



The influence of capital structure, liquidity, and operational cost efficiency on firm value with profitability as an intervening variable in banking companies listed on the Indonesia Stock Exchange for the period 2019–2023

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ABSTRACT

Capital structure, liquidity, and operating cost efficiency are important factors that influence company performance, especially banking companies. This study aims to analyze the effect of capital structure, liquidity, and operating cost efficiency on profitability and firm value. This study uses the regression analysis method to test the proposed hypothesis. The data also used is data from banking companies listed on the Indonesia stock exchange during the 2019-2023 period. Hypothesis testing is carried out using linear regression tests to analyze the relationship between variables. The findings prove that capital structure has a significant positive effect on profitability, but has no direct effect on firm value. Liquidity has no significant effect on profitability, but has a negative effect on firm value. Operating cost efficiency is proven to have a significant positive effect on profitability, and firm value through profitability.

Kata kunci: *Capital Structure, Liquidity, Operational Cost Efficiency, Profitability, Company Value*



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INTRODUCTION

The banking industry in Indonesia has undergone a remarkable journey, evolving from its early foundations and growth, through a challenging era of reform and liberalization, to the current digital age characterized by transformation and disruption. Today, the industry faces multifaceted challenges, including intense competition from fintech companies, cybersecurity risks, and the pursuit of financial inclusion. However, it also presents significant opportunities, driven by the rapid integration of financial services and digital technologies. Collaboration between banks and fintech firms, a focus on technology-driven financial services, and innovative policies from the Financial Services Authority (OJK) are pivotal in addressing these challenges and capitalizing on opportunities in this digital era.

Banks serve as intermediaries in managing funds entrusted by customers, maintaining public trust as a cornerstone of their operations. To this day, banks remain a trusted institution, with a significant portion of the population engaging in transactions ranging from savings to credit applications. This trust places a continuous obligation on the banking sector to demonstrate strong performance, ensuring the safety of customer deposits. Such performance is critical not only for sustaining public confidence but also for attracting new customers. Consequently, banks bear the responsibility of maintaining and enhancing their performance under all circumstances. This responsibility extends beyond customers to other stakeholders, including investors who rely on banks' performance to inform investment decisions, and the government, which implements policies to safeguard customer deposits. The government also strives to prevent declines in banking sector performance to maintain economic stability.

The period from 2019 to 2023 was marked by significant volatility in the firm value of Indonesian banks, influenced by global economic dynamics, monetary policies, and the COVID-19 pandemic. In 2019, the banking sector enjoyed relative stability with moderate growth. Firm value generally trended upward, despite minor disruptions from geopolitical uncertainties, such as the U.S.-

China trade war. Overall, major banks reported solid financial performance, supported by favorable interest rates.

The landscape shifted dramatically in early 2020 with the onset of the COVID-19 pandemic. Banking stocks plummeted amid fears of a global recession and rising credit risks. Economic uncertainty prompted investors to withdraw from the sector, leading to a sharp decline in market capitalization. Central banks worldwide, including Indonesia's, responded with low interest rates and quantitative easing programs, which helped stabilize markets. By the second half of 2020, bank stock values began a gradual recovery. Data on the firm value of banks listed on the Indonesia Stock Exchange (IDX) during this period reflect these trends.

From 2021 to 2023, the banking sector experienced a phased recovery, albeit with high volatility. The year 2021 saw global economic recovery post-COVID-19, with rising bank stock values fueled by market optimism. However, concerns about inflation and potential interest rate hikes introduced uncertainty. In 2022, central banks' rate hikes to curb inflation triggered further volatility. While banks' net interest margins improved, fears of a global recession weighed on stock valuations. By 2023, the sector demonstrated greater stability, particularly for banks that had invested in digitalization and innovation. Nonetheless, global economic uncertainties and geopolitical risks continued to drive fluctuations in firm value.

During the 2019–2023 period, PT Allo Bank Indonesia Tbk recorded the highest firm value in 2021 at 6,342, likely reflecting significant improvements in financial performance, business expansion, or highly positive market sentiment. In subsequent years, PT Bank Ina Perdana Tbk led with values of 737 in 2022 and 698 in 2023, demonstrating stability and effective business strategies. Conversely, PT Bank Artha Graha Internasional Tbk recorded the lowest value in 2019 at 2, followed by PT Bank KB Bukopin Tbk at 14 in 2020, and PT Bank MNC Internasional Tbk with values of 73 in 2022 and 19 in 2023. These declines may stem from internal issues, such as poor risk management or weak operational performance, as well as external factors, including macroeconomic conditions and government regulations impacting the banking industry.

Capital structure in banking comprises equity (own capital) and debt, used to support operations and expansion. Equity includes share capital and retained earnings, while debt encompasses loans, bonds, and customer deposits. Banking regulations play a critical role in governing capital structure, limiting debt levels and mandating minimum capital requirements. Capital ratios, such as the core capital to risk-weighted assets ratio, are used to assess capital adequacy. Dividend policies also influence capital structure by affecting available capital.

Research by Anggraeni & Fatwara (2023) found a positive but statistically insignificant relationship between capital structure, measured by the Debt-to-Equity Ratio (DER), and firm value in state-owned banks listed on the IDX from 2013 to 2021. Conversely, Juliana et al (2020) concluded that capital structure had no impact on firm value, suggesting that investors may not prioritize capital structure in stock purchasing decisions. This phenomenon may arise because the banking sector's capital structure is heavily influenced by third-party funds, where greater deposits enhance profit potential through lending.

Liquidity is a cornerstone of banking, ensuring smooth cash flow to meet customer withdrawals and payment obligations without financial strain. Adequate liquidity enables banks to manage market risks, adjust investment portfolios efficiently, and prevent financial crises by maintaining sufficient funds. Effective liquidity management also bolsters banks' reputation and trust among customers, investors, and regulators, which is vital for long-term growth and sustainability.

Jonnardi (2021) research demonstrated that liquidity positively contributes to firm value in the banking subsector listed on the IDX, with higher liquidity correlating with increased firm value. Similar findings by Lan et al (2021) in Vietnam's trading sector confirmed a positive correlation between liquidity and firm value. However, Afni et al., (2023) found that the current ratio, a liquidity measure, negatively affected the price-to-book value, a firm value indicator.

Operational costs in banking encompass expenses for daily operations, including employee salaries, information technology, physical infrastructure, regulatory compliance, marketing, and administration. These costs vary based on bank size, business models, and external factors such as regulatory changes and market competition. The challenge lies in balancing cost efficiency with high service standards and regulatory compliance. Many banks leverage technologies like automation and

digitalization to reduce operational costs, while effective risk management helps control compliance-related expenses.

Operational cost efficiency reflects a bank's ability to manage and minimize operational expenses to achieve financial goals effectively (Sholika & Zaki, 2024). Given the banking sector's typically thin profit margins, reducing operational costs is critical to maximizing profitability. This involves optimizing human resources, technology, infrastructure, and operational processes. Common strategies include adopting technology, streamlining bureaucracy, optimizing branch networks, and enhancing human resource management. Research linking operational efficiency to firm value underscores the importance of cost efficiency in achieving optimal financial performance. Yuliana et al (2024) found that operational costs significantly influence firm value, whereas Wati et al (2021) concluded that operational efficiency had no significant impact on firm value.

Profitability is the lifeblood of banking, serving as a key indicator of financial health, management effectiveness, and investor appeal (Yahaya, 2025). Its benefits include providing capital for expansion, fostering trust among investors and customers, attracting top talent, and contributing to national tax revenues. Factors such as capital adequacy, risk management, operational efficiency, healthy net interest margins (NIM), and economic conditions influence profitability. Ratios like ROA, ROE, NIM, and LDR are critical for monitoring performance. Enhancing profitability is essential for sustainable growth, high investment value, and economic contributions. With appropriate strategies and effective management, banks can achieve optimal profitability and strengthen the financial system.

Profitability positively impacts firm value, meaning higher profitability enhances shareholder value. Strong profitability reflects robust financial performance, particularly in generating profits, benefiting shareholders significantly. A company's ability to generate higher profits signals operational success and financial health, increasing investment value for shareholders (Akhmadi & Januarsi, 2021). However, Silvia & Dewi (2022) found that profitability did not positively affect firm value, possibly because investors perceived profits as being reinvested in operations rather than distributed as dividends, reducing its influence on stock purchasing decisions.

Extreme fluctuations in banking firm value during 2019–2023, largely driven by the COVID-19 pandemic and shifting global economic conditions, posed significant challenges for management in maintaining investor confidence and market stability. Such instability heightened investor caution, potentially lowering stock prices and raising capital costs. Unaddressed fluctuations could reduce profitability and expose firms to acquisition risks by entities capitalizing on declining firm value.

Previous studies reveal research gaps regarding variables influencing firm value. For instance, Anggraeni & Fatwara (2023) found a positive but statistically insignificant relationship between capital structure and firm value, while Juliana et al (2020) concluded it had no impact. Lan et al (2021) reported a positive correlation between liquidity and firm value, contrasting with Afni et al (2023), who found a negative relationship between the current ratio and price-to-book value. Yuliana et al (2024) confirmed operational costs' significant impact on firm value, but Wati et al (2021) found operational efficiency to be insignificant. These inconsistencies highlight a knowledge gap regarding factors affecting firm value. Therefore, further research is warranted, titled "The Influence of Capital Structure, Liquidity, and Operational Efficiency on Firm Value, with Profitability as an Intervening Variable, in Banks Listed on the Indonesia Stock Exchange, 2019–2023."

RESEARCH METHOD

This study employs a quantitative research design with an explanatory approach, aiming to examine the influence of Capital Structure, Liquidity, and Operational Cost Efficiency on the firm value of banks, both directly and indirectly through Profitability as an intervening variable. Grounded in a systematic theoretical framework, as outlined by Sugiyono (2017), the conceptual framework serves as a logical structure that links theories with identified problem factors. The study utilizes secondary data, specifically financial reports of banks, sourced from the official website of the Indonesia Stock Exchange (www.idx.co.id) for the period 2019–2023. Data analysis is conducted using multiple linear regression equations. The sample consists of 42 banking companies selected through purposive sampling based on specific criteria. Data processing involves documentation observation techniques and is analyzed systematically to test ten formulated hypotheses. The operational variables include Capital Adequacy Ratio (CAR), Loan-to-Deposit Ratio (LDR), Operating Expense to Operating Income

Ratio (BOPO), Return on Assets (ROA), and Price-to-Book Value (PBV), representing Capital Structure, Liquidity, Operational Cost Efficiency, Profitability, and Firm Value, respectively.

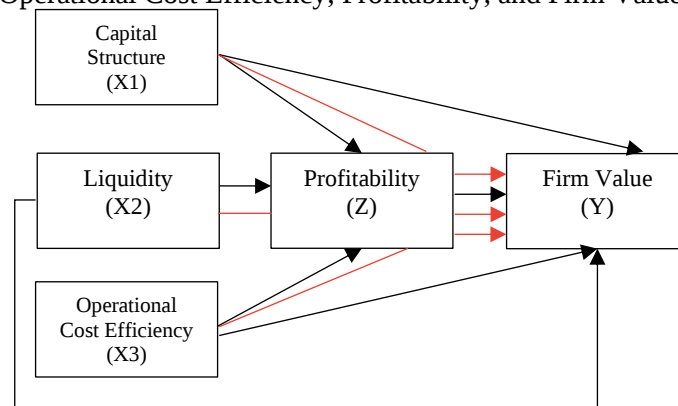


Figure 1. Frameworks

RESULT AND DISCUSSION

This study adopts a quantitative approach to investigate the conditions and dynamics of the Indonesian banking sector, alongside an analysis of data pertaining to variables influencing the firm value of banks. The Indonesian banking industry has undergone significant development since the country's independence, marked by the establishment of Bank Indonesia in 1953 and progressing into the digital era characterized by the adoption of technology and partnerships with fintech companies. The 1998 monetary crisis and the COVID-19 pandemic posed substantial challenges; however, the sector demonstrated resilience, achieving positive performance between 2022 and 2023. In this study, preliminary analysis was conducted using descriptive statistical tests on the financial data of 42 banking companies listed on the Indonesia Stock Exchange for the period 2019–2023.

Table 1. Descriptive Variable

	Capital Structure	Liquidity	Operational Cost Efficiency	Profitability	Firm value
Mean	30.52233	85.40581	89.92471	0.952824	1.962762
Median	24.40500	83.73500	87.00000	0.910000	0.995000
Maximum	127.4200	163.1900	287.8600	13.58000	63.42000
Minimum	9.010000	12.35000	23.09000	-14.75000	0.020000
Std. Dev.	17.89446	24.36688	31.79013	2.832337	4.647274
Skewness	2.410964	0.656889	2.651171	-1.107361	11.30281
Kurtosis	10.24116	4.663327	14.19333	13.61889	147.6153
Jarque-Bera	662.2477	39.31088	1342.299	1029.576	187465.2
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	6409.690	17935.22	18884.19	200.0930	412.1800
Sum Sq. Dev.	66924.27	124092.7	211218.0	1676.626	4513.805
Observations	210	210	210	210	210

This study employs a quantitative approach to analyze descriptive statistical data of variables influencing the firm value of banks listed on the Indonesia Stock Exchange over the period 2019–2024. The results reveal significant variation across companies in terms of Capital Structure (mean = 30.52, standard deviation = 17.89), Liquidity (mean = 85.41, standard deviation = 24.37), and Operational Cost Efficiency (mean = 89.92, standard deviation = 31.79). Additionally, Profitability exhibits considerable diversity, with a mean of 0.95 and extreme values ranging from -14.75 to 13.58 (standard deviation = 2.83). Meanwhile, firm value reflects substantial market variation, with a mean of 1.96, a maximum value of 63.42, and a standard deviation of 4.65. These findings indicate that the financial conditions of banking companies in Indonesia are highly diverse, encompassing aspects of financial structure, operational efficiency, and market perception.

Table 2. Chow Test or Likelihood Ratio Test for Equation 1

Redundant Fixed Effects Tests Equation: Untitled Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	8.086570	(41,157)	0.0000
Cross-section Chi-square	229.309336	41	0.0000

The probability value is 0.0000. This indicates that the p-value is less than the significance threshold (0.10), resulting in the rejection of the null hypothesis (H0) and the acceptance of the alternative hypothesis (Ha). Consequently, the Fixed Effect Model (FEM) is deemed a more suitable estimating technique, and the study advances with the Hausman test.

Table 3. Hausman Test for Equation 1

Correlated Random Effects - Hausman Test Equation: Untitled Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	17.526582	3	0.0006

Based on the results of the Hausman test using EViews 13, the probability value obtained is 0.0006. This indicates that the probability value is lower than the significance level of 0.05, leading to the rejection of the null hypothesis (H0) and the acceptance of the alternative hypothesis (Ha). Therefore, the appropriate estimation model to be used is the Fixed Effect Model (FEM). Since there is no discrepancy between the model suggested by the Chow test and the Hausman test, it is not necessary to perform the Lagrange Multiplier test.

Table 4. Multicollinearity of Equation 1

Variance Inflation Factors Date: 07/22/24 Time: 20:36 Sample: 1 210 Included observations: 202			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.129458	21.49004	NA
X1	2.00E-05	4.112100	1.014461
X2	1.01E-05	13.18913	1.019353
X3	5.87E-06	8.810525	1.007429

Based on this table, it can be observed that the Variance Inflation Factor (VIF) values for variables X1, X2, and X3 are below the critical threshold of 10, indicating that multicollinearity does not significantly affect this model. The VIF value for X1 is 1.014461, for X2 is 1.019353, and for X3 is 1.007429, all of which suggest a low correlation among the independent variables in the model. Although the Uncentered VIF values show relatively higher figures, they do not significantly impact the overall model.

Table 5. Heteroskedasticity Test for Equation 1

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	2.202744	Prob. F(3,198)	0.0890
Obs*R-squared	6.523993	Prob. Chi-Square(3)	0.0887
Scaled explained SS	6.004923	Prob. Chi-Square(3)	0.1114

Based on this table, the results of the Breusch-Pagan-Godfrey test show an F-statistic value of 2.202744 with a probability of 0.0890, which is greater than 0.05. Therefore, there is insufficient evidence to reject the null hypothesis, indicating that the model does not suffer from heteroskedasticity. Consequently, it can be concluded that there is no serious issue with non-constant error variance in this model.

Table 6. Autocorrelation Test for Equation 1

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	2.202744	Prob. F(3,198)	0.0890
Obs*R-squared	6.523993	Prob. Chi-Square(3)	0.0887
Scaled explained SS	6.004923	Prob. Chi-Square(3)	0.1114

Based on this table, the results of the Breusch-Pagan-Godfrey test show an F-statistic value of 2.202744 and an ObsR-squared* value of 6.523993, with sufficiently large probabilities (0.0890 and 0.0887) for both tests. This indicates that there is insufficient evidence to reject the null hypothesis, which suggests that there is no autocorrelation issue in the model. Therefore, it can be concluded that the model is free from autocorrelation problems.

Table 7. Fixed Effect Model (FEM) for Equation 1

R-squared	0.223266	Mean dependent var	-1.48E-16
Adjusted R-squared	0.203451	S.D. dependent var	1.094855
S.E. of regression	0.977154	Akaike info criterion	2.820907
Sum squared resid	187.1465	Schwarz criterion	2.919172
Iog likelihood	-278.9116	Hannan-Quinn criter.	2.860665
F-statistic	11.26773	Durbin-Watson stat	1.926978
Prob(F-statistic)	0.000000		

Based on this table, the R-squared value of 0.223266 indicates that the model explains approximately 22% of the variation in the dependent variable. The lower Adjusted R-squared value of 0.203451 suggests that although the model is fairly good, there are other factors that have not been fully explained. The significant F-statistic value of 11.26773 with a probability of 0.000000 indicates that the model as a whole is significant and can be considered a valid model for use.

Table 8. Chow Test for Equation 2

Redundant Fixed Effects Tests Equation: Untitled Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.382294	(41,157)	0.0000
Cross-section Chi-square	218.077180	41	0.0000

Based on the table, the Chow test results indicate an F-statistic value of 7.382294 with a probability of 0.0000, alongside a significant Chi-square value (218.077180 with a probability of 0.0000). These findings confirm that the fixed-effects model is more appropriate than the random-effects model, suggesting significant differences among the cross-sections tested.

Table 9 Hausman Test Results for Equation 2

Correlated Random Effects - Hausman Test Equation: Untitled Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.907113	4	0.2970

The Hausman test was conducted to evaluate the suitability of the fixed-effects versus random-effects model for Equation 2. The test produced a Chi-square statistic of 4.907113 with a probability value of 0.2970, which exceeds the 0.05 threshold. These results indicate insufficient evidence to reject the null hypothesis, suggesting that the random-effects model is more appropriate than the fixed-effects model for this equation.

Table 10 Lagrange Multiplier Test Results for Equation 2

Lagrange multiplier (LM) test for panel data			
Date: 07/22/24 Time: 22:07			
Sample: 2019 2023			
Total panel observations: 203			
Probability in ()			
Null (no rand. effect)	Cross-section	Period	Both
Alternative	One-sided	One-sided	
Breusch-Pagan	114.2569 (0.0000)	0.268432 (0.6044)	114.5254 (0.0000)
Honda	10.68910 (0.0000)	0.518104 (0.3022)	7.924692 (0.0000)
King-Wu	10.68910 (0.0000)	0.518104 (0.3022)	3.687630 (0.0001)
GHM	-- --	-- --	114.5254 (0.0000)

Based on the table, the Lagrange Multiplier test results indicate that the probability value for the Breusch-Pagan test is 0.0000, signifying that random effects are statistically significant for this model. However, for the period and cross-section dimensions, the probability values are higher (0.6044 and 0.3022, respectively), suggesting that the model does not exhibit significant random effects in these dimensions.

Table 11 Random Effect Model (REM)

Dependent Variable: Y				
Method: Panel EGLS (Cross-section random effects)				
Date: 07/22/24 Time: 22:12				
Sample: 2019 2023				
Periods included: 5				
Cross-sections included: 42				
Total panel (unbalanced) observations: 203				
Wansbeek and Kapteyn estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.268627	0.287308	18.33792	0.0000
X1	0.003721	0.002704	1.375824	0.1704
X2	-0.007464	0.002334	-3.197681	0.0016
X3	0.000113	0.001805	0.062577	0.9502
M	0.155473	0.039501	3.935934	0.0001
Effects Specification			S.D.	Rho
Cross-section random			0.550862	0.5922
Idiosyncratic random			0.457166	0.4078
Weighted Statistics				
R-squared	0.122120	Mean dependent var		1.673152
Adjusted R-squared	0.104385	S.D. dependent var		0.494728
S.E. of regression	0.456778	Sum squared resid		41.31191
F-statistic	6.885844	Durbin-Watson stat		1.333059
Prob(F-statistic)	0.000033			
Unweighted Statistics				
R-squared	0.163585	Mean dependent var		4.741773
Sum squared resid	99.48253	Durbin-Watson stat		0.553577

Based on the table, the Random Effects Model demonstrates an R-squared value of 0.122120 (unweighted) and 0.163585 (weighted), indicating that the model explains a portion of the variation in the data, albeit to a modest extent. The significant F-statistic of 6.885844 with a probability of 0.000033 suggests that the model is overall statistically significant. However, the Durbin-Watson statistic of 1.333059, being relatively low, points to the potential presence of autocorrelation issues within the model.

Table 12 Sobel Test Results for the Effect of Capital Structure (X1) on Firm Value (Y) through Profitability (Z)

Parameter	Value
A	0.0088
B	0.1554
SE(A)	0.0047
SE(B)	0.0395
Sobel Test Statistic	169.064.191
One-tailed probability	0.04545261
Two-tailed probability	0.09090522

Based on the table, the Sobel test results indicate a Sobel statistic of 169.064.191 with a two-tailed probability of 0.09090522, which exceeds the 0.05 threshold. This suggests that the effect of Capital Structure (X1) on Firm Value (Y) through Profitability (Z) is not statistically significant.

Table 13 Sobel Test Results for the Effect of Liquidity (X2) on Firm Value (Y) through Profitability (Z)

Parameter	Value
A	0.0039
B	0.1554
SE(A)	0.0042
SE(B)	0.0395
Sobel Test Statistic	0.90373952
One-tailed Probability	0.18306677
Two-tailed Probability	0.36613354

The Sobel test findings indicate a Sobel statistic of 0.90373952 and a two-tailed probability of 0.36613354, surpassing the 0.05 criterion. Consequently, it may be inferred that Liquidity (X2) does not significantly influence Firm Value (Y) via Profitability (Z).

Table 14 Sobel Test Results for the Effect of Operational Cost Efficiency (X3) on Firm Value (Y) through Profitability (Z)

Parameter	Value
A	0.0166
B	0.1554
SE(A)	0.0024
SE(B)	0.0395
Sobel Test Statistic	341.969.265
One-tailed Probability	0.00031346
Two-tailed Probability	0.00062692

The Sobel test produces a statistic of 341,969.265 and a two-tailed probability of 0.00062692, indicating strong significance. This signifies that the impact of Operational Cost Efficiency (X3) on Firm Value (Y) via Profitability (Z) is statistically significant. Consequently, it can be inferred that Operational Cost Efficiency significantly impacts Firm Value via Profitability.

Discussion

Direct Effect of Capital Structure on Profitability

The hypothesis testing results indicate that Capital Structure significantly influences the Profitability of banking companies listed on the Indonesia Stock Exchange from 2019 to 2023. Although Capital Structure is a critical element in financial management, this study provides evidence that it directly influences Profitability. According to Signaling Theory, companies with a specific Capital Structure can convey signals to the market regarding their Profitability prospects. In the banking context, the decision to increase leverage may be perceived as a positive signal, indicating management's confidence in the bank's ability to generate sufficient profits to service debt. This, in turn, can enhance investor confidence and ultimately boost the bank's Profitability. These findings align with the research by Anggraeni & Fatwara (2023), which states that Capital Structure, Profitability, and firm size positively affect firm value. Conversely, Sastra (2019) study on Capital Structure and

Profitability concluded that Capital Structure does not significantly influence Profitability. This suggests that firm size and the allocation of debt and equity do not directly impact Profitability; rather, effective management and strategic decisions play a crucial role in driving company growth and Profitability.

Direct Effect of Liquidity on Profitability

The hypothesis testing results in this study indicate that Liquidity does not significantly affect the Profitability of banking companies listed on the Indonesia Stock Exchange during the period 2019–2023. Keynesian Theory posits that high liquidity may reflect the holding of funds that could otherwise be invested to generate profits. Consequently, excessive liquidity may not significantly influence Profitability. Maintaining high liquidity typically involves holding assets in highly liquid forms, such as cash or short-term securities, which generally yield lower returns compared to less liquid but more profitable investments. These findings are consistent with the study by Sudarsono et al (2018), which concluded that liquidity has a negative relationship with Profitability, suggesting that management seeks to diversify income sources beyond financing activities. However, Nainggolan & Abdullah (2019) found that liquidity significantly affects Profitability, with a higher current ratio indicating greater Profitability. This implies that strong liquidity can enhance a company's ability to meet short-term obligations and improve its overall financial position.

Direct Effect of Operational Cost Efficiency on Profitability

The hypothesis testing results indicate that Operational Cost Efficiency significantly enhances the Profitability of banking firms listed on the Indonesia Stock Exchange from 2019 to 2023. Companies that successfully reduce transaction and operational costs gain a competitive advantage, which ultimately enhances Profitability. Effective cost control is crucial for improving Profitability. Cost management involves planning and controlling expenses to ensure that the company's expenditures align with its financial objectives. By reducing operational costs through strategies such as enhancing productivity, automating processes, or negotiating better pricing, companies can improve their net profit margins, as noted by Brigham & Houston (2021). These findings are consistent with the research conducted by Suryadi et al (2020), which found that higher operational costs reduce bank Profitability. Conversely, efficient management of operational costs positively impacts Profitability.

Direct Effect of Capital Structure on Firm Value

The hypothesis testing outcomes in this study demonstrate that alterations in capital structure do not exert a direct influence on the firm value of banks listed on the Indonesia Stock Exchange from 2019 to 2023. Banks have diversified sources of income, such as interest on loans, fee-based services, and investments. This diversification may reduce the dependency of firm value on capital structure. The Pecking Order Theory suggests that firms prefer to use internal financing over external financing, so capital structure may not significantly influence firm value if income from other sources, such as loan interest, is sufficient.

This finding aligns with the conclusions of Irawan & Kusuma (2019), which indicated that capital structure does not significantly influence firm value. Budiarta & Dewi (2023) contend that capital structure significantly influences business value, since a bigger debt proportion can entice investors in pursuit of greater returns.

Effect of Liquidity on Firm Value

Based on the results of hypothesis testing in this study, it was found that liquidity has a significant negative relationship with the firm value of banks listed on the Indonesia Stock Exchange during the 2019–2023 period. Excessive funds held in liquid form (such as cash) may indicate missed investment opportunities that could otherwise enhance firm value. Agency Theory refers to the conflict of interest between management (agents) and shareholders (principals). Excessive liquidity can create agency problems, where management may use the available cash for inefficient investments or purposes that do not maximize shareholder value. On the other hand, a more moderate or lower level of liquidity may encourage management to be more cautious and efficient in utilizing resources, which can lead to an increase in firm value. This finding is consistent with the results of Chynthiawati & Jonnardi (2022), which also demonstrate that liquidity has a significant negative effect on firm value.

Direct Effect of Operational Cost Efficiency on Firm Value

This study demonstrates that Operational Cost Efficiency does not have a significant effect on the firm value of banks listed on the Indonesia Stock Exchange during the 2019–2023 period. This may indicate that banks have already achieved an optimal level of operational cost efficiency, such that further improvements in cost efficiency do not contribute significantly to firm value. In the banking sector, other factors—such as risk management, income diversification, and asset quality—often play a more influential role in how investors assess firm value, as explained by Brealey et al (2020).

Direct Effect of Profitability on Firm Value

The results of hypothesis testing in this study show that profitability has a significant positive effect on the firm value of banks listed on the Indonesia Stock Exchange during the 2019–2023 period. This result provides a strong signal that companies need to continuously strive to improve their profitability. By increasing profitability, a company not only enhances its firm value in the eyes of investors but also strengthens its financial position and competitive advantage. According to Signaling Theory, high profitability is perceived as a positive signal to investors regarding the company's future performance, thereby increasing firm value. This finding is in line with the results of Febiawanticha et al (2022), who also found that profitability has a significant positive effect on firm value.

Effect of Capital Structure on Firm Value Through Profitability

The hypothesis testing results indicate that there is no substantial effect of capital structure on firm value when profitability serves as a mediating variable. Changes in capital structure do not immediately affect business value via alterations in profitability. There may be other factors that have a stronger influence on firm value than profitability and capital structure, such as firm size, industry growth, and the quality of management. The banking industry has characteristics that differ from other industries, particularly in terms of regulation, leverage, and funding sources. Banks tend to have high capital structures due to the nature of their business, which relies heavily on third-party funding (depositors). High leverage in banking may be the norm, so changes in capital structure may not directly affect profitability and, ultimately, firm value.

Indirect Effect of Liquidity on Firm Value Through Profitability

The hypothesis testing results in this study indicate a significant positive effect of liquidity on firm value through profitability as a mediating variable. Investors generally assess firm value based on financial performance, including profitability. More profitable companies tend to have higher market values. The Modigliani-Miller (MM) theory posits that in an ideal market, devoid of taxes, bankruptcy costs, or asymmetric information, capital structure does not influence firm value. The value of a firm is mostly influenced by its capacity to produce consistent and lucrative operating cash flows. Consequently, alterations in capital structure will not directly affect business value via profitability.

Indirect Effect of Operational Cost Efficiency on Firm Value Through Profitability

This study demonstrates a significant positive effect of operational cost efficiency on firm value through profitability as a mediating variable. In an efficient market, investors tend to assess firm value based on solid financial performance, with profitability being a key indicator. When a company successfully reduces operational costs without compromising revenue, profitability increases. This improvement in profitability, as observed by the market, directly enhances firm value, as market participants respond positively to strong profitability signals. According to Agency Theory, effective cost management reflects the company's ability to control inefficiencies and waste, which in turn boosts profitability and ultimately firm value.

CONCLUSION

Based on the analysis conducted, this study concludes that capital structure has a positive and significant effect on profitability, but does not directly influence firm value, nor does it impact firm value through profitability. Liquidity does not significantly affect profitability; however, it has a negative and significant direct effect on firm value, while showing a positive and significant indirect effect through profitability. Operational cost efficiency positively and significantly affects profitability

but does not directly influence firm value; instead, it impacts firm value indirectly through profitability. Furthermore, profitability itself has a positive and significant effect on firm value, reaffirming its central role in enhancing firm valuation in the banking sector.

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