

Factors Affecting Profitability: The Case of Coal Mining Sector Listed Firms in the Indonesia Stock Exchange (IDX)

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Abstract

This comprehensive study aims to determine the factors that affect profitability in coal mining companies listed on the Indonesia Stock Exchange (IDX). The data used in this study are secondary. The population in this study consists of coal mining companies listed on the Indonesia Stock Exchange, comprising 34 companies, of which 11 were selected as samples. The data collection technique used is the Library study technique. The research method used is quantitative research. The analysis model used in this study is descriptive. The results show that simultaneously, the current ratio, quick ratio, cash ratio, debt-to-assets ratio, and debt-to-equity ratio have a significant effect on profitability. To some extent, the current ratio has a positive impact on profitability. To some extent, the quick ratio has a positive impact on profitability. To some extent, the cash ratio has a positive impact on profitability. To some extent, the debt-to-assets ratio has a positive impact on profitability. Partially, the debt-to-equity ratio does not affect profitability.

Keywords: Profitability, Coal Mining Sector, Listed-firms, Indonesia Stock Exchange

1. Introduction

A business activity (business) carried out by a company certainly has several goals that the owner and management want to achieve. The company owner wants optimal profit from the business he runs. Therefore, every owner wants the capital invested in their business to be returned quickly. In addition, the owner also expects returns on the capital invested, allowing it to provide additional capital (new investment) and generate prosperity for the owner and all employees ([Kasmir, 2019](#)). The coal industry sector is a key supporter of a country's economic development, as it plays a vital role in providing energy resources that are essential for a country's economic growth. Coal is an abundant natural resource with great potential for use as fuel in various industrial sectors.

The growth of the coal sector industry is also supported by its production target activities, where the coal production target for this year is approximately 550 million tons. For next year, the production of this black gold commodity is estimated to increase sharply to around 609 million tons ([id.linkedin.com](https://www.linkedin.com)). Domestic coal sector industry companies, in collaboration with the Ministry of Energy and Mineral Resources (ESDM), have set a coal production target for 2023

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of 694 million tons, representing an increase of almost 5% from the previous year, which reached 663 million tons. Meanwhile, coal demand projections from the electricity sector (PLN and IPP) are also expected to increase significantly throughout 2023, reaching 161.15 million tons from an estimated 115 million tons for 2022. The S&P Global Commodity Insights survey stated that miners in Indonesia would increase production of low- to medium-calorie coal due to rising domestic demand, with expectations of a rebound in the industrial and residential sectors. Meanwhile, according to a report released mid-last month by the International Energy Agency (IEA), global coal use in 2022 increased by 1.2% to reach 8 billion tons, surpassing the previous record set in 2013. The IEA also predicts that coal use will peak this year or in 2023 and then stabilize until 2025, after which it is expected to decline again.

Along with the increasingly rapid development of the business world, this will have a significant impact on intense competition, especially among similar companies. With the increase in the Company's production, the profits generated by the Company also increase. The profit obtained by the Company is one of the main objectives of the Company in carrying out its activities. The profit obtained by the Company is used for various interests, one of which is to improve the welfare of the Company. To measure profit, the profitability ratio can be used. The author uses the coal industry in this study because mining sector companies, especially those in the coal sector, are known to have significantly larger debts compared to non-coal industries in meeting their funding needs. The use of debt, especially very large long-term debt, will undoubtedly make it easier for the mining sector to finance all its business needs, which require substantial funds and a considerable amount of time to yield results from its efforts. However, the mining sector must bear increasingly high financial risks. This is because the interest burden and principal installments of loans that must be borne are increasing. As a consequence, the possibility of coal sub-sector companies going bankrupt will be even greater.

The average ROA growth in coal mining companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2023 fluctuated annually. The highest average ROA growth was achieved in 2022, at 26.24%, while the lowest average ROA, which decreased drastically, occurred in 2020, with growth reaching only 4.78%. The slowing return on assets (ROA) growth in coal mining companies listed on the Indonesia Stock Exchange (IDX) is estimated to be influenced by two factors: internal and external factors. Internal factors can manifest as decreasing profits and increasing expenses, while external factors include macroeconomic conditions, market fluctuations, inflation, government regulations, natural disasters, and others. This will undoubtedly pose an obstacle for the company in managing its financial performance. The average current ratio growth in coal mining companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2023 fluctuated annually. The highest average current ratio growth was observed in 2022, at 422.61%, while the lowest average current ratio growth occurred in 2019, at 167.69%. Increasing current ratio growth is not always followed by an increase in ROA, and decreasing current ratio growth is also not always followed by a decrease in ROA. A company's current ratio, when high, significantly reduces the risk of it failing to meet its short-term obligations, providing a sense of financial stability to shareholders and reducing uncertainty for potential investors. However, a high current ratio may also indicate that the company is holding excess cash, potentially lowering its profitability. This highlights the importance of maintaining a balanced current ratio, as one that is too high could mean the company is holding more cash than necessary. Research findings on the relationship between the current ratio and profitability are varied. While some studies, such as those by [Saragih et al. \(2015\)](#) and [Suryani and Hamzah \(2022\)](#), suggest a positive impact, and [Alfiani \(2022\)](#), indicate no significant effect. This

diversity of findings provides a comprehensive view and ensures that the audience is well-informed about the different perspectives in the field.

The average growth of the quick ratio in coal sub-sector mining companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2023 fluctuated each year. The highest average growth in the quick ratio was observed in 2022, at 404.52%, while the lowest average growth in the quick ratio was recorded in 2019, at 151.12%. The increase in the development of the fast ratio is not always followed by an increase in ROA, and a decrease in the growth of the quick ratio is also not always followed by a decline in ROA. The increase in the quick ratio's value indicates the company's high liquidity. This quick ratio does not include prepaid expenses and inventory from current assets that are difficult to convert into cash. Research conducted by [Wati et al. \(2024\)](#) stated that the growth of the quick ratio has a positive effect on profitability.

The average cash ratio growth in coal sub-sector mining companies listed on the Indonesia Stock Exchange (IDX) fluctuated annually from 2019 to 2023, indicating a volatile financial performance. The highest average cash ratio growth was achieved in 2023, at 219.96%, while the lowest average growth was recorded in 2019, at 55.1%. It's essential to note that an increase in ROA does not always accompany increasing cash ratio growth, and decreasing cash ratio growth is also not always associated with a decrease in ROA. Cash, being the most liquid asset, plays a crucial role in a company's financial health. However, a liquidity (cash ratio) that is too high can lead to reduced profits, as the company's funds are tied up due to the non-circulation of cash. This highlights the trade-off between liquidity and profitability. In contrast, funds embedded in less productive current assets will not increase profits, indicating that the cash ratio cannot be increased. Funds that should be used to generate profit are instead used to pay liabilities.

The average growth of the debt-to-asset ratio in coal mining companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2023 fluctuated each year. The highest average growth in the debt-to-asset ratio was observed in 2019, at 42.89%. The lowest average growth rate was achieved in 2023, at 33.91%. These fluctuations in the debt-to-asset ratio can have significant implications for the financial health of the companies. For instance, a higher ratio could indicate a greater reliance on debt, potentially leading to higher financial risk. However, it's important to note that increasing growth in the debt-to-asset ratio is not always accompanied by an increase in ROA, and decreasing growth in the debt-to-asset ratio is also not always followed by a decrease in ROA. The debt-to-asset ratio is measured in numbers or percentages. The higher the value, the greater the proportion of assets funded by debt. This is especially true if interest rates rise or income falls, which can interfere with the Company's ability to pay debts. This also indicates a higher level of financial risk. However, it's important to note that the debt-to-asset ratio does not always correlate with profitability. For instance, a company with a high debt-to-asset ratio may still generate good profits if the assets financed by debt generate high income. A practical example of this could be a coal mining company that uses debt to invest in high-yield mining projects, thereby generating significant profits despite the high debt.

The average growth of the debt-to-equity ratio in coal mining companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2023 fluctuated each year. The highest average growth in the debt-to-equity ratio was observed in 2019, at 102.24%. The lowest average growth rate was achieved in 2023, at 69.5%. Increasing growth in the debt-to-asset ratio is not always followed by an increase in ROA, and decreasing growth in the debt-to-equity ratio is also not always followed by a decrease in ROA. The higher the debt-to-equity ratio, the greater the Company's

use of debt. For investors, on the one hand, a company with high debt has little potential to pay dividends because the Company's profits are eroded to pay debts. On the other hand, the use of high debt also has the potential to maximize sales and is expected to generate greater profits, even if the debt can be covered well.

2 Literature Review

The financial performance of a company can be assessed by analyzing its financial statements. Analyzing a company's financial condition can be done in several ways, but analyzing existing ratios is a common approach to evaluating its economic performance. Ratio analysis involves calculating specific ratios based on a financial statement and then interpreting the results of those ratios. Through financial analysis, companies can assess their performance in terms of profitability (Profitability Ratio), Liquidity (Liquidity Ratio), efficiency, and the effectiveness of their fund utilization and cost management. By using these ratios, companies can assess the development of their financial condition and take appropriate action based on the available information. Ratio analysis will also help a company leader make informed decisions and consider what the company needs to achieve and the prospects it faces in the future.

Several factors that influence financial performance in the company used in this study are the Current Ratio, Quick Ratio, Cash Ratio, debt-to-assets ratio, and debt-to-equity ratio, which are independent variables. The financial performance ratio used in this study is profitability, measured by Return On Assets, which is the dependent variable. Research conducted by [Lestari \(2021\)](#) showed that Liquidity, Solvency, and Profitability have a positive effect on the company's financial performance, while research conducted by [Diana and Osesoga \(2020\)](#) and research conducted by [Putra and Triyonowati \(2023\)](#) showed that liquidity, solvency, and profitability have an adverse effect on the company's financial performance.

Profitability is the outcome of various policies and decisions made by the company ([Brigham & Houston, 2006](#)). The company has a goal to achieve, namely, to maximize profit. Achieving maximum profit has become a company's primary goal, enabling it to prioritize the peace of mind of its owners and employees while developing high-quality new products and making strategic investments ([Sakdiyah et al., 2020](#)). However, a level of profitability that is too high will lead investors to conclude that the company has a high level of profit. This raises investor suspicions about the company as if there is a monopoly and will increase investor expectations and demands on the company. Therefore, managers will strive to maintain the company's annual profits by implementing effective profit management ([Jeniffer & Sudirgo, 2020](#)). Profitability is one of the key benchmarks used by investors in assessing a company's performance to inform investment decisions. This ratio can be used to compare the various components in the financial statements, prioritizing the balance sheet and income statement. It can also make measurements over several periods, aiming to track the company's development over a specific time frame, either increasing or decreasing, while identifying the causes of these changes. Profitability in a company is indicated by the profit generated from sales and investment income. Essentially, this ratio indicates the company's efficiency ([Nursophia et al., 2023](#)).

Profitability can be measured by several key metrics, including Return on Assets, Return On Equity, Gross Profit Margin, Operating Profit Margin, and Net Profit Margin ([Hery 2018](#)). One of the profitability ratios often used by investors is the Return on Assets. Return on Assets (ROA) can indicate the level of assets that can generate a net profit. In financial statement analysis, this ratio is often highlighted because it shows the company's success in generating profits based on its total assets. The higher the return on assets (ROA) generated by the

company, the higher the net profit generated from each fund invested in total assets. Conversely, if the ROA generated is lower, the lower the net profit generated from each fund invested in total assets. The Return on Assets is influenced by two factors: the turnover of operating assets (the rate of turnover of assets used for operations) and the Profit Margin ([Munawir, 2014](#)). The company's ability to meet its short-term obligations can be measured through its liquidity ratio.

Liquidity is an analysis that measures a company's ability to meet its short-term obligations. The higher the percentage of this ratio, the more liquid a company is ([Kasmir, 2019](#)). According to ([Kasmir, 2019](#)), there are several types of liquidity ratios, namely the current ratio, the quick ratio, and the cash ratio. The liquidity ratios used in this study are the current ratio, the quick ratio, and the cash ratio. The current ratio compares current assets to current liabilities and is the most commonly used measure to determine a company's ability to meet its short-term obligations. The current ratio shows the extent to which current assets cover current liabilities. The greater the ratio of current assets and current liabilities, the higher the company's ability to cover its short-term obligations. A low current ratio is typically considered a sign of potential problems in liquidation. Conversely, a current ratio that is too high is also undesirable, as it indicates excessive idle funds that can ultimately reduce the company's profitability ([Yordan et al., 2020](#)).

A quick ratio is used to measure a company's ability to meet its short-term obligations. Calculation of the fast ratio by subtracting current assets from inventory. This is because inventory is an element of current assets that has low liquidity and often experiences price fluctuations, which can cause losses if liquidity is not maintained. This ratio indicates the ability of the most liquid current assets to cover current liabilities. The quick ratio is generally considered good; the greater this ratio, the better the company's condition ([Yordan et al., 2020](#)). This Cash Ratio is a measure that indicates the cash position sufficient to cover current liabilities. In other words, the cash ratio describes the cash capacity available for managing current liabilities in the relevant year ([Yordan et al., 2020](#)). The relationships between the current ratio, quick ratio, and cash ratio and the company's profit are very close. With an excess of bad current assets, the company's profitability will be reduced. Conversely, as the company's ability to generate profits increases, its ability to pay its short-term debts will also improve. To measure a Company's ability to pay off debts or loans within a specific time, it is better to use the solvency ratio. Solvency describes the extent to which the owner's capital can cover debts to external parties. The higher this ratio, the greater the company's ability to pay its obligations. A company that uses debt will be riskier than a company without debt because, in addition to having business risks, companies that use debt have financial risks. This means that the company has a high risk, which will make stock investment less attractive, thus affecting the decline in stock return values. The ratios used to measure solvency in this study are the debt-to-equity (DER) ratio and the total debt-to-asset ratio. The higher debt-to-equity ratio (DER) indicates a relatively high risk for the company. As a result, investors tend to avoid stocks with high debt-to-equity (DER) ratios. Total Debt to Total Assets Ratio is used to measure the comparison between total debt and total assets. If the ratio is high, it means that funding through debt is increasing, which makes it increasingly difficult for the company to obtain additional loans, as it is feared that the company may not be able to pay its debts using its existing assets. Research conducted by [Dauda et al. \(2021\)](#) entitled "The Effect of Liquidity and Solvency on Profitability in Telecommunication Companies Listed on the Indonesia Stock Exchange for the 2011-2018 Period" the results of the study showed that CR as a liquidity ratio variable had a positive and significant effect on profitability as measured by return on equity (ROE) in

Telecommunication Companies Listed on the Indonesia Stock Exchange for the 2011-2018 period and the DER variable as a variable from the capital structure has a positive and significant effect on financial performance as measured by return on equity (ROE) in Telecommunication Companies Listed on the Indonesia Stock Exchange. Research conducted by [Agatha \(2022\)](#) entitled "The Effect of Liquidity and Solvency Ratios on Profitability in Manufacturing Companies in the Consumer Goods Industry Sector Listed on the IDX" the results of the study showed that liquidity (current ratio) partially had an adverse effect and did not have a significant impact on profitability. The solvency ratio (debt-to-equity ratio) had an important, albeit partial, positive impact on profitability. Simultaneously, liquidity (as measured by the current ratio) and solvency (as indicated by the debt-to-equity ratio) impacted profitability.

The Effect of Current Ratio, Quick Ratio, Cash Ratio, Debt to Assets Ratio, and Debt to Equity Ratio on Profitability. The company has a goal to achieve, namely, to maximize profit. Obtaining maximum profit has become a company's primary goal, enabling it to meet the interests of its owners and employees, develop new products, and make strategic investments ([Sakdiyah et al., 2020](#)). However, a level of profitability that is too high will lead investors to conclude that the company has a high level of profit. This raises investor suspicion of the company, such as a monopoly, and will increase investor expectations and demands on the company. Therefore, managers will try to keep the company's profit stable every year by implementing profit management ([Jeniffer & Sudirgo, 2020](#)). According to [Aryani \(2021\)](#), the high or low profitability of a company can be influenced by several factors, namely Liquidity, Solvency, Working Capital Turnover, and Sales Growth. According to [Dauda et al. \(2021\)](#), the effect of Liquidity and Solvency on Profitability in Telecommunication Companies Listed on the Indonesia Stock Exchange for the period 2013-2017. The results show that Liquidity and Solvency have an effect on Profitability in Telecommunication Companies Listed on the Indonesia Stock Exchange for the period 2013-2017. Research conducted by [Sudarsono et al. \(2019\)](#) shows that Liquidity has a positive and significant effect on profitability. Meanwhile, research conducted by [Fitriana et al. \(2022\)](#) shows that Liquidity does not have a substantial impact on profitability. Research conducted by [Prijantoro et al. \(2022\)](#) shows that Solvency has a positive and significant effect on profitability. Meanwhile, research conducted by [Ersyafdi et al. \(2022\)](#) shows that Solvency does not have a substantial impact on profitability.

The Effect of Current Ratio on Profitability. According to [Fitriana et al. \(2022\)](#), a good current ratio is when a company's current assets exceed its current liabilities. A large current ratio indicates that a company is more liquid, meaning it can pay off its short-term debts on time by utilizing its current assets without needing to borrow from other parties. Still, if the current ratio is too large, it will have an impact on the company's profit because the company is not utilizing current assets to generate profits. This finding is supported by previous research, specifically, the studies conducted by [Ivander \(2024\)](#), which found that the current ratio has a positive and significant impact on profitability. The current ratio of coal sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period fluctuated due to an increase in current assets accompanied by an increase in current debt; however, the companies were able to pay their short-term debt.

The Influence of Quick Ratio on Profitability. According to ([Kasmir, 2019](#)), the quick ratio indicates the company's ability to meet or pay its current liabilities or debts using only its current assets without considering the value of inventory. This is achieved by subtracting the value of inventory from the total value of current assets. This is done because inventory is deemed to

require a relatively longer time to be released if the company needs quick funds to pay its obligations compared to other current assets. This finding is supported by previous research conducted by [Nadhifa and Budiyanto \(2017\)](#), which stated that the quick ratio has a positive effect on profitability. The quick ratio of coal sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period fluctuated due to drastic increases in current assets, a decrease in inventory, and significant increases in current liabilities.

The Effect of Cash Ratio on Profitability. According to [\(Kasmir, 2019\)](#), the cash ratio is used to measure the amount of cash available to pay debts. The availability of money can be demonstrated by the presence of cash funds or cash equivalents, such as checking accounts or savings accounts in banks, that can be withdrawn at any time. This finding is supported by previous research conducted by [Nadhifa and Budiyanto \(2017\)](#), which stated that the cash ratio has a positive effect on profitability. The cash ratio in coal sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period fluctuated due to an increase in the company's current debt, indicating inefficiency.

The Effect of Debt to Assets Ratio on Profitability. According to [\(Kasmir, 2019\)](#), a high ratio indicates that the company is increasing its debt funding, making it difficult for the company to obtain additional loans because it is feared that the company will not be able to cover its debts with the assets it owns. Likewise, if the ratio is low, the smaller the company is financed with debt. This finding is supported by previous research conducted by [Anggraeni and Nasution \(2022\)](#), which both stated that the Debt-to-Assets Ratio has a positive effect on profitability. The debt-to-assets ratio in coal sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period fluctuated due to the high use of debt, which is a risk to the company.

The Effect of Debt-to-Equity Ratio on Profitability. According to [Hery \(2016\)](#), the higher the debt-equity ratio, the smaller the amount of owners' capital that can be used as collateral for the debt. The smaller the amount of capital a company owns, the greater its debt burden, which can reduce the profit it earns. This finding is supported by previous research conducted by Vira Octavianty in 2021 and Indah Yolanda in 2022, which both stated that the Equity Ratio has a positive effect on profitability. The debt-to-equity ratio in coal sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period fluctuated due to the increasing burden on creditors of these companies.

3. Research Method

The research was conducted in the coal mining sector of companies listed on the Indonesia Stock Exchange. The independent variables are the Current Ratio (X₁), Quick Ratio (X₂), Cash Ratio (X₃), Debt-to-Assets Ratio (X₄), and Debt-to-Equity Ratio (X₅), and the dependent variable is the Profitability (Y). The research method used by the author is the associative method which is used to explain and determine the relationship between the independent variables: Current Ratio (X₁), Quick Ratio (X₂), Cash Ratio (X₃), Debt to Assets Ratio (X₄), and Debt to Equity Ratio (X₅) with the dependent variable is Profitability (Y). The profitability indicator is the return on assets (ROA). The liquidity indicators are the current ratio, quick ratio, and cash ratio. The solvency indicators are the debt-to-assets ratio and the debt-to-equity ratio. The population in this study consisted of 34 Coal Sub-Sector Companies Listed on the Indonesia Stock Exchange (IDX) for the period of 2019-2023. This study employs a purposive sampling method, a sample selection technique that involves determining a sample based on specific criteria adjusted to the research objectives. The

requirements set are: a. Research on Coal Sub-Sector Companies Listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 Period. b. Coal Sub-Sector Companies Listed on the Indonesia Stock Exchange (IDX) that issue and publish annual financial reports from 2019-2023. After going through the sample selection process, the samples that meet the criteria are 11 Coal Sub-Sector Companies listed on the Indonesia Stock Exchange (IDX) in 2019 - 2023. Based on these sample criteria, the 11 selected Coal Sub-Sector Companies are PT Adaro Energy, PT Golde Energy Mines, PT Indika Energy, PT Indo Tambanraya Megah, PT Mitrabara Adiperdanam PT Bukit Asam, PT TBS Energy Utama, PT RIG Tenders Indonesia, PT Sumber Energy Global, PT Dana Brata Luhur and PT Trans Power Marine. In this study, the data collection method used is documentation, as the author collects data based on documents such as annual financial reports of companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2023. In this study, the data collection instrument used is the literature study technique. Data collection through literature studies is carried out by reviewing the company's financial reports, books or literature, and scientific journals that are relevant to the problems being studied to obtain a strong theoretical basis and documentation, namely by collecting data from the company's financial reports that have been recorded or officially published, in the form of an Annual Report issued by the official website of the Indonesia Stock Exchange. The type of data used is secondary data, namely data that is not directly obtained from the first party but in the form of financial reports of cosmetics and household needs sub-sector companies published on the Indonesia Stock Exchange for the period 2019-2023. The data source was obtained from www.idx.co.id, the official website of the Indonesia Stock Exchange. The analysis model used is multiple regression analysis.

4. Findings and Discussions

This multiple linear regression analysis is used to determine factors affecting profitability. The results of the multiple linear regression analysis can be seen in the following table:

Table 1. Regression Result

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-10.970	2.360		-4.649	.000
	Current Ratio	.062	.013	.510	4.706	.000
	Quict Ratio	.036	.014	.268	2.501	.016
	Cash Ratio	.043	.016	.211	2.682	.010
	DAR	.119	.054	.144	2.195	.033
	DER	-.010	.014	-.050	-.724	.473

Based on the results above, the multiple linear regression equation can be arranged as follows:

$$Y = -10.970 + 0.062X_1 + 0.036X_2 + 0.043X_3 + 0.119X_4 - 0.010X_5$$

The constant value of -10.970 shows that if the variables Current Ratio, Quick Ratio, Cash Ratio, DAR, and DER are considered constant (0), then Profitability is -10.970. The regression coefficient of the Current Ratio variable (X_1) is 0.062. This means that every 1% increase in the Current Ratio will increase Profitability by 0.062. The regression coefficient of the Quick Ratio variable (X_2) is 0.036. This means that every 1% increase in the Quick Ratio will increase Profitability by 0.036. The regression coefficient of the Cash Ratio variable (X_3) is

0.043. This means that every 1% increase in Cash Ratio will increase Profitability by 0.043. The regression coefficient of the DAR variable (X_4) is 0.119. This means that every 1% increase in DAR will result in a 0.119% increase in profitability. The regression coefficient of the DER variable (X_5) is -0.010. This means that every 1% increase in DER will decrease Profitability by 0.010.

Table 2. F-test

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10879.794	5	2175.959	79.152	.000 ^b
	Residual	1347.060	49	27.491		
	Total	12226.854	54			

a. Dependent Variable: Profitability

b. Predictors: (Constant), DER, Current Ratio, DAR, Cash Ratio, Quick Ratio

Based on the results above, the F_{count} value of 79.152 is greater than 2.40 F_{table} and significant for the Current Ratio, Quick Ratio, Cash Ratio, DAR, and DER, with a p-value of 0.000 or less than 0.05. The regression model of the Current Ratio, Quick Ratio, Cash Ratio, DAR, and DER simultaneously has an effect and is significant on Profitability.

Table 3. t-test

Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-10.970	2.360		-4.649	.000
	Current Ratio	.062	.013	.510	4.706	.000
	Quick Ratio	.036	.014	.268	2.501	.016
	Cash Ratio	.043	.016	.211	2.682	.010
	DAR	.119	.054	.144	2.195	.033
	DER	-.010	.014	-.050	-.724	.473

Based on the table above, it can be seen that the Current Ratio has a t-value = 4.706 > t-table = 1.677 with a significance level of 0.000 < 0.05, so H_0 is rejected, and H_a is accepted. So, the Current Ratio has a positive effect on Profitability. The Quick Ratio has a t-value = 2.501 > t-table = 1.677 with a significance level of 0.016 < 0.05, so H_0 is rejected, and H_a is accepted. So, the Quick Ratio has a positive effect on Profitability. The Cash Ratio has a t-value = 2.682 > t-table = 1.677 with a significance level of 0.010 < 0.05, so H_0 is rejected and H_a is accepted. So, the Cash Ratio has a positive effect on Profitability. Debt to Assets Ratio has a t-value = 2.195 > t-table = 1.677 with a significance level of 0.033 < 0.05, then H_0 is rejected and H_a is accepted. Therefore, the Debt-to-Assets Ratio has a positive effect on Profitability. Debt to Equity Ratio has a t-value = -0.724 < t-table = -1.677 with a significance level of 0.473 > 0.05, then H_0 is rejected and H_a is accepted. Therefore, the Debt-to-Equity Ratio does not affect Profitability.

The Effect of Current Ratio, Quick Ratio, Cash Ratio, Debt to Assets Ratio, and Debt to Equity Ratio on Profitability in Coal Subsector Companies Listed on the Indonesia Stock Exchange. The first hypothesis analysis reveals that simultaneously, there is an effect of the Current Ratio, Quick Ratio, Cash Ratio, Debt-to-Assets Ratio, and Debt-to-Equity Ratio on Profitability in Coal Subsector Companies Listed on the Indonesia Stock Exchange. This is evidenced by the F_{count} value being greater than the F_{table} value. The results of the study align with those of research conducted by [Rizki and Yandri \(2019\)](#), [Sari et al. \(2020\)](#), and [Akbar \(2022\)](#), which suggest that liquidity and solvency have a significant impact on profitability. Profitability is a ratio that measures a company's ability to generate profits by utilizing its resources, as well as evaluating the overall effectiveness of management, which is determined by the size of the profits from sales and investment activities. For the company, profitability is an indicator of the level of net profit after tax and total sales, specifically whether the company generates a substantial net profit from its sales. Several factors that affect profitability are liquidity and solvency. The results of this analysis align with the research data presented, which indicate growth in profitability, Liquidity, and Solvency during the period 2019-2023. During the research year, the data have fluctuated up and down. In general, the increase and decrease in Liquidity and Solvency have a very significant contribution to changes in profitability.

The Effect of Current Ratio on Profitability. The results of the test carried out on the Current Ratio show that it partially affects Profitability (ROA). The test results yielded a value of $t_{\text{count}} = 4.706 > t_{\text{table}} = 1.677$, with a significance level of $0.000 < 0.05$. Therefore, H_0 is rejected, and H_a is accepted. So, the Current Ratio has a significant effect on profitability. This finding aligns with research conducted by [Ivander \(2024\)](#), which indicates that the Current Ratio has a positive and significant effect on profitability. The current ratio in coal sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period fluctuated due to an increase in current assets, accompanied by an increase in current liabilities; however, the companies were able to pay their short-term debts.

The Effect of Quick Ratio on Profitability. The results of testing the Quick Ratio indicate that it has a positive impact on Profitability (ROA). The results of partial testing have a t-count value of $2.501 > t_{\text{table}} = 1.677$, with a significance level of $0.016 < 0.05$. Therefore, H_0 is rejected, and H_a is accepted, indicating that the Quick Ratio has a positive and significant effect on Profitability (ROA). This finding is supported by previous research conducted by [Nadhifa and Budiyanto \(2017\)](#), which stated that the quick ratio has a positive effect on profitability. The quick ratio in coal sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period fluctuated due to a drastic increase in current assets, a decrease in inventory, and a drastic increase in current liabilities.

The Effect of Cash Ratio on Profitability. The results of the tests carried out on the Cash Ratio indicate that it has a partial positive effect on Profitability (ROA). The test results obtained a t-count value of $2.682 > t_{\text{table}} = 1.677$ with a significance level of $0.000 < 0.05$, so H_0 is rejected, and H_a is accepted. So, the Cash Ratio has a significant effect on profitability. This finding is supported by previous research conducted by [Nadhifa and Budiyanto \(2017\)](#), which stated that the cash ratio has a positive effect on profitability. The cash ratio in coal sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period fluctuated due to an increase in the company's current debt, indicating inefficiency.

The Effect of Debt to Assets Ratio on Profitability. The results of the test conducted on the Debt-to-Assets Ratio show that it has a partial positive effect on Profitability (ROA). The test

results obtained a t-count value of $2.195 > t\text{-table} = 1.677$ with a significance level of $0.033 < 0.05$, so H_0 is rejected, and H_a is accepted. Therefore, the debt-to-assets ratio has a significant impact on profitability. This finding is supported by previous research conducted by [Anggraeni and Nasution \(2022\)](#), which stated that the debt-assets ratio has a positive effect on profitability. The debt-to-assets ratio in coal sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period fluctuated due to the high debt used by the companies, which was considered risky.

The Effect of Debt-to-Equity Ratio on Profitability. The test results conducted on the Debt-to-Equity ratio show that it does not affect Profitability (ROA). The test results obtained a t_count value = $-0.724 < t\text{-table} = -1.677$ with a significant level of $0.473 > 0.05$, so H_0 is rejected and H_a is accepted. Therefore, the debt-to-equity ratio has no significant effect on profitability. The Debt-to-Equity Ratio is a measure that indicates a company's ability to meet its obligations if it were to become liquid. This ratio can be calculated from long-term items such as fixed assets and long-term debt ([Harahap, 2017](#)). The debt-equity ratio measures a company's ability to cover long-term debt payments using its capital or equity from shareholders as leverage. A high Debt-to-Equity Ratio indicates that the company can operate with debt as its primary source of capital. This trade debt, when used properly, can generate increasing profits compared to operating with its capital. This is supported by previous researchers, namely research conducted by [Hantono et al. \(2019\)](#), which stated that the Debt-to-Equity Ratio does not have a significant effect on Profitability (ROA), and research conducted by [Ambari & Sudarma \(2020\)](#), which stated that the Debt-to-Equity Ratio does not affect profitability. The debt-to-equity ratio in coal sub-sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period fluctuated due to the increasing burden on creditors for the company.

5. Conclusion

There is a significant influence of the variables Current Ratio, Quick Ratio, Cash Ratio, Debt-to-Assets Ratio, and Debt-to-Equity Ratio on the Profitability (ROA) variable. For the Company, it is beneficial to periodically evaluate its finances to control the key factors that impact profitability. The Company should pay attention to its liquidity level by monitoring the Current Ratio to ensure the Company's ability to meet short-term obligations and increase profitability. Based on the study's results, the Company is advised to effectively monitor and manage the Quick Ratio to increase profitability by ensuring its ability to meet short-term obligations without relying on inventory. The Company's management is advised to develop an effective cash management strategy to improve the Cash Ratio and ultimately increase the Company's profitability. The Company should prioritize debt management by monitoring its debt-to-assets ratio to reduce financial risk and increase profitability by optimizing the use of equity.

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