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The effect of capital structure, liquidity, activity ratio, and profitability on the value of pharmaceutical companies

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Abstract

This study aims to investigate the impact of capital structure, liquidity, activity ratio, and profitability on firm value in the pharmaceutical sector listed on the Indonesia Stock Exchange (IDX) during the period from 2018 to 2023. A quantitative approach was employed using multiple linear regression analysis to analyze panel data from 10 pharmaceutical companies, resulting in a total of 60 observations (n = 60). The results of the regression analysis indicate that only capital structure has a significant effect on firm value. In contrast, liquidity, activity ratio, and profitability do not show a significant impact. These findings were influenced by the dynamics of the capital market during the study period, particularly the effects of the COVID-19 pandemic, which altered investors' strategies and priorities. The results highlight the importance of adopting a more comprehensive approach in evaluating firm value within the pharmaceutical industry by incorporating external factors and additional financial metrics. Future research is recommended to include macroeconomic variables and industry policies to gain a more holistic understanding.

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1. Introduction

The pharmaceutical sector represents a vital pillar of the Indonesian economy, particularly in meeting the healthcare needs of the population. Companies operating in this sector and listed on the Indonesia Stock Exchange (IDX) bear considerable responsibility in ensuring the continuity of their operations while maintaining investor confidence. Firm valuation, which reflects the market's perception of a company's performance and growth potential, serves as a key indicator for investors in making investment decisions. Therefore, understanding the various factors that influence firm value within this sector is essential.

One of the primary determinants of firm valuation is capital structure, which indicates the proportion of debt and equity in a company's financing. Sound decisions regarding capital structure can help firms optimize their value, as excessive reliance on debt increases insolvency risk, while an overly equity-dominated structure may limit potential returns. Research by Nurhidayah (2021) found that capital structure significantly influences the valuation of pharmaceutical companies listed on the IDX, with most firms adopting a conservative capital structure to mitigate risk. In addition to capital structure, liquidity also plays a critical role in shaping firm value. Liquidity, typically

measured by the Current Ratio or Quick Ratio, reflects a firm's ability to meet short-term obligations. A study by Oktowiati and Nurhayati (2020) showed that pharmaceutical companies with higher liquidity levels tend to have greater firm value, as this builds investor confidence in the company's financial health. The activity ratio, exemplified by Total Asset Turnover, reflects how efficiently a company utilizes its assets to generate sales. Operational efficiency is crucial for pharmaceutical firms facing intense competition both domestically and globally. Meanwhile, profitability, measured by indicators such as Return on Assets (ROA) and Return on Equity (ROE), reflects a company's ability to generate earnings from its assets or equity. Research by Oktaviani and Mulya (2018) confirms that profitability significantly affects firm value, especially in highly competitive pharmaceutical markets.

Nevertheless, previous studies have yielded mixed and sometimes contradictory findings regarding the influence of financial indicators on firm value, particularly in the context of Indonesia's pharmaceutical sector. This inconsistency highlights a critical research gap that this study aims to address. Moreover, the novelty of this research lies in its coverage of the 2018–2023 period, which includes the COVID-19 pandemic—a significant external shock that influenced market behavior, investor strategies, and corporate performance. This context enables a more nuanced evaluation of the relationship between financial variables and firm value during times of market instability. The urgency of this study is further reinforced by empirical data demonstrating the pharmaceutical sector's growing importance. According to the Ministry of Health and IDX data, the sector has seen a notable increase in market capitalization and has become one of the key contributors among non-financial industries, playing a strategic role in supporting national health resilience. Thus, a comprehensive reassessment of internal financial factors affecting firm value in this sector is both timely and necessary. The objective of this study is to examine and explain the effects of capital structure, liquidity, activity ratio, and profitability on the valuation of pharmaceutical companies listed on the Indonesia Stock Exchange (IDX) over the period 2018–2023.

The relationship between capital structure and corporate value is an important area of study in corporate finance, revealing how financial decisions affect market perceptions and company performance. Research shows that capital structures, particularly debt and equity balances, significantly affect a company's value, with impacts that vary across different industries and contexts. The following section outlines the key findings of the latest research. Moderate levels of debt can increase a company's value due to tax benefits, while excessive leverage can lead to financial difficulties, which negatively impact market valuations (Mazumdar & Mara, 2024). Studies on S&P 500 companies show that higher leverage correlates with increased market valuations, which emphasizes the importance of strategic capital structure decisions (Ding, 2024). Research in the property sector shows that profitability and capital structure significantly affect a company's value, which highlights the need for a tailored financial strategy (Awaliyah et al., 2025).

Although capital structure plays a role, financial performance and investment decisions are also important determinants of a company's value, as evidenced in the consumer goods sector (Aditya & Cindiyasari, 2024). Good corporate governance and company size have been found to affect financial performance, indirectly affecting the value of the company, although the direct effects are less pronounced (Mayasari et al., 2024). In contrast, some studies suggest that capital structure may not always have a significant impact on a company's value, suggesting that other factors such as market conditions and operational efficiency may play a more dominant role in certain contexts (Aditya & Cindiyasari, 2024).

H1: Capital structure has a positive influence on the value of the company.

The relationship between liquidity and a company's value is complex, as evidenced by various studies highlighting both positive and negative impacts. Liquidity, which is often measured by ratios such as current ratios, can affect profitability, which in turn affects a company's value.

However, the nature of these relationships can vary greatly across different sectors and contexts. Liquidity can negatively impact profitability, as shown in research where increased liquidity can lead to lower asset returns due to a lack of resource utilization (Ichwanudin et al., 2025). In contrast, liquidity can also increase profitability by providing the necessary funds for operational efficiency and growth, which ultimately supports the value of the company (Cahyani et al., 2024). Profitability often mediates the relationship between liquidity and a company's value. For example, higher profitability can offset the negative impact of liquidity on a company's value, suggesting that companies should focus on increasing profitability to increase overall value (Cahyani et al., 2024). In some cases, sales growth can moderate the trade-off between liquidity and profitability, suggesting that a strategic focus on growth can increase the effect of liquidity on a company's value (Ichwanudin et al., 2025).

In the banking sector, liquidity has been found to negatively impact a company's value, emphasizing the importance of capital adequacy and credit risk management (Hakim, 2024). In contrast, studies in the pharmaceutical and food and beverage sectors show that liquidity can positively affect a company's value if managed in conjunction with the company's capital structure and size (Sari & Syahzuni, 2024) (Saputra & Kusuma, 2025). While liquidity is essential for operational stability, its relationship to a company's value is indirect and can vary based on industry dynamics and interactions with profitability. This complexity suggests that companies must adopt a nuanced approach to liquidity management, balancing it with profitability and growth strategies to optimize company value.

H2: Liquidity has a positive influence on the value of the company.

The relationship between activity ratio and company value is very important, as proven by various studies. The activity ratio, which measures how efficiently a company utilizes its assets, has been shown to positively impact a company's value across a variety of sectors. This relationship is further moderated by factors such as leverage and profitability, which suggests a complex interaction between these financial metrics. Research shows that higher activity ratios correlate with increased company value, as companies that manage their assets effectively tend to perform better financially (Anjarwati & Akhmadi, 2024; Aditia et al., 2022).

Activity ratios can moderate the relationship between leverage and company value, suggesting that efficient asset management increases the benefits of financial leverage (Anjarwati & Akhmadi, 2024). In the property sector, the ratio of profitability and activity contributes significantly to the value of a company, although the capital structure does not improve this relationship (Ariosafira & Suwaidi, 2022). For digital startups, activity ratio remains an important determinant of a company's value, beating out other financial metrics such as liquidity and solvency (Aditia et al., 2022). Although activity ratios are important, some studies suggest that other factors, such as stock prices and profitability, may play a more dominant role in determining a company's value, suggesting that a multifaceted approach is necessary for a comprehensive understanding of a company's valuation (Gunadi et al., 2020).

H3: The activity ratio has a positive influence on the company's value.

The interplay between profitability and corporate valuation constitutes a crucial domain of investigation within the field of finance, as profitability is frequently regarded as a pivotal measure of a firm's operational efficacy and its capacity for sustainable advancement. Empirical evidence demonstrates that enhanced profitability, quantified through indicators such as Return on Equity (ROE) and Return on Assets (ROA), exerts a favorable influence on a company's valuation, which is conventionally assessed via Price to Book Value (PBV). This correlation is further augmented by elements such as capital structure and investment choices. Scholarly findings consistently affirm that profitability exerts a substantial positive influence on corporate value. For instance, ROE exhibits a direct correlation with PBV, signifying that firms with greater profitability

generally attain elevated valuations (Awaliyah et al., 2025) (Nurlaelasari et al., 2024). Moreover, the Capital Adequacy Ratio (CAR) has been recognized as a mediating variable that enhances the connection between profitability and corporate valuation, particularly within the banking industry (Rawati & Puteri, 2024).

Investment strategy also plays an important role in determining the value of a company. Research shows that good investment decisions, in addition to profitability, significantly affect a company's valuation (Arifin & Munandar, 2024) (Purwaningrum et al., 2025). Although profitability does not moderate the relationship between investment decisions and company value, maintaining profitability is essential for sustainable operations (Arifin & Munandar, 2024). Conversely, some studies suggest that company size can negatively impact value, as larger companies may be hesitant to invest due to existing debt obligations, which suggests that profitability alone does not guarantee high company value (Nurlaelasari et al., 2024). This highlights the complexity of relationships, where many factors influence each other to affect the company's overall valuation.

H4 : Profitability has a positive influence on the value of the company.

2. Methods

This study employs a quantitative approach using panel data regression analysis to examine the effect of independent variables (capital structure, liquidity, activity ratio, and profitability) on the dependent variable (firm value). This methodological approach was chosen for its ability to explain causal relationships between variables through numerical data and statistical analysis. The population in this study comprises all pharmaceutical companies listed on the Indonesia Stock Exchange (IDX) during the 2018–2023 period. Sampling was conducted using a purposive sampling technique based on the following inclusion criteria: (1) pharmaceutical companies consistently listed on the IDX during the observation period, (2) companies that provided complete and valid annual financial reports, and (3) companies that were not delisted during the research period. The exclusion criteria included companies with incomplete data or changes in listing status. Based on the selection process, the final sample consisted of 10 companies, resulting in a total of 60 panel data observations over six years. The data used in this study are secondary data obtained from the companies' annual financial statements, sourced from the official IDX website (www.idx.co.id), financial data providers such as Yahoo Finance, and other reputable publications.

Firm value in this study is measured using Tobin's Q, which is considered more comprehensive than other indicators such as Price to Book Value (PBV) or Price to Earnings Ratio (PER). Tobin's Q reflects the ratio of a firm's market value to its asset replacement cost, offering a more accurate representation of market perception regarding a firm's performance and prospects. The panel regression model used in this study refers to one of the three approaches: common effect, fixed effect, or random effect. To determine the most appropriate model, several model selection tests were conducted: (1) the Chow test to choose between common effect and fixed effect models, (2) the Hausman test to choose between fixed effect and random effect models, and (3) the Lagrange Multiplier (LM) test to choose between common effect and random effect models. The results of these tests served as the basis for selecting the most suitable panel regression model. Data analysis was conducted using the latest version of EViews. In data processing, special attention was given to the potential presence of outliers and incomplete data. Observations with extreme statistical values deviating from the general pattern were further analyzed to determine whether they should be excluded or transformed. Missing data were treated using listwise deletion to preserve the integrity of the panel data. The panel data regression model is formulated as follows:

$$Yit = \alpha + \beta_1 X1it + \beta_2 X2it + \beta_3 X3it + \beta_4 X4it + \varepsilon it \quad (1)$$

Where:
Yit = Firm Value (measured by Tobin's Q)
α = Constant
β_1, β_2, β_3, β_4 = Regression coefficients
X1it = Capital Structure (Debt to Equity Ratio/DER)
X2it = Liquidity (Current Ratio/CR)
X3it = Activity Ratio (Total Asset Turnover/TATO)
X4it = Profitability (Return on Assets/ROA)
εit = Error term

Before regression analysis, the dataset was tested for the classical assumptions of panel data regression, including a normality test to assess the distribution of residuals, a multicollinearity test to ensure no strong correlation among independent variables, heteroscedasticity test to check for constant variance of residuals, and autocorrelation test to confirm no correlation among residuals. The F-test was used to examine the simultaneous effects of all independent variables on firm value, while the t-test evaluated the individual influence of each independent variable. The coefficient of determination (R^2) was calculated to assess the extent to which the independent variables explain the variation in firm value.

3. Results and discussion

Based on testing, the selected model is a random effect (Rem) model. The following are the results of the random effect testing of the model.

Table 1. Random Effect Model Panel Test Results

Dependent Variable: Y
Method: Panel EGLS (Cross-section random effects)
Date: 03/24/25 Time: 12:58
Sample: 2019 2023
Periods included: 5
Cross-sections included: 11
Total panel (unbalanced) observations: 54
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.762557	2.746989	-0.277597	0.7825
X1	5.119416	1.302232	3.931262	0.0003
X2	0.761417	0.859731	0.885646	0.3801
X3	-0.031964	0.061596	-0.518932	0.6061
X4	0.034863	0.053856	0.647328	0.5204

Effects Specification

	S.D.	Rho
Cross-section random	3.367564	0.3546
Idiosyncratic random	4.542876	0.6454

Weighted Statistics

Root MSE	4.686679	R-squared	0.253380
Mean dependent var	1.949351	Adjusted R-squared	0.192431
S.D. dependent var	5.472761	S.E. of regression	4.919988
Sum squared resid	1186.108	F-statistic	4.157267

Durbin-Watson stat	2.072141	Prob(F-statistic)	0.005607
	Unweighted Statistics		
R-squared	0.118481	Mean dependent var	3.762037
Sum squared resid	2155.531	Durbin-Watson stat	1.140222

Source: Data processing (2025)

The test results of the model showed that the R-squared value was 0.253380 or about 25.34%. This means that around 25.34% of the variation in the company's value (Tobin's Q) can be explained by the four independent variables in the model, namely capital structure (DER), liquidity (CR), activity ratio (TATO), and profitability (ROA). Although the capital structure is statistically significant, the relatively low R-squared value suggests that there is still a 74.66% variation in the company's value explained by factors outside of this model. A low R-squared value in this context does not necessarily signal a weakness of the model, but rather reflects the complexity of determining the value of a company, especially in the pharmaceutical sector which is capital-intensive, high-risk, and heavily influenced by external dynamics. Some other potential variables that can affect a company's value but are not yet covered in this model include: The growth of the company's revenue and profit, which reflects the business outlook and is the main concern of investors. Expenditure on research and development (R&D), which is very important in the pharmaceutical industry because it is directly related to product innovation and the sustainability of the company. Dividend and corporate governance (GCG) policies, which can affect investors' perception of risk and return on investment. External factors such as government policies, BPOM regulations, and patent protection, which have a significant impact on the continuity of the pharmaceutical business. Macroeconomic conditions and capital market sentiment, such as inflation, interest rates, and political stability, can influence investment decisions.

These results are consistent with previous research which also found that capital structure has a significant influence on the value of companies in the pharmaceutical sector and other sectors in the Indonesian capital market (Susilowati et al., 2019; Tribhuwana et al., 2024). However, some studies note that the contribution of capital structure and other financial ratios to a company's value tends to vary depending on the time period, market conditions, as well as the managerial approach of each company. In the context of the Indonesian capital market, pharmaceutical companies face additional challenges such as the volatility of drug price policies, pressure from the National Health Insurance (JKN) system, and the influence of exchange rates on the cost of imported raw materials. Research by Elbawati et al. (2024) shows that investors in the pharmaceutical sector tend to pay more attention to long-term resilience and regulatory support than just short-term financial efficiency indicators.

From a policy and managerial point of view, the results of this study imply that pharmaceutical companies need to carefully manage their capital structures by considering the balance between the use of debt and equity. An overly aggressive capital structure can increase the risk of bankruptcy, while an overly conservative structure can limit a company's growth. In addition, companies need to improve investment efficiency in fixed assets and working capital to simultaneously increase asset turnover and profitability. Optimization of financial performance must also be accompanied by non-financial strategies such as increasing R&D capabilities, product innovation, and strengthening relationships with regulators. The COVID-19 pandemic is also one of the important external dynamics that affect the interpretation of these results. During the pandemic, pharmaceutical companies faced a temporary surge in demand, but also had to adapt to changes in supply chains, increased logistics costs, and reliance on government regulations. Under such

conditions, a company's value is determined more by the company's strategic response to the crisis than by indicators of liquidity or asset efficiency alone. Therefore, in building a more comprehensive model of predicting the value of a company in the future, researchers need to consider non-financial factors and macro variables as part of a more holistic approach in analyzing the pharmaceutical sector in the Indonesian capital market.

3.1 The Influence of Capital Structure on the Value of Pharmaceutical Companies on the IDX

Capital Structure (X1), quantified through the Debt to Equity Ratio (DER), exhibits a positive coefficient (5.119416) and is statistically significant at the one percent level (p-value = 0.0003), thereby suggesting that Capital Structure exerts a substantial impact on Company Value (Y) as assessed via Tobin's Q. The correlation between capital structure and the valuation of pharmaceutical firms listed on the Indonesia Stock Exchange (IDX) is noteworthy, as corroborated by an array of empirical investigations. The affirmative coefficient associated with the Debt-to-Equity Ratio (DER) signifies that an optimal capital structure enhances the valuation of the firm, as indicated by Tobin's Q. This influence is markedly robust, with a significance threshold of one percent (p-value = 0.0003), underscoring that capital structure is a critical determinant of corporate valuation. Scholarly research consistently demonstrates that DER exerts a pronounced positive effect on company valuation. For instance, one investigation reported a standardized coefficient of 0.897 for DER, illustrating its preeminent influence over other variables (Susilowati et al., 2019). Comprehensive multiple linear regression analyses in various studies affirm that capital structure significantly impacts a company's valuation, with p-values indicating substantial statistical significance (Tribhuwana et al., 2024; Fauziah & Rislawati, 2023).

A well-structured capital framework can attract investors, increase the stock price and the overall valuation of the company (Fauziah & Rislawati, 2023). Companies are encouraged to optimize their capital structures to meet operational needs and improve financial performance, which in turn increases the value of the company (Sari & Syahzuni, 2024)]. A strong capital structure is beneficial; excessive reliance on debt can lead to financial stress, potentially damaging the value of a company. Thus, a balanced approach to capital structure is essential for sustainable growth in the pharmaceutical sector.

3.2 The Effect of Liquidity on the Value of Pharmaceutical Companies on the IDX

Liquidity (X2) measured by Current Ratio/CR. has a probability above 0.05, which means it is not statistically significant to the Company Value (Y) measured by Tobin's Q. Analysis of the effect of liquidity on the value of pharmaceutical companies listed on the IDX shows that liquidity, measured by the Current Ratio, does not show a statistically significant relationship with the value of the company, represented by Tobin's Q, during the period 2018 to 2023. Liquidity is one of the financial aspects that reflects a company's ability to meet its short-term obligations. However, in various studies, liquidity often does not show a significant influence on a company's value. This can be explained from several theoretical perspectives and empirical evidence. In theory, a company's value, measured by Tobin's Q, is more influenced by market expectations of growth, profitability, and capital structure than short-term liquidity. According to Signaling Theory, investors pay more attention to factors that reflect the company's growth prospects and investment strategy than simply the level of liquidity (Elbawati et al., 2024). High liquidity as measured by Current Ratio (CR) often does not necessarily increase the value of the company because excess funds in current assets are not always allocated for productive investments (Sintarini & Djawoto, 2018).

During the COVID-19 pandemic (2020–2021), economic uncertainty caused many investors to be more cautious and tend to look for companies with high levels of liquidity. However, despite increased liquidity, research shows that this has no significant effect on the value of pharmaceutical companies. One reason is that investors are not only considering the company's ability to meet its short-term obligations, but also its long-term growth prospects. In addition, the pharmaceutical industry at that time was more influenced by the demand for medical products and vaccines, which made a company's valuation more dependent on external factors such as regulation and government support than simply liquidity ratios (Elbawati et al., 2024). Previous research has also shown that while high liquidity can reduce the risk of bankruptcy, its impact on a company's value is indirect and depends on other factors such as profitability and dividend policies (Melfia & Dewi, 2023). If the company has high liquidity but is not accompanied by an optimal rate of return on investment, then the company's value will not experience a significant increase (Sari & Syahzuni, 2024). In the context of the pharmaceutical industry, which has long-term investment characteristics and large research and development needs, investors tend to focus more on growth and profit potential rather than liquidity ratios alone.

Additionally, liquidity can have diverse effects depending on market conditions and a company's financial strategy. In some cases, companies with high liquidity may be considered less efficient in managing their assets, thus reducing the attractiveness for investors seeking more aggressive growth in the company's value (Elbawati et al., 2024). Therefore, while liquidity is an important indicator of financial health, research shows that its effect on a company's value tends to be statistically insignificant across various industry sectors, including pharmaceuticals.

3.3 The Effect of Activity Ratio on the Value of Pharmaceutical Companies on the IDX

The Activity Ratio (X3) measured by Total Asset Turnover/TATO, all have a probability above 0.05, which means that it is not statistically significant to the Company Value (Y) measured by Tobin's Q. The effect of the Activity Ratio, especially Total Asset Turnment (TATO), on the value of pharmaceutical companies listed on the Indonesia Stock Exchange (IDX) from 2018 to 2023 does not appear to be statistically significant. This conclusion is supported by several studies showing that TATO does not significantly affect a company's value as measured by Tobin's Q, despite its relevance in assessing operational efficiency.

Although the lack of meaning of TATO in influencing a company's value is evident, it is important to consider that other financial ratios can provide a more comprehensive understanding of a company's financial health and market performance. This suggests that a multifaceted approach to financial analysis can lead to better insights into the dynamics of the pharmaceutical sector. The activity ratio, especially Total Asset Turnover (TATO), reflects the efficiency of a company in using its assets to generate revenue. However, in various studies, activity ratios often do not show a significant influence on a company's value, as measured by Tobin's Q. This can be explained from both theoretical and empirical perspectives. The activity ratio, measured by Total Asset Turnover (TATO), reflects the efficiency of the use of assets in generating revenue. However, during the pandemic period, many pharmaceutical companies experienced supply chain disruptions, increased operational costs, and a shift in focus to the production of essential goods, which impacted their asset turnover. Volatile capital market conditions make investors focus more on the aspects of profitability and business resilience compared to operational efficiency. Therefore, although the activity ratio may remain stable or even increase in some pharmaceutical companies, the company's value is not significantly affected because other factors, such as economic uncertainty and changes in investor

preferences, are more dominant in determining stock valuations (Gultom & Anggraeni, 2024).

In theory, a company's value is more influenced by factors such as profitability, growth prospects, and capital structure than operational efficiency alone. According to the firm value theory, investors pay more attention to the potential for profit growth and long-term expansion strategies compared to the high rate of asset turnover (Gultom & Anggraeni, 2024). Although a high activity ratio indicates that a company can make good use of its assets, it does not necessarily reflect increased profitability or investment attractiveness, which is a major factor in increasing a company's value (Elbawati et al., 2024). Previous research has also shown that in some industry sectors, including pharmaceuticals, asset utilization efficiency is not always the main indicator in determining a company's market value. The pharmaceutical industry often relies on large research and development (R&D) investments, which require large capital and have a long-term return cycle. As a result, activity ratios such as TATO may not directly reflect a company's financial success in the short term (Gultom & Anggraeni, 2024).

In addition, research shows that other factors, such as profitability and liquidity, have a more significant impact on a company's value compared to activity ratios (Elbawati et al., 2024). If a company has a high asset turnover rate but does not generate strong profitability, investors may not see it as a high-value company. Therefore, although the activity ratio is an indicator of operational efficiency, its effect on the value of a company is often not statistically significant due to other factors that are more influential in determining the company's valuation in the market.

3.4 The Effect of Profitability on the Value of Pharmaceutical Companies on the IDX

Profitability, measured by Return on Assets (ROA), is an indicator of financial performance that reflects a company's efficiency in generating profits from its total assets. In theory, higher profitability should increase the value of the company because it demonstrates management's effectiveness in managing existing resources. However, in the context of the pharmaceutical industry, various studies have shown that ROA does not have a significant influence on the value of a company as measured by Tobin's Q, as evidenced by statistical probabilities above 0.05 in various empirical studies.

Profitability as measured by Return on Assets (ROA) also did not have a significant effect on the value of companies in the pharmaceutical sector during the 2018–2023 period. In the early years of the pandemic, although some pharmaceutical companies experienced increased demand, high production and R&D costs caused profitability not to always increase significantly. In addition, the capital market at that time was more influenced by investor sentiment related to economic stimulus policies, interest rates, and health regulations, rather than simply the level of profitability of companies. Investors are more interested in long-term prospects, such as product innovation and market expansion strategies, compared to the short-term financial performance represented by ROAs (Sutalaksana & Kurniawati, 2022; Marsiati et al., 2024).

According to Signaling Theory, investors tend to pay attention to financial indicators that provide strong signals about the company's growth prospects, such as Return on Equity (ROE) or Net Profit Margin (NPM), compared to ROA which only describes the efficiency of assets in generating profits (Sulistyowati, 2022; Putri & Martha, 2024). In the pharmaceutical sector, company value is more influenced by external factors such as regulations, research and development (R&D) costs, and market expansion strategies than simply operational efficiency measured through ROA (Sutalaksana & Kurniawati, 2022). Previous studies have also shown that while profitability is an important factor in financial analysis, its effect on a company's value is not always significant. This is due to the competitive landscape in the pharmaceutical sector, where investors consider long-term prospects, product competitiveness, and business strategy more than a single profitability ratio

(Marsiati et al., 2024). In addition, other research has found that liquidity ratios play a greater role in influencing a company's value compared to ROA, indicating that a broader approach to financial analysis is needed to understand the factors that impact a company's valuation (Elbawati et al., 2024; Sutalaksana & Kurniawati, 2022).

Therefore, while profitability serves as a critical metric in assessing a firm's financial performance, the findings of the research indicate that Return on Assets (ROA) does not consistently exert a direct influence on enhancing the firm's value. Additional determinants such as market dynamics, strategic growth initiatives, and the regulatory landscape of the pharmaceutical sector exert a more pronounced effect, rendering the correlation between profitability and firm value increasingly intricate and not universally applicable across all industry contexts.

The results of the goodness-of-fit analysis indicate that the model in use has an R-squared (R^2) value of 0.253380, or 25.34%. This means that the independent variable in the model only accounts for about 25.34 percent of the variability in the dependent variable (Y). This figure is rather low, indicating that the model is not robust enough to fully explain how the independent and dependent variables are related. Additionally, the Adjusted R-squared value of 0.192341 is lower than the R-squared, suggesting that adding more independent variables to the model does not substantially increase the explanatory power concerning the dependent variable; on the contrary, it may even decrease explanatory capability.

Nevertheless, the *F-statistic* value f 4.157287 with a probability of 0.0058 indicates that the model as a whole is significant at the 99% confidence *level*. This means that simultaneously, independent variables in the model influence dependent variables. In addition, the *Durbin-Watson statistic value* of 2.072141 is close to the value of 2, which indicates that there are no serious problems related to autocorrelation in the model, so the residual of the regression does not show a specific pattern. However, the low R^2 indicates that there are still other variables outside the model that have a greater effect on the dependent variables, so this model still needs to be further developed by considering other more relevant factors.

4. Conclusion

This study examines the relationship between capital structure, liquidity, activity ratio, and profitability to the valuation of pharmaceutical companies listed on the Indonesia Stock Exchange (IDX) in the period 2018 to 2023, the results of the study show that the three variables do not have a statistically significant influence on the company's value, only the variables have a significant influence. This insignificance reflects capital market dynamics that are heavily influenced by external factors, particularly the COVID-19 pandemic, which changed investor behavior and shifted the orientation of corporate valuations. In conditions of high uncertainty, investors tend to pay more attention to external factors such as government policies, economic stimulus programs, and long-term growth prospects than conventional financial indicators. In addition, the pharmaceutical industry that experienced a surge in demand during the pandemic became more vulnerable to regulatory changes, global supply chain disruptions, and geopolitical fluctuations, which ultimately reduced the direct relevance between internal operational performance and the company's value in the market. These findings emphasize the importance for pharmaceutical companies to adjust their internal policies and financial strategies considering rapidly changing external dynamics. Companies need to strengthen financial flexibility, improve risk management capabilities, and strengthen strategic communication with stakeholders, especially investors, in the face of external uncertainty. For further research, it is recommended to include new variables that have the potential to have a significant influence on pharmaceutical companies' valuations, such as the level of innovation, the intensity of investment in research and development (R&D), and adaptability to health regulations and new technologies. In addition, future research also needs to dig deeper into

the role of external factors such as capital market volatility, interest rates, and investor sentiment as mediating or moderating variables in the analysis of company valuations. Comparative studies between the pharmaceutical industry and other sectors, both during and after the pandemic, will also provide a broader understanding of the dynamics of a company's value-determining factors in changing market conditions.

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