Impact of Current Ratio, Debt-to-Equity Ratio, and Inventory Turnover on ROA: Evidence from Indonesian Manufacturing Firms

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ABSTRACT

This study aims to examine the effect of current ratio, debt-to-equity ratio, and inventory turnover on Return on Assets (ROA) in manufacturing companies in the miscellaneous industry sector listed on the Indonesia Stock Exchange (IDX) for the period 2021-2023. The data used in this research is secondary data sourced from company financial statements and statistics. The research population consists of 63 manufacturing companies in the miscellaneous industry sector listed on the IDX during the 2021-2023 period. The sample was selected using purposive sampling based on specific criteria, resulting in 25 companies with a total of 75 annual financial reports analyzed. The data analysis techniques used in this study include descriptive statistics, classical assumption tests, multiple linear regression analysis, coefficient of determination, t-test, and F-test. The results show that, partially, the current ratio has a significant effect on return on assets with a significance value of 0.003 < 0.05, the debt-to-equity ratio has no significant effect on return on assets with significance value of 0.110 > 0.05, and inventory turnover has a significant effect on return on assets with a significance value of 0.040 < 0.05. Simultaneously, the current ratio, debt to equity ratio, and inventory turnover collectively have a significant effect on return on assets with a significance value of 0.001 < 0.05.

Keywords: ***Current Ratio, Debt-to-Equity Ratio, Inventory Turnover, Return on Assets***

1. Introduction

Indonesia's economic development, which continues to evolve in line with the advancement of globalization, has intensified competition among companies. In

such circumstances, firms are required to implement improvements across various aspects in order to survive and sustain growth, particularly in the financial sector, which constitutes a crucial component of corporate operations. Financial performance serves as a key indicator in evaluating a firm's overall condition. Strong financial performance can function as a strategic strength that enables companies to achieve their objectives and maintain continuous growth amid intense competition.

In evaluating financial performance, companies generally employ financial ratios as analytical tools. This study focuses on four types of financial ratios: the current ratio as a measure of liquidity, the debt-to-equity ratio as an indicator of solvency, inventory turnover to assess activity efficiency, and return on assets to evaluate profitability.

Financial statements serve as a crucial instrument for obtaining information regarding a company's financial condition and performance. Fahmi (2018) states that financial statements represent a presentation of data reflecting the financial situation of a business entity, which subsequently serves as a reference for assessing the dynamics of the company's financial performance. Murhadi (2015) explains that financial statements constitute a concise depiction of a company's operational flows. According to Prihadi (2019), financial statements are the result of accountants' work in reporting economic realities. Meanwhile, Hery (2023) defines financial statements as products of accounting recording activities that function as a medium for conveying financial and business information to relevant stakeholders. Kasmir (2022) further asserts that, in general, there are five types of financial statements commonly prepared, namely the statement of financial position (balance sheet), income statement, statement of changes in equity, cash flow statement, and notes to the financial statements.

According to Hery (2023), the primary objectives of financial statements are to provide accurate information regarding the economic condition and business needs of an entity, to present reliable information on the sources of net assets derived from business activities aimed at generating profit, and to supply essential information concerning changes in assets and liabilities.

The current ratio is a commonly used indicator for assessing a company's short-term debt in meeting its obligations as they fall due (Fahmi, 2018). A higher current ratio reflects greater short-term liquidity, indicating that the company faces a lower credit risk due to its ability to effectively settle short-term liabilities (Sukamulja, 2022). Previous research conducted by Fitriani and Febriyanti (2023) indicates that the current ratio has a significant effect on return on assets. This finding suggests that optimal liquidity management can enhance the efficiency of asset utilization and subsequently improve corporate profitability. A ratio is defined as a numerical comparison between one value and another, aimed at identifying the relationship between the two. The results of such comparisons are subsequently used as a basis for evaluation, analysis, and decision-making. Financial ratios represent an analytical approach that examines the relationships among figures presented in financial statements by applying formulas considered relevant for analysis (Fahmi, 2018). According to Kasmir (2020), financial ratio analysis involves comparing figures in financial statements by dividing one figure by another. These comparisons may be conducted between components within a single financial statement or across different financial statements, and the figures compared may originate from a single period or multiple periods.

The debt-to-equity ratio measures the relationship between a company's total liabilities and equity, indicating the firm's ability to utilize its own capital to fulfill all obligations (Sujarweni, 2022). Research conducted by Kurniawati and Waluyo (2024) demonstrates that, partially, the current ratio does not have a significant effect on return on assets, whereas the debt to equity ratio and inventory turnover exert a positive and significant influence on return on assets. According to Amaroh (2024), return on assets represents a ratio used to assess an entity's performance in generating profit through the utilization of its assets. Similarly, Sudana (2019) defines return on assets as an indicator measuring an entity's ability to manage its total assets to generate profit after tax. Every company strives to maximize its return on assets, as a higher ROA indicates more optimal asset utilization in generating profits. An increase in ROA consequently reflects an improvement in the firm's overall profitability. Debt to equity ratio is defined as a financial ratio used to measure the proportion between total debt and total equity (Thian, 2022). Total debt comprises the sum of current liabilities and long-term debt. Kasmir (2022) asserts that this ratio is particularly useful for creditors in assessing the extent of funds provided to the firm's owners. This comparison reflects the amount of equity available as collateral for borrowed funds. The debt to equity ratio, commonly referred to as a leverage ratio, indicates the extent to which a company's operations are financed by debt relative to its own capital. Consequently, a higher debt to equity ratio signifies a greater reliance on debt financing in supporting corporate operations.

Inventory turnover is a ratio that indicates how quickly a company is able to sell its inventory. A higher inventory turnover rate reflects faster inventory sales, thereby indicating greater efficiency in inventory management (Sukamulja, 2022). This ratio is calculated by dividing the cost of goods sold by the average inventory. Previous research conducted by Kurniawati and Waluyo (2024) demonstrates that inventory turnover has a significant effect on return on assets. Return on assets serves as an indicator for measuring a company's efficiency in generating profit from the total assets under its management. This ratio is considered one of the most important profitability ratios, as return on assets has a dominant influence on stock returns and overall corporate financial performance (Amaroh, 2024). Manufacturing companies, particularly those in the miscellaneous industry sector, play a crucial role in the economy, as this sector encompasses a wide range of industries producing diverse products, ranging from heavy equipment and machinery to automotive components. The outputs of this sector are not only required by other industries as supporting inputs for production processes, but also experience relatively stable demand in line with technological advancement and global industrial needs. Consequently, firms within the miscellaneous industry sector exhibit favorable long-term prospects due to their continuous innovation in improving efficiency and product quality. According to Jumingan (2019), inventory turnover is a ratio that illustrates how frequently inventory is sold and subsequently replenished within a given accounting period. This turnover ratio is obtained by dividing the cost of goods sold by the average inventory. Sukamulja (2022) further explains that inventory turnover reflects the speed at which inventory is converted into sales. A higher inventory turnover indicates faster sales and more effective inventory management, suggesting better corporate performance due to the optimization of inventory levels. However, an excessively high inventory turnover may also signal potential issues, such as overly rapid

inventory depletion, which could result in stock shortages and disrupt business operations.

Tabel 1.1

Development of Return on Assets (ROA) of Manufacturing Companies in the Miscellaneous Industry Sector Listed on the Indonesia Stock Exchange for the Period 2021–2023.

No	Kode	ROA		
		2021	2022	2023
1.	AMFG	4 %	6%	8%
2	AMIN	-16%	1%	3%
3	APII	4%	2%	5%
4	ARKA	1 %	1%	2%
5	ARNA	13%	-	11%
6	CAKK	-3%	2 %	-7%
7	CCSI	7%	6%	6%
8	CTTH	-	7%	13%
9	GPSO	-6%	3%	10%
10	HEXA	3%	9%	-
11	HOPE	-3%	12%	4%
12	IBFN	18%	21%	-
13	IKAI	-12%	-18%	-13%
14	IKBI	1%	9%	3%
15	IMPC	7%	9%	12%
16	INTA	-	2%	3%
17	JECC	-3%	3%	3%
18	KBLI	-	-	-
19	KBLM	3%	2%	2%
20	KIAS	-4%	1%	4%
21	KOBX	6%	4%	-
22	KOIN	-12%	-9%	-5%
23	KPAL	-	-	-
24	KRAH	-	-	-
25	KUAS	2%	3%	4%
26	LABA	-5%	-7%	-8%
27	MARK	3%	2%	9%
28	MLIA	11%	13%	8%
29	NTBK	2%	1%	3%
30	PIPA	-	15%	17%
31	PTMP	-	-3.6	8.7
32	SCCO	3%	2%	5%
33	SINI	-11%	-10%	7%
34	SKRN	4%	2%	8%
35	SMIL	-	-5%	7%
36	SPTO	6%	7%	8%
37	TOTO	5%	7%	8%
38	UNTR	6%	13%	5%
39	VOKS	-7%	-7%	1%
40	WIDI	-	-	12%
41	ASGR	8%	11%	12%
42	BINO	1%	3%	-9%

The ROA data presented in the table indicate fluctuations in the profitability of companies in the Miscellaneous Industry Sector during the 2021–2023 period. Several firms experienced significant increases in ROA, such as AMFG, whose ROA rose from −4% to 6% and 8%, resulting in an average of 3.33%, which reflects an

improvement in asset utilization efficiency. ASII and ASGR also recorded upward trends, indicating relatively consistent growth in profitability. Conversely, several companies, namely KONI, CRSN, and LABA, experienced losses for three consecutive years. This condition suggests that the assets owned by these firms were unable to generate profits and instead contributed to declining value or sustained losses. Low ROA levels observed in companies such as MDRN and TIRA indicate inefficiency in utilizing assets to generate returns. Factors such as weak profitability, high operating expenses, or suboptimal investment decisions may account for this condition. Overall, the data reflect heterogeneous sectoral dynamics, in which certain companies successfully enhanced asset efficiency, while others faced challenges leading to declining or unstable profitability. Fluctuations in return on assets are also influenced by changes in total assets, particularly increases in total asset values that are not accompanied by proportional growth in net income.

2. Research Methods

This study adopts a quantitative research approach. Quantitative methods involve the use of numerical data that are analyzed through statistical techniques. The quantitative approach is grounded in empirical data and is applied in the determination of samples and populations (Santoso, 2019). The variables examined in this study consist of the current ratio (X_1), debt to equity ratio (X_2), inventory turnover (X_3), and return on assets (Y). The operational definitions of the variables employed in this research are presented below.

Table 2
Operational Variable

Variable	Definition of Variable	Indicator	Scale
Current Ratio (X1)	This ratio is used to evaluate the extent to which a company's current assets are able to meet all of its short-term financial obligations (Sukamulja, 2022)	$CR = \frac{\text{Aset Lancar}}{\text{Hutang Lancar}}$	Rasio
Debt to Equity Ratio (X2)	The Debt to Equity Ratio is a financial ratio used to measure the proportion between total liabilities and total equity (Thian, 2022)	$DER = \frac{\text{Total Hutang}}{\text{Total Ekuitas}}$	Rasio

Inventory Turnover (X3)	Inventory Turnover is a ratio that describes how frequently inventory is sold and subsequently replenished within a single accounting period (Jumingan, 2019)	$\text{ITO} = \frac{\text{Harga Pokok Penjualan}}{\text{Rata}-\text{Rata Persedian}}$	Rasio
Return on Asset (Y)	Return on Assets is an indicator that measures an entity's ability to utilize its total assets to generate profit	$ROA = \frac{\text{Laba Bersih}}{\text{Total Aset}}$	Rasio

2.1. **Population**

Population is a defined group consisting of objects or subjects that possess certain qualities and characteristics determined by the researcher to be studied and from which conclusions are drawn (Sugiyono, 2020)

Tabel . 3
Population

No.	Kode Emiten	Nama Perusahaan
1	AMFG	Asahimas Flatt Glass Tbk.
2	AMIN	Ateliers Mecaniques D"Indonesia Tbk
3	APII	Aritha Prima Indonesia Tbk
4	ARKA	Arkha Jayanti Persada Tbk.
5	ARNA	Arwana Citramulia Tbk
6	CAKK	Cahayaputra Asa Keramik Tbk.
7	CCSI	Communication Cable System Indonesia Tbk.
8	CTTH	Citatah Tbk.
9	GPSO	Geoprima Solusi Tbk.
10	HEXA	Hexindo Adiperkasa Tbk.
11	HOPE	Harapan Duta Pertiwi Tbk.
12	IBFN	Intan Baruprana Finance Tbk.
13	IKAI	Intikeramik Alamasri Industri Tbk.
14	IKBI	Sumi Indo Kabel Tbk.
15	IMPC	Impack Pratama Industri Tbk.
16	INTA	Intraco Penta Tbk.
17	JECC	Jembo Cable Company Tbk.
18	KBLI	KMI Wire & Cable Tbk.
19	KBLM	Kabelindo Murni Tbk.
20	KIAS	Keramika Indonesia Assosiasi Tbk.
21	KOBX	Kobexindo Tractors Tbk.
22	KOIN	Kokoh Inti Arebama Tbk.
23	KPAL	Steadfast Marine Tbk.
24	KRAH	Grand Kartech Tbk.
25	KUAS	Ace Oldfield Tbk.
26	LABA	Ladangbaja Murni Tbk.
27	MARK	Mark Dynamics Indonesia Tbk.
28	MLIA	Mulia Industrindo Tbk.
29	NTBK	Nusatama Berkah Tbk.
30	PIPA	Multi Makmur Lemindo Tbk.
31	PTMP	Mitra Pack Tbk.

32	SCCO	Suprame Cable Manufacturing & Commerce Tbk.
33	SINI	Singaraja Putra Tbk.
34	SKRN	SuperKrane Mitra Utama Tbk.
35	SMIL	Sarana Mitra Luas Tbk.
36	SPTO	Surya Pertiwi Tbk.
37	TOTO	Surya Toto Indonesia Tbk.
38	UNTR	United Tractors Tbk.
39	VOKS	Voksel Electric Tbk.
40	WIDI	Widiant jaya Krenindo Tbk.
41	ASGR	Astra Graphia Tbk.
42	BINO	Perma Plasinso Tbk.
43	BLUE	Berkah Prima PerkaSA Tbk.
44	CRSN	Carsurin Tbk.
45	DYAN	Dyandra Media International Tbk.
46	ICON	Island Concepts Indonesia Tbk.
47	INDX	Tanah Laut Tbk.
48	JTPE	Jasuindo Tiga Perkasa Tbk.
49	KING	Hoffmen Cleanindo Tbk.
50	KONI	Perdana Bangun Pusaka Tbk
51	LION	Lion Metal Works Tbk.
52	MDRN	Modern Internasional Tbk.
53	MFMI	Multifiling Mitra Indonesia Tbk.
54	MUTU	Mutuagung Lestari Tbk.
55	PADA	Personel Alih Daya Tbk.

2.2. **Sample**

A sample constitutes a subset drawn from the entire population under study and is considered representative of that population (Jaya, 2021). The sampling method employed in this research is purposive sampling. According to Setiawati (2024), purposive sampling is a sampling technique in which samples are selected based on specific considerations determined by the researcher. This technique is commonly applied when the researcher intends to select samples that are representative of a particular population with distinct characteristics.

The criteria and characteristics applied in this study are as follows:

1) Manufacturing companies in the miscellaneous industry sector listed on the Indonesia Stock Exchange (IDX) during the 2021–2023 period
2) Manufacturing companies in the miscellaneous industry sector that consistently published annual financial statements throughout the 2021–2023 period
3) Manufacturing companies in the miscellaneous industry sector that did not experience consecutive losses during the 2021–2023 period

This study utilizes secondary data, defined as data obtained indirectly rather than directly from respondents, but through other sources such as documents (Sugiyono, 2017). The data employed in this research consist of financial statement data regularly published by manufacturing companies in the miscellaneous industry sector listed on the Indonesia Stock Exchange during the 2021–2023 period, which were accessed through the official website of the Indonesia Stock Exchange http://www.idx.co.id/.

According to Sugiyono (2022), data collection techniques constitute a crucial component of the research process, as the core objective of research activities is to obtain data that can be further analyzed. The methods employed to collect the data in this study are as follows:

a. Documentation

The documentation method refers to a data collection activity conducted through the examination of relevant documents. In this study, documentation analysis was carried out by collecting data from companies listed in the manufacturing sector of the miscellaneous industry, specifically in the form of annual financial reports for the 2021–2023 period, as published by the Indonesia Stock Exchange.

b. Library research (literature study)
The data collection technique involves gathering data from research reports, books, and relevant academic journals. A literature review constitutes a series of research activities related to the methods of collecting library-based data, followed by reading, recording, and systematically managing the research materials (Zed, 2016).

Data analysis techniques constitute a systematic process in research that involves a comprehensive review of all collected data (Sugiyono, 2020). Data analysis represents a stage of examining and organizing information obtained from interviews, field notes, and documents in a structured manner. This process includes categorizing data into specific groups, breaking them down into analytical units, arranging them into identifiable patterns, and selecting relevant aspects for further examination. The final stage of data analysis involves drawing conclusions that are comprehensible to both the researcher and other readers. Data analysis can also be defined as the utilization of collected data that are subsequently analyzed using statistical methods to address research questions. In this study, a quantitative analytical approach is employed, and the data are analyzed using multiple linear regression analysis. This technique is applied to examine the effect of the current ratio, debt to equity ratio, and inventory turnover on return on assets. All statistical computations in this study are conducted using the Statistical Package for the Social Sciences (SPSS).

Descriptive statistics refer to statistical methods used to describe, summarize, and present data in order to facilitate better understanding (Siregar, 2017). Several measures may be employed to describe data distribution, including the mode, mean (average), and median. The variables examined in this study consist of independent variables, namely the current ratio (CR), debt to equity ratio (DER), and inventory turnover (ITO), as well as the dependent variable, return on assets (ROA).

3. Result

The data presentation in this study is based on a population consisting of 63 manufacturing companies in the miscellaneous industry sector listed on the Indonesia Stock Exchange. The sample examined comprises 25 companies, with the sample data consisting of corporate financial statements that have published annual financial reports for the 2021–2023 period.

Descriptive statistical analysis in this study is employed to present information related to the research variables, including the minimum value, which indicates the lowest figure in the observation series, and the maximum value, which represents the highest figure. The mean or average value is obtained by dividing the total sum of all observations by the number of observations, while the standard deviation is calculated as the square root of the sum of the squared deviations from the mean divided by the number of observations.

a. Normality Test

The normality test is conducted to determine whether the endogenous variables in the study follow a normal distribution. In this research, the normality test is performed using the One-Sample Kolmogorov–Smirnov method. This method is selected due to its ability to provide accurate results based on numerical values.

The normality test is evaluated by examining the Asymp. Sig. (asymptotic significance) value. If the Asymp. Sig. value exceeds 0.05, the data are considered to be normally distributed. Conversely, if the Asymp. Sig. value is less than 0.05, the data are deemed not to follow a normal distribution. Based on the results presented in Table 4.3, the Asymp. Sig. value is 0.200, which is greater than 0.05. Therefore, it can be concluded that the research data are normally distributed.

Table 4
Results of the Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		75
Normal Parameters[a,b]		0.0000000
	Std.Deviation	0.04913622
Most Extreme Differences	Absolute	0.089
	Positive	0.040
	Negative	-0.089
Test Statistic		0.089
Asymp. Sig. (2-tailed)		.200[c,d]

b. Multicollinearity Test

Multicollinearity occurs when one or more independent variables can be expressed as a linear combination of other independent variables, or in other words, when functional relationships exist among the independent variables (Nugroho & Haritanto, 2022). A well-specified regression model should not exhibit correlation among the explanatory variables. A commonly used method for detecting multicollinearity is by examining the Tolerance and Variance Inflation Factor (VIF) values in the regression model. A regression model is considered free from multicollinearity if the VIF value is less than 10 and the Tolerance value exceeds 0.10.

Based on the results, no indication of multicollinearity is detected. This is evidenced by the tolerance values of the current ratio (CR) at 0.873, the debt to equity ratio (DER) at 0.852, and inventory turnover (ITO) at 0.966, all of which exceed the threshold value of 0.10. In addition, the variance inflation factor (VIF) values for CR (1.146), DER (1.174), and ITO (1.036) are all below 10.00. Accordingly, it can be concluded that the regression model employed in this study does not suffer from multicollinearity. This indicates that the independent variables do not exhibit high intercorrelations and are therefore suitable for use in regression analysis.

Table 5
Results of the Multicollinearity Test

Coefficients[a]			
		Collinearity Statistic	
Model		Tolerance	VIF
1	CR	0.873	1.146
	DER	0.852	1.174
	ITO	0.966	1.036

c. Heteroscedasticity Test

Heteroscedasticity refers to a condition in which the variance of the residuals differs across observations in a regression model. A well-specified regression model should be free from heteroscedasticity (Priyatno, 2018). To detect the presence of heteroscedasticity, several methods may be employed, one of which is the Glejser test. The Glejser test is conducted by regressing the independent variables on the absolute values of the residuals. If the significance (Sig.) value exceeds 0.05, it can be concluded that heteroscedasticity is not present. Accordingly, heteroscedasticity is considered absent when the Sig. value is greater than 0.05

Based on the results, it can be concluded that the significance values of the independent variables—current ratio (CR) at 0.334, debt to equity ratio (DER) at 0.632, and inventory turnover (ITO) at 0.170—are all greater than 0.05 (Sig. > 0.05). Therefore, the regression model employed in this study does not exhibit heteroscedasticity.

Table 6
Results of the Heteroscedasticity Test

Coefficients[a]						
		Unstandardized	Coefficients	Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	.038	.010		3.788	.000
	CR	.002	.002	.121	.972	.334
	DER	.002	.005	.061	.481	.632
	ITO	-.003	.002	-.164	-1.386	.170

d. Autocorrelation Test

The autocorrelation test is a diagnostic method used to identify the presence of systematic relationships between the residuals of one observation and those of another observation, which are arranged sequentially based on time or spatial dimensions (Priyatno, 2018). A well-specified regression model requires the absence of autocorrelation problems. In this study, autocorrelation is tested using the Durbin–Watson (DW) test. The decision criteria for the Durbin–Watson test are as follows:

1) If DU < DW < 4 − DU, the null hypothesis (H_0) is accepted, indicating that autocorrelation is not present.

2) If DW < DL or DW > 4 − DL, the null hypothesis (H_0) is rejected, indicating the presence of autocorrelation
3) If DL < DW < DU or 4 − DU < DW < 4 − DL, the test result is inconclusive, meaning that no definitive conclusion can be drawn.

Based on the results, the Durbin–Watson value is 1.863. Referring to the Durbin–Watson table with K = 3 and N = 75, the lower bound (DL) is 1.5432 and the upper bound (DU) is 1.7092, while the value of 4 − DU is 2.2908. Since the Durbin–Watson statistic satisfies the condition DU < DW < 4 − DU (1.7092 < 1.863 < 2.2908), the null hypothesis (H_0) is accepted. This indicates that there is no autocorrelation in the regression model..

Table 7
Results of the Autocorrelation Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.464[a]	.215	.182	.05016	1.863

Descriptive statistical analysis in this study aims to provide a general overview of the characteristics of the data in the research variables. Descriptive statistics present information in the form of a minimum value, which indicates the lowest value among all observations, and a maximum value, which indicates the highest value. In addition, the mean (average) value is obtained by dividing the total sum of the data by the number of observations. Meanwhile, the standard deviation is a measure of data dispersion calculated as the square root of the average squared differences between each data value and the mean.

a. Multiple Linear Regression Analysis

Multiple linear regression analysis is used to determine the extent to which several independent variables influence a dependent variable by employing a linear equation. In this study, multiple linear regression analysis aims to examine the effect of Current Ratio (CR), Debt to Equity Ratio (DER), and Inventory Turnover (ITO) on Return on Assets (ROA) in manufacturing companies within the miscellaneous industry sector listed on the Indonesia Stock Exchange during the 2021–2023 period. Based on the results of data processing using SPSS statistical software, the following multiple linear regression equation was obtained:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$

$Y = 0{,}004 + 0{,}011\ X_1 - 0{,}014\ X_2 + 0{,}007\ X_3 + e$

Keterangan:

Where:

Y = Return on Assets (ROA)
α = Constant
β_1, β_2, β_3 = Regression coefficients
X_1 = Current Ratio (CR)
X_2 = Debt to Equity Ratio (DER)
X_3 = Inventory Turnover (ITO)

e = Error term

Based on the regression equation, the constant value is 0.004**,** indicating that when the Current Ratio (CR)**,** Debt to Equity Ratio (DER)**,** and Inventory Turnover (ITO) increase or decrease by 1 percent**,** the Return on Assets (ROA) will correspondingly increase or decrease by 0.004, assuming other variables remain constant. The coefficient of the Current Ratio (CR) variable is 0.011, indicating that a one-unit increase in the Current Ratio is associated with an increase in Return on Assets (ROA) of 0.011, assuming other variables remain constant. The coefficient of the Debt-to-Equity Ratio (DER) variable is **−**0.014, indicating that a one-unit increase in the Debt to Equity Ratio is associated with a decrease in Return on Assets (ROA) of 0.014, assuming other variables remain constant. Meanwhile, the coefficient of the Inventory Turnover (ITO) variable is 0.007**,** indicating that a one-unit increase in Inventory Turnover leads to an increase in Return on Assets (ROA) of 0.007, ceteris paribus.

Table 7
Results of Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.004	.017		.231	.818
	CR	.011	.004	.341	3.027	.003
	DER	-.014	.008	-.185	-1.620	.110
	ITO	.007	.003	.224	2.095	.040

b. The coefficient of determination (R^2)
The coefficient of determination is employed to measure the extent to which the independent variables contribute to the dependent variable. The results indicate the magnitude of the influence exerted by the independent variables on the dependent variable. The analysis yields an R-square value of 0.215, or 21.5%, indicating that Current Ratio, Debt to Equity Ratio, and Inventory Turnover collectively explain 21.5% of the variation in Return on Assets. The remaining 78.5% is attributable to other variables not included in the model.

c. Hypothesis Testing
1) Testing t
The t-test is employed to determine whether each independent variable has a statistically significant partial effect on the dependent variable. Based on the results, the partial effects of the independent variable (X) on the dependent variable (Y) can be described as follows:
a) Effect of Current Ratio on Return on Assets: Based on the

results presented in Table 4.8, the significance value is less than 0.05 (0.003 < 0.05). Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. It can be concluded that the Current Ratio has a statistically significant effect on Return on Assets.

b) Effect of Debt-to-Equity Ratio on Return on Assets: Based on the results presented in Table 4.8, the significance value is greater than 0.05 (0.110 > 0.05). Accordingly, the null hypothesis (H_0) is accepted and the alternative hypothesis (H_a) is rejected. It can be concluded that the Debt-to-Equity Ratio does not have a statistically significant effect on Return on Assets.

c) Effect of Inventory Turnover on Return on Assets: Based on the results presented in Table 4.8, the significance value is less than 0.05 (0.040 < 0.05). Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. It can be concluded that Inventory Turnover has a statistically significant effect on Return on Assets.

Table 8
Results of the t-Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.004	.017		.231	.818
	CR	.011	.004	.341	3.027	.003
	DER	-.014	.008	-.185	-1.620	.110
	ITO	.007	.003	.224	2.095	.040

2) Testing F

The *F*-test is conducted to examine the effect of all independent variables on the dependent variable simultaneously and is therefore commonly referred to as a simultaneous test (Sayidah, 2018). Based on the regression results, the calculated *F* value is 46.882 with a significance value (Sig.) of 0.001. Since the significance value is less than 0.05, it can be concluded that Current Ratio, Debt-to-Equity Ratio, and Inventory Turnover collectively have a positive and significant effect on Return on Assets.

Table 9
Results of the F-Test

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig
1	Regression	.049	3	.016	6.485	.001[b]
	Residual	.179	71	.003		
	Total	.228	74			

The partial regression analysis shows that the Current Ratio (CR) has a significance value below the 0.05 threshold (p = .003). Therefore, the null hypothesis (H_0) is rejected, indicating that the Current Ratio has a statistically significant effect on Return on Assets (ROA).

The analysis also indicates that the Debt-to-Equity Ratio (DER) does not have a statistically significant effect on Return on Assets, as its significance value exceeds the acceptable threshold. This result suggests that variations in DER are not associated with measurable changes in profitability.

Furthermore, Inventory Turnover (ITO) demonstrates a statistically significant effect on Return on Assets, indicating a meaningful relationship between inventory efficiency and profitability.

The simultaneous test (F-test) produces a significance value of .001, which is below the 0.05 criterion. Thus, the null hypothesis (H_0) is rejected, confirming that CR, DER, and ITO collectively have a statistically significant effect on Return on Assets.

4. Discussion

The significant influence of Current Ratio on Return on Assets suggests that companies with stronger liquidity positions tend to demonstrate improved profitability. A higher Current Ratio reflects a greater capacity to meet short-term obligations, which contributes to operational stability and more effective asset utilization. This finding is consistent with the theoretical perspective proposed by Fahmi (2018), who states that the Current Ratio serves as a measure of short-term solvency or a firm's ability to fulfill maturing obligations. The present results also align with the study conducted by Fitriani and Febriyanti (2023), which reported that Current Ratio has a significant effect on Return on Assets.

In contrast, the absence of a significant effect of debt-to-equity ratio indicates that leverage does not directly determine profitability. An increase in debt relative to equity is not necessarily accompanied by greater efficiency in asset utilization. This suggests that debt financing may not always be optimally allocated toward profit-generating activities. Such an interpretation supports the argument presented by Frengkynyelan (2018), who noted that debt and equity structures do not automatically contribute to profitability growth. The current findings are also consistent with Yojana and Priyanto (2024), who similarly found that Debt-to-Equity Ratio does not significantly influence Return on Assets.

The significant relationship between Inventory Turnover and Return on Assets highlights the importance of effective inventory management in enhancing profitability. Higher inventory turnover reduces holding costs and improves operational efficiency, thereby optimizing asset use. This interpretation is in line with Umar (2021), who emphasized that efficient inventory management contributes positively to financial performance. The findings also support the study

of Kurniawati and Waluyo (2024), which documented a significant influence of Inventory Turnover on Return on Assets.

Finally, the simultaneous influence of Current Ratio, Debt-to-Equity Ratio, and Inventory Turnover demonstrates that liquidity, capital structure, and operational efficiency collectively shape profitability outcomes. These variables provide an integrated framework for evaluating financial performance and asset utilization. The present findings reinforce the conclusions of Umar (2021), who reported that CR, DER, and ITO simultaneously have a significant effect on Return on Assets.

5. Conclusion

Based on the results and discussion regarding the relationship between Current Ratio (CR), Debt to Equity Ratio (DER), and Inventory Turnover (ITO) on Return on Assets (ROA), several conclusions can be drawn. First, the partial test results indicate that Current Ratio has a significant effect on Return on Assets, as evidenced by a significance value of 0.003 < 0.05. This finding suggests that sound liquidity management enhances the effectiveness of asset utilization in generating profits. Second, the partial test results show that debt-to-equity ratio does not have a significant effect on Return on Assets, with a significance value of 0.110 > 0.05. This indicates that capital structure does not directly influence the efficiency of assets in generating profits. Third, the partial test results demonstrate that Inventory Turnover has a significant effect on Return on Assets, as indicated by a significance value of 0.040 < 0.05. This implies that efficient inventory turnover improves asset performance in generating profits. Finally, the simultaneous test results reveal a significance value of 0.001 < 0.05, indicating that Current Ratio, Debt-to-Equity Ratio, and Inventory Turnover collectively have a significant effect on Return on Assets. This suggests that effective management of liquidity, capital structure, and inventory turnover plays a crucial role in enhancing the firm's asset performance.

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