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The Moderating Role of Liquidity in the Relationship between Leverage, Firm Size, and Profitability

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ABSTRACT
This study aims to analyze the role of liquidity in moderating the effect of capital structure and firm size on profitability. The data used in this research is secondary data from companies in the property and real estate sector listed on the Indonesia Stock Exchange (IDX) for the period 2019–2023. The study employs panel data with a sample of 45 companies selected using purposive sampling, resulting in 225 observations. The analysis uses panel data regression with EViews 13 software, with the best model chosen through the Chow, Hausman, and Lagrange Multiplier tests. The study results indicate that capital structure and liquidity do not significantly affect profitability, while firm size positively affects profitability. Furthermore, liquidity does not moderate the effect of capital structure and firm size on profitability. These findings provide implications for companies and investors in designing strategies and making decisions based on financial analysis to maintain stable financial performance.

Keywords: Capital structure, Firm Size, Liquidity, Profitability

INTRODUCTION

The property and real estate sector strategically drives Indonesia's economic growth, particularly by contributing to the Gross Domestic Product (GDP) and job creation. However, global economic instability and the COVID-19 pandemic have caused many companies in this sector to face financial pressures, such as the inability to meet short-term obligations due to low liquidity and high leverage. This phenomenon underscores the need for an in-depth study of effective financial management strategies to address these challenges. This research is essential and urgent as it guides companies in mitigating financial risks while improving profitability amid economic uncertainty.

The selection of the property and real estate sector as the research object is based on the unique characteristics that distinguish it from other sectors, such as the need for long-term financing, sensitivity to monetary policies, and market volatility. This sector generally exhibits higher leverage levels than other industries, making it more vulnerable to liquidity pressures. Furthermore, as one of the sectors with a significant contribution to GDP, the findings of this research are expected to provide specific and relevant insights that cannot be generalized to other sectors.

This study examines the relationship between capital structure, firm size, and profitability, with liquidity as a moderating variable. Capital structure, which reflects a company's funding structure, is closely related to profitability, but excessive reliance on it may increase financial risk. Firm size also influences profitability, as larger companies typically have better access to resources, which supports their profitability. Liquidity, as a moderating variable, plays a vital role in bridging the influence of capital structure and firm size on profitability, given that a company's

ability to meet short-term obligations can mitigate the risks associated with high leverage (Brigham & Houston, 2020).

There is a gap in prior studies regarding the role of liquidity as a moderating variable. Studies by Tailab (2014), Makhdalena (2018), Hirdis (2019), Natsir & Yusbardini (2020), Prakoso et al., (2022), and Lestari (2023) examined the impact of capital structure and firm size on profitability without considering the moderating role of liquidity. Meanwhile, research by Rehman et al., (2015), Ismail (2016), Madushanka & Jathurika (2018), Rajak (2022), and Sunjoko & Arilyn (2016) highlighted the impact of liquidity on profitability but did not include capital structure and firm size as independent variables. This indicates the need to explore how liquidity can strengthen or weaken the relationship between leverage and firm size with profitability, particularly in the property and real estate sector.

Addressing these gaps, this study offers novelty by analyzing the role of liquidity as a moderating variable, which has not been extensively explored in the context of Indonesia's property and real estate sector. The findings are expected to provide practical benefits for corporate management in designing more adaptive financial management strategies and theoretical contributions to the academic literature on financial variable moderation. The primary objective of this study is to identify and explain the influence of capital structure and firm size on profitability, taking into account the moderating role of liquidity.

Literatur Review

1. Signal Theory

Signal theory, introduced by Spence (1973), explains how corporate managers use financial decisions to inform investors about the company's prospects and condition. According to (Brigham & Houston, 2020), increasing dividend payments or reducing debt can provide a positive signal to the market, indicating the company is strong financial position. This signal helps reduce information asymmetry between managers and investors, influencing investment decisions.

2. Trade-off Theory

The trade-off theory illustrates how companies balance the benefits and costs of debt in their capital structure. Brigham & Houston (2020) assert that companies must consider benefits such as tax savings from debt interest (tax shield) against the potential bankruptcy costs that may arise from excessive debt usage. An optimal capital structure is achieved when the marginal benefits of debt equal its marginal costs.

3. Agency Theory

Agency theory addresses conflicts of interest between owners (principals) and managers (agents). Brigham & Houston (2020) emphasize that agency problems can occur when managers make decisions that are not aligned with the interests of shareholders. Strong corporate governance and performance-based incentives are crucial to aligning managers' goals with those of shareholders.

4. Profitability

Profitability measures a company's ability to generate profits from its assets or capital. Ratios such as Return on Assets (ROA) and Return on Equity (ROE) are used to assess a company's operational efficiency. According to Brigham & Houston (2020), high profitability reflects effective resource management and provides a positive signal to investors regarding the company's stability and prospects.

5. Liquidity

Liquidity reflects a company's ability to meet its short-term obligations. Ratios such as the Current Ratio (CR) are commonly used to measure a company's liquidity level. Brigham & Houston (2020) state that adequate liquidity demonstrates financial stability, but maintaining excessive liquidity can reduce asset utilization efficiency.

6. Capital Structure

Capital structure refers to the proportion of debt and equity a company uses to finance its operations. Brigham & Houston (2020) explain that decisions regarding capital structure must consider the cost of capital for each funding source. Proper use of debt can enhance company value through tax savings, but excessive debt usage increases the risk of bankruptcy.

7. Firm Size

Firm size is often measured by total assets or the natural logarithm of total assets. Brigham & Houston (2020) suggest that larger firms typically have better access to financial resources and better stability when facing market risks. However, large firms may also encounter bureaucratic challenges that can reduce operational efficiency.

8. Hypothesis Development

Capital structure is a critical factor in determining a company's financial performance. Measured by the debt-equity ratio (DER), it reflects the extent to which a company utilizes debt as a source of financing relative to equity. A high DER indicates that the company relies more on debt than equity for financing, which can increase interest expenses and financial risk (Brigham & Houston, 2020). According to the Trade-Off Theory of capital structure, debt usage can provide tax benefits through interest expense deductions (tax shield). However, excessive debt utilization heightens the risk of financial distress, negatively impacting the company's profitability. Companies with high DER often experience this condition, as significant interest expenses reduce the net income available to shareholders. Profitability, measured by Return on Assets (ROA), indicates the company's ability to generate profits from its total assets. A low ROA in companies with high DER typically occurs because a substantial portion of profits is allocated to cover debt interest obligations, leaving a reduced net income for shareholders. Research by Rahman et al. (2019), Putri & Rahyuda (2020), Natsir & Yusbardini (2020), Nugraha et al. (2020), and Bintara (2020) found that DER negatively affects profitability. Based on this explanation, the proposed hypothesis is as follows:

H_1: Capital structure has a negative effect on profitability

Firm size is one of the key indicators that can influence financial performance, including profitability. Firm size is often measured using the natural logarithm of total assets (LnTotal Assets), which reflects the company's capacity to manage assets to generate revenue. Larger companies tend to have easier access to resources such as capital, technology, and skilled labor, enabling them to compete more effectively in the market than smaller firms (Brigham & Houston, 2020). From the Resource-Based Theory perspective, larger firms possess competitive advantages from economies of scale and operational diversification. Economies of scale allow large companies to reduce production costs per unit, while diversification mitigates business risks and provides flexibility to respond to market dynamics. These conditions support increased corporate profitability, measured by Return on Assets

(ROA). ROA indicates a company's efficiency in managing its assets to generate profit. Larger companies have more mature organizational structures and better capabilities in leveraging their assets to create added value. Studies by Hirdinis (2019) and Lestari (2023) show that firm size has a significant positive impact on ROA because larger firms have greater bargaining power with suppliers and customers, which leads to better profit margins. This aligns with the findings that larger companies have more opportunities to optimize asset utilization. Based on the above explanation, the proposed hypothesis is:

H_2: Firm size has a positive effect on profitability

Liquidity indicates a company's ability to meet its short-term obligations using current assets. The Current Ratio (CR) is one of the most commonly used measures of liquidity, calculated by comparing total current assets to total current liabilities. Healthy liquidity reflects the company's capability to manage its daily operational needs without facing the risk of default (Brigham & Houston, 2020). In financial management theory, high liquidity enables companies to maintain smooth operations, creating efficiency in asset utilization and enhancing profitability. Adequate liquidity also allows companies to seize profitable short-term business opportunities without relying on external financing, which can increase net income and, ultimately, Return on Assets (ROA). Empirical studies support the positive relationship between liquidity and profitability. Research by Rehman et al., (2015), Ismail (2016), Sunjoko & Arilyn (2016) and Rajak (2022) demonstrates that high CR positively impacts ROA, as companies with healthy liquidity are better equipped to reduce financial pressures and maintain operational stability. However, it is essential to note that the efficient management of current assets may influence this relationship. Excessive liquidity may also indicate inefficiencies in using current assets, underscoring the need for prudent management to maximize the benefits of liquidity on profitability. Based on this explanation, the proposed hypothesis is as follows:

H_3: Liquidity has a positive effects on profitability

In financial theory, capital structure and liquidity are critical elements that influence a company's profitability. Capital structure, measured by the Debt to Equity Ratio (DER), reflects the extent to which a company relies on debt to finance its operations. A high DER indicates a greater dependence on debt, which can increase financial risk due to interest expenses and other debt-related obligations (Brigham & Houston, 2020). This risk negatively impacts profitability if the company fails to manage these burdens effectively. Liquidity, measured by the Current Ratio (CR), indicates a company's ability to meet its short-term obligations using its current assets. Adequate liquidity allows companies to manage financial obligations, including interest payments and debt repayments, thereby maintaining financial stability. According to signal theory, high liquidity sends a positive signal to stakeholders, indicating that the company has sound financial management and can meet its financial commitments. This enhances investor confidence and supports profitability. Liquidity can act as a moderating variable in the relationship between capital structure and profitability. When a company has adequate liquidity, the financial risks associated with high DER can be minimized, thereby reducing the negative impact of capital structure on profitability. In other words, liquidity is a balancing factor that allows the company to manage debt more efficiently and

maintain stable profitability, measured by Return on Assets (ROA). Based on this theory, the proposed hypothesis is as follows:

H_4: Liquidity can moderates the effect of capital structure on profitability

In financial theory, firm size indicates a company's ability to leverage its resources to create added value. Firm size, measured using the natural logarithm of total assets (LnTotal Assets), reflects the operational scale of a company. Larger firms generally have better access to capital, resources, and broader markets, giving them the potential to achieve higher levels of profitability (Brigham & Houston, 2020). However, a firm's ability to translate its size into optimal profitability is significantly influenced by liquidity factors. Liquidity, measured by the Current Ratio (CR), reflects a company's ability to meet its short-term obligations. According to signal theory, adequate liquidity levels provide a positive signal to investors and stakeholders that the company possesses financial stability and can efficiently manage its financial resources. High liquidity can moderate the relationship between firm size and profitability by maximizing the benefits of economies of scale and the operational advantages of large firms. Large firms with sufficient liquidity are better positioned to meet short-term financial obligations, invest in strategic projects, and respond effectively to market volatility. This enhances operational efficiency and profitability, as measured by Return on Assets (ROA). Based on this theory, the proposed hypothesis is as follows:

H_5: Liquidity can moderates the effect of firm size on profitability

9. Framework

Based on the theoretical basis and the results of previous studies and the problems that have been raised, then as a basis for formulating a hypothesis, the following framework is presented in the research model in the following figure:

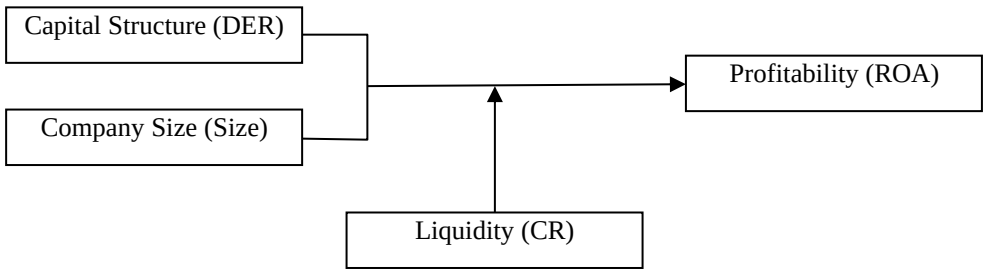

Figure 1. Conseptual Model Method

METHOD

The data used in this study is secondary data obtained from the Indonesia Stock Exchange (IDX) website and the sample companies' websites. The sample used in this study consists of companies listed in the Property and Real Estate Sector for 2019-2023. The sampling technique employed is purposive sampling, with the following company criteria:

Table 1. Sampling Criteria

No	Criteria	Quantity
1	Companies in the Property and Real Estate Sector for the period 2019–2023	**92**
2	ompanies that did not publish audited financial statements for the period 2019–2023	**(47)**
3	Total sample of companies	**45**
4	Total observation periods	**5**
5	Total research sample: 45 company × 5 periods	**225**

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This study uses panel data analysis with EViews 13 software. This technique is appropriate because the data includes multiple companies (cross-section) over several years (time series). Panel data analysis controls unobserved variables, resulting in more efficient and unbiased estimates compared to separate cross-sectional or time series analyses.

The analysis uses panel data in EViews 13, including multiple companies (cross-section) and specific periods (time series), providing more efficient estimates than separate cross-sectional or time series analyses. Before performing the regression test, model selection is conducted using the Chow Test (to choose between Fixed Effect Model/FEM or Common Effect Model/CEM), Hausman Test (FEM vs. Random Effect Model/REM), and Lagrange Multiplier Test (REM vs. CEM).

In this study, profitability is the dependent variable, measured by Return on Assets (ROA). Liquidity acts as the moderating variable, measured by the current ratio. The independent variables include capital structure measured by the Debt to Equity Ratio (DER) and firm size, measured by the natural logarithm of total assets (Ln Total Assets). Operational variables can be summarized in the following table 2 :

Table 2. Definition Operasional Variabel

Variable	Definition	Measurement	Scale
Capital structure	Capital structure is the balance or combination of debt and equity a company uses to finance its operations. (Brigham & Houston, 2020)	$\frac{\text{Total Liabilitas}}{\text{Total Equity}}$ (Natsir & Yusbardini, 2020)	Ratio
Company size	Company size (firm size) is the scale of the company's size which can be classified in various ways, including total revenue, total assets and total equity (Brigham & Houston, 2020)	Firm Size = Ln (Total Asset) (Natsir & Yusbardini, 2020)	Ratio
Liquidity	Liquidity ratios are ratios that show the relationship between a company's cash and other current assets with its current liabilities. (Brigham & Houston, 2020)	$CR = \frac{\text{Cuurent Assets}}{\text{Current Liability}}$ (Ismail, 2016)	Ratio
Profitability	Profitability is the result of a number of policies and decisions made by a company. (Brigham & Houston, 2020)	$ROA = \frac{\text{Earning After Tax}}{\text{Total Asset}}$ (Natsir & Yusbardini, 2020)	Ratio

RESULTS AND DISCUSSION

1. Descriptive Statistics

Based on the purposive sampling method, 45 companies met the criteria in this research, and the total research time was 5 years so there were 225 observations. The following are descriptive statistics for the research sample.

Table 3. Descriptive Statistics

	DER	SIZE	ROA	CR
Mean	0.507161	29.17055	0.013488	3.482296
Median	0.529450	29.52163	0.008970	2.114440
Maximum	4.991730	31.83314	0.428330	65.59248
Minimum	-21.05752	24.73459	-0.375160	0.142880
Std. Dev.	2.009731	1.539599	0.072758	6.668279
Observations	225	225	225	225

Based on Table 3, the minimum value of capital structure (DER) is -21.05752. This minimum value is shown by the company (BIKA) in 2021. The maximum value is 4.991730, observed in the company (PPRO) in 2023. This variable's average (mean) value is 0.507161, and its standard deviation is 2.009731. Since the standard deviation is greater than the mean (2.009731 > 0.507161), this indicates that the leverage variable (DER) has data that is not homogeneous, meaning the data variation is high.

The minimum firm size (SIZE) value is 24.73459, shown by the company (MTSM) in 2023. The maximum value is 31.83314, observed in the company (BSDE) in 2023. This variable's average (mean) value is 29.17055, and its standard deviation is 1.539599. Since the standard deviation is smaller than the mean (1.539599 < 29.17055), this indicates that the firm size variable (SIZE) has homogeneous data, meaning the data variation is not high.

The minimum value of profitability (ROA) is -0.375160, shown by the company (LPCK) in 2020. The maximum value is 0.428330, observed in the company (PUDP) in 2022. This variable's average (mean) value is 0.013488, and its standard deviation is 0.072758. Since the standard deviation is greater than the mean (0.072758 > 0.013488), this indicates that the profitability variable (ROA) has data that is not homogeneous, meaning the data variation is high.

The minimum value of liquidity (CR) is 0.142880, shown by the company (DART) in 2022. The maximum value is 65.59248, observed in the company (LPLI) in 2022. This variable's average (mean) value is 3.482296, and its standard deviation is 6.668279. Since the standard deviation is greater than the mean (6.668279 > 3.482296), this indicates that the liquidity variable (CR) has data that is not homogeneous, meaning the data variation is high.

2. Normality Test

Table 4. Results of Normality Test

Long-run Normality Test		
Date: 12/03/24 Time: 18:12		
Sample: 2019 2023		
Included observations: 225		
	Statistic	Prob.
Skewness	0.504938	0.306801
Skewness 3/5	0.330302	0.370586
Kurtosis	1.839.741	0.032903
Normality	3.237.891	0.198108

Based on Table 4 above, the probability value is 0.198108 (>0.05), indicating that the data is normally distributed.

3. Model Selection Test

Based on the results of the Chow Test, the Cross-section F value is 0.0000 < 0.05, indicating that the selected model is the Fixed Effect Model. The Hausman Test results show that the Cross-section F value is 0.0085 < 0.05, confirming that the Fixed Effect Model is preferred. The Lagrange Multiplier and Breusch-Pagan tests also yielded a value of 0.0000 < 0.05, suggesting the choice of the Random Effect Model. Therefore, the best model for this research is the Fixed Effect Model.

4. Panel Data Regression Analysis

Structure I: The Effect of Capital Structure and Firm Size on Profitability

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Table 5. Regression Test Structure I

Dependent Variable: ROA Method: Panel Least Squares Date: 12/03/24 Time: 18:21 Sample: 2019 2023 Periods included: 5 Cross-sections included: 45 Total panel (balanced) observations: 225				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.504052	1.409175	-3.196233	0.0016
DER	-0.004324	0.003405	-1.269856	0.2058
SIZE	0.154942	0.048297	3.208102	0.0016
	Effects Specification			
Cross-section fixed (dummy variables)				
R-squared	0.493532	Mean dependent var		0.013488
Adjusted R-squared	0.362646	S.D. dependent var		0.072758
S.E. of regression	0.058086	Akaike info criterion		-2.670322
Sum squared resid	0.600570	Schwarz criterion		-1.956737
Log likelihood	347.4112	Hannan-Quinn criter.		-2.382316
F-statistic	3.770724	Durbin-Watson stat		2.627474
Prob(F-statistic)	0.000000			

Based on Table 5, the regression for Structure I is as follows:

ROA = -4.504052 - 0.004324*DER + 0.154942*SIZE

The capital structure regression coefficient value measured by DER is -0.004324 with a probability value of 0.2058 (>0.05), so capital structure does not affect profitability. Based on these results, it can be concluded that H1 is rejected. The regression coefficient value for company size measured by Size is 0.154942 with a probability value of 0.0016 (<0.05) so company size positively affects profitability. Based on these results, it can be concluded that H2 is accepted. Furthermore, the Adjusted R-squared value is 0.362646, which allows us to conclude that the influence of liquidity, leverage and company size on profitability reaches 36.27%, while other factors cause the remaining 63.73%

.As measured by DER, the regression coefficient for capital structure is -0.004324 with a probability value of 0.2058 (>0.05), indicating that capital structure does not significantly affect profitability. Based on these results, it can be concluded that H_1 is rejected. The regression coefficient for firm size, as measured by SIZE, is 0.154942 with a probability value of 0.0016 (<0.05), indicating that firm size positively affects profitability. Based on these results, it can be concluded that H_2 is accepted. Furthermore, the Adjusted R-squared value is 0.362646, suggesting that the influence of liquidity, leverage, and firm size on profitability accounts for 36.27%, while other factors explain the remaining 63.73%.

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Structure II: The Role of Liquidity in Moderating the Effect of Capital Structure and Firm Size on Profitability.

Table 6. Regression Test Structure I

Dependent Variable: ROA Method: Panel Least Squares Date: 12/03/24 Time: 18:29 Sample: 2019 2023 Periods included: 5 Cross-sections included: 45 Total panel (balanced) observations: 225				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.378971	1.462393	-2.994388	0.0031
DER	-0.000413	0.009747	-0.042332	0.9663
SIZE	0.150337	0.050102	3.000603	0.0031
CR	-0.029382	0.035892	-0.818624	0.4141
CR_DER	-0.002803	0.006708	-0.417814	0.6766
CR_SIZE	0.001136	0.001304	0.871220	0.3848
	Effects Specification			
Cross-section fixed (dummy variables)				
R-squared	0.509432	Mean dependent var		0.013488
Adjusted R-squared	0.372073	S.D. dependent var		0.072758
S.E. of regression	0.057655	Akaike info criterion		-2.675553
Sum squared resid	0.581715	Schwarz criterion		-1.916420
Log likelihood	350.9997	Hannan-Quinn criter.		-2.369164
F-statistic	3.708759	Durbin-Watson stat		2.668302
Prob(F-statistic)	0.000000			

Based on Table 6 above, the regression for Structure II is as follows:

ROA = -4.378971 - 0.000413*DER + 0.150337*SIZE - 0.029382*CR - 0.002803*CR_DER + 0.001136*CR_SIZE

The regression coefficient for liquidity, as measured by the Current Ratio (CR), is -0.818624 with a probability value of 0.4141 (>0.05), indicating that liquidity does not significantly affect profitability. Based on these results, it can be concluded that H_3 is rejected. The regression coefficient for capital structure moderated by liquidity (CR_DER) is -0.417814 with a probability value of 0.6766 (>0.05), indicating that liquidity does not moderate the effect of capital structure on profitability. Based on these results, it can be concluded that H4 is rejected. The regression coefficient for firm size moderated by liquidity (CR_SIZE) is 0.871220 with a probability value of 0.3848 (>0.05), indicating that liquidity does not moderate the effect of firm size on profitability. Based on these results, it can be concluded that H_5 is rejected. Furthermore, the Adjusted R-squared value is 0.372073, suggesting that the combined effect of liquidity, leverage, and firm size on profitability accounts for 37.21%, while other factors explain the remaining 62.79%.

Discussion

1. The Effect of Capital Structure on Profitability

The research findings indicate that capital structure does not significantly affect profitability. Signaling theory suggests that corporate financing decisions, such as

using debt, send signals to the market regarding the company's prospects. However, the lack of a significant effect of capital structure on profitability implies that the market may not perceive financing decisions as critical signals of a company's ability to generate profits. According to trade-off theory, companies aim to balance the tax benefits of debt (tax shield) against the costs of financial distress. However, these benefits do not always directly impact profitability, mainly if companies focus more on asset management or long-term investments. Brigham & Houston (2010) emphasize that optimal capital structure varies by industry, and therefore, capital structure does not always significantly impact profitability. Furthermore, agency theory highlights that debt can reduce conflicts of interest between management and shareholders by encouraging managerial discipline. However, if agency conflicts within the company are relatively low or management already has strong incentives to enhance performance, the impact of capital structure on profitability may become insignificant.

These findings suggest that a company's profitability is more influenced by other factors, such as operational efficiency, asset management, or market dynamics, rather than capital structure decisions. This also underscores that in specific sectors, such as property and real estate, the effect of capital structure on profitability may be negligible due to the strong influence of external factors and industry-specific characteristics. These findings align with studies conducted by (2014), Makhdalena (2018), (Hirdinis, 2019), (Prakoso et al., 2022), and Muhammad et al., (2023), which found that capital structure does not affect profitability. However, these results contrast with findings by Natsir & Yusbardini (2020), Nugraha et al. (2020), and Bintara (2020), which concluded that the Debt to Equity Ratio (DER) negatively impacts profitability.

2. The Effect of Firm Size on Profitability

The research findings indicate that firm size has a positive effect on profitability. Signaling theory suggests that larger firms can serve as a positive signal to investors and markets. Large companies typically possess greater assets, more stable revenues, and enhanced resilience during economic challenges. This signal boosts investor confidence in the company's ability to generate profits. A larger size also reflects strong operational capacity and easier access to external funding, ultimately supporting increased profitability. According to trade-off theory, larger firms benefit from better economies of scale. They reduce operational costs per unit due to their scale efficiency. Additionally, larger companies are better positioned to take advantage of tax benefits from debt usage (tax shields) due to their higher cash flow stability. Brigham & Houston (2010) note that companies with significant assets often have better access to capital markets at lower funding costs, contributing to higher profitability. Agency theory highlights that agency conflicts between managers and shareholders can diminish in larger firms. This is due to implementing better corporate governance, which is often more organized in larger firms. With improved governance, companies can ensure that managerial decisions are aligned with increasing company value and profitability. Furthermore, larger firms possess the resources to adopt advanced technologies and more effective management strategies, which drive profitability.

Overall, the positive relationship between firm size and profitability reflects the ability of large firms to efficiently manage assets, improve operational efficiency, and capitalize on market opportunities. These advantages contribute significantly to

achieving higher profitability compared to smaller firms. These findings align with previous studies by Hirdinis (2019) and Lestari (2023), which found that firm size significantly and positively impacts Return on Assets (ROA). Larger companies have greater bargaining power with suppliers and customers, resulting in better profit margins. Additionally, larger firms have more opportunities to optimize asset utilization, further enhancing profitability.

3. The Effect of Liquidity on Profitability

The finding that liquidity does not significantly affect profitability can be explained using signaling theory, trade-off theory, agency theory, and the perspectives of Brigham & Houston (2010). Signaling theory posits that liquidity can serve as a signal to investors regarding a company's financial stability and its ability to meet short-term obligations. High liquidity is often perceived as a positive signal, reflecting the company's preparedness to address operational and financial needs. However, suppose the market emphasizes other factors, such as operational efficiency or market conditions, as critical indicators. In that case, the signal from liquidity levels will not significantly influence profitability. According to trade-off theory, high liquidity has both benefits and costs. Adequate liquidity enables companies to reduce default risks, but excessive liquidity may indicate inefficient asset management, where non-productive current assets diminish potential returns. Brigham & Houston (2010) state that excessive liquidity may reflect suboptimal resource allocation, thereby failing to impact profitability directly. From the agency theory perspective, high liquidity gives managers greater financial flexibility but may lead to potential agency conflicts. Managers might prioritize maintaining high liquidity levels to mitigate personal risk, which can hinder investments in projects with potential profitability. Brigham & Houston (2010) emphasize that ineffective liquidity management can diminish the positive impact of liquidity on profitability, especially if liquid assets are not strategically utilized.

The insignificant relationship between liquidity and profitability suggests that liquidity alone cannot drive a company's profitability. This underscores the importance of effective resource management and productive investment strategies to ensure that liquidity contributes meaningfully to profit growth. Furthermore, profitability is more influenced by factors such as operational efficiency, asset management, and market conditions rather than liquidity levels alone. These findings align with Makhdalena (2018), who similarly concluded that liquidity does not significantly affect profitability.

4. Liquidity Moderates the Effect of Capital Structure on Profitability

The research findings reveal that liquidity does not moderate the effect of capital structure on profitability. Signal theory suggests that information about liquidity and capital structure can act as signals for investors. High liquidity is typically perceived as a positive signal, indicating a company's ability to meet short-term obligations. However, if a debt-dominated capital structure is not accompanied by efficiency in fund utilization, the positive signal of high liquidity alone is insufficient to improve profitability. This indicates that liquidity does not constantly strengthen the relationship between capital structure and profitability. In trade-off theory, liquidity and capital structure serve different roles. A capital structure with an optimal proportion of debt can provide benefits such as tax savings (tax shield). However, if a company focuses excessively on maintaining high liquidity without strategically

utilizing debt, the opportunities to improve profitability through capital efficiency become limited. According to Brigham & Houston (2010), companies with high liquidity tend to hold assets in non-productive forms, reducing the potential return on capital. As a result, high liquidity does not always support the relationship between capital structure and profitability. Agency theory highlights potential conflicts between management and shareholders regarding liquidity and capital structure. Managers may prefer to maintain high levels of liquidity to avoid financial risks, even if such decisions limit the effective utilization of capital structure. When the capital structure is not employed to drive productive investments, its impact on profitability becomes minimal. Moreover, high liquidity may lead to agency problems, such as managerial conservatism, where decisions are overly cautious and not aligned with shareholder interests to maximize profits. Brigham & Houston (2010) emphasize balancing liquidity and capital structure management. High liquidity without a clear strategy to utilize productive debt can hinder profit growth. They assert that the relationship between capital structure and profitability success depends heavily on the company's ability to manage these financial components synergistically.

Overall, the finding that liquidity does not moderate the effect of capital structure on profitability reflects that excessive liquidity cannot compensate for weaknesses in capital structure management. This underscores the importance of integrated strategies in leveraging liquidity and capital structure to enhance a company's profitability.

5. Liquidity Moderates the Effect of Firm Size on Profitability

The research findings indicate that liquidity does not moderate the effect of firm size on profitability. Signal theory posits that firm size and liquidity provide signals to the market. Large firms are often associated with stability, access to financial resources, and resilience in the market, while high liquidity indicates a company’s ability to meet short-term obligations. However, if large firms maintain high liquidity without allocating it productively, the positive signal from firm size will not translate into increased profitability. Thus, high liquidity does not necessarily strengthen the relationship between firm size and profitability. In trade-off theory, companies must balance the benefits of high liquidity with the opportunity costs associated with holding assets in liquid form. Brigham & Houston (2010) explain that large firms often have access to cheaper external financing and can sustain lower liquidity levels without significant financial risks. If liquidity levels are excessively high, funds that could otherwise be used for productive investments become underutilized, rendering liquidity ineffective in strengthening the relationship between firm size and profitability. Agency theory highlights the potential conflicts between managers and shareholders in managing liquid assets. In large firms, managers tend to have greater control over asset allocation, including liquidity. While high liquidity provides managerial flexibility, it also increases the risk of opportunistic behavior that does not align with profitability enhancement. In this context, liquidity does not significantly influence the relationship between firm size and profitability due to unresolved agency risks. According to Brigham & Houston (2010), large firms possess competitive advantages such as operational efficiency and economies of scale, which should support profitability. However, they also emphasize that improper liquidity management can diminish these positive effects. Excess liquidity can lead to

idle assets and reduce resource utilization efficiency, thereby not significantly contributing to increased profitability.

Overall, the finding that liquidity does not moderate the effect of firm size on profitability underscores the importance of effective financial management. While firm size offers potential advantages, these benefits cannot be fully realized without strategic liquidity management. This finding reaffirms that the relationship between firm size and profitability is more influenced by internal factors such as operational strategies and investment decisions rather than the company's liquidity level.

CONCLUSION

This study identified several key findings regarding the relationships among capital structure, firm size, liquidity, and profitability. The results indicate that capital structure and liquidity do not significantly affect profitability, while firm size positively influences profitability. Furthermore, liquidity does not moderate the effects of capital structure or firm size on profitability. These findings highlight the importance of firm size as a primary determinant of profitability, whereas capital structure and liquidity do not consistently contribute directly in the context of the property and real estate sector.

Theoretically, these findings align with trade-off theory, which posits that capital structure does not always directly impact profitability, depending on how companies balance the benefits and risks of funding. Signaling theory is also relevant in explaining that larger firms can provide positive signals to the market, enhancing investor confidence and driving profitability. From the agency theory perspective, larger firms tend to have better governance systems to manage agency conflicts, contributing to improved profitability. Practically, this study provides insights that companies should focus on operational efficiency and optimizing resource utilization to leverage the advantages of firm size in enhancing profitability. Additionally, firms should recognize that high liquidity does not always effectively strengthen the relationship between capital structure or firm size and profitability, underscoring the need for holistic financial management strategies. For investors, firm size can be a key indicator in evaluating profitability, while high liquidity does not always indicate better financial prospects.

However, this study has several limitations. First, the research is limited to Indonesia's property and real estate sector, and the findings may not apply to other industries. Second, the study variables are confined to capital structure, firm size, liquidity, and profitability, without considering external factors such as macroeconomic conditions or government policies. Third, the relatively short research period (2019–2023) may not sufficiently capture long-term dynamics. Future research should expand the scope to other industry sectors to test whether similar findings apply. It would also be beneficial to include better external variables such as inflation, interest rates, or monetary policies to understand their influence on the relationships among variables. Extending the research period could help identify long-term trends and provide more in-depth results. These findings offer valuable guidance for companies and investors in designing strategies and making decisions based on more holistic financial analyses.

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