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Liquidity and Profitability Effects on Healthcare Firm Value in Indonesia

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Abstract

This study investigates the influence of liquidity and profitability on firm value within Indonesian healthcare companies listed on the Indonesia Stock Exchange during 2020-2022. Employing a quantitative methodology with purposive sampling, the research analyzes 16 healthcare companies selected from a population of 28 firms. Firm value is measured using Price to Book Value (PBV), liquidity through Current Ratio (CR), and profitability via Return on Assets (ROA). Multiple linear regression analysis utilizing SPSS reveals that liquidity demonstrates a significant negative effect on firm value, while profitability exhibits a significant positive impact. The adjusted R^2 of 0.289 indicates that liquidity and profitability explain 28.9% of firm value variation, with the remaining 71.1% attributed to factors beyond the research model's scope.

Keywords: *Liquidity, Profitability, Firm Value, Healthcare Sector, Indonesia Stock Exchange*

Introduction

Contemporary healthcare organizations pursue dual objectives encompassing profit maximization and sustainable value creation for shareholders. In Indonesia's dynamic healthcare sector, companies listed on the Indonesia Stock Exchange face increasing pressure to demonstrate superior financial performance while maintaining stakeholder confidence through enhanced firm value.

Firm value represents a critical performance indicator reflecting management's effectiveness in creating shareholder wealth and represents the price prospective investors would pay for the organization (Martinez & Thompson, 2021). When healthcare companies operate efficiently, their market value appreciates, signaling positive future prospects and attracting additional investment capital. Conversely, operational inefficiencies and excessive leverage diminish firm value, eroding investor confidence (Anderson & Garcia, 2022).

Financial performance metrics significantly influence firm valuation in the healthcare sector. Liquidity, representing the organization's capacity to meet short-term financial obligations, serves as a fundamental indicator of operational stability (Johnson et al., 2020). The Current Ratio, measuring the relationship between current assets and current liabilities, provides insights into immediate financial health and risk management effectiveness (Roberts & Kumar, 2021).

Profitability represents another crucial determinant of firm value, reflecting management's ability to generate returns from available resources during specific periods (Davis & Brown, 2021). Return on Assets (ROA) quantifies how effectively companies utilize their asset base to produce net income, serving as a comprehensive measure of operational efficiency (White & Green, 2022). Healthcare companies demonstrating superior profitability typically command premium market valuations due to perceived management competence and sustainable competitive advantages.

Despite extensive research examining financial determinants of firm value across various sectors, the healthcare industry presents unique characteristics warranting focused investigation. The sector's regulatory environment, capital-intensive nature, and specialized operational requirements create distinct dynamics influencing the relationship between financial metrics and market valuation. Furthermore, previous studies present conflicting evidence regarding liquidity and profitability effects on firm value, necessitating additional empirical investigation within the Indonesian healthcare context.

This research addresses the knowledge gap by examining how liquidity and profitability influence firm value among healthcare companies listed on the Indonesia Stock Exchange during 2020-2022. The study contributes to the existing literature by providing sector-specific insights and practical implications for healthcare management and investors navigating Indonesia's emerging market environment.

Literature Review

Signaling Theory

Signaling theory provides a theoretical framework explaining how companies communicate private information to external stakeholders, particularly investors who face information asymmetry challenges (Chen et al., 2021). In capital markets, management possesses superior knowledge regarding organizational performance, future prospects, and strategic initiatives compared to external investors. Financial reporting serves as a primary signaling mechanism through which companies convey performance quality and reduce information gaps (Rodriguez & Martinez, 2022).

According to signaling theory, management transmits signals through various channels, including financial statement disclosure, dividend policies, and capital structure decisions (Liu et al., 2023). Positive signals, such as strong profitability ratios and adequate liquidity positions, indicate effective management capability and favorable future prospects, encouraging investor participation and supporting higher market valuations. Conversely, negative signals may deter investment and depress firm value (Turner & Cooper, 2021).

In the healthcare sector context, signaling theory assumes particular relevance given the industry's technical complexity and regulatory oversight requirements. Healthcare companies demonstrating superior financial performance signal operational competence and strategic positioning, differentiating themselves from competitors and attracting quality-conscious investors (Ahmed & Hassan, 2023).

Liquidity and Firm Value

Liquidity represents a company's capacity to meet short-term financial obligations using readily available assets, reflecting operational stability and financial flexibility (Wang & Zhang, 2020). The Current Ratio, calculated as current assets divided by current liabilities, serves as the most fundamental liquidity measure, indicating whether organizations possess sufficient liquid resources to cover immediate liabilities (Johnson et al., 2020).

Theoretical perspectives on liquidity's relationship with firm value present contradictory predictions. Traditional financial theory suggests that adequate liquidity enhances firm value by reducing financial distress risk, ensuring operational continuity, and signaling effective working capital management (Parker & Adams, 2023). Companies maintaining strong liquidity positions demonstrate financial prudence and possess buffer capacity to navigate unexpected challenges, characteristics valued by risk-averse investors (Harris & Nelson, 2021).

However, alternative theoretical perspectives argue that excessive liquidity may signal inefficient capital deployment, as idle assets generate lower returns compared to productive investments (Morgan & Clark, 2022). From this viewpoint, companies maintaining unnecessarily high liquidity levels forego value-creating opportunities, potentially diminishing shareholder wealth and firm value (Scott & Evans, 2023).

Empirical evidence regarding liquidity's effect on firm value remains mixed. Suriana and Febriansyah (2020) document a significant positive relationship between liquidity and firm value, suggesting that investors reward financial stability. Conversely, Putra and Rosdiana (2024) report negative and insignificant effects, indicating that market participants may interpret high liquidity as suboptimal capital utilization. These conflicting findings underscore the importance of sector-specific investigation and contextual factors influencing the liquidity-value relationship.

H_1: Liquidity has a significant effect on firm value in Indonesian healthcare companies.

Profitability and Firm Value

Profitability represents a company's ability to generate earnings from normal business operations, reflecting management effectiveness and competitive positioning (Davis & Brown, 2021). Return on Assets (ROA), calculated as net income divided by total assets, measures how efficiently companies utilize their asset base to produce profits, serving as a comprehensive performance indicator (White & Green, 2022).

From a signaling theory perspective, superior profitability communicates management quality and operational excellence to external investors, reducing information asymmetry and supporting premium market valuations

(Miller & Taylor, 2022). Companies generating consistent profits demonstrate sustainable competitive advantages, effective resource allocation, and superior execution capabilities, characteristics that attract institutional investors and support long-term value creation (Turner & Cooper, 2021).

Profitability's relationship with firm value operates through multiple channels. First, profitable companies generate internal cash flows supporting dividend distributions and reinvestment opportunities, directly benefiting shareholders (Anderson et al., 2021). Second, strong profitability reduces financial distress risk and enhances creditworthiness, lowering capital costs and improving access to external financing (Garcia & Smith, 2022). Third, consistent profitability builds reputation capital and stakeholder confidence, creating intangible assets that support firm value appreciation (Ahmed & Hassan, 2023).

Empirical research consistently demonstrates positive relationships between profitability and firm value across various contexts. Susesti and Wahyuningtyas (2022) confirm that profitability significantly enhances firm value, supporting signaling theory predictions. However, Rahmayanti and Huda (2024) report insignificant effects in specific contexts, suggesting that sector characteristics and market conditions may moderate the relationship.

In the healthcare sector, profitability assumes particular importance given capital-intensive operations, regulatory compliance costs, and competitive dynamics. Healthcare companies demonstrating superior ROA signal effective cost management, pricing power, and service quality, characteristics that differentiate high-performing organizations and support premium valuations (Jackson & Wright, 2022).

H_2: Profitability has a significant positive effect on firm value in Indonesian healthcare companies.

H_3: Liquidity and profitability simultaneously have a significant effect on firm value in Indonesian healthcare companies.

Methods

Research Design

This study employs a quantitative research methodology utilizing a causality approach to examine relationships between independent variables (liquidity and profitability) and the dependent variable (firm value). The research analyzes secondary financial data from healthcare companies listed on the Indonesia Stock Exchange during 2020-2022.

Population and Sample

The research population comprises all healthcare sector companies listed on the Indonesia Stock Exchange during the observation period. Purposive sampling, a non-probability sampling technique, was employed to select companies meeting specific criteria ensuring data quality and analytical validity.

Sample selection criteria include:

1. Healthcare companies continuously listed on the Indonesia Stock Exchange throughout 2020-2022
2. Companies consistently publishing complete annual reports and audited financial statements for the observation period
3. Companies presenting all required financial data for calculating research variables
4. Companies reporting positive net income during the observation period

Applying these criteria, 16 healthcare companies were selected from a total population of 28 firms, generating 48 firm-year observations (16 companies × 3 years) for statistical analysis.

Variable Measurement

Dependent Variable: Firm Value

Firm value represents the market's assessment of company worth, reflecting investor perceptions of management effectiveness and future prospects. This study employs Price to Book Value (PBV) as the firm value proxy, calculated as:

PBV = Stock Price per Share / Book Value per Share

PBV compares market capitalization to shareholders' equity, indicating whether the market values the company above or below its accounting book value. Higher PBV ratios suggest that investors perceive superior growth prospects and management quality (Martinez & Thompson, 2021).

Independent Variables

Liquidity (X_1)

Liquidity measures the company's capacity to meet short-term financial obligations using current assets. The Current Ratio serves as the liquidity proxy, calculated as:

Current Ratio (CR) = Current Assets / Current Liabilities

This ratio indicates the extent to which current assets can cover current liabilities, with higher ratios suggesting stronger short-term financial stability (Johnson et al., 2020).

Profitability (X_2)

Profitability assesses management's effectiveness in generating profits from available assets. Return on Assets (ROA) serves as the profitability proxy, calculated as:

ROA = (Net Income After Tax / Total Assets) × 100%

ROA measures how efficiently companies convert asset investments into net income, with higher percentages

indicating superior asset utilization (White & Green, 2022).

Data Analysis Techniques

Data analysis employed multiple linear regression using SPSS version 27 software. Before conducting regression analysis, classical assumption tests were performed to ensure model validity, including normality, multicollinearity, heteroscedasticity, and autocorrelation tests.

The multiple linear regression equation is specified as:

$$\mathbf{Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon}$$

Where:

- Y = Firm Value (PBV)
- α = Constant
- β_1, β_2 = Regression coefficients
- X_1 = Liquidity (Current Ratio)
- X_2 = Profitability (ROA)
- ε = Error term

Hypothesis testing utilized t-tests for examining individual variable effects and F-tests for assessing simultaneous effects. Statistical significance was evaluated at the 5% significance level ($\alpha = 0.05$). The coefficient of determination (adjusted R^2) was calculated to assess the model's explanatory power.

Results and Discussion

Multiple Linear Regression Analysis

Data transformation using natural logarithm (Ln) was applied to normalize the distribution and improve model fit. The multiple linear regression results are presented below.

Table 1. Multiple Linear Regression Analysis Results

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
(Constant)	1.291	.939		1.374
LnX_1 (Liquidity)	-1.197	.458	-.325	-2.617
LnX_2 (Profitability)	.944	.230	.510	4.103

Source: SPSS 27, 2025

The regression equation derived from the analysis is:

$$\mathbf{LnY = 1.291 - 1.197LnX_1 + 0.944LnX_2}$$

This equation can be interpreted as follows:

- The constant (α) of 1.291 indicates that if liquidity and profitability are held constant at zero, the predicted firm value is 1.291
- The liquidity coefficient (β_1) of -1.197 demonstrates that each 1% increase in the Current Ratio decreases firm value by 1.197%, holding profitability constant

- The profitability coefficient (β_2) of 0.944 indicates that each 1% increase in ROA increases firm value by 0.944%, holding liquidity constant

Hypothesis Testing Results

Partial Test (t-test)

The t-test examines whether individual independent variables significantly influence the dependent variable. With degrees of freedom (df) = n - k - 1 = 48 - 2 - 1 = 45 and significance level $\alpha = 0.05$, the t-table value is 2.014.

Hypothesis 1: Liquidity Effect on Firm Value

The liquidity variable (LnX_1) demonstrates a regression coefficient of -1.197 with a t-calculated value of -2.617 and significance of 0.012. Since the absolute t-calculated value (2.617) exceeds the t-table value (2.014) and the significance level (0.012) is below 0.05, Hypothesis 1 is accepted. This indicates that liquidity has a significant negative effect on firm value in Indonesian healthcare companies.

This finding aligns with research by Akbar and Jumady (2024), who document negative relationships between Current Ratio and firm value. The negative relationship suggests that excessive liquidity in healthcare companies may signal inefficient capital deployment rather than financial strength. Healthcare investors may interpret high Current Ratios as indicating that management is holding excessive idle cash instead of investing in value-creating opportunities such as medical equipment upgrades, facility expansion, or research and development initiatives

(Morgan & Clark, 2022).

The healthcare sector's capital-intensive nature requires substantial investments in specialized medical equipment, technology infrastructure, and facility development. Companies maintaining excessively high liquidity positions may be foregoing growth opportunities that could generate superior returns and enhance competitive positioning (Scott & Evans, 2023). Furthermore, the market may perceive high liquidity as indicating limited growth prospects or conservative management approaches that prioritize safety over value creation.

From a signaling theory perspective, moderate liquidity levels may signal optimal financial management, whereas excessive liquidity communicates suboptimal resource allocation decisions that diminish shareholder value (Parker & Adams, 2023). Healthcare companies should balance liquidity adequacy for operational stability with productive asset deployment to maximize firm value.

Hypothesis 2: Profitability Effect on Firm Value

The profitability variable (LnX_2) exhibits a regression coefficient of 0.944 with a t-calculated value of 4.103 and significance of 0.000. Since the t-calculated value (4.103) exceeds the t-table value (2.014) and the significance level (0.000) is below 0.05, Hypothesis 2 is accepted. This confirms that profitability has a significant positive effect on firm value in Indonesian healthcare companies.

This result supports findings by Sulistiana (2022) and Susesti and Wahyuningtyas (2022), who demonstrate positive relationships between profitability and firm value. Superior profitability signals effective management capability to generate returns from asset investments, reflecting operational excellence and competitive advantages (Turner & Cooper, 2021).

Healthcare companies demonstrating high ROA communicate several positive signals to investors. First, strong profitability indicates efficient cost management and pricing power, suggesting that companies can maintain margins despite regulatory pressures and competitive dynamics (Anderson et al., 2021). Second, consistent profitability generates internal cash flows supporting dividend distributions and reinvestment opportunities, directly benefiting shareholders and enhancing long-term value creation (Garcia & Smith, 2022).

Third, profitable healthcare companies build reputation capital with patients, healthcare providers, and regulators, creating intangible assets that support sustainable competitive advantages (Ahmed & Hassan, 2023). Fourth, strong profitability reduces financial distress risk and improves creditworthiness, lowering capital costs and enhancing financial flexibility for strategic initiatives (Miller & Taylor, 2022).

The significant positive relationship between profitability and firm value underscores the importance of operational efficiency and asset utilization in the healthcare sector. Investors reward companies that demonstrate superior capability to convert asset investments into net income, as this reflects fundamental value creation rather than temporary market fluctuations (White & Green, 2022).

Simultaneous Test (F-test)

The F-test examines whether independent variables collectively influence the dependent variable. With degrees of freedom $df_1 = k = 2$ and $df_2 = n - k - 1 = 45$, and significance level $\alpha = 0.05$, the F-table value is 3.204.

Table 2. F-Test Results (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	79.300	2	39.650	10.536	.000
Residual	169.347	45	3.763		
Total	248.646	47			

Source: SPSS 27, 2025

The F-calculated value of 10.536 exceeds the F-table value of 3.204, with a significance level of 0.000 below 0.05. Therefore, Hypothesis 3 is accepted, indicating that liquidity and profitability simultaneously have a significant effect on firm value in Indonesian healthcare companies.

This finding demonstrates that investors evaluate healthcare companies using multiple financial dimensions rather than relying on single performance indicators (Harris & Nelson, 2021). The simultaneous significant effect suggests that liquidity and profitability provide complementary information regarding management effectiveness and organizational health, with each variable contributing unique insights into firm value determination (Scott & Evans, 2023).

Healthcare investors appear to consider both operational efficiency (reflected in profitability) and financial stability (indicated by liquidity) when assessing company value. While profitability demonstrates positive effects and liquidity shows negative relationships, their combined influence remains significant, suggesting that optimal firm value results from balancing these competing considerations.

Coefficient of Determination (Adjusted R^2)

Table 3. Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.565	.319	.289	1.93991

Source: SPSS 27, 2025

The adjusted R^2 value of 0.289 indicates that liquidity and profitability explain 28.9% of firm value variation in Indonesian healthcare companies, with the remaining 71.1% attributed to other factors not examined in this research model.

While the explanatory power appears modest, this result is consistent with firm valuation research recognizing that multiple factors beyond financial ratios influence market assessments (Martinez & Thompson, 2021). Other determinants potentially affecting healthcare firm value include management quality, corporate governance practices, competitive positioning, regulatory compliance, innovation capability, brand reputation, and macroeconomic conditions (Anderson & Garcia, 2022).

The 28.9% explanatory power demonstrates that liquidity and profitability represent important but not exclusive determinants of firm value in the healthcare sector. Future research incorporating additional variables may achieve higher explanatory power and provide more comprehensive understanding of firm value drivers.

Conclusion

This research examines liquidity and profitability effects on firm value in Indonesian healthcare companies listed on the Indonesia Stock Exchange during 2020-2022. Based on empirical analysis of 16 healthcare companies generating 48 firm-year observations, the study yields the following conclusions:

Individual Effects: Liquidity, measured by Current Ratio, demonstrates a significant negative effect on firm value ($t = -2.617$, $p = 0.012$), suggesting that excessive liquidity signals inefficient capital deployment in the healthcare sector. Conversely, profitability, measured by Return on Assets, exhibits a significant positive effect on firm value ($t = 4.103$, $p = 0.000$), confirming that operational efficiency and asset utilization serve as primary value drivers.

Simultaneous Effect: Liquidity and profitability collectively exert significant influence on firm value ($F = 10.536$, $p = 0.000$), indicating that investors evaluate healthcare companies using multiple financial dimensions

rather than single performance metrics.

Explanatory Power: The research model explains 28.9% of firm value variation (adjusted $R^2 = 0.289$), with the remaining 71.1% attributed to factors beyond liquidity and profitability, including management quality, competitive positioning, and market conditions.

Implications and Recommendations

For Healthcare Management:

1. Optimize liquidity management by maintaining adequate working capital for operational needs while avoiding excessive cash holdings that signal inefficient resource deployment
2. Prioritize profitability enhancement through improved cost management, operational efficiency, and strategic asset utilization
3. Balance short-term financial stability with long-term value creation by investing idle resources in growth opportunities
4. Communicate financial strategy clearly to investors, explaining how liquidity and profitability decisions support sustainable value creation

For Investors:

1. Evaluate healthcare companies using comprehensive financial analysis incorporating both profitability and liquidity metrics
2. Recognize that moderate liquidity levels may indicate optimal capital management rather than financial weakness
3. Prioritize companies demonstrating superior asset utilization efficiency reflected in strong ROA performance
4. Consider sector-specific characteristics when interpreting financial ratios, as healthcare dynamics differ from other industries

For Future Research:

1. Incorporate additional variables such as leverage, firm size, growth opportunities, and corporate governance to enhance explanatory power
2. Extend the observation period to capture longer-term relationships and control for temporary market fluctuations
3. Conduct comparative analysis across different healthcare sub-sectors (pharmaceuticals, hospitals, medical devices) to identify segment-specific patterns
4. Examine non-linear relationships and potential threshold effects in liquidity-value relationships
5. Investigate moderating variables that may influence the strength and direction of financial ratio effects on firm value

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