

The Effect of the Cash Ratio on the Operating Profit Case Study at PT. Pupuk Indonesia year 2019-2023

Nurul Ulawati Fauziah¹ and Sa'ad Noor²

¹Correspondence Author: nurululawati@gmail.com

^{1,2} Piksi Ganesha Polytechnic, Bandung, Indonesia

INDEXING	ABSTRACT
Keywords: Keyword 1; Cash ratio Keyword 2; Liquidity Keyword 3; Profitability	This study clarified the relationship between profitability and liquidity by concentrating on how the cash ratio affects operating profit. The purpose of this study, which uses Pearson's correlation analysis technique and R-Square analysis technique, is to determine and investigate the impact of the cash ratio on the company's operating profit in greater detail. It is hoped that this study will further shed light on the relationship between liquidity management and the operational performance of companies. The research relies on PT Pupuk Indonesia's annual financial data from 2019 to 2023 is used as the basis for the research. Operating profit is a dependent variable, and cash ratio is an independent variable. The analysis's findings indicate a strong relationship between operating profit and PT Pupuk Indonesia's cash ratio. According to the results of the R Squared determination test, the cash ratio can explain as much as 81.7% of the variation in operating profit. In this study, PT Pupuk Indonesia's cash ratio and operating profit were found to be significantly positively correlated. These results show that the improvement in the company's operating performance can be attributed to increased liquidity. Nevertheless, the management of PT Pupuk Indonesia must take into account other elements that can impact the company's profitability, such as market conditions, marketing tactics, and cost-effectiveness, to create a better long-term strategic plan.

Article History

Received 20 August 2024; Revised 28 August 2024; Accepted 14 September 2024

INTRODUCTION

Business continuity and operational stability are greatly influenced by the company's financial condition. In financial management, the cash ratio is one of the important indicators that reflects the company's liquidity. The amount of cash held plays an important role in most companies because it provides the ability to pay in cash and directly affects the performance of the company (Nguyen Thanh, 2019). The amount of cash held by the company is understood as cash and cash equivalents such as bank deposits and short-term securities which are able to be quickly converted into money (Bates et al., 2009). The cash ratio indicates a company's ability to meet its short-term obligations with available cash and cash equivalents. A higher cash ratio indicates that the company has more assets that can be used to cover its short-term liabilities, which will have a positive impact on financial stability and increase its value. (Ramadani and Ratmono, 2023).

Good cash flow shows that effective cash flow management can increase profitability. This shows how important it is to maintain a balance between cash assets and short-term liabilities to improve the overall financial performance of a company, which is essential for a company's financial health, including its impact on the company's operating profit, as well as described by Surachman and Ningsih (2023).

Earnings management has been an active topic of discussion among accounting (Nagar and Sen, 2016). Operating profit margin (OPM) is a well-supported and easily interpretable parameter from the DuPont framework for understanding firm performance (Maris and Dörner, 2023). Operating profit is one of the important indicators that reflects the company's performance, because operating profit shows the company's ability to generate profits, or profits on revenue generated from ongoing operations. Operating profit represents revenues and expenses that can be controlled by the company's management and used extensively for decision-making. (Jayathilaka, 2020).

As a result, the purpose of this study is to determine the extent to which the cash ratio can affect operating profit at PT Pupuk Indonesia, a company that produces fertilizer, food, and trading. Maintaining adequate liquidity can help companies meet short-term obligations, handle day-to-day operations, and ultimately increase operating profits.

LITERATURE REVIEW

This study provides an in-depth understanding of company management by providing an overview of how effective cash ratio management can affect the company's operational profitability. By knowing this relationship, it is hoped that the company's management can make better decisions about the management of cash ratios and financial strategies that can improve the company's operational performance. Therefore, this study enriches academic research on financial management by providing practical insights into how company management manages the company's operational performance and liquidity. A number of previous studies have shown the relationship between the cash ratio and a company's operating profit and financial performance. Firm growth is a central theme in entrepreneurship research, company, and it is generally seen as a positive performance outcome (Mansikkamäki, 2023). Current profitability level reflects its productivity and operation in its present condition (Liu *et al.*, 2023). For example, research conducted by Aljufri (2023) found the cash ratio to have a significant influence on business profit. In this study, the cash ratio is measured as the ratio of available cash compared to current debt. Companies with higher cash ratios have a better ability to pay debts and generate greater profits. In addition, according to Nasyaroeka's (2020) research on Astra Otoparts companies listed on the Indonesia Stock Exchange, the cash ratio has a significant impact on return on assets, which is a measure of operating profit. This implies that managing liquidity with a healthy cash ratio can improve asset efficiency and increase operating profit.

RESEARCH METHOD

The population in this study includes all companies listed on the Indonesia Stock Exchange (IDX) that have adequate financial data for the 2019-2023 period. In particular, this research is focused on companies operating in the manufacturing or chemical industry, such as PT Pupuk Indonesia. PT Pupuk Indonesia was chosen because it is one of the largest companies in Indonesia's fertilizer and agro-industry producer sectors, with comprehensive financial statements that are available and accessible to the public.

The sample in this study was taken from a wider population, with a focus on PT Pupuk Indonesia. PT Pupuk Indonesia was selected as the main sample based on several criteria, such as the availability of financial data, relevance to the research, and significant scale and impact that enabled it to produce in-depth and representative analysis for other large companies in the same business sector.

The study uses PT Pupuk Indonesia's financial statements for the last 5 years, specifically the 2019-2023 period, which includes cash ratio data, operating profit data, and other supporting data such as total asset data, total revenue data, and other relevant financial indicators for further analysis. This study's data source is PT Pupuk Indonesia's annual report, which is officially published by the company and can be accessed through the official website of PT Pupuk Indonesia, the official website of the Indonesia Stock Exchange (IDX), and secondary data sources such as publications, journal articles, and relevant industry reports that discuss PT Pupuk Indonesia's financial and operational performance.

This study employs quantitative research methods, utilizing both descriptive and quantitative approaches. To prove the influence or not of this study, several quantitative test analysis techniques were carried out with the help of SPSS statistical applications, Pearson correlation analysis calculation techniques, and the R square test. The data was processed from PT Pupuk Indonesia's annual financial statements, which were reported on the company's official website. The data in this study was obtained through literacy studies. Typically, surveys, observations, or experiments collect data for quantitative research methods, which statistical tools then analyze (Ghanad, 2023).

In this study, dependent variables and independent variables are analyzed to understand the effect of cash ratio on operating profit at PT Pupuk Indonesia. The study considers the independent variables, specifically the cash ratio and operating profit, as dependent variables. Cash ratio is a general measure to assess a company's liquidity, which reflects the company's ability to meet its short-term obligations using cash and cash equivalents owned. In general, a low cash ratio indicates liquidity. However, a cash ratio that is too high indicates a large amount of idle capital, which can ultimately hinder the company's ability to generate profits. The cash ratio is the result of a comparison between total current assets and total current debt, which shows that the value of current assets that can be immediately turned into money is several times that of short-term debt (Yahya and Hidayat, 2020).

According to Chabachib *et al* (2019), the signaling theory states that companies with high cash ratios demonstrate the company's ability to meet short-term obligations effectively, which in turn will increase the company's value. The cash ratio has a positive impact on the company's value, indicating that investor opinion can be positively influenced by the company's ability to meet its short-term obligations, which will ultimately increase the company's value. An increase in the company's value will have a positive influence on profitability (Rasyid, 2015). A high cash turnover indicates effective cash flow management, which in turn boosts the company's profitability. The importance of maintaining a balance between cash assets and short-term liabilities to improve overall financial performance is critical to a company's financial health, including its impact on the company's operating profit. (Surachman and Ningsih, 2023)

Operating profit is one of the important indicators that reflects the company's performance, because operating profit shows the company's ability to generate profits, or profits on revenue generated from ongoing operations. Operating profit represents revenues and expenses that can be controlled by the company's management and used extensively for decision-making. Operating profit is also a deeper part of profitability, taking into account all operating expenses and those included in the gross profit calculation. Therefore, all profits generated except interest on debt, taxes, and one-time costs such as the sale of assets are presented as operating profit, which in other terms is also called earnings before interest and taxes (EBIT). (Jayathilaka, 2020).

Operating profit measures a company's fundamental performance by reflecting how well and efficiently its business operations have been run and managed. The measure of operating profit can also be used to assess the extent to which management is able to set selling prices, market the company's products, and maintain relationships with suppliers and customers. Operating profit is the amount of revenue a company generates from ongoing operating activities, calculated as the difference between gross profit and operating expenses. Operating profit is obtained from revenue after deducting expenses, namely cost of goods sold (COGS) and operating expenses. Cost of good sold is the largest burden of the company's main activities, as well as described by Indrayani (2018), Kustono and Agustini (2019), and also Sari and Supriati (2024).

In this study, there are several statistical tools and econometric models used to measure relevance. The cash ratio's effect on operating profit is as follows:

Descriptive statistics are used to explain the characteristics of the data analyzed in this study. Cash ratio and operating profit data sourced from PT Pupuk Indonesia's annual financial statements for the 2019-2023 period are analyzed using mean values, median values, standard deviations, ranges, and minimum and maximum values. The results of these descriptive statistics provide a preliminary overview of the data's variability and ensure that the data meet the assumptions required for the Pearson correlation analysis to be used to test the effect of the cash ratio on operating profit, which will be discussed in more depth in the results and discussion chapters.

For this study, we used inferential statistics to look at how the cash ratio affected PT Pupuk Indonesia's operating profit from 2019 to 2023. We used the company's financial data sources and the Pearson correlation analysis method with the SPSS statistical application version 29. The Pearson correlation analysis results will then be retested using the correlation determination analysis technique (R-squared) to find out how much variation in the cash ratio can explain the variation in operating profit. The results of this inferential statistic will illustrate the extent of the cash ratio's influence on operating profit, which will be explained further in the results and discussion chapter.

To find out how much the cash ratio affects operating profit, the Pearson correlation analysis method was used to test the strength and direction of the linear relationship between the cash ratio and operating profit. The data came from PT Pupuk Indonesia's annual financial statements for the years 2019–2023. This technique is employed due to the numerical nature of both variables, which allows for efficient correlation. Data processing was carried out with the help of the SPSS software statistics application version 29 was used to perform data processing.

In this study, the correlation determination analysis technique (R-squared) was used to find out how much proportion of the variation in operating profit could be explained by the variation in cash ratio. The R-squared value, which ranges between 0 and 1, will explain that the closer to the value of 1, the greater the proportion of the variation in operating profit that can be explained by the variation in the cash ratio.

RESULT AND DISCUSSION

Table 1. Descriptive Statistics

YEAR	CASH RATIO (%)	LABA SURGERY (IDR in Trillion)
2019	25,92	71,11
2020	47,11	71,87
2021	52,88	78,6
2022	78,27	103,85
2023	52,21	79,2

Source : Annual Financial Report of PT Pupuk Indonesia for the period 2019-2023

Table 2. Descriptive Statistics

Variabel	Mean	Minimum (Min)	Maksimum (Max)	Range	Standard Deviation
Cash Ratio (%)	51.27	25.92	78.27	52.35	18.66
Operating Profit (billion rupiah)	80.92	71.11	103.85	32.74	13.34

According to the Table 2, the results of the descriptive statistics can be described as PT Pupuk Indonesia having an average cash ratio of 51.27%; this shows a fairly strong level of liquidity because more than half of its assets are stored in the form of cash or cash equivalents. The average value of the company's cash at its lowest point was 25.92%, which indicates a decrease in liquidity but is still above the minimum threshold. The company's cash ratio peaked at 78.27%, indicating a high amount of cash reserves that may be the result of hoarding or accumulating large amounts of money. There is a significant variation in the cash ratio of 52.35%, which can be influenced by several factors, such as changes in sales, debt payments, and investment decisions. The company's cash ratio fluctuates significantly over time, as evidenced by a standard deviation of 18.66%, which indicates a large variation from the average. Based on these descriptive statistics, it is clear that PT Pupuk Indonesia has a good liquidity ratio and a high average cash ratio. However, there were significant fluctuations in the cash ratio during the study period. The company's management must be able to maintain liquidity stability to ensure that the company can meet the minimum cash ratio for future planning, especially when the cash ratio is below the minimum value.

Based on Table 2, the results of descriptive statistics can be described as PT Pupuk Indonesia having an operating profit of 80.92 billion rupiah, which shows the high profitability of the company's operating activities. At its lowest point, the company's operating profit was 71.11 billion rupiah, demonstrating that even at its lowest point, it can continue to operate profitably. The company's operating profit peaked at 103.85 billion rupiah, demonstrating strong operational performance and the ability to generate high profits. This may be due to higher sales or significant cost savings. The operating profit range of 32.74 billion rupiah shows significant volatility in the company's operational performance over the last 5-year period. Operating profit varies greatly from year to year, as evidenced by a standard deviation of 13.34 billion rupiah, which shows a significant difference from the

average. Based on these descriptive statistics, it is clear that PT. Pupuk Indonesia has a strong average operating profit and good overall operational performance. Despite fluctuations, operating profit shows resilience to changes in the market and operating environment, even at its lowest point. The company's management must supervise and control factors that may affect profitability in order to maintain and improve operational performance in the future.

Table 3. Results of Pearson Correlation Analysis

		CASH RATIO	OPERATING PROFIT
CASH RATIO	Pearson Correlation	1	.904*
	Sig. (2-tailed)		.035
	N	5	5
Operating Profit	Pearson Correlation	.904*	1
	Sig. (2-tailed)	.035	
	N	5	5

Source : IBM SPSS Statistics Version 29 Output Data (processed data, 2024)

Based on table 3, the results of Pearson's correlation analysis technique can be explained by the fact that cash ratio and operating profit have a substantial and profitable relationship. With a Pearson correlation value of 0.904, it shows a strong positive relationship between the two variables. With a significance level of 0.035, it shows a statistically significant relationship at a significant level of 0.05. This shows that an increase in the cash ratio tends to be followed by an increase in operating profit. In other words, the higher the cash ratio owned by the company, the higher the operating profit generated, and vice versa. The results of this study provide important information for company management in understanding the dynamics between the company's liquidity reflected in the cash ratio and the company's operational performance as measured through operating profit.

Table 4. Coefficient of Determination Test Results

Model	Model Summary			Std. Error of the Estimate
	R	R Square	Adjusted R Square	
1	.904 ^a	.817	.756	6,59345

a. Predictors: (Constant), Cash Ratio

Source : IBM SPSS Statistics Version 29 Output Data (processed data, 2024)

According to the calculation shown above, the determination of the correlation efficiency (r^2) between the cash ratio and operating profit is 0.817, or 81.7%. This shows that the variation in the cash ratio explains 81.7% of the variance in operating profit. There is a very strong correlation between the two variables, as shown by the very high determination value. According to these findings, most changes in operating profit are predicted based on changes in cash ratios. In other words, the available evidence shows that an increase in the cash ratio tends to be followed by an increase in operating profit. These results also show that there is a high level of accuracy in the linear regression model that predicts operating profit

based on cash ratio. Nonetheless, there was still an 18.3% variation in operating profit that could not be explained by the cash ratio, which may be due to other factors that were not accounted for in the study.

CONCLUSION

The analysis conducted in this study concludes a very high positive relationship between the cash ratio and operating profit of PT Pupuk Indonesia. The Pearson correlation analysis value of 0.904 indicates that operating profit tends to increase as the cash ratio increases, and vice versa. Operating profit is positively correlated with the cash ratio, with a high level of significance of 0.035. This indicates that there is a real linear relationship between cash ratio and operating profit, with a probability rate of 95%.

This research is expected to provide a significant perspective for company management. By understanding the close relationship between cash ratio and operating profit, management can focus more on managing the company's liquidity through cash ratio. Thus, the increase in operating profit can be driven by an increase in a well-managed cash ratio, which will ultimately improve the company's profitability and overall financial performance. The company's management must also take into account other elements that can impact the company's profitability, such as market conditions, marketing tactics, and cost-effectiveness. By understanding the relationship between liquidity and profitability, companies will be able to create better long-term strategic plans, as well as argued by Edem (2017), Jihadi *et al* (2021), and also Kontuš and Mihanović (2019).

REFERENCES

- Aramana, D. (2021). Pengaruh Cash Ratio, Debt to Equity Ratio dan Asset Growth terhadap Return On asset Pada perusahaan Sub Sektor Hotel, Restoran dan Parawisata yang terdaftar Di Bursa Efek Indonesia (BEI). *Jurnal Sistem Informasi, Akuntansi & Manajemen*, 1(1), 27–37.
- Bates, T. W., Kahle, K. M., & Stulz, R. M. (2009). Why do U.S. firms hold so much more cash than they used to? *Journal of Finance*, 64(5). <https://doi.org/10.1111/j.1540-6261.2009.01492.x>
- Chabachib, M., Hersugondo, H., Ardiana, E., & Pamungkas, I. D. (2019). Analysis of company characteristics of firm values: Profitability as intervening variables. *International Journal of Financial Research*, 11(1), 60.
- Edem, D. B. (2017). Liquidity management and performance of deposit money banks in Nigeria (1986–2011): An investigation. *International Journal of Economics, Finance and Management Sciences*, 5(3), 146-161.
- Ghanad, A. (2023). An overview of quantitative research methods. *International journal of multidisciplinary research and analysis*, 6(8).
- Indrayani, R. (2018). Analysis use of fixed assets depreciation method on company profits. *The Accounting Journal of Binaniaga*, 3(01), 59-66.
- Jayathilaka, A. K. K. R. (2020). Operating Profit and Net Profit: Measurements of Profitability. *OALib*, 07(12), 1–11. <https://doi.org/10.4236/oalib.1107011>
- Jihadi, M., Vilantika, E., Hashemi, S. M., Arifin, Z., Bachtiar, Y., & Sholichah, F. (2021). The effect of liquidity, leverage, and profitability on firm value: Empirical evidence from Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(3), 423-431.

- Kepramareni, P., Pradnyawati, S. O., & Pratiwi, M. A. R. (2021). Laba Ditahan, Laba Operasi, Aliran Kas Operasi, Leverage, Profitabilitas Dan Pengaruhnya Pada Peringkat Obligasi. *WACANA EKONOMI (Jurnal Ekonomi, Bisnis Dan Akuntansi)*, 20(1), 28–37. <https://doi.org/10.22225/we.20.1.3158.28-37>.
- Kontuš, E., and Mihanović, D. (2019). Management of liquidity and liquid assets in small and medium-sized enterprises. *Economic research-Ekonomska istraživanja*, 32(1), 3247-3265.
- Kustono, A. S., & Agustini, A. T. (2019, October). Why accounting is important for SMEs?(case study of tape madu Jaya jember). In *2018 International Conference on Islamic Economics and Business (ICONIES 2018)* (pp. 320-323). Atlantis Press.
- Liu, Y., Yang, B., & Su, Y. (2023). Changes in firm profitability, heterogeneous investor beliefs, and stock returns. *Journal of Management Science and Engineering*, 8(2). <https://doi.org/10.1016/j.jmse.2022.10.004>
- Mansikkamäki, S. (2023). Firm growth and profitability: The role of age and size in shifts between growth–profitability configurations. *Journal of Business Venturing Insights*, 19. <https://doi.org/10.1016/j.jbvi.2023.e00372>
- Maris, R., & Dorner, Z. (2023). An analysis of operating profit margin: a valuable tool for New Zealand dairy farmers. *New Zealand Economic Papers*, 57(3). <https://doi.org/10.1080/00779954.2022.2156383>.
- Nagar, N., & Sen, K. (2016). Earnings management in India: Managers' fixation on operating profits. *Journal of International Accounting, Auditing and Taxation*, 26. <https://doi.org/10.1016/j.intaccaudtax.2016.02.003>.
- Nasyaroecka, J. (2020). *Pengaruh Dominan Cash Ratio dan Debt to Asset Ratio Terhadap Return on Equity dan Return on Assets pada Perusahaan Astra Otoparts Di Bursa Efek Indonesia*. 12(2), 93–104.
- Nguyen Thanh, C. (2019). Optimal Cash Holding Ratio for Non-Financial Firms in Vietnam Stock Exchange Market. *Journal of Risk and Financial Management*, 12(2). <https://doi.org/10.3390/jrfm12020104>
- Ramadani, A., and Ratmono, D. (2023). Financial distress prediction: the role of financial ratio and firm size. *JRAK*, 15(1), 19-26.
- Rasyid, A. (2015). Effects of ownership structure, capital structure, profitability and company's growth towards firm value. *International Journal of Business and Management Invention*, 4(4), 25-31.
- Sari, V. M., & Supriati, D. (2024). Joint Production Cost Allocation in Determining Cost of Goods Production to Optimize Profits. *Research of Accounting and Governance*, 2(1), 13-24.
- Surachman, S. R., & Ningsih, T. (2023). The Effect of Cash Turnover and Quick Ratio on Profitability (Study Of Multinational Companies Producing Chemicals (2019-2021 Period). *Management, and Entrepreneurship*, 1(2), 94–102. <https://doi.org/10.55208/jeme>
- Yahya, A., & Hidayat, S. (2020). The influence of current ratio, total debt to total assets, total assets turn over, and return on assets on earnings persistence in automotive companies. *Journal of Accounting Auditing and Business*, 3(1).