Linking Financial Performance to Profit Growth: Empirical Insights from Pharmaceutical Firms in Indonesia

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ABSTRACT

Profit growth in pharmaceutical companies is regarded as a meaningful indicator of successful financial performance. However, achieving sustained profitability in this sector remains challenging due to structural vulnerabilities, including intense industry competition, a heavy reliance on imported raw materials, and persistent volatility in foreign exchange rates. These external pressures underscore the need for robust financial management strategies to ensure long-term viability. In response to these dynamics, this study investigates the determinants of profit growth among pharmaceutical firms listed on the Indonesia Stock Exchange (IDX) over the 2014–2024 period. Drawing on secondary data sourced from company financial statements, the analysis employs panel data regression to examine the influence of the cash ratio (CR), total asset turnover (TATO), and debt-to-asset ratio (DAR) on profit growth (PG). To complement the regression analysis, the study also applies the Simple Moving Average (SMA) method using a five-year rolling window to forecast future trends in the observed variables. The empirical findings reveal that both CR and TATO exert a positive and statistically significant influence on profit growth, highlighting the importance of liquidity and asset efficiency in enhancing firm profitability. Conversely, DAR does not exhibit a significant effect, suggesting that leverage plays a less critical role in shaping earnings performance within the context of the pharmaceutical industry during the observed period. Forecasting analysis supports these insights. All variables meet the criteria for model feasibility, with Mean Absolute Percentage Error (MAPE) values ranging between 20% and 50%, indicating moderate predictive accuracy. The projections show an upward trend in PG and TATO, while CR remains relatively stable and DAR demonstrates a gradual decline. These trends point to an industry trajectory characterized by improving operational performance, sustained liquidity, and cautious deleveraging. Overall, the results provide relevant empirical evidence on the financial performance drivers in Indonesia's pharmaceutical sector. They also offer practical implications for corporate managers and stakeholders, emphasizing the strategic value of liquidity and asset utilization in fostering profit sustainability under volatile market conditions.

Keywords: Pharmaceutical Companies; Financial Performance; Profit Growth; Forecasting

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INTRODUCTION

Financial challenges remain a fundamental concern in the strategic development and sustainability of corporate entities across industries (Ramayanti et al., 2022; Mamo, 2023). A primary indicator of a firm's financial success is its ability to generate consistent and optimal profit levels in line with shareholder expectations (Elreedy et al., 2021; Refriansyah et al., 2024). In this regard, financial performance serves as a critical metric, often necessitating targeted managerial interventions to preserve financial stability and mitigate potential disruptions (Maulidya et al., 2019). This concern is not limited to traditional manufacturing sectors but is also acutely relevant to the pharmaceutical industry.

As a vital pillar of the healthcare sector in Indonesia, pharmaceutical companies are expected to uphold not only the safety and efficacy of their products but also the resilience of their financial structures (Martani & Aprilya, 2023). The dual pressure of maintaining product quality while navigating dynamic financial environments places pharmaceutical firms in a unique position of operational and financial accountability. Currently, ten pharmaceutical companies are publicly listed on the Indonesia Stock Exchange (IDX), including major players such as Kalbe Farma, Kimia Farma, and Darya Varia. These firms contribute significantly to the nation's healthcare infrastructure while simultaneously operating within the constraints of capital markets.

Data obtained from the IDX covering the period 2014 to 2024 reveal notable volatility in the financial performance of these pharmaceutical companies. Key performance indicators exhibit mixed trends: the current ratio (CR) experienced a moderate increase of 2.87%, total asset turnover (TATO) rose by 1.18%, and the debt-to-asset ratio (DAR) showed a smaller increase of 0.6%. Despite these fluctuations, profit growth (PG) recorded a cumulative increase of 4.1% during the same period (see Figure 1). These figures reflect a strategic emphasis among industry players on sustaining profitability amid shifting operational and economic conditions.

The observed trends suggest that pharmaceutical companies are actively pursuing financial strategies aimed at improving liquidity, enhancing operational efficiency, and managing leverage to support sustainable growth. Given the critical role of these firms in public health and their exposure to regulatory and market pressures, understanding the determinants of financial performance in this sector remains a vital area of inquiry. Accordingly, examining the relationship between financial ratios such as CR, TATO, and DAR with profit growth offers valuable insights into the financial dynamics of Indonesia's pharmaceutical industry.
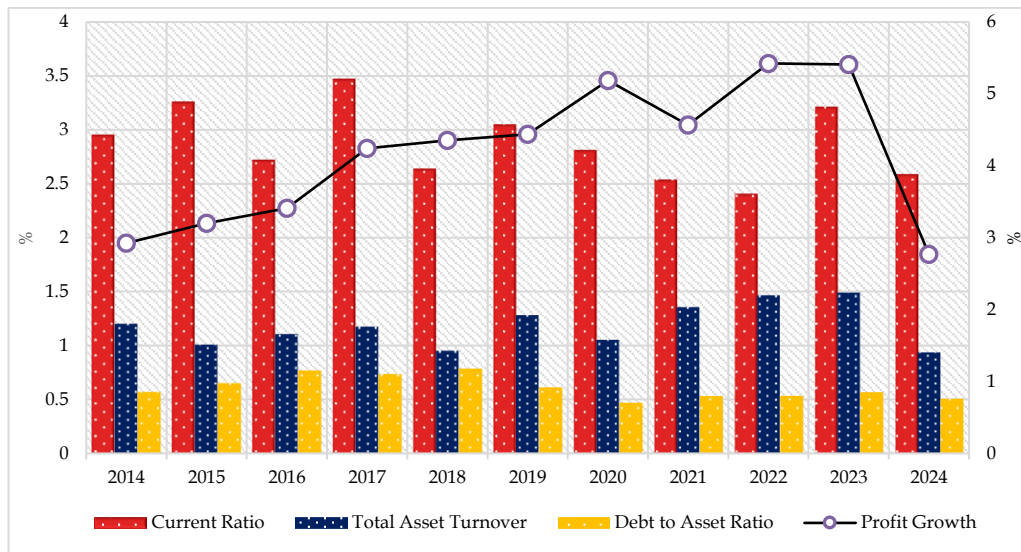
Figure 1. Average financial performance and profit growth of pharmaceutical companies in Indonesia in 2014 – 2024

Source: BEI, 2024

Despite the expansive landscape of Indonesia's pharmaceutical industry, with approximately 174 companies registered according to the Ministry of Health (Kementerian Kesehatan, 2017), only a small fraction—around ten firms—have attained publicly listed status on the Indonesia Stock Exchange (IDX) (Report et al., 2022). This disparity reflects the rigorous regulatory and institutional requirements associated with entering the public capital market. Companies seeking to go public through an Initial Public Offering (IPO) are obligated to meet specific governance, performance, and asset thresholds that ensure transparency, accountability, and financial resilience.

One of the core prerequisites for IPO eligibility is the establishment of a robust and transparent organizational structure. This includes, at a minimum, an Independent Commissioner composition of no less than 30% of the Board of Commissioners, the appointment of an Independent Director, and a functioning governance infrastructure comprising the Board of Directors, Audit Committee, Internal Audit Unit, and Corporate Secretary (Ismiyanti & Armansyah, 2010; Brau, 2010; Yandes & Nugroho, 2023; Kasim et al., 2022). These governance elements are designed to align corporate decision-making with shareholder interests, reduce information asymmetry, and enhance investor confidence.

In addition to governance criteria, profitability serves as a fundamental benchmark. Companies are required to demonstrate a record of operating profit in their most recent fiscal year (Nany et al., 2023). For pharmaceutical firms in Indonesia, this threshold has proven particularly salient. Between 2014 and 2024, these companies recorded an average annual profit growth rate of 2.8% (Figure 2). This performance underscores both the sector's potential and the strategic importance of consistent earnings as a criterion for public listing.

Furthermore, IPO candidates must meet minimum asset requirements, particularly in terms of tangible assets. The Financial Services Authority (OJK) mandates that firms possess a minimum of IDR 100 billion in tangible assets to qualify for public offering status (Mointi et al., 2021; Sulistio, n.d.). This stipulation

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ensures that companies are not only operationally sound but also possess adequate asset backing to support future growth and withstand market fluctuations.

The relatively low number of pharmaceutical firms listed on the IDX, despite the sector's scale and relevance, suggests that the combination of governance, profitability, and asset thresholds presents a significant barrier to market entry. Nonetheless, these requirements are aligned with broader market objectives of protecting investors, promoting transparency, and ensuring the financial health of publicly traded entities. As the healthcare sector continues to expand, driven by demographic trends and increased demand for medical innovation, the financial positioning of pharmaceutical firms—particularly in relation to these IPO requirements—will play a critical role in shaping their access to capital markets and long-term sustainability.
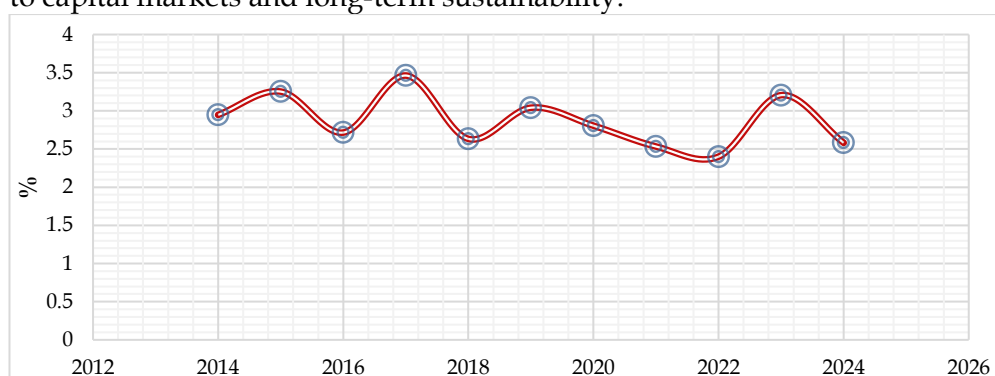
Figure 2. Profit growth of pharmaceutical companies in Indonesia 2014 – 2024
Source: BEI, 2024

Intensifying competition within the pharmaceutical industry compels each firm to continuously improve operational efficiency while simultaneously seeking to enhance profitability. In general, financial performance is often perceived as a reflection of a company's operational and strategic success over a defined reporting period, offering insight into its overall financial health and sustainability (Baby et al., 2024; Rahmah Fadillah et al., 2024). To assess this performance, a range of financial ratios is typically employed, serving as both internal control metrics and external signals to investors and stakeholders.

One of the most frequently used indicators is the liquidity ratio, particularly the cash ratio (CR), which measures a firm's ability to meet its short-term liabilities using its most liquid assets. A high cash ratio indicates strong liquidity and suggests the company is well-positioned to cover immediate obligations, thus contributing positively to overall financial performance (Affandi et al., 2019; Saleh, 2023). This ratio is calculated by comparing a company's cash and cash equivalents to its current liabilities, providing a conservative measure of liquidity (Damayanti et al., 2022). Prior studies have found a positive relationship between the cash ratio and corporate performance, supporting the notion that firms with stronger liquidity positions are more resilient to short-term financial shocks and better equipped to capitalise on operational opportunities (Harinurdin, 2022; Seretidou et al., 2025). On this basis, the following hypothesis is proposed:
H_1: The cash ratio has a positive impact on corporate performance.

A second key performance metric is the activity ratio, measured by total asset turnover (TATO). This ratio reflects the firm's capacity to efficiently utilise its total assets to generate revenue. A higher TATO indicates that the company is more effective in managing its resources, which in turn suggests greater operational efficiency (Patin et al., 2020; Karim et al., 2023). The standard calculation involves dividing net sales by average total assets (Rajagukguk & Siagian, 2021; Manajemen et al., 2021). TATO serves as a strategic benchmark not only for internal managerial assessment but also for external comparisons with industry peers, thus playing a vital role in evaluating resource deployment and operational productivity (Arsyad et al., 2021). Empirical studies have consistently demonstrated that higher asset turnover is associated with improved firm performance, reinforcing the relevance of this ratio for both management and investors (Sestanj-Peric et al., 2019). Based on this evidence, the following hypothesis is formulated:

H_2: Total asset turnover has a positive influence on corporate performance.

A third dimension of financial performance involves the solvency ratio, specifically the debt-to-asset ratio (DAR). This indicator assesses a firm's financial leverage and its capacity to meet long-term obligations. A lower DAR reflects lower financial risk and higher solvency, whereas a higher DAR may signal increased risk but also potential for greater returns through leverage (Sunaryo & Lestari, 2021; Pardosi & Siagian, 2021). When used judiciously, debt financing can enhance a company's profitability by enabling capital investment and expansion without immediate equity dilution. Profitability, in turn, serves as a core indicator of managerial efficiency, as it reflects a company's ability to generate net income from its sales and investment activities (Kanna et al., 2023; Rutkowska-Miczka, 2015). A high profitability ratio signals financial health and may attract investment, facilitating growth and market expansion. Several studies have found that DAR can positively influence financial performance when leveraged appropriately (Ahmed et al., 2024; Influence et al., 2024). Accordingly, the following hypothesis is advanced:

H_3: The debt-to-asset ratio has a positive influence on corporate performance.

However, the Indonesian pharmaceutical industry operates within a complex and often challenging economic environment. One of the most pressing structural issues is the sector's persistent reliance on imported raw materials, which exposes firms to exchange rate volatility and foreign transaction costs (Moosivand et al., 2019). This dependency significantly increases operational costs, particularly during periods of rupiah depreciation against the U.S. dollar, leading to rising production expenses and margin pressures (Alomi et al., 2023; Sari & Yousida, 2022). Given that most pharmaceutical inputs are denominated in foreign currency, even minor fluctuations in exchange rates can adversely affect firms' bottom lines and liquidity positions.

Despite these challenges, several pharmaceutical companies have demonstrated the ability to maintain stable financial performance and achieve profit growth over time. This resilience signals strategic adaptability and highlights the importance of efficient financial management in weathering macroeconomic pressures. Against this backdrop, the present study investigates the relationship between financial performance and profit growth in

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pharmaceutical firms listed on the Indonesia Stock Exchange (IDX). In addition, the study incorporates a forecasting component to project future performance trends, thereby providing insight into the sector's financial trajectory amid ongoing economic uncertainty.

RESEARCH METHODS

This study investigates the financial dynamics of ten publicly listed pharmaceutical companies in Indonesia over the period 2014–2024. These companies were selected based on their critical role in sustaining national health infrastructure and their strategic positioning within the pharmaceutical sector. Their status as publicly traded entities on the Indonesia Stock Exchange (IDX) signifies that they have fulfilled stringent regulatory and financial criteria, including enhanced corporate governance structures, transparent financial reporting, and long-term business sustainability.

The rationale for focusing on these ten firms lies in their ability to meet essential benchmarks that characterize financially resilient enterprises. These include maintaining a strong capital structure, effectively managing debt levels, and consistently enhancing firm value while preserving the continuity of family-owned business structures—an important attribute in the Indonesian corporate landscape (Sulistio, n.d.). The ten companies examined in this study are Kalbe Farma (KLBF), Sido Muncul Herbal and Pharmaceutical Industry (SIDO), Kimia Farma (KAEF), Tempo Scan Pacific (TSPC), Merck Tbk (MERK), Indofarma (INAF), Pharos (PEHA), Darya-Varia Laboratoria (DVLA), Pyridam Farma (PYFA), and Organon Pharma Indonesia (SCPI).

To explore the relationship between financial performance and profit growth, this study employs secondary data drawn from audited annual reports, financial statements, and IDX publications. The analytical method used is Panel Data Regression, which offers several methodological advantages. Notably, it allows for controlling unobservable heterogeneity, enhances the precision of estimation by reducing multicollinearity, and enables the testing of more complex and dynamic models across both time and individual dimensions (Xu et al., 2007; Hsiao, 2014; A. R., 2023).

The model in this study comprises one dependent variable—profit growth (PG)—and three independent variables: the cash ratio (CR), total asset turnover (TATO), and the debt-to-asset ratio (DAR). These variables are selected based on their theoretical and empirical relevance to the assessment of financial performance in capital-intensive and heavily regulated sectors such as pharmaceuticals. Table 1 presents the operational definitions, measurement proxies, and expected relationships of each variable based on the literature and preliminary analysis.

This methodological framework facilitates a robust exploration of how liquidity, asset utilization, and capital structure influence profit dynamics within the pharmaceutical sector. Moreover, by applying panel data techniques over a decade-long period, the study captures both cross-sectional and longitudinal effects, offering richer insights into the financial behaviour of firms that play a pivotal role in national health resilience.

Table 1. Research Variables

Variable		Unit	Description
Dependent	*Profit Growth* (PG)	%	Increase in company profits every year (Endri et al., 2020)
Independent	*Current Ratio* (CR)	%	A ratio that measures a company's ability to pay short-term liabilities (Khoiriah, 2022)
	Total Asset Turnover (TATO)	%	Ratios that measure a company's ability to generate sales based on its assets (Patin et al., 2020)
	Debt To Asset Ratio (DAR)	%	A ratio that measures the ratio of total debt to a company's total assets (Pardosi & Siagian, 2021)
$\beta_0, \beta_1 \ldots \beta_n$			Coefficient
ε			Error
t			Observation time

Source: Research Data, 2025

The equations of this model are:

$$PG = \beta_0 + \beta_1 CR_{1i} + \beta_2 TATO_{1i} + \beta_3 DAR_{1i} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

To project the future values of the variables under investigation, this study employs the Simple Moving Average (SMA) method, a widely accepted technique for short-term forecasting in time-series analysis. The moving average method operates by calculating the arithmetic mean of observed values across a fixed time interval, thereby smoothing fluctuations and highlighting underlying trends (Oyemaja, 2024; Raudys & Pabarškaitė, 2018; Estrada et al., 2020). Specifically, a five-year period is used in the SMA computation, selected to capture medium-term performance dynamics while minimizing the influence of short-term volatility.

The predictive accuracy of the SMA model is evaluated using three commonly applied error metrics: Mean Absolute Deviation (MAD), Mean Squared Error (MSE), and Mean Absolute Percentage Error (MAPE). Each of these indicators provides distinct insights into the magnitude and consistency of the forecast errors.

First, the MAD measures the average absolute differences between the actual and forecasted values, offering a straightforward interpretation of the average forecast error regardless of direction (Azman, 2019; Ren & Ren, 2017). Second, the MSE evaluates the average of the squared forecast errors, thus penalizing larger deviations more heavily and providing a sensitive gauge of predictive accuracy (Nuha, 2023; Hodson et al., 2021). Third, the MAPE quantifies the average absolute error expressed as a percentage of actual values, allowing for intuitive comparison across different scales and facilitating the classification of forecast accuracy into standard ranges (Nabillah & Ranggadara, 2020; Estrada et al., 2020).

In interpreting the MAPE results, the following classification is typically applied: a MAPE value of less than 10% indicates highly accurate forecasting; 10%–20% reflects good forecasting performance; 20%–50% is considered acceptable for exploratory research; while values exceeding 50% suggest poor predictive reliability. This classification enables researchers to assess the feasibility of their forecasting models in supporting strategic decision-making.

The integration of the SMA technique with robust error diagnostics provides a comprehensive approach to evaluating the forward trajectory of key financial performance indicators, such as profit growth, liquidity, efficiency, and solvency, within the pharmaceutical industry. In doing so, this methodological framework not only complements the panel regression analysis but also enhances the study's practical relevance by offering forward-looking insights to corporate decision-makers and policymakers.

Table 2. Interpretation of MAPE values

MAPE Values	Interpretation
< 10%	Excellent forecasting model
10 % - 20 %	Good model
20 % - 50 %	Viable forecasting model
> 50%	Bad forecasting model

Source: Research Data, 2025

The 3 (three) equations of the indicators are:

$$MAD = \Sigma \left[\frac{At - Ft}{n} \right] \quad \dots \dots \dots (2)$$

$$MSE = \Sigma \left[\frac{(At - Ft)^2}{n} \right] \quad \dots \dots \dots (3)$$

$$MAP = \frac{100}{n} \Sigma \left[\frac{At - Ft}{n} \right] \quad \dots \dots \dots (4)$$

Where:

At = The amount of data observed in t periods
Ft = Forecasting of the t period
n = a lot of data

RESULTS AND DISCUSSION

The findings of this study reveal that the variables Cash Ratio (CR), Total Asset Turnover (TATO), and Debt-to-Asset Ratio (DAR) collectively exhibit a positive relationship with Profit Growth (PG), as reflected in an R-squared (R^2) value of 43.7%. This indicates that 43.7% of the variation in profit growth among the observed pharmaceutical companies can be explained by these three financial indicators. However, not all independent variables demonstrate statistically significant effects on the dependent variable.

The CR variable shows a positive and statistically significant impact on PG. Specifically, a 1% increase in CR is associated with a 33.4% rise in profit growth (Table 3). This result underscores the importance of liquidity in enhancing financial performance and reinforces the strategic role of CR in facilitating business expansion within the pharmaceutical industry. These findings are consistent with prior studies (Affandi et al., 2019; Mufidah et al., 2024), which affirm that firms with robust liquidity positions are better positioned to fund operations, invest in new ventures, and generate returns for shareholders. Moreover, the availability of sufficient cash reserves can serve as a mechanism for mitigating agency conflicts among stakeholders, thus fostering financial stability and operational efficiency (Virandani & Sofyan, 2023).

Similarly, the TATO variable also demonstrates a significant positive relationship with PG. A 1% increase in TATO contributes to a 35.8% increase in

profit growth (Table 3). This finding highlights the efficiency of asset utilisation as a critical driver of financial performance in the pharmaceutical sector. Efficient asset turnover not only enhances operational effectiveness but also shortens the cash conversion cycle, allowing companies to translate assets into revenues at a faster rate (Fahrudin & Dillak, 2022; Kovalchuk & Verhun, 2020). In this context, TATO serves as a key metric for managerial decision-making, particularly in capital-intensive industries where optimal asset deployment directly impacts profitability.

By contrast, while DAR is positively associated with PG—indicating that a 1% increase in DAR leads to a 6.1% increase in profit growth—this effect is statistically insignificant. One plausible explanation is that many pharmaceutical companies rely heavily on debt financing to support research, development, and expansion activities. The relatively stable nature of pharmaceutical demand may allow these firms to operate with higher leverage without immediately compromising financial performance. Furthermore, debt may be strategically managed to optimise tax advantages or to signal financial strength to external investors. However, the lack of statistical significance suggests that the relationship between leverage and profit growth is not uniform and may vary depending on the firm's capital structure, cost of debt, and risk exposure.

Table 3. Effect of financial performance on profit growth

Variable	Coefficient	Std Error	t-Stat	Prob
C	6.886	0.715	9.628	0
CR	0.334	0.203	1.64	0.03*
TATO	0.358	0.255	5.31	0**
DAR	0.061	0.284	0.215	0.830
R-Squared				0.437
Durbin Watson Stat				0.595
Prob (F-Statitic)				0.000

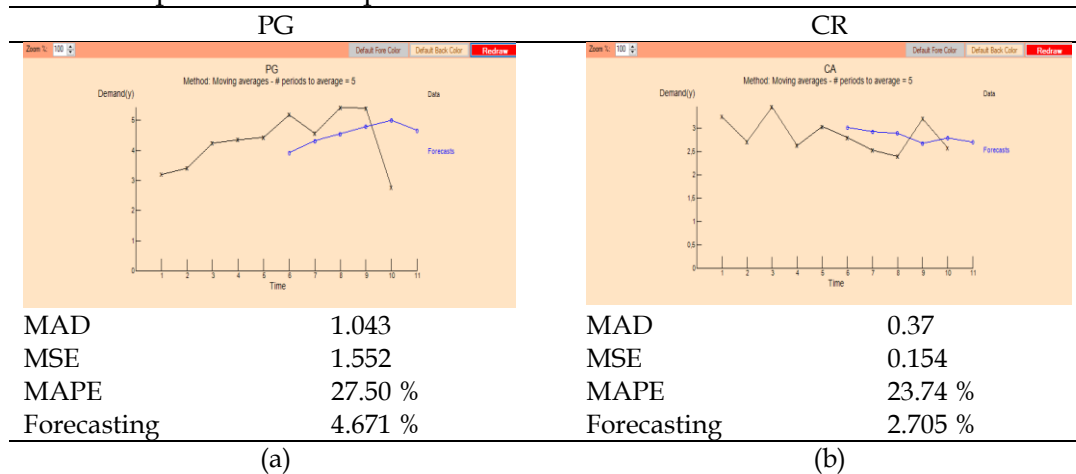*: $\alpha=0.05$, **: $\alpha=0.01$
Source: Research Data, 2025

The forecasting results for profit growth (PG) indicate an anticipated change of 4.67% in the upcoming period. The forecasting model demonstrates a Mean Absolute Percentage Error (MAPE) of 27.50%, which falls within the acceptable threshold for forecasting accuracy, indicating that the model is reasonably reliable. Additionally, the Mean Absolute Deviation (MAD) is recorded at 1.043, and the Mean Squared Error (MSE) stands at 1.552, further validating the model's forecasting performance. Despite previous periods showing consistent growth, the projection for the next period suggests a downward trend in PG (Figure 3a). This deceleration may reflect structural inefficiencies or external market pressures affecting profit sustainability. Therefore, strategic interventions such as expanding sales channels, fostering positive investor sentiment, enhancing managerial effectiveness, and tightening budgetary controls are critical to sustaining and improving profit growth in pharmaceutical companies (Bagus et al., 2023). These actions not only mitigate the projected decline but also position firms to be more resilient in the face of industry volatility.

In parallel, the forecast for the Cash Ratio (CR) in the subsequent period reveals a projected change of 2.705%, supported by a MAPE of 23.74%, confirming

the model's suitability for predictive analysis. The MAD for CR is reported at 0.37, while the MSE stands at 0.154, both reflecting a high level of accuracy in the model's predictive capability. As depicted in Figure 3b, the CR is expected to remain relatively stable, suggesting that liquidity conditions within the sample pharmaceutical firms will not fluctuate significantly in the near term. Nevertheless, maintaining liquidity at an optimal level remains a strategic priority. In this context, firms are encouraged to increase CR by improving their current asset base and concurrently managing or reducing short-term liabilities (Kolade, 2019). Strengthening liquidity not only enhances the firm's ability to meet immediate obligations but also serves as a buffer against unexpected market shocks or operational disruptions.

PG		CR	
MAD	1.043	MAD	0.37
MSE	1.552	MSE	0.154
MAPE	27.50 %	MAPE	23.74 %
Forecasting	4.671 %	Forecasting	2.705 %
(a)		(b)	

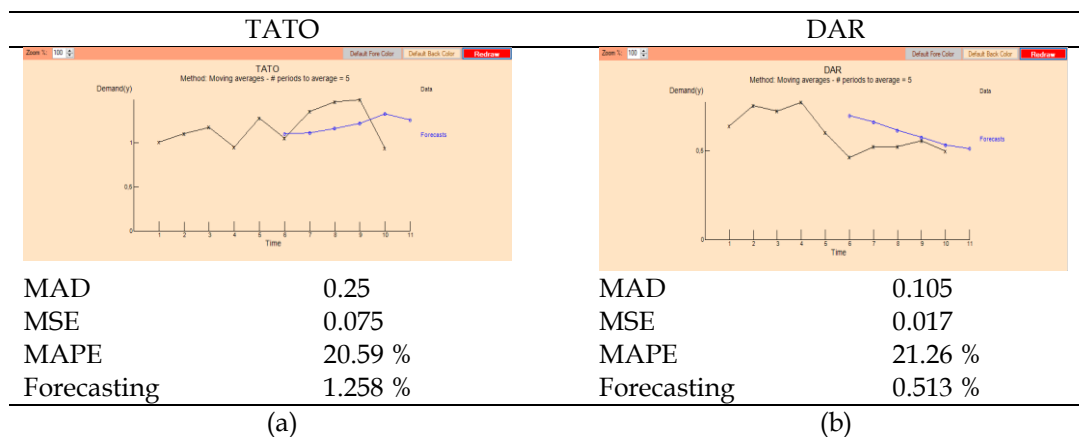**Figure 3. Forecasting results of PG and CR**

Source: Research Data, 2025

The forecast results for Total Asset Turnover (TATO) reveal a projected increase of 1.258% in the upcoming period. The forecasting model, with a Mean Absolute Percentage Error (MAPE) of 20.59%, is considered feasible and reliable. Furthermore, the model demonstrates a Mean Absolute Deviation (MAD) of 0.25 and a Mean Squared Error (MSE) of 0.075, indicating a satisfactory level of predictive accuracy. As illustrated in Figure 4a, TATO is expected to rise in the near term, suggesting that pharmaceutical companies are likely to improve their efficiency in utilising total assets to generate revenue. However, the model also signals a potential tapering or decline in the longer term. This projection highlights the need for firms to consistently monitor asset utilisation and invest in strategies that maximise operational efficiency. Initiatives such as upgrading production technology, streamlining supply chain management, and minimising idle assets may help sustain or even accelerate turnover rates, particularly in a highly competitive and innovation-driven industry.

Turning to the Debt-to-Asset Ratio (DAR), the forecast suggests a slight increase of 0.513% in the next period. The forecasting model, with a MAPE of 21.26%, falls within an acceptable range for accuracy, supported by a MAD of 0.105 and an MSE of 0.017, both of which reflect strong predictive precision. As shown in Figure 4b, DAR is anticipated to trend downward after the next period. This decline indicates a potential shift toward lower financial leverage, which may be indicative of a strategic move by pharmaceutical firms to strengthen their capital

structure. Reduced reliance on debt financing can improve financial stability, especially amid macroeconomic uncertainty and currency fluctuations that affect loan repayment costs. In response, firms are encouraged to enhance internal financing mechanisms, optimise working capital, and reduce dependence on external debt to lower interest burdens and improve long-term solvency (Gettman, 2022; Zhang et al., 2025; Alomi et al., 2023).

Together, these forecast findings underscore the importance of dynamic financial management in Indonesia's pharmaceutical sector. By anticipating future changes in asset efficiency and debt levels, firms can adopt more agile and informed strategies to support sustainable profit growth and strengthen overall financial performance.

TATO		DAR	
MAD	0.25	MAD	0.105
MSE	0.075	MSE	0.017
MAPE	20.59 %	MAPE	21.26 %
Forecasting	1.258 %	Forecasting	0.513 %
(a)		(b)	

Figure 4. Forecasting results of TATO and DAR
Source: Research Data, 2025

CONCLUSION

The findings of this study reveal that financial performance—measured through the Cash Ratio (CR), Total Asset Turnover (TATO), and Debt-to-Asset Ratio (DAR)—has a generally positive influence on profit growth (PG), although not all variables contribute equally. The results of the panel data regression analysis indicate that a 1% increase in CR corresponds to a 33.4% increase in PG, and a 1% increase in TATO is associated with a 35.8% rise in PG. Both of these effects are statistically significant and underscore the critical role of liquidity and asset efficiency in driving profitability. Conversely, a 1% increase in DAR corresponds to a 6.1% increase in PG, but the relationship is statistically insignificant. This suggests that while leverage may contribute to profitability to some extent, its impact remains marginal and may reflect differing capital structures or risk preferences across pharmaceutical firms.

Given these findings, pharmaceutical companies in Indonesia should prioritise strategies that improve cash reserves and optimise asset utilisation to sustain profit growth. These may include strengthening working capital management, reducing operational inefficiencies, and leveraging digital technologies to support inventory and distribution processes. Although DAR was found to be insignificant, managing debt prudently remains essential in

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maintaining financial resilience and investor confidence, particularly in periods of macroeconomic volatility.

In light of the regression outcomes, future research should consider the inclusion of additional variables that may influence corporate performance more robustly. Potential areas for exploration include investment in research and development (R&D), innovation capabilities, supply chain efficiency, and regulatory compliance. Incorporating such variables may yield deeper insights into the structural and strategic factors underpinning profitability in the pharmaceutical industry and provide more comprehensive guidance for stakeholders.

Turning to the forecasting results, the analysis shows that the financial performance of publicly listed pharmaceutical firms in Indonesia remains dynamic. Profit growth (PG), while generally increasing, is projected to experience a deceleration in the near future. To counter this potential downturn, firms must intensify efforts to boost sales, improve managerial effectiveness, and foster favourable market sentiment. In this context, transparent corporate governance and strong investor relations may contribute to maintaining confidence and sustaining capital inflows.

The forecast for CR suggests a stable trend in the short term, although maintaining this position requires active management of liquidity. Firms should consider initiatives to improve current asset levels and reduce short-term liabilities, ensuring a sufficient buffer to absorb operational shocks. Similarly, the forecasted trajectory of TATO, which mirrors that of PG, highlights the ongoing importance of asset efficiency. Pharmaceutical firms are encouraged to invest in technologies and practices that enhance asset turnover, such as demand forecasting, production planning, and lean inventory systems.

Finally, the downward trend in DAR suggests a move towards deleveraging, which could reflect a strategic preference for lower financial risk. While this may strengthen balance sheet health, companies must also ensure that reduced borrowing does not constrain growth opportunities. Balancing capital structure decisions with investment needs will be critical for maintaining competitiveness in a sector marked by innovation and regulatory change.

In summary, the combined results of the regression and forecasting analyses provide strategic insight into how financial performance variables interact with profit growth. These findings offer a valuable reference for pharmaceutical companies seeking to enhance performance, manage financial risks, and navigate a complex and evolving business environment. Future strategic planning and business expansion decisions should be grounded in these empirical insights to ensure long-term sustainability and shareholder value creation.

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