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# THE EFFECT OF PROFITABILITY, LIQUIDITY, AND SOLVENCY ON FIRM VALUE IN PHARMACEUTICAL SUB-SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE PERIOD 2019-2024

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**Abstract**
This study aims to examine the influence of key financial ratios, namely profitability, liquidity, and solvency, on the firm value of pharmaceutical companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2024 period. Profitability is measured using Return on Equity (ROE), liquidity is represented by the Current Ratio (CR), and solvency is measured using the Debt-to-Equity Ratio (DER). Firm value is assessed using the Price to Book Value (PBV) ratio. This research adopts a quantitative approach based on secondary data obtained from the annual financial statements of pharmaceutical sub-sector companies. The sample was selected through a purposive sampling technique according to predetermined criteria. Data analysis was conducted using multiple linear regression with the assistance of IBM SPSS Statistics version 26. The findings reveal that profitability (ROE) and solvency (DER) do not have a statistically significant effect on firm value. In contrast, liquidity (CR) has a positive and significant effect on firm value, indicating that stronger short-term financial capability enhances investor confidence and contributes to higher market valuation of pharmaceutical companies during the observation period.
**Keywords**: Profitability, Liquidity, Solvency, Firm Value

## PENDAHULUAN

The manufacturing industry, particularly the pharmaceutical sub-sector listed on the Indonesia Stock Exchange (IDX), plays an important role in meeting public healthcare needs while supporting national economic growth. The pharmaceutical industry produces a wide range of products, including medicines, dietary supplements, and other healthcare products. The development of this sub-sector experienced significant changes during the 2019–2024 period, covering the pre-COVID-19 pandemic, the pandemic period, and the post-pandemic recovery period. These conditions affected the operational activities and financial performance of pharmaceutical companies, creating challenges in maintaining business performance and investor confidence.

In an increasingly competitive business environment, financial performance has become one of the key factors influencing investors' perceptions of a company. A sound financial condition reflects a company's ability to manage its resources effectively, generate profits, meet its financial obligations, and maintain business sustainability. For companies listed on the Indonesia Stock Exchange, these conditions are also reflected in their firm value. Firm value represents investors' perceptions of a company's performance and prospects. A higher firm value generally indicates greater investor confidence and contributes to increasing shareholders' wealth. Therefore, companies need to pay close attention to various financial factors that may influence firm value.

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One of the financial factors affecting firm value is profitability. Profitability reflects a company's ability to generate profits by utilizing its capital and available resources. A high level of profitability indicates that the company is capable of managing its resources efficiently and generating returns for shareholders. In this study, profitability is measured using Return on Equity (ROE). However, a high level of profitability does not necessarily lead to an increase in firm value, as investors may also consider other factors, such as business prospects, market conditions, and investment risks.

Another financial factor that may influence firm value is liquidity. Liquidity refers to a company's ability to meet its short-term financial obligations. A company with a strong liquidity position is considered capable of fulfilling its short-term liabilities while maintaining the continuity of its business operations. In this study, liquidity is measured using the Current Ratio (CR). A higher CR provides a positive signal to investors, indicating that the company has sufficient current assets to meet its short-term obligations. As a result, strong liquidity may increase investor confidence and contribute to higher firm value.

In addition to profitability and liquidity, solvency is another important financial factor. Solvency indicates the extent to which a company relies on debt financing to support its assets and operational activities. In this study, solvency is measured using the Debt to Equity Ratio (DER). A high DER indicates greater dependence on debt financing, which may increase the company's financial risk. However, debt financing can also support business expansion and operational growth when managed effectively. Therefore, the relationship between solvency and firm value depends on the company's ability to manage its debt and financial risk.

Previous studies have reported inconsistent findings regarding the effects of profitability, liquidity, and solvency on firm value. These inconsistent results indicate that the relationship between financial ratios and firm value remains inconclusive. These differences constitute a research gap and provide a basis for further investigation. Moreover, the pharmaceutical sub-sector experienced different economic conditions throughout the 2019–2024 period, particularly during the COVID-19 pandemic and the subsequent recovery period. Therefore, examining the effects of profitability, liquidity, and solvency on firm value in pharmaceutical companies is important to provide additional empirical evidence regarding the financial factors that influence firm value.

Based on the phenomenon and the identified research gap, this study aims to examine the effect of profitability, liquidity, and solvency on firm value in pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange during the 2019–2024 period. Profitability is measured using Return on Equity (ROE), liquidity using the Current Ratio (CR), solvency using the Debt to Equity Ratio (DER), and firm value using the Price to Book Value (PBV) ratio.

## LITERATURE REVIEW

### Agency Theory

Agency theory, proposed by Jensen and Meckling (1976), explains the relationship between company owners (principals) and managers (agents) in managing a company. This theory emphasizes the potential conflict of interest between managers and shareholders due to their different objectives. Therefore, effective corporate governance is essential to align the interests of both parties, maximize firm value, and improve shareholders' wealth.

### Signaling Theory

Signaling theory, introduced by Spence (1973), explains that companies convey information to external stakeholders through financial reports as signals regarding their financial condition and prospects. Favorable financial information provides a positive signal to investors, thereby increasing investment interest and enhancing firm value. Conversely, unfavorable information may generate a negative signal and reduce investors' confidence in the company.

### Profitability

Profitability is one of the key financial indicators used to evaluate a company's ability to generate earnings from its available resources. According to Junaedah Rahmawati et al. (2023), profitability serves as an important basis for investors' decision-making because it reflects the company's financial performance. High profitability provides a positive signal to investors regarding the company's prospects, whereas low profitability may indicate weaker financial performance. In this study, profitability is measured using Return on Equity (ROE), which measures the company's ability to generate net income from shareholders' equity. A higher ROE indicates greater efficiency in generating returns for shareholders.

### Liquidity

Liquidity refers to a company's ability to meet its short-term financial obligations as they become due (Siswanto, 2021). In this study, liquidity is measured using the Current Ratio (CR), which is calculated by comparing current assets with current liabilities. A higher Current Ratio indicates a stronger ability to fulfill short-term obligations and reflects a healthier liquidity position.

### Solvency

Solvency, also referred to as leverage, measures the extent to which a company's assets are financed by debt (Kasmir, 2016, p. 151). This study uses the Debt to Equity Ratio (DER) as the proxy for solvency. DER compares total liabilities with total shareholders' equity. A higher DER indicates greater reliance on debt financing, which may increase the company's financial risk.

### Firm Value

Firm value reflects investors' perceptions of a company's financial condition, performance, and prospects. A higher firm value indicates greater investor confidence and increased shareholder wealth. In this study, firm value is measured using the Price to Book Value (PBV) ratio, which compares the

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market price per share with the book value per share. A higher PBV indicates that the market places a higher valuation on the company. According to Brigham, E. F., & Houston, J. F. 2021), an increase in firm value also reflects an increase in shareholders' wealth.

**Framework**

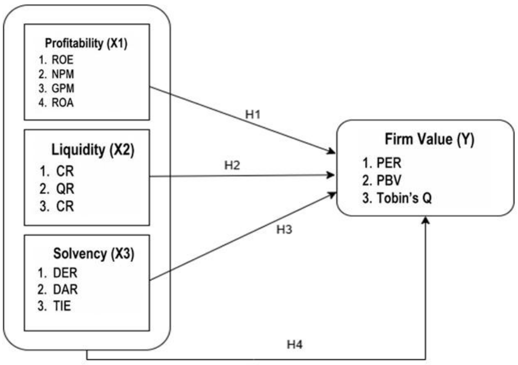


Figure 1: Thinking Framework

## METHOD

This study employed a quantitative method with a descriptive approach to examine the effect of profitability, liquidity, and solvency on firm value. The study used secondary data obtained from the annual financial statements of pharmaceutical companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2024 period.

The population consisted of 11 pharmaceutical companies listed on the IDX. The sample was selected using a purposive sampling technique based on predetermined criteria. As a result, 8 companies were selected as the research sample, namely SIDO, KLBF, DVLA, TSPC, PEHA, INAF, PYFA, and MERK. With a six-year observation period, a total of 48 observations were obtained.

The research data were collected from the annual financial statements of the sample companies and the official website of the Indonesia Stock Exchange (IDX). The data were analyzed to examine the effect of profitability (Return on Equity/ROE), liquidity (Current Ratio/CR), and solvency (Debt to Equity Ratio/DER) on firm value (Price to Book Value/PBV).

## RESULTS AND DISCUSSION

### Classical assumption test: Normality test

The normality test was conducted using the Kolmogorov–Smirnov test on the regression residuals to determine whether the data were normally distributed.

Table 1 Normality test

| **One-Sample Kolmogorov-Smirnov Test** | |
|---|---|
| | Unstandardized Residual |
| N | 48 |

| | | |
|---|---|---|
| Normal Parameters[a,b] | Mean | .0000000 |
| | Std. Deviation | 1.86825537 |
| Most Extreme Differences | Absolute | .124 |
| | Positive | .124 |
| | Negative | -.057 |
| Test Statistic | | .124 |
| Asymp. Sig. (2-tailed) | | .062[c] |

Source: Secondary data analyzed using IBM SPSS Statistics 26

Berdasarkan tabel diatas, nilai Asymp.Sig. (2-tailed) sebesar 0,062 sedangkan kriteria yang ditetapkan adalah nilai Asymp.Sig.(2-tailed)>0.05. Jadi dapat dikatakan bahwa dalam penelitian ini data terdistribusi normal dan dapat dilanjutkan.

**Multicollinearity Test**

The multicollinearity test was conducted to determine whether there was a strong correlation among the independent variables in the regression model. The results showed that all independent variables had tolerance values greater than 0.10 and Variance Inflation Factor (VIF) values below 10, indicating that no multicollinearity was detected in the regression model.

Table 2 Multicollinearity Test Results

| **Coefficients[a]** | | | |
|---|---|---|---|
| | | Collinearity Statistics | |
| Model | | Tolerance | VIF |
| 1 | Profitabilitas | .307 | 3.258 |
| | Likuiditas | .668 | 1.497 |
| | Solvabilitas | .263 | 3.800 |

Source: Secondary data analyzed using IBM SPSS Statistics 26

Based on the table above, the Asymp. Sig. (2-tailed) value is 0.062, which is greater than the significance level of 0.05. Therefore, it can be concluded that the data are normally distributed, indicating that the normality assumption has been satisfied and the analysis can be continued.

**Heteroscedasticity Test**

The heteroscedasticity test was performed using a scatterplot of the regression residuals. The scatterplot showed that the residuals were randomly distributed around the zero line and did not form any specific pattern. Therefore, it can be concluded that the regression model is free from heteroscedasticity.

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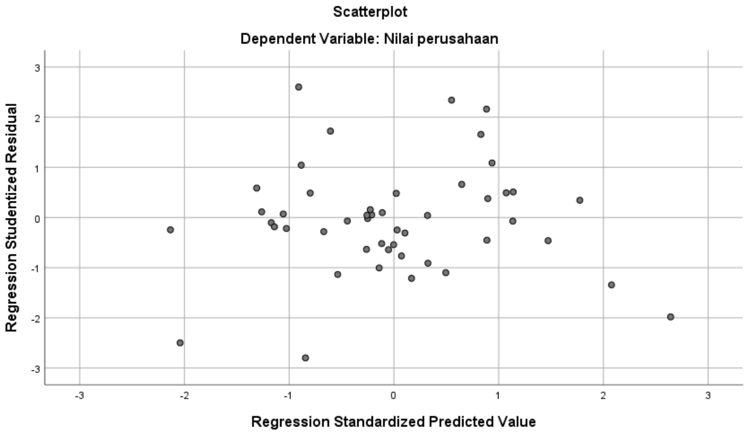


Figure 2 scatterplot

**Multiple Linear Regression Analysis**

Multiple linear regression analysis was employed to examine the relationship between the dependent variable, firm value (PBV), and the independent variables, namely profitability (ROE), liquidity (CR), and solvency (DER).

Table 1 Linearity Test

| a. | | **Coefficients**[a] | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
| 1 | (Constant) | -.113 | .809 | | -.140 | .889 |
| | Profitabilitas | -.124 | .641 | -.045 | -.194 | .847 |
| | Likuiditas | .856 | .236 | .567 | 3.630 | .001 |
| | Solvabilitas | .087 | .198 | .110 | .442 | .661 |

Source: Secondary data analyzed using IBM SPSS Statistics 26

The regression equation is as follows:

PBV = -0,113 – 0,124ROE + 0,856CR + 0,087DER

The regression results indicate that the

1. constant value is -0.113, implying that when all independent variables are assumed to be zero, firm value is estimated at -0.113.
2. The regression coefficient of ROE is -0.124, indicating that an increase of one unit in ROE decreases firm value by 0.124, assuming the other variables remain constant.
3. The coefficient of CR is 0.856, indicating that an increase of one unit in CR increases firm value by 0.856.

The coefficient of DER is 0.087, indicating that an increase of one unit in DER increases firm value by 0.087, assuming the other variables remain constant

1. Nilai konstanta sebesar -0,113 menunjukkan bahwa apabila variabel profitabilitas (ROE), likuiditas (CR), dan solvabilitas (DER) dianggap konstan atau bernilai nol, maka nilai perusahaan diperkirakan sebesar -0,113.
2. Koefisien regresi variabel profitabilitas (ROE) bernilai -0,124. Hal ini menunjukkan bahwa setiap kenaikan ROE sebesar 1 satuan akan menurunkan nilai perusahaan sebesar 0,124, dengan asumsi variabel independen lainnya tetap.
3. Koefisien regresi variabel likuiditas (CR) bernilai 0,856. Hal ini menunjukkan bahwa setiap kenaikan CR sebesar 1 satuan akan meningkatkan nilai perusahaan sebesar 0,856, dengan asumsi variabel independen lainnya tetap.
4. The coefficient of DER is 0.087, indicating that an increase of one unit in DER increases firm value by 0.087, assuming the other variables remain constant

**Hypothesis Test Partial Test (t)**

Table 2 t-test

| **Coefficients[a]** | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.113 | .809 | | -.140 | .889 |
| | Profitabilitas | -.124 | .641 | -.045 | -.194 | .847 |
| | Likuiditas | .856 | .236 | .567 | 3.630 | .001 |
| | Solvabilitas | .087 | .198 | .110 | .442 | .661 |

Source: Secondary data analyzed using IBM SPSS Statistics 26

The results of the partial hypothesis test show:

1. Profitability (ROE) has a t-value of -0.194 and a significance value of 0.847, which is greater than 0.05. Therefore, profitability does not have a significant effect on firm value.
2. The liquidity (CR) variable has a t-value of 3.630 with a significance value of 0.001, which is less than 0.05. This indicates that liquidity has a positive and significant effect on firm value.\
3. The solvency (DER) variable has a t-value of 0.442 with a significance value of 0.661, which is greater than 0.05. Therefore, solvency does not have a significant effect on firm value.

**Coefficient of Determination**

The coefficient of determination (Adjusted $R^2$) is 0.233, indicating that profitability (ROE), liquidity (CR), and solvency (DER) explain 23.3% of the variation in firm value. In comparison, the remaining 76.7% is explained by other variables outside the research model.

Table 3 Determination Test Results

| **Model Summary[b]** | | | | | |
|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |

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| | | | | | |
|---|---|---|---|---|---|
| 1 | .531[a] | .282 | .233 | 1.93090 | 1.232 |

Source: Secondary data analyzed using IBM SPSS Statistics 26

**Discussion**

**Effect of Profitability on Firm Value**

Based on the hypothesis testing results, profitability, as measured by Return on Equity (ROE), has a significance value of 0.847 > 0.05 and a regression coefficient of −0.124. These findings indicate that profitability has no significant effect on firm value. Therefore, the hypothesis stating that profitability affects firm value is rejected. This suggests that the company's ability to generate profits from shareholders' equity has not significantly influenced firm value in pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange during the 2019–2024 period.

The insignificant effect of profitability on firm value indicates that investors do not rely solely on a company's ability to generate profits when making investment decisions. Investors may also consider other factors, such as industry conditions, business growth prospects, investment risks, corporate policies, and capital market conditions. Consequently, an increase in ROE does not necessarily lead to an increase in PBV if the improvement in profitability does not provide investors with confidence regarding the company's long-term prospects.

The findings of this study are consistent with Samiun et al. (2022), who reported that profitability has no significant effect on firm value. However, these findings differ from those of Ali and Faroji (2021) and Anggraini and Yudiantoro (2023), who found that profitability has a positive and significant effect on firm value. These differences may be attributed to variations in company characteristics, industry sectors, research periods, and economic conditions. In this study, the observation period covered both the COVID-19 pandemic and the post-pandemic recovery, during which investors may have paid greater attention to market conditions and industry prospects than to profitability alone.

**Effect of Liquidity on Firm Value**

Based on the hypothesis testing results, liquidity, as measured by the Current Ratio (CR), has a significance value of 0.001 < 0.05 and a regression coefficient of 0.856. These results indicate that liquidity has a positive and significant effect on firm value. Therefore, the hypothesis stating that liquidity affects firm value is accepted. This finding implies that companies with better short-term financial capability tend to have higher firm value.

The positive effect of liquidity suggests that companies capable of meeting their short-term obligations are viewed more favorably by investors. Strong liquidity reduces the risk of financial distress and demonstrates sound financial management. As a result, higher investor confidence may increase market appreciation of the company, which is reflected in a higher Price to Book Value (PBV).

The findings are consistent with those of (Alifian & Susilo, 2024), who found that liquidity has a positive effect on firm value. However, the results differ from those of Jonnardi (2020), who reported that liquidity has no significant effect on firm value. Variations in industry sectors, research periods, economic conditions, and company characteristics may explain these differences. In pharmaceutical companies, maintaining adequate liquidity is essential to support operational activities, making liquidity an important consideration for investors.

**Effect of Solvency on Firm Value**

Based on the hypothesis testing results, solvency, as measured by the Debt to Equity Ratio (DER), has a significance value of 0.661 > 0.05 and a regression coefficient of 0.087. These findings indicate that solvency has no significant effect on firm value. Therefore, the hypothesis stating that solvency affects firm value is rejected. This suggests that changes in the proportion of debt relative to equity do not significantly influence firm value in pharmaceutical sub-sector companies during the 2019–2024 period.

The insignificant effect of DER indicates that investors may not consider the level of corporate debt as the primary determinant of firm value. Instead, investors are more likely to evaluate how effectively the company manages its debt. Although debt financing can support business expansion and operational activities, excessive debt may increase financial risk. Therefore, changes in DER do not necessarily influence investors' decisions as long as the company remains capable of managing its financial obligations.

The findings of this study are consistent with those of (Tandrio & Handoyo, 2022), who found that leverage has no significant effect on firm value. However, these findings differ from those of (Fhelisah & Wulandari, 2025), who reported that solvency has a significant effect on firm value. These differences may be attributed to variations in industry characteristics, research periods, economic conditions, and corporate financing policies.

**Effect of Profitability, Liquidity, and Solvency on Firm Value**

Based on the simultaneous hypothesis test, the F-statistic is 5.764 with a significance value of 0.002 < 0.05. These results indicate that profitability (ROE), liquidity (CR), and solvency (DER) simultaneously have a significant effect on firm value. This implies that the three financial ratios collectively explain changes in firm value among pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange during the 2019–2024 period.

Although only liquidity has a significant effect in the partial test, the simultaneous test demonstrates that profitability, liquidity, and solvency collectively contribute to explaining firm value. This finding suggests that investors evaluate a company's overall financial condition rather than relying on a single financial ratio. Profitability reflects the company's ability to generate earnings, liquidity indicates its ability to meet short-term obligations, and solvency represents its capital structure and financial risk

The findings are consistent with those of Alfina Dwi Indrawati & Yudiantoro (2023), who found that profitability, liquidity, and solvency simultaneously have a significant effect on firm value. Similarly, Nugroho et al. (2023) reported that profitability, liquidity, and solvency significantly influence firm value both partially and simultaneously.

## CONCLUSION

This study examined the effects of profitability, liquidity, and solvency on firm value in pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange during the 2019–2024 period. The findings indicate that profitability (ROE) does not have a significant effect on firm value, suggesting that the company's profitability alone is insufficient to increase firm value. Liquidity (CR) has a positive and significant effect on firm value, indicating that companies with stronger short-term financial capabilities tend to achieve higher firm value. Meanwhile, solvency (DER) does not have a significant effect on firm value, suggesting that the level of corporate debt is not the main consideration for investors. Furthermore, profitability, liquidity, and solvency simultaneously have a significant effect on firm value.

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