



The Effect of Current Ratio (CR) and Debt to Equity Ratio (DER) on Return on Assets (RoA) in Pharmaceutical Subsector Companies Listed on the Indonesian Stock Exchange (BEI) Period 2020-2023

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ABSTRACT

The central aim of this research is to establish real-life data on how the Current Ratio and Debt-To-Equity Ratio impact the Return On Assets of Pharmaceutical Subsector Companies listed on the Indonesia Stock Exchange (IDX) from 2020 to 2023. A regression analysis with a quantitative approach using company financial report data was the research method employed. The research sample consisted of 26 pharmaceutical subsector companies meeting the study criteria, selected through purposive sampling. The empirical evidence suggests that Current Ratio positively affects Return On Assets, as demonstrated by the regression coefficient (0.023) and significance level ($p < 0.05$), which confirms hypothesis H_1 . The statistical evaluation reveals a t value of 4.422 when compared to the t_{table} of 1.991, with a significance value of 0.000 which is lower than $\alpha 0.05$. To sum up, the rejection of H_0 indicates the acceptance of H_1 . On the other hand, the Debt To Equity Ratio does not seem to have a notable effect on Return On Asset, as indicated by a regression coefficient of 0.011 and a significance level of 0.596 (>0.05), causing hypothesis H_2 to be rejected. Conversely, both the Current Ratio and Debt To Equity Ratio exhibit a significant influence on Return On Asset, supported by an F value of 15.785 and a significance level of 0.000b, resulting in the validation of hypothesis H_3 . Thus, this study underscores the importance of the Current Ratio in improving Return On Asset, while the specific impact of the Debt To Equity Ratio is not deemed significant.

Keywords: Current Ratio, Debt To Equity Ratio, Return On Asset, Pharmaceutical Subsector Companies, Indonesia Stock Exchange, Purposive Sampling

1. INTRODUCTION

The economic prosperity of a nation is heavily influenced by its industrial growth, making industries like pharmaceuticals crucial drivers of financial advancement. The pharmaceutical sector in Indonesia, which prioritizes the production of health-related goods, is essential for maintaining the country's healthcare system. From 2020 to 2023, the manufacturing companies within the pharmaceutical sub-sector in Indonesia saw unpredictable fluctuations in their growth rates. Several external factors have contributed to this situation, including the introduction of BPJS Kesehatan by the government, the depreciation of the rupiah, and the US central bank's interest rate hikes alongside the Covid-19 pandemic. The profitability and financial stability of pharmaceutical companies can be affected by a combination of external and internal influences. Capital markets provide a spectrum of investment alternatives, facilitating investors' capacity to configure portfolios that correspond to their particular financial targets. Investing is a wealth-building endeavour that involves adopting specific strategies, each with its own risks and potential rewards.

Investors who invest in this activity will face profits and losses as part of the risks inherent in every investment decision taken. According to Sudaryo et al. (2020), in financial terminology, share price signifies the present market valuation of equity units. As delineated in Law No. 4 of 2023 regarding Development and Strengthening of the Financial Sector, implemented on January 12, 2023, the market price is formally established as the concluding price at the cessation of stock exchange trading activities. The share price also

indicates the value of a company which is appropriate for assessing the effectiveness of the company (Selawati et al., 2022).

The financial reports of a business give insight into its operational capabilities and financial health. Utilising precise financial data is crucial for external parties like investors and creditors to assess the profitability of their investments and evaluate the company's financial standing (Baroto, 2022). Techniques such as financial ratio analysis can help assess and mitigate risks associated with investments (Kusumawardani, 2023).

Financial ratios assess company liquidity, solvency, and profitability via metrics like CR, DER, and ROA. Satria (2022) study of PT Mayora Indah Tbk found CR had no significant effect on ROA, while DER showed a notable negative impact. Though both ratios displayed minimal positive effects on ROA, these were statistically insignificant.

As articulated by Solihin (2021), Return on Assets (ROA) functions as a measurement of corporate efficacy in converting assets into profitability. The numerical value of ROA may be modulated by numerous independent determinants. Return on Assets (ROA) functions as an essential metric for profitability assessment, quantifying the percentage of net income generated from an organization's aggregate assets. Scholarly discourse suggests that financial indicators, specifically Current Ratio and Debt-to-Equity Ratio, may exert influence on ROA performance.

The company may face difficulty in settling debts due to the low Current Ratio (CR). Notwithstanding, an increased ratio may conceal underlying financial weaknesses, potentially indicating ineffective cash utilization strategies. To determine the company's financial health, industry benchmarks or internal targets can be used as a comparison standard (Yuliani & Purwanto, 2023).

The Debt-to-Equity Ratio (DER) serves as a fundamental financial indicator that quantifies the relative magnitude of debt financing compared to equity financing within a corporate capital structure. Companies with excessive debt are viewed as having poor performance and may struggle to attract investors. This can be exemplified by companies with high levels of debt or Debt to Equity Ratios, as they might experience a decrease in their share price (Firmansyah & Lesmana, 2021).

This scholarly examination intends to analyze the potential correlation between Current Ratio (CR) and Return on Assets (ROA) within the Pharmaceutical Subsector from 2020 to 2023, while formulating germane research questions. Additionally, this study examines how Debt-to-Equity Ratio (DER) affects Return on Assets (ROA) in pharmaceutical firms during 2020-2023. The research objectives are to: evaluate the correlation between CR and ROA; investigate DER's influence on ROA; and analyze the combined impact of both CR and DER on ROA in pharmaceutical companies throughout this period.

2. LITERATURE REVIEW

2.1. Return On Asset (ROA)

Financial performance is something that cannot be separated from the condition of a company. To assess good financial performance, analysis using financial ratios is required. The company must assess its health, sustainability, and make important decisions moving forward (Karmiyati, 2024). It is expected that the performance of companies in the pharmaceutical sector will always be positive. However, some research results show that the trend of profitability of pharmaceutical sector companies is always fluctuating and uncertain. Within the domain of financial analysis, profitability serves as a key determinant of corporate sustainability. Return on assets is frequently utilized for assessing company effectiveness at leveraging assets in generating profit (Kurniawan & Marjohan, 2024). ROA reflects a company's ability to generate profit from its total assets. Key factors that may influence this metric include the Current Ratio (CR) and Debt to Assets Ratio (DAR) (Mursalini et al., 2024).

A company's ability to settle short-term debts using current assets gets measured by this financial metric rather effectively nowadays. This calculation is essential for determining if a company has enough resources to pay off its immediate financial obligations (Kampongsina et al., 2020). In case the CR value of a company rises, probability of company failure drops sharply resulting in markedly lower overall risk due largely to short-term commitments being met readily. Conversely, if the CR value decreases, the likelihood of a company

not meeting its responsibilities rises, thereby exposing the company to greater risk (Yuliani & Purwanto, 2023). There is a slight amount of risk involved that can help put investors at ease when considering investing in the company. This suggests that there are non-active funds present that might impact the company's profitability negatively, leading to a smaller ROA. However, certain research studies have found different results. Conversely, the current ratio's influence on ROA is deemed advantageous.

2.2. Return on Asset (ROA)

Return on Asset (ROA) is a widely employed metric for evaluating an organization's efficiency in generating profit after taxes based on its assets. It demonstrates the company's proficiency in making profits from every amount of money that investors put in. A higher ratio signifies higher net income, indicating growth in sales and profits for the company. This can attract investors to companies with strong profitability, leading to higher stock prices and increased returns for shareholders in the long run. Conversely, if this ratio is low, decrease in investor interest may stem from poor financial performance marked by losses and sizable deficits over several consecutive quarters (Veronica & Widiyanto, 2024).

2.3. Current Ratio (CR)

The Current Ratio assesses how promptly a company can settle its immediate financial obligations. A high level of liquidity indicates strong ability to meet immediate financial obligations, suggesting sound financial health and efficient cash flow management. This enables the company to cover expenses like taxes without difficulty (Sari, 2021).

2.4. Debt To Equity Ratio (DER)

The Debt to Equity Ratio (DER) is a measure that assesses the extent to which a company's assets are funded through debt. Greater risks often lurk beneath a company's surface when Debt to Equity Ratio is unusually high indicating potentially precarious financial health. This ratio provides insight into a firm's ability to pay off its liabilities with its existing resources. It provides a glimpse into the financial stability of the company by showing how much of its assets are financed through borrowings. Having a higher ratio means that the majority of the assets are financed through borrowing, which in turn, increases the level of risk for the company (Mursalini, Sriyanti, et al., 2024).

3. RESEARCH METHODS

Quantitative methods are applied in this research, with random sampling used to investigate selected populations or samples, collecting data using research tools, conducting quantitative or statistical data analysis to test pre-established hypotheses. Secondary data from financial statements of pharmaceutical subsector companies listed on Indonesia Stock Exchange for period 2020-2023 are being utilized here. Then the data is then analysed and grouped based on the research variables. The research stage begins with sample collection and then processed into secondary data obtained from a literature study and documentation regarding matters related to this research.

3.1. Object of Research

Pharmaceutical companies listed on Indonesia Stock Exchange within 2020-2023 period are object of this research. The study specifically targets firms operating in the pharmaceutical subsector that are publicly traded during the stated years.

3.2. Population and Research Sample

The study used purposive sampling, a non-probability method that selects participants according to specific criteria: (1) companies must operate within the pharmaceutical subsector and be listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period; (2) companies must have published financial statements for each year ending on December 31 within the research timeframe; and (3) companies must provide complete and clearly presented financial reports for the selected years.

Based on the qualification data above, there are 26 pharmaceutical subsector companies sampled in this study. The list of names of the sample companies include; PT Bundameedik Tbk, PT Metro Healthcare Indonesia Tbk, PT Diagnos Laboratorium Utama Tbk, PT Murni Sadar Tbk, PT Kedoya Adyaraya Tbk, Onix

Capital Tbk, Sejahteraraya Anugrahjaya Tbk, Sarana Mediatama Metropolitan Tbk, PT Siloam International Hospitals Tbk, PT Mitra Keluarga Karyasehat Tbk, PT Prodia Widyahusada Tbk, PT Royal Prima Tbk, PT Medikaloka Hermina Tbk, PT Falmaco Nonwoven Industri Tbk, PT Kimia Farma Tbk, Darya-Varia Laboratoria Tbk, Indofarma Tbk, Kalbe Farma Tbk, PT Soho Global Health Tbk, Sido Muncul Pharmaceuticals Tbk, Tempo Scan Pasific Tbk, PT Itama Ranoraya Tbk, PT Phapros Tbk, PT Organon Pharma Indonesia Tbk, Pyridam Farma Tbk, and Merck Tbk.

3.3. Variable Operational Definition

ROA is an indicator to gauge how much a company can profit out of total assets it holds referring to net earnings produced from total assets, it reflects how efficiently the assets are used to earn income. The formula for calculating return on assets is:

$$ROA = \frac{\text{Net Profit After Tax}}{\text{Total Asset}} \times 100$$

The net profit after tax is the profit left behind after accounting for interest costs and tax expenses. While total assets mean the complete value of any and all assets owned by the company, basically, they comprise current and non-current assets.

A company's ability in meeting short-term obligations gets assessed by comparing current assets with current liabilities in this financial ratio called Current Ratio.

$$CR = \frac{\text{Total Current Assets}}{\text{Total Current Liabilities}} \times 100$$

Current assets refer to cash and other assets that are expected to be converted into cash within one year or during the company's normal operating cycle. On the other hand, current debt pertains to the company's financial obligations that will be settled using current assets within a year of the balance sheet date.

Debt and equity interplay gets scrutinized by Debt to Equity Ratio or DER somewhat objectively usually in financial analysis. The formula for DER is as follows:

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}} \times 100$$

Total debt is the combination of a company's short-term debts and long-term commitments. Meanwhile, total equity represents the remaining stake in a company's assets once all liabilities are subtracted, calculated by deducting total liabilities from total assets.

4. RESULTS AND DISCUSSION

Table 1. Descriptive Statistics Test Results

	N	Minimum	Maximum	Mean	Std. Deviation
X1 CR	104	4.711	657862.110	39877.75365	141515.262003
X2 DER	104	.015	1676.522	103.48470	222.095849
Y ROA	104	.001	5174.424	67.32085	513.174838
Valid N (listwise)	104				

Source: Data processed by reseracher with spss version 22

4.1. Multiple Linear Regression Analysis

The results on this analysis are outlined in the following table 2.

Table 2. Multiple Linear Regression Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.992	2.383		.836	.406
CR	.023	.005	.580	4.422	.000
DER	.011	.020	.070	.532	.596

a. Dependent Variable: ROA

Source: Processed by researcher using SPSS 22

4.2. Correlation and Determination Coefficient Test

Table 3. Correlation Coefficient Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.534 ^a	.286	.267	5.67030	1.386

a. Predictors: (Constant), Debt to Equity Ratio, Current Ratio

b. Dependent Variable: Return on Asset

Source: Processed by researcher using SPSS 22

The data in the table 3 reveals a significant R value of 0.534, suggesting a robust relationship among the Current Ratio, Debt to Equity Ratio, and Return on Assets, which renders the model suitable for additional scrutiny. With an adjusted R² of 0.267, these factors account for 26.7% of the variance in ROA, leaving 73.3% susceptible to external influences like Total Asset Turnover, Net Profit Margin, or the size of the company.

4.3. Hypothesis Test

1. Hypothesis 1

The acceptance of hypothesis is determined by the findings of comparison between the computed t-value and critical t-value. Once the calculated statistic surpasses the predetermined threshold and the significance level is below 0.05, the hypothesis is considered valid. The critical t-value for this study is 1.991, while the test of the liquidity ratio (X1) obtained a t-statistic of 4.422 and indicated a p-value of 0.000 clearly signifying high statistical significance. Therefore, the first hypothesis (H1) is supported: this suggests that the firm's short-term solvency measure (X1) significantly influences profitability, explained by the variable Y.

2. Hypothesis 2

In hypothesis testing, the t-count and t-table values are compared to determine acceptance or rejection of a hypothesis. If the t-value exceeds the t-table value and the significance level is below 0.05, the hypothesis will be considered valid. Looking at the Debt to Equity Ratio (X2) variable, the t-table value is 1.991 and the t-value is 0.532, yielding a significance level of 0.596, which is above 0.05. Consequently, rejecting the second hypothesis indicates that the Debt to Equity Ratio does not significantly impact the Return on Asset. This decision was made because the t-value is lower than the critical t-value, specifically $0.532 < 1.991$.

Table 4. Simultaneous Testing Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1015.035	2	507.517	15.785	.000 ^b
Residual	2540.036	73	32.152		
Total	3555.071	75			

a. Dependent Variable: Return on Asset

b. Predictors: (Constant), Debt to Equity Ratio, Current Ratio

Source: Processed by researcher using SPSS 22

The analysis involves comparing fcount and f-table figures. If f-count is higher than f-table and the significance level is below 0.05, the hypothesis is validated. The f-table value is specified as 3.115. Examination of the f test outcomes demonstrates that fcount is 15.785, surpassing the ftable value of 3.115, with a significance level of 0.000 which is below 0.05. This suggests that fcount exceeds ftable and the significance level is less than 0.05. Therefore, the outcomes of the study seem to affirm the combination of the Current Ratio and Debt to Equity Ratio vendorsly influences the variable, that is, Return on Asset.

5. CONCLUSIONS

A study from 2020 to 2023 analyzed pharmaceutical companies and found interesting connections between financial ratios and Return on Assets (ROA). It was uncovered that there is a strong and positive impact on ROA from the Current Ratio (CR), with a t-value of 4.422 surpassing the critical t-table value of 1.991. Moreover, the significance level of 0.000, which is lower than the threshold of 0.05, reinforces this connection. Essentially, companies with greater liquidity, as indicated by the Current Ratio, are more likely to excel in asset utilization and profitability. Conversely, the impact of the Debt to Equity Ratio (DER) on ROA was minimal, with a t-value of 0.532 (below the critical t-value of 1.987) and a significance level of 0.596 (above

the threshold of 0.05). This suggests that alterations in financial leverage did not significantly influence asset returns in the industry being analyzed at that time. However, when assessed together, both CR and DER jointly had a significant influence on ROA, supported by an F-value of 15.785 surpassing the critical F-value of 3.115 and a significance level of 0.000, demonstrating that the combined management of liquidity and leverage contributes significantly to enhancing the overall profitability of the firms.

According to the findings, it is advised that pharmaceutical companies continue to strengthen their liquidity management, as maintaining a healthy Current Ratio can significantly enhance returns on assets. While DER alone does not appear to directly influence ROA, it continues to be a vital element of a company's financial framework and should not be overlooked. A balanced approach to managing both liquidity and leverage will be beneficial for sustaining long-term financial performance. Future research may also consider examining additional financial indicators or incorporating broader industry comparisons to offer a more thorough insight into the factors influencing financial success in the field of pharmaceuticals.

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