Effect of Current Ratio (Cr), Quick Ratio (Qr), Debt To Asset Ratio (Dar) and Debt To Equity Ratio (Der) on Return On Assets (Roa)

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**KEYWORD**

Current Ratio (CR), Quick Ratio (QR), Debt to Assets Ratio (DAR), Debt to Equity Ratio (DER), Return On Assets (ROA)

**ABSTRACT**

This research is motivated by differences in the results of previous studies regarding the Effect of Current Ratio (CR), Quick Ratio (QR), Debt To Asset Ratio (DAR), and Debt To Equity Ratio (DER) on Return On Assets (ROA) in Companies Pharmaceutical Sub-Sector Listed on the Indonesia Stock Exchange for the 2015-2019 Period. This study aims to determine the effect of the Current Ratio (CR), Quick Ratio (QR), Debt To Asset Ratio (DAR), and Debt To Equity Ratio (DER) on Return On Assets (ROA). This study uses several data analyzes, namely descriptive analysis, model selection test, data selection method test (Chow test, Hausman test, and Langrange multiplier test), panel data regression analysis test, hypothesis testing (partial test and simultaneous test), and coefficients determination by using the Eviews version 10 program. Based on the results of this study, it shows that the measurement results on the Current Ratio (X1) have no significant effect on Return On Assets (Y), Quick Ratio (X2) have no significant effect on Return On Assets (Y), Debt to Assets Ratio (X3) has an effect on Return On Asset (Y), and finally Debt to Equity Ratio (X4) has an effect on Return On Asset (Y).
1. **Introduction**

The inflation rate in 2015 which reached 0.17% had an impact on the performance of the pharmaceutical sub-industry companies which reduced people's purchasing power, especially when the rupiah exchange rate weakened to Rp. 13,121 per dollar (Permaysinta and Sawitri 2021). As a result, in 2015, the issuer's performance was below the expected target of 4.6%, and the average revenue fell to 10% due to a decrease in sales volume and the weakening of the rupiah. (Kontan.co.id 2015).

A very popular measuring tool used in assessing a company's liquidity and short-term ability to pay off its obligations (Susilawati 2012). The current ratio is sometimes called the working capital ratio (Santini and Baskara 2018). The current ratio is seen as a more reliable indicator than the working capital ratio Working capital is used to measure the ability to pay current liabilities with current assets. In general, the greater the working capital, the better the ability to repay debt. Capital is total assets minus total liabilities. Working capital is the current version of total capital.

The current ratio is the most common ratio for evaluating current assets and current liabilities, which are current assets divided by current liabilities (Faisal, Samben, and Pattisahusiwa 2018). The current ratio measures the ability to pay current liabilities with current assets, which is a ratio that shows the extent to which short-term receivables from creditors can be met with assets that are expected to be converted into cash in the near future.

The rate of return on total assets (rate of return on total assets), or simply return on total assets (Return On Assets = ROA), measures the success of the company in using assets to generate profits (Kuniawan, Arifati, and Andini 2016). ROA shows the company's
ability to use all of its assets to generate after-tax profits. This ratio is important for the management to evaluate the effectiveness and efficiency of the company's management in managing all company assets. The greater the ROA, it means that the more efficient the use of the company's assets or in other words the same number of assets can generate greater profits, and vice versa. ROA is a ratio that reflects the company's ability to obtain results, namely net income on financial resources from the total assets that have been invested in the company.

ROE shows the company's ability to generate after-tax profits by using the company's own capital (Ammy 2021). This ratio is important for the management to be used as material to evaluate the effectiveness and efficiency of the company's management in managing their own capital which is carried out by the company's management. The greater the ROE, it means that the more efficient the use of company assets or in other words the same number of assets can generate greater profits, and vice versa. ROE is a ratio to measure the company's ability to generate net income on shareholder investment.

Asset structure is the determination of how much funds are allocated for each asset component, both current assets and fixed assets (Mustafa et al. 2022). The allocation for each asset component has an understanding of how much rupiah must be allocated to each asset component. Asset structure is the larger composition of current assets. Another opinion regarding the structure of assets is the balance or comparison between fixed assets and total assets.

It is concluded that asset structure is the determination of the amount of allocation or balance of funds for each component of assets, both current assets and fixed assets. Describes the amount of assets that the company can guarantee as collateral when the
Company makes loans to creditors. Asset structure is the proportion of fixed assets owned by the company. Asset structure can be formulated by comparing current assets with total assets. Assets are the resources owned by the company in carrying out its business activities.

Assets are a collection of various assets owned by the company that will be used to earn income during the current year and the following years (Setiawan 2006). Company assets or assets can be in the form of cash/cash, accounts receivable, office equipment, vehicles, machinery, buildings, land, and so on. The company's efforts to obtain these assets are by having two possible sources of funds, namely from the owner's capital deposit or creditor loans. If an asset is purchased with funds originating from the owner of the company, the share capital in the financial statements of financial position will increase by the price of the asset. If purchased with borrowed funds from creditors, the amount of debt in the company's statement of financial position will increase by the price of the asset. Several previous studies such as Linga, Manaf, and Azhar (2022), Solihin (2019) and Annisa and Chabachib (2017) still have not discussed the Effect of Current Ratio (Cr), Quick Ratio (Qr), Debt To Asset Ratio (Dar) and Debt To Equity Ratio (Der) Against Return On Assets (Roa) in pharmaceutical companies. So this study aims to cover this gap.

The research method used is descriptive verification method with a quantitative approach. In this study, the independent variables are Current Ratio (X1), Quick Ratio (X2), Debt to Assets Ratio (X3), and Debt to Equity Ratio (X4) while the dependent variable is Return On Assets (Y). In this study using several data analysis, namely panel data regression analysis, hypothesis testing (partial test and simultaneous test).
2. **Result and Discussion**

In order to analyze more deeply, assets need to be grouped into several categories Parts (Susan 2019), including:

1. Current assets
2. Long term investment
3. Fixed assets
4. Intangible assets
5. Deferred expense expense
6. Other non-current assets.

Assets are classified as current and non-current. This distinction is based on the level of speed or duration of the disbursement of assets back into cash (Sri Wahyuni et al. 2020).

1. Current assets
   Current assets include cash, other assets, or other sources that are expected to be converted into cash, or sold, or consumed over a normal period of time (usually one year).

2. Long-term Investment
   Companies can also invest their funds in the form of assets which are classified as long-term investments.

3. Fixed assets
   Fixed assets are tangible assets, which are relatively permanent, used in regular operations for more than one year, purchased with the intention of not being resold.

Meanwhile, during the 2016-2019 period, the performance of the pharmaceutical sub-industry companies was uneven, some achieved profit growth, some lost a lot (Lestari 2020). Based on the above phenomenon, it can be explained in the financial statements of the pharmaceutical sub-industry companies of the Indonesia Stock Exchange in 2015-2019 which changes every year. The number of pharmaceutical sub-industry companies in Indonesia is very large and the products produced are varied. Of the many pharmaceutical
sub-industry companies in Indonesia, only 12 are listed on the Indonesia Stock Exchange. The registered company is PT. Darya-Varia Laboratoris Laboratory (PT. Darya-Varia Laboratoris Tbk.) Indonesia Indofarma (Persero) Tbk. Kimia Farma (Persero) Tbk. PT. Kalbe Farma Tbk., PT. Merck (Germany) Phapros Tbk., PT. Pyridam Farma Tbk., PT. Merck (Merck Sharp Dohme Pharma Tbk.), PT. Sido Muncul Tbk for the herbal and pharmaceutical industry. , PT. Soho Global Health Tbk. , PT. Tempo Scan Pacific Tbk., PT. Millennium Pharmacon International Tbk. In this study, the researcher uses a five-year financial situation from 2015 to 2019. The financial status of the last 5 to 10 years is the status of relevant financial data.

Because to obtain information generated from financial statements, it is necessary to have clear information about the company's financial processes so that information users can make the right decisions. In this study, researchers used secondary data obtained from documents (data) on the website www.idx.com. The following are the average values of Current Ratio (CR), Quick Ratio (QR), Debt to Asset Ratio (DAR), Debt to Equity Ratio (DER), and Return On Assets (ROA) of companies in the Pharmaceutical Sub-Sector: Average Value Current Ratio (CR), Quick Ratio (QR), Debt to Asset Ratio (DAR), Debt to Equity Ratio (DER), and Return On Asset (ROA) in Pharmaceutical Sub-Sector Companies listed on the Indonesia Stock Exchange in 2015-2019 in figure 1.
It can be seen, the ratio of Current Ratio (CR), Quick Ratio (QR), Debt to Asset Ratio (DAR), Debt Equity Ratio (DER), and Return On Asset (ROA) has increased and decreased every year (Nuraeni, Tanuatmodjo, and Cakhyaneu 2021). It can be seen from the graph that data is a problem in the company because it fluctuates every year, so the Current Ratio of Pharmaceutical Subsector Companies in 2015 to 2016 increases. However, in 2017 it decreased by 256%. Then in the following years it experienced a continuous decline until 2019 by 202%. The highest increase in 2016 was 292% and the lowest was 202% in 2019, so it is not too burdensome to pay off debt or short-term debt. The debt or debt is due immediately when it is recovered, so that it has a good impact on the return on assets (ROA), and the condition of the company is in a stable condition for the next 5-10 years. Based on the graph above, the Quick Ratio of Pharmaceutical Subsector Companies from 2015 to 2016 continued to increase. However, from 2017 to 2019 there continued to be a decline of 136% in 2019. The highest increase was in 2016 at 197% and the lowest in 2019 was 136%. If the Quick Ratio value is too large, it is also not good because too high this quick
ratio can also indicate that the company has too many receivables and may be difficult to collect. Based on the data above, it can be seen that the value of the Debt to Asset Ratio in the Pharmaceutical Sub-Sector Company fluctuates annually. Where in 2015-2016 it decreased by 1%, and in 2016-2019 it increased continuously until it was at its highest point in 2019 of 38%. However, the calculation of this ratio is not important for investors, but is very important for creditors who provide credit to the company. The greater the debt-to-asset ratio, the greater the risk that the company will not be able to repay its debts to creditors.

If the debt-to-asset ratio is large, creditors will be more careful in approving the company’s credit application (Aisyah et al. 2020). From the data above, the development of the debt-to-equity ratio of pharmaceutical sub-industry companies from 2015 to 2019. It can be seen that developments between 2015 and 2019 experienced fluctuations. There was a decrease from 2015 to 2016, and the debt to equity ratio in 2015 was 44% to 42% in 2016. Then it increased in 2017. The debt to equity ratio in 2016 was 42% to 46%, and increased in 2017-2019. The value of the debt to equity ratio in 2017 was 46% to 56%. % in 2018.

The highest increase occurred in 2019, with a debt to equity ratio of 59% which indicates that the company is in a very bad condition, because the company's debts or liabilities are getting bigger, which is a trend that is very dangerous for the company (Andriani and Rudianto 2019). It can be seen from the results of the graphic image that data is a company problem because the data fluctuates every year, so the largest Return on Assets (ROA) data is the average value in 2016 is 12%, and the ROA value is very large compared to the previous year which can be said as the company's profit for the year.
good and safe position can help the company's income or assets, but in 2017-2019 it continues to decline, namely the 2017 value of 11%, the 2018 value of 11%, and the 2019 value of 8%. Based on the description of the problem above, the authors are interested in analyzing the relationship between the Current Ratio, Quick Ratio, Debt to Asset Ratio, Debt to Equity Ratio, and the company's Return on Assets.

The current ratio or current ratio is a ratio that measures the company's ability to pay short-term debt or debt as soon as it is received in its entirety (Kisdayanti and Agustin 2018). The current ratio is to measure the company's ability to use existing assets to pay short-term debt (assets will be converted into cash in one year or business cycle).

The Quick Ratio is a quick test ratio that shows a company's ability to pay its short-term liabilities with current assets, regardless of the value of its inventory. Inventory is one of the elements of liquid assets with the lowest level of liquid assets, often experiencing the lowest price fluctuations that often occur, usually causing losses during the liquidation period. Therefore, when calculating the quick ratio, the inventory value is not included in current assets.

Debt-to-asset ratio (DAR) is a debt ratio that measures the ratio of total debt to total assets. Debt to Asset Ratio (DAR) is a debt ratio used to measure the ratio of total debt to total assets. In other words, how much of the company's assets are financed through debt, or how the company's debt affects asset management. From the measurement results, if the ratio is high, it means that more funds are collected from the debt, so it will be difficult for the company to obtain additional loans because it is feared that the company will not be able to use its assets to pay off debt. Likewise, if the ratio is low, the smaller the
company is financed with debt. The formula for calculating the debt to asset ratio (DAR) is as follows:

Debt to equity ratio is a ratio used for the following purposes: evaluating debt to equity ratio, which is obtained by comparing all debt (including current debt) with all activities (Shintia 2017). Debt to Equity Ratio (DER) is a ratio that compares long-term debt with equity. Then the Debt to Equity Ratio (DER) is used to evaluate the debt to equity ratio. While stating the Debt to Equity Ratio (DER) is a measure used to analyze financial statements to show the amount of collateral available to creditors. So it can be said that the Debt to Equity Ratio (DER) is a ratio that compares the company's debt with its capital. The formula used to determine the ratio of debt to equity can be used to compare total debt to total equity.

The debt to equity ratio is the balance between debt and the company's own funds. The higher the ratio means that the owned funds are smaller than their debts, for the company the amount of debt should not exceed their own funds to avoid excessive fixed burdens. For the conservative method, the maximum amount of debt is equal to the equity, meaning that when calculating the debt to equity ratio using the following formula, the maximum debt to equity ratio is 100%. The debt-to-equity ratio is the debt ratio represented by the relationship between the funds provided by the company's creditors (suppliers and banks) and the company's remaining shareholders' funds (Ardinindya, Djuwarsa, and Kusuma Dewi 2021).

We can compare debt with assets or equity (Trianto 2018). You can also see the relationship between the interest earned on the debt and the profits generated. The less debt, the lower the financial risk (financial risk). However, it is undeniable that every
company needs debt to develop its business. The following are the dimensions that determine the company’s liquidity status, namely: According to Prihadi, the formula used to calculate the debt to equity ratio. Because this data is time series and obtained from a credible institution, the validity test and reliability test are not used in this study. Based on the test results of the data selection model, the Lagrange Multiplier Test says that the model that is suitable for use in this research is the Common Effect Model.

So from Figure 2 and Figure 3, the following panel data regression equations are obtained:

\[ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 \]

Information:

\[ Y = \text{Return on Assets} \]
\[ a = \text{konstanta} \]
\[ b_1 \text{-} b_4 = \text{Regression coefficient}; \]
\[ X_1 = \text{Current Ratio} \]
X2 = Quick Ratio;
X3 = Debt to Asset Ratio;
X4 = Debt to Equity Ratio;

\[
\text{Return on Assets} = 0.137169 + 0.014469X_1 - 0.007406X_2 - 0.22234X_3
\]

Figure 3. Return on assets

So: From these equations we can interpret as follows:

1. In the above equation the value of constant (a) is 0.137169, this value means when the Current Ratio (X1), Quick Ratio (X2), Debt to Asset Ratio (X3), and Debt to Equity Ratio (X4) are zero, (0) then the result of calculating return on assets using the above equation is 0.137169.

2. The value of the Current Ratio (X1) based on the above equation is 0.014469, which means it has a positive effect. This means that when there is an increase in the Current Ratio by 1%, it can be predicted that the return on assets will be in the same direction, namely an increase of 0.014469 or 1.14%. With a note the value of the other variables have a fixed value.

3. The value of Quick Ratio (X2) based on the above equation is -0.007406 which means negative. This means that when there is an increase in the Quick Ratio by 1%, it can be predicted that the return on assets will decrease by 0.007406 or 0.7%. With a note the value of the other variables have a fixed value.

4. The value of the Debt to Asset Ratio (X3) is -0.22234 which means it is negative. So when there is an increase in the amount of the Debt to Asset Ratio of 1%, it can be
predicted that the return on assets will decrease by 0.22234 or 22%. With a note the value of the other variables have a fixed value.

The value of the Debt to Equity Ratio (X4) of 0.011771 means positive. If when there is an increase in the 1% Debt to Equity Ratio, it can be predicted that the return on assets will be in the same direction, namely an increase of 0.011771 or 1%. With a note the value of the other variables have a fixed value.

3. Conclusion

Current Ratio (CR) partially has no positive and insignificant effect on Return On Assets (ROA). This can be seen from the t-test (partial) where the value of tcount < ttable is 1.117975 < 1.67591 so that Ha is rejected and Ho is accepted. And the coefficient of Current Ratio is positive at 0.014469. With a significance level of 0.2689 > 0.05. So it can be concluded that the Current Ratio partially has no positive and insignificant effect on ROA.

Quick Ratio (QR) partially has no negative and insignificant effect on Return On Asset (ROA). This can be seen from the t-test (partial) where the value of tcount < ttable is -0.474687 < 1.67591 so that Ha is rejected and Ho is accepted. And the Quick Ratio coefficient is negative at 0.007406. With a significance level of 0.6371 > 0.05. So it can be concluded that the Current Ratio partially has no negative and insignificant effect on ROA.

3. Debt to Asset Ratio (DAR) partially has a negative and significant effect on Return On Assets (ROA). This can be seen from the t-test (partial) where the value of tcount > ttable is 4.682503 > 2.00856 so Ha is accepted and Ho is rejected. And the coefficient of Debt to Asset Ratio is negative at -0.22234. With a significance level of 0.0000 < 0.05. So it can be concluded that the Debt to Asset Ratio partially has a negative and significant effect.
on ROA. Debt to Equity Ratio (DER) partially positive and significant effect on Return On Assets (ROA). This can be seen from the t-test (partial) where the value of tcount > ttable is $2.878803 > 2.00856$ so that Ha is accepted and H0 is rejected. And the coefficient of Debt to Equity Ratio is positive at $0.011771$. With a significance level of $0.0059 < 0.05$. So it can be concluded that the Debt to Equity Ratio partially has a positive and significant effect on ROA. Current Ratio, Quick Ratio, Debt to Asset Ratio, and Debt to Equity Ratio simultaneously have a significant and significant effect on ROA. This can be seen from the F (simultaneous) test where the calculated F value is greater than the F table, namely $19.69644 > 2.56$, so H0 is rejected and Ha is accepted. With a significance level of $0.000000 <0.05$. So it can be concluded that the Current Ratio, Quick Ratio, Debt to Asset Ratio, and Debt to Equity Ratio simultaneously have a significant and significant effect on ROA.

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