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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 (IDX) 2020-2023 Period

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ABSTRACT

The primary objective of this research is to gather practical evidence concerning the impact of the Current Ratio and Debt To Equity Ratio on the Return On Assets in Pharmaceutical Subsector Companies listed on the Indonesia Stock Exchange (IDX) between 2020 and 2023. The research employs regression analysis using a quantitative methodology based on financial reports of the companies. The research sample was chosen through the purposive sampling technique, consisting of 26 pharmaceutical subsector companies that fulfilled the research criteria. The findings of the study suggest that the CR has a positive and influential influence on ROA, with a regression coefficient of 0.023 and a significance level of 0.000 (<0.05), hence confirming the hypothesis (H_1). Conversely, the DER is uninfluential on ROA, with a regression coefficient of 0.011 and a significance value of 0.596 (>0.05), leading to the rejection of hypothesis H_2. Nevertheless, both the CR and DER jointly is influential on the ROA, with an F value of 15.785 and a significance of 0.000, supporting the acceptance of hypothesis H_3. Hence, this study highlights the significant role of the CR in enhancing ROA, while the DER lacks individual significance.

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

1. Introduction

The advancement of industry within a nation has a notable influence on the advancement of that country's economy, therefore it is undeniable that the industrial sector, including the pharmaceutical industry, serves as a key driver of economic progress. The pharmaceutical sector in Indonesia, which specifically focuses on delivering healthcare products, plays a crucial role in upholding the ongoing viability of the national healthcare segment. The expansion of pharmaceutical manufacturing firms during the timeframe of 2020-2023 has encountered fluctuating rises and falls. This variation is attributed to multiple external elements, such as the consequences of the implementation of the National Health Insurance (BPJS Kesehatan) arranged by the government, the depreciation of the rupiah's exchange rate, and the expectations of interest rate hikes by the US Federal Reserve, in addition to the emergence of the COVID-19 pandemic.

The effectiveness of pharmaceutical firms may be impacted by diverse external and internal factors that influence the company's profitability and financial strength. For investors, the capital market offers opportunities to choose various investment instruments that align with their preferences and financial goals. Investment itself is an activity aimed at growing wealth through specific strategies, which in turn involves

risks and potential returns. Investors who allocate capital to such activities will face both gains and losses as part of the inherent risks associated with every investment decision made. According to Sudaryo et al. (2020), the market value of a stock refers to the current price at which it is trading. The recently enacted Law No. 4 of 2023, focusing on enhancing the financial sector, states that market price is based on the closing price of stocks at the end of the trading session. Stock prices act as a mirror reflecting the actual worth of a company, facilitating a precise evaluation of its performance (Selawati et al., 2022).

The financial statements of a company are a representation of its ability to operate and its financial success (Maghfira et al., 2022). External parties such as investors, creditors, and potential creditors rely on precise financial data to determine the potential profitability of future investments and evaluate the company's financial performance. Various methods are available for analysing financial information to reduce the risk associated with investments, one of which is financial ratio analysis (Kusumawardani, 2023).

By analysing financial ratios like the current ratio, debt to equity ratio, and return on assets, one can assess a company's liquidity, solvency, and profitability. Satria (2022) which investigated how the current ratio (CR) and debt to equity ratio (DER) impact the return on assets (ROA) at PT Mayora Indah Tbk over a specific timeframe. Findings indicated that the CR is uninfluential on ROA. Conversely, DER was found to have a notable negative impact on ROA. Both the CR and DER were observed to have a minor positive influence on ROA, but it was not statistically significant.

ROA is a measure of a company's ability to manage its assets to generate profits (Solihin, 2019). Various factors can have an impact on the size of the ROA value. ROA serves as a useful tool in assessing profitability as it shows the proportion of a company's net profit in relation to its total assets. The CR and DER are believed to be among the factors that can affect ROA.

The company may face a capital shortage when looking at the CR. Nevertheless, a high ratio does not always indicate good financial health, as it may simply mean that cash is not being utilised efficiently. Evaluating a company's condition involves comparing its ratio with industry benchmarks or internal targets (Yuliani & Purwanto, 2023).

The DER is a useful tool for evaluating how much debt a company has compared to the total equity owned by shareholders. Companies with high levels of debt are seen as performing poorly and may find it difficult to attract investors. This could result in a decrease in stock prices for companies with high Debt to Equity Ratios (Firmansyah & Lesmana, 2021).

This research investigates the impact of CR and DER on ROA of pharmaceutical subsector companies from 2020-2023. The study aims to: (1) assess CR's influence on ROA, (2) evaluate DER's impact on ROA, and (3) determine how CR and DER jointly affect ROA in pharmaceutical companies during this period. The results will offer important perspectives for investors, executives, and government officials when they are making educated financial choices within the pharmaceutical sector.

2. Literature Review

The status of a company is closely tied to its financial performance. Evaluating financial ratios is crucial for evaluating financial success. It is essential to assess health, stability, and future decision-making of the company through this analysis (Karmiyati, 2024). According to analysts, companies in the pharmaceutical industry are likely to continue performing well. Despite this, research indicates that the financial success of companies in this sector can be unstable and unpredictable. Evaluating a company's financial health is crucial, with profitability being a key factor. A company's profitability can be evaluated using ROA, which assesses its efficiency in generating profits from its assets (Kurniawan & Marjohan, 2024). Various factors can impact the size of ROA. ROA offers a valuable insight into a company's profitability by highlighting the proportion of its net profit compared to total assets. The CR and DER are believed to be among the factors that can influence ROA (Mursalini, Nasrah, et al., 2024).

2.1. Return on Asset (ROA)

ROA is a commonly used ratio to evaluate an organisation's ability to generate net profit after tax based on its assets. This ratio illustrates how efficiently a company generates profits from each unit of currency

invested by shareholders. The higher the ratio, the greater the net income generated, which means an increase in sales and company profits. This can increase investor interest in investing capital in companies with high profitability, thereby driving up stock prices and ultimately increasing the stock returns received by investors. Conversely, if the ratio is low, this may be due to negative profits or losses, which in turn may reduce investor interest in the company (Veronica & Widiyanto, 2024).

2.2. Current Ratio (CR)

CR is a metric that assesses how well a company can settle its immediate financial obligations (Kampongsina et al., 2020). Companies with strong liquidity levels are better equipped to handle short-term debts, indicating a healthy financial standing and the capability to cover expenses like taxes without cash flow issues (Sari, 2021). When a company's CR value rises, the likelihood of the company not being able to fulfill its immediate obligations decreases, which in turn lessens the risk taken on by the company. Conversely, if the CR value decreases, the risk of the company failing to meet short-term obligations increases, putting the company in a more precarious position (Yuliani & Purwanto, 2023). Investors may feel more confident investing in a company with low risk, but this could also mean there is less potential for higher returns. Some studies have shown that low risk does not necessarily equate to lower profitability. Conversely, research has indicated that corporate responsibility can have a positive impact on return on assets.

2.3. Debt To Equity Ratio (DER)

DER is a financial tool used to assess how much of a company's assets are funded through borrowing. A higher DER suggests that the company may face increased risks in terms of its financial well-being. By looking at this ratio, we can understand how well the company can pay off its debts using its current assets. It helps to give an overview of the financial strength of the company by revealing the extent to which its assets are supported by loans. A higher ratio signifies that a majority of the assets are backed by debt, leading to greater risk for the company (Mursalini, Sriyanti, et al., 2024).

3. Methodology

The research in question employs quantitative methods to investigate a particular group of individuals or a sample using randomized sampling techniques. Data is gathered through research tools, and statistical analysis is performed to test the hypothesis. Financial reports from pharmaceutical companies listed on the Indonesia Stock Exchange from 2020 to 2023 are utilised for this study. The data is categorised and analysed based on various research variables. The research process starts with collecting samples, which are then converted into secondary data derived from literature reviews and relevant documentation.

3.1. Research Object

The focus of this study is on pharmaceutical companies in the sub-sector that are listed on the IDX between 2020 and 2023. Quantitative methods were employed for this research. The data utilised in this study consisted of secondary data from annual reports of each company, which were sourced from the Indonesia Stock Exchange (IDX) website at www.idx.id. The study's population comprised pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange (IDX) from 2020 to 2023.

3.2. Research Population and Sample

The sampling technique employed in this research is known as purposive sampling. This method involves intentionally selecting samples that meet specific criteria to accurately represent the population. The criteria for selection include: 1) Choosing companies from the pharmaceutical sub-sectors listed on the IDX between 2020 and 2023; 2) Ensuring that the companies have published financial statements for the year ending December 31 within the research period of 2020-2023; and 3) Confirming that the selected companies have comprehensive and transparent financial statements for the specified period. With these criteria in mind, a total of 26 pharmaceutical sub-sector companies were selected as samples for this study. In order to uphold confidentiality and anonymity, the identities of the companies involved in this study have been anonymized and are not revealed in the analysis.

3.3. Operational Definition of Variables

ROA is a ratio that shows a company's profit on the total assets used. The formula for calculating ROA is:

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

Description: Net profit after tax: The amount of profit remaining after deducting interest and taxes Total Assets: The sum of all company assets consisting of Current Assets plus Non-Current Assets.

CR shows the amount of current liabilities guaranteed to be paid by current assets. The formula for calculating CR is:

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

Description: Current Assets pertain to cash and other assets that are anticipated to be converted into cash within a year or the regular operations of the business. Current Liabilities refer to the company's short-term financial responsibilities that can be settled within a year using its current assets.

DER is a metric employed for evaluating the relationship between debt and equity. It is determined by comparing the total debt, which includes current liabilities, against total equity. The formula for deriving the DER is:

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

Description: Total Debt: Total current debt and long-term debt Total Equity: The difference between total assets and total liabilities.

4. Results and Discussion

4.1. Descriptive Test

Table 1. Descriptive Statistical 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 independently using SPSS version 22

The descriptive statistical results (Table 1) show that the mean values for CR, DER, and ROA are 39,877.75, 103.48, and 67.32 respectively, indicating substantial variability across all variables, particularly CR, which has the highest standard deviation.

4.2. Multiple Linear Regression Test Results

According to Sari (2021) multiple linear regression analysis involves examining how IV (such as CR and DER) can influence a DV (ROA). The process of multiple linear regression analysis is used to determine the impact of different IV on a specific outcome. The calculations for the multiple linear regression test in this research project are outlined below:

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: Data processed independently using SPSS version 22

The multiple linear regression test results indicate that CR (p = 0.000) has a influential and beneficial effect on ROA, with a standardized beta coefficient of 0.580. In contrast, DER (p = 0.596) is uninfluentially affect ROA. These findings suggest that the company's current ratio plays a more dominant role in influencing financial performance compared to its debt-to-equity ratio.

4.3. Correlation and Determination Coefficient Test

This assessment is conducted to establish the connection between each factor that stands alone and the factor that relies on others. The R figure falls within the range of 0 to 1. The more the value approaches 1, the more robust the connection becomes. Conversely, a lower proximity to 0 signifies a weaker relationship. The correlation between variables is displayed in the table 3 below:

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), DER, CR

b. Dependent Variable: ROA

Source: Data processed independently using SPSS version 22

According to the information presented in the table, an R value of 0.534 shows a significant correlation between the CR (X1) and DER (X2) variables with ROA. As a result, it can be inferred that the model is suitable for future applications.

According to the data in the table, Adjusted R2 = 0.267 suggests that the Current Ratio and Debt to Equity Ratio collectively influence 37% of Return on Assets. Other factors like Total Asset Turnover (TATO), Net Profit Margin (NPM), and firm size could potentially have a larger impact on ROA, accounting for the remaining 73.3% not covered in this analysis.

4.4. Hypothesis Testing

4.4.1. Hypothesis 1

In hypothesis testing, the comparison between thihung and ttabel values is crucial. An accepted hypothesis is determined by the condition tvalue > ttable and sig value < 0.05. The ttable value is set at 1.991. As for the CR (X1), the tvalue of 4.422 exceeds 1.991 and the significance value is below 0.05 at 0.000. Hence, the initial hypothesis (H1) is deemed validated. It signifies that the CR (X1) has influential impacts on ROA (Y). This assertion is derived from the fact that tvalue surpasses ttable, specifically at 4.422 > 1.991.

4.4.2. Hypothesis 2

In hypothesis testing, the comparison is made between the thihung and ttabel values to determine whether to accept or reject the hypothesis. The hypothesis is considered valid if tvalue is greater than ttable and the significance value is less than 0.05. With the ttabel value set at 1.991, the tvalue value for the DER (X2) stands at 0.532, which is below 1.991, and the significance value is 0.596, exceeding 0.05. Consequently, the second hypothesis (H2) is not supported, suggesting that the DER (X2) has uninfluential impact toward ROA (Y). This rejection is based on the fact that 0.532 is less than 1.991.

Table 4. Simultaneous Test 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: ROA

b. Predictors: (Constant), DER, CR

Source: Data processed independently using SPSS version 22

The examination was carried out by comparing the values of fvalue and ftable. If fvalue is greater than ftable and the significance value is less than 0.05, the hypothesis is considered valid. The ftable value is 3.115. The outcomes of the f test demonstrate that the fvalue of 15.785 exceeds the ftable value of 3.115, with a significance level of 0.000 being lower than 0.05. This indicates that the f-value - is higher than the f-table value and the significance level is below 0.05. Thus, the joint influence of the CR and DER on ROA is inluential.

5. Conclusion

The research findings suggest that the CR plays a major role in determining the ROA of pharmaceutical companies in the period from 2020 to 2023. With a t-value of 4.422, significantly higher than the t-table of 1.991, and a significance level of 0.000, lower than 0.05, it can be inferred that an increase in the CR leads to an enhancement in the company's ROA. On the other hand, the DER impact ROA insignificantly, as indicated by a t-value of 0.532, below the t-table of 1.987, and a significance level of 0.596, exceeding 0.05. Nevertheless, upon simultaneous examination of CR and DER, it becomes evident that they collectively has influential impact on ROA. This is evidenced by an F-value of 15.785, surpassing the F-table of 3.115, and a significance level of 0.000, falling below the 0.05 threshold. Hence, despite the distinct effects of the variables in isolation, their combined presence significantly shapes the ROA of pharmaceutical subsector firms between 2020 and 2023.

The findings indicate that pharmaceutical companies need to give importance to managing their liquidity effectively, while also taking into account their debt structure as a key component of a holistic financial strategy. This advice is crucial for investors looking to make profitable investments in the pharmaceutical industry, as well as for managers who aim to optimize their company's capital structure. Additionally, policymakers would benefit from understanding the financial dynamics within the industry. This study makes a valuable contribution to the financial literature by illustrating that while individual financial ratios may not provide a comprehensive explanation on their own, their combined effect can greatly enhance the predictive value for the performance of companies in the pharmaceutical sector.

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