



The Effect of Leverage and Liquidity on Company Value with Profitability as a Mediation Variable

Muh Fathul Mubaraq SS^{1*}, Ayatulloh Michael Musyaffi², Agung Dharmawan Buchdadi³

Universitas Negeri Jakarta, Indonesia

Corresponding Author: Muh Fathul Mubaraq SS, ssmubaraq@gmail.com

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ABSTRACT

This research explores how leverage and liquidity influence firm value, with profitability acting as a mediating factor. A quantitative method was utilized, employing SPSS version 30 along with Multiple Linear Regression and the Sobel Test for data analysis. The study focused on companies within the technology sector listed on the Indonesia Stock Exchange (IDX) from 2021 to 2024. A total of 13 companies were selected as samples, resulting in 52 data points. The findings show that leverage has no significant effect on firm value. Liquidity has no significant effect on firm value. Leverage has a positive and significant effect on profitability. Liquidity has a positive and significant effect on profitability. Profitability has a positive and significant effect on firm value. Leverage has a positive and significant effect on firm value through profitability. Liquidity does not have a significant effect on firm value through profitability.

INTRODUCTION

The rapid development of the technology sector in the global economic landscape has made this industry a strategic sector that attracts a lot of investor attention. However, the conditions that have occurred in the technology sector in Indonesia have shown quite fluctuating dynamics in recent years, especially from 2021 to 2024. The Indonesia Stock Exchange (IDX), through its sectoral index, noted that IDXTECHNO was one of the worst performing sectors from 2023 to August 2024, with a decline of 1,172.3 points or 35.92%, making it the sector with the greatest decline among 11 other sectors (SECURITIES, 2024). Which of course will have an impact on the firm value. The firm value is a reflection of investors' perceptions or assessments of the performance and future prospects of a business entity (Amelia et al., 2025). This value is often measured through stock prices on the capital market, because stock prices are considered a collective representation of investors' expectations of future profits, growth, stability, and company risks. According to Sari & Ilmi (2024), the main goal of a company is to optimize its company value, which is generally reflected in stock prices.

The declining performance of technology stocks also reflects a decline in market perception of the company's intrinsic value, which in this study is measured by Price to Book Value (PBV). The low PBV value of several large technology issuers, such as PT DCI INDONESIA Tbk (DCII) which experienced a decline in PBV value in 2024 by 13.03x from the previous year, is in contrast to the PBV of PT Multipolar Technology Tbk (MLPT) which increased drastically in 2024 by 47.25x from the previous year (www.idx.co.id). This is certainly an anomaly amidst the conditions of technology sector companies, the majority of which experienced a decline in PBV value.

This phenomenon raises fundamental questions about the factors that influence the value of technology companies, especially in the context of how their financial structure and liquidity conditions contribute to that value. Leverage, which in this study is proxied by the Debt to Equity Ratio (DER), and liquidity which is proxied by the Current Ratio (CR), are two main aspects of the financial structure that are often the main concern of investors. One of the main indicators to evaluate the extent to which a company's assets are financed through debt is the leverage ratio, this ratio reflects the proportion of debt used by the company to support its operational activities (Ceunfin et al., 2024). In developing countries like Indonesia, where access to financing and interest rates are fluctuating, leverage has two sides: on the one hand it provides opportunities for growth, but on the other hand it carries risks that must be managed carefully (Rahmanto et al., 2024). Research also conducted by Permana et al. (2024) and Oktaviani et al. (2022) provides results that leverage has an effect on company value. However, the opposite results were shown in research conducted by Putri et al. (2023).

Leverage itself is a financial indicator used to evaluate the extent to which a company is able to pay off its long-term obligations. Companies that rely on fewer loans tend to be able to increase their net income, which will indirectly also improve their overall financial performance (Andriani & Triyono, 2023). Research conducted by Samsi & Indrabudiman (2024) and Ramadhanti & Dara (2022) also showed that leverage affects profitability. However, the opposite

results were shown in research conducted by Setyawan (2021) and Ceunfin et al. (2024).

Liquidity is recognized as one of the key determinants influencing firm value. It refers to a company's capacity to meet its short-term financial obligations in a timely manner (Yudha et al., 2022). From a managerial perspective, liquidity reflects the efficiency with which an organization manages its working capital, particularly in balancing current liabilities against available cash resources (Artanti & Rahmiyati, 2022). High liquidity typically indicates a stable financial condition, suggesting the firm's resilience in fulfilling immediate obligations. This, in turn, can enhance investor trust and contribute positively to the firm's overall market valuation. Empirical findings from Setyawan (2021) and Jihadi et al. (2021) support the assertion that liquidity exerts a favorable influence on firm value. However, divergent outcomes were reported by Rohmatulloh (2023) and Ceunfin et al. (2024), who found no significant relationships, indicating that the effect of liquidity on firm value may vary depending on contextual and industry-specific factors.

Liquidity reflects the company's ability to meet short-term obligations using current assets. In general, the positive relationship between liquidity and profitability indicates that the higher the level of company liquidity, the better its financial performance. Research conducted by Rahmanto et al. (2024) and Amelia et al. (2025) stated that liquidity affects profitability. However, the opposite results were shown in research conducted by Setyawan (2021) and Samsi & Indrabudiman (2024).

The next factor that affects company value is profitability. Profitability describes a company's capacity to generate profits through the utilization of its assets. A high level of profitability indicates that the company is able to run its operations efficiently and effectively in achieving profits in each period (Adhyasta & Sudarsi, 2023). Research conducted by Komalasari & Yulazri (2023) and Adhyasta & Sudarsi (2023) showed that profitability affects company value. However, the opposite results were shown in research conducted by Rohmatulloh (2023) and Setyawan (2021).

The debt to equity ratio (DER) serves as an indicator for evaluating the proportion of a company's total liabilities relative to its shareholders' equity. Maintaining an optimal balance between debt and equity is crucial, as it tends to enhance the company's return on assets (ROA), thereby supporting the broader objective of maximizing shareholder value (Krismunita & Imronudin, 2021). When managed prudently, the strategic use of financial leverage particularly through productive financing can contribute positively to net income (Amelia et al., 2025). Effective leverage utilization, especially when directed toward income-generating investments, can result in higher ROA. A strong ROA is generally perceived favorably by investors and is often associated with an increase in firm value due to its reflection of sound operational performance. Empirical evidence presented by Safitri et al. (2025) and Anita et al. (2023) supports the view that profitability plays a mediating role in the relationship between leverage and firm value. Conversely, contradictory findings were reported by Ceunfin et al. (2024)

and Samsi & Indrabudiman (2024), highlighting potential variability in outcomes depending on contextual or firm-specific factors.

Companies with high liquidity reflect ownership of current assets greater than their current liabilities (Amelia et al., 2025). Investors consider high profitability as a positive indicator, which drives increased interest in the company's shares. The increase in demand for shares has an impact on increasing share prices, which ultimately also drives an increase in the company's value (Pratiwi & Muthohar, 2021). Adequate liquidity allows companies to run operations smoothly and efficiently, which drives profitability, and ultimately profitability has a positive impact on increasing the company's value. Research conducted by Samsi & Indrabudiman (2024) and Amelia et al. (2025) provides results in line with the statement above that profitability mediates the effect of liquidity on company value. However, opposing results were shown in research conducted by Ceunfin et al. (2024) and Krismunita & Imronudin (2021).

Based on a review of the background that has been described, the problem formulations in this study are as follows:

1. Does leverage affect firm value?
2. Does liquidity affect firm value?
3. Does leverage affect profitability?
4. Does liquidity affect profitability?
5. Does profitability affect company value?
6. Does leverage affect company value through profitability?
7. Does liquidity affect company value through profitability?

THEORETICAL REVIEW

Signaling Theory

Originating from the work of Spence (1973), signaling theory posits that firms communicate both financial and non-financial information to the market as a means to minimize information asymmetry between corporate insiders and external stakeholders (Putri et al., 2022). The theory underscores that management possesses superior knowledge regarding the firm's internal operations and financial health. Consequently, they are inclined to transmit this privileged information to prospective investors as a strategic move to influence market perceptions and potentially elevate the company's share value (Putri et al., 2022).

Firm Value

Company value is a reflection of investor perception or assessment of the performance and future prospects of a business entity (Amelia et al., 2025). One of the main indicators of a company's success in creating added value for shareholders and other stakeholders is the high value of the company. This value reflects investor confidence in the company's prospects and growth potential in the future, while also indicating stable and healthy financial and operational conditions (Anggraini & Hwihanus, 2025).

In this study, company value was measured using the Price to Book Value (PBV) method. PBV is calculated by comparing the company's stock market price to its book value (book value per share). The primary rationale for using PBV in

this study is its high relevance in assessing technology sector companies, which tend to have fewer fixed assets but have high growth potential (Brigham & Houston, 2019).

Leverage

The leverage ratio is a key financial metric used to assess the extent to which a firm utilizes debt in financing its assets. This indicator illustrates the company's dependence on borrowed capital to support its operational activities (Ceunfin et al., 2024). Leverage, in essence, denotes the level of debt employed by a business to sustain day-to-day operations, and it is commonly quantified using measures such as the debt-to-equity ratio or the debt-to-total-assets ratio. According to the capital structure theory introduced by Modigliani and Miller, incorporating debt into a firm's capital composition has implications for both the firm's market value and the cost of capital it must bear (Rahmanto et al., 2024).

Research conducted by Aziz & Kartadjumena (2024) shows that technology companies tend to choose debt as a source of financing because it is considered to reflect optimism about business prospects. Utilizing debt as a source of financing enables firms with substantial leverage to enhance their profitability, which in turn can lead to a higher overall firm value. (Alifian & Susilo, 2024; Ceunfin et al., 2024; Krismunita & Imronudin, 2021). However, conflicting results were shown in research conducted by Putri et al. (2023), which stated that the reason leverage has no effect on company value in the technology sector is because, on average, technology companies are unable to manage their debt effectively, resulting in profits that are not commensurate with the debt the company bears.

Liquidity

Liquidity is a company's ability to pay off short-term financial obligations that must be settled immediately (Yudha et al., 2022). The concept of liquidity describes the extent to which management's performance in managing the company's working capital comes from short-term liabilities and available cash balances (Artanti & Rahmiyati, 2022). The liquidity ratio serves as an indicator of a firm's capability to fulfill its financial commitments to both internal stakeholders and external creditors in a timely manner, in accordance with the predetermined due dates.

Empirical findings by Setyawan (2021) and Jihadi et al. (2021) suggest that liquidity exerts a positive influence on firm value. A higher liquidity ratio indicates that a company possesses sufficient current assets to cover its short-term liabilities, which in turn enhances stakeholder confidence. Nonetheless, contrasting evidence is presented by Rohmatulloh (2023) and Ceunfin et al. (2024), who argue that although a firm may demonstrate the ability to meet its immediate financial obligations, liquidity is not necessarily viewed by investors as a key determinant in evaluating stock performance or forming overall perceptions of firm value.

Profitability

Profitability refers to a firm's capacity to generate earnings over a specific period, serving as a key indicator of its operational efficiency (Artanti & Rahmiyati, 2022). This financial ratio reflects how well a company converts its sales and investments into profits, thereby offering insight into the overall performance and efficiency of its business activities (Artanti & Rahmiyati, 2022). In essence, profitability illustrates the extent to which a firm can effectively produce net income, which in turn contributes to the enhancement of its stock price and overall market valuation (Rohmatulloh, 2023).

Within the framework of signaling theory, strong profitability serves as an indicator of a firm's robust financial condition. This performance metric conveys a positive message to investors, reflecting effective management and operational success, which may contribute to an increase in the firm's market valuation. The positive impact of profitability can also shape more optimistic investor perceptions, which then triggers stock price increases (Andriani & Triyono, 2023 and Ceunfin et al., 2024). High profitability indicates good financial performance, increases investor confidence and positive market perceptions, which in turn increase company value (Amelia et al., 2025). However, conflicting results were shown in research conducted by Rohmatulloh (2023), who explained that company value does not always increase with the influence of growth opportunities; greater profits do not guarantee better company value.

METHODOLOGY

Population and Sampel

The target population for this research comprises all companies within the technology sector that were listed on the Indonesia Stock Exchange (IDX) during the period 2021 to 2024, amounting to a total of 47 firms. The sampling technique applied in this study is non-probability sampling, a method wherein the selection likelihood of each population element varies and is not based on randomization (Purwohedi, 2022). The specific criteria for sample selection are outlined as follows:

Table. 1 Criteria

No	Criteria	Amount
1	Technology companies listed in the technology sector on the IDX until 2024	47
2	Companies not listed during 2021-2024	(20)
3	Companies that did not publish financial reports for the 2021-2024 research period	(2)
4	Companies that experienced losses in the 2021-2024 period	(11)
5	Companies that publish financial statements in foreign currencies	(1)
	The number of technology companies sampled in this study	13
	Amount of data processed (4 years)	13 X 4 = 52

Data Collection Tools

The technique used in collecting this data is the documentation technique, in the form of financial reports from companies that have been published. This technique was chosen because the data needed is historical and openly available on the official BEI website and the pages of each company.

Data Analysis Tools

This research employs a multiple regression analysis along with the Sobel test to examine the influence of leverage and liquidity on firm value, with profitability serving as a mediating variable. The analysis focuses on technology sector firms listed on the Indonesia Stock Exchange (IDX) over the 2021-2024 period. Data processing and statistical evaluation were carried out using version 30 of the Statistical Package for the Social Sciences (SPSS).

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

Based on sample data sourced from the company's financial reports published on the IDX website from 20121 to 2024, a description of the variables used in this study was obtained. The description of this data can be seen from the number of samples, minimum value, maximum value, average value, and standard deviation.

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Leverage	52	,03	35,00	1,8892	6,09152
Likuiditas	52	,64	18,83	3,1408	3,32572
Profitabilitas	52	,03	26,99	6,9362	5,09845
Nilai Perusahaan	52	,37	56,28	7,1469	10,60552
Valid N (listwise)	52				

Source: Data processed by researchers, 2025

Hypothesis Test

T Test

The t-statistic test is utilized to assess the extent to which each independent variable individually contributes to explaining the variation in the dependent variable. In interpreting the coefficient estimates of the independent variables, unstandardized coefficients are typically referenced. The decision criteria for this test rely on the significance probability value (sig-t). If the sig-t value is below the 5% threshold, it indicates that the independent variable significantly influences the dependent variable, thereby supporting the proposed hypothesis. Conversely, if the sig-t value exceeds 5%, it implies that the independent variable does not exert a statistically significant effect on the dependent variable, leading to the rejection of the hypothesis due to insufficient empirical support.

a) T Test Equation I

Table 3. T Test Equation I
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,028	,679		2,989	,004
	Leverage	,742	,268	,352	2,772	,008
	Likuiditas	,408	,191	,272	2,140	,037

a. Dependent Variable: Profitabilitas

Source: Data processed by researchers, 2025

The decision-making criterion in the t-test states that if the calculated t-value exceeds the critical value from the t-distribution table, then the independent variable has a partial effect on the dependent variable. Referring to the t-distribution table at a 0.05 significance level, the corresponding critical value is 2.009. Based on the results presented in the table above, the interpretation of the t-test outcomes for the first regression equation is as follows:

- (1) The leverage variable, as measured by the Debt to Equity Ratio (DER), yields a calculated t-value of 2.772, which exceeds the critical t-value of 2.009, with a significance level of 0.008, which is below the 0.05 threshold. These results provide statistical evidence to support the acceptance of hypothesis H3, indicating that leverage (DER) has a significant influence on profitability (ROA).
- (2) The liquidity variable, represented by the Current Ratio (CR), shows a calculated t-value of 2.140, surpassing the critical t-value of 2.009, with a significance level of 0.037, also less than 0.05. This finding supports the acceptance of hypothesis H4, confirming that liquidity (CR) significantly affects profitability (ROA).

b) T Test Equation II

Table 3. T Test Equation II
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,672	,802		,837	,407
	Leverage	,283	,313	,117	,903	,371
	Likuiditas	-,043	,217	-,025	-,198	,844
	Profitabilitas	,604	,155	,524	3,888	<,001

a. Dependent Variable: Company's Value

Source: Data processed by researchers, 2025

The decision rule for the t-test states that if the computed t-value exceeds the critical value from the t-distribution table, the independent variable has a partial effect on the dependent variable. At a 5% significance level, the corresponding t-table value is 2.010. Based on the results shown in the table above, the interpretation of the t-test for the second regression equation is as follows:

- (1) The leverage variable (DER) has a t-statistic of 0.903, which is less than the critical value of 2.010, and a p-value of 0.371, which is greater than 0.05. These results indicate that hypothesis H1 is rejected, suggesting that leverage does not have a statistically significant impact on firm value (PBV).
- (2) The liquidity variable (CR) produces a t-value of -0.198, also lower than the critical value of 2.010, with a significance level of 0.844, exceeding the 0.05 threshold. Therefore, hypothesis H2 is rejected, indicating that liquidity does not significantly influence firm value (PBV).
- (3) The profitability variable (ROA) shows a t-value of 3.888, which surpasses the critical value of 2.010, with a highly significant p-value of <0.001. As a result, hypothesis H5 is accepted, confirming that profitability has a significant positive effect on firm value (PBV).

Sobel Test

In this study, the Sobel test, also referred to as the mediation analysis, is employed to examine the indirect influence of the independent variables, namely leverage and liquidity, on the dependent variable, firm value, through the mediating role of profitability. This analysis is conducted on companies operating within the technology sector and listed on the Indonesia Stock Exchange (IDX) during the observation period from 2021 to 2024. Based on the results of the regression analysis, this study obtained the coefficient values and standard errors of the leverage (DER) and liquidity (CR) regression coefficients in the profitability (ROA) regression model and the coefficient values and standard errors of the profitability (ROA) regression coefficients in the firm value (PBV) regression model as follows:

Table 4. Sobel Test Result

Variable	ROA Regression Model		PBV Regression Model	
	Koefisien Regresi	Standard Error	Koefisien Regresi	Standard Error
DER	0,742	0,268		
CR	0,408	0,191		
ROA			0,604	0,155

Source: Data processed by researchers, 2025

The following section outlines the indirect effects of the independent variables on the dependent variable through the mediating variable:

- a) The Effect of Leverage on Firm Value Mediated by Profitability

The Sobel test is utilized to assess the significance of the mediating effect; however, the z-score required for interpretation is not directly available from the regression output and must be calculated manually using the Sobel test formula. The resulting z-value derived from this calculation is as follows:

$$z = \frac{ab}{\sqrt{(b^2SEa^2) + (a^2SEb^2)}}$$

$$z = \frac{0,742 \times 0,604}{\sqrt{((0,604)^2(0,268)^2) + ((0,742)^2(0,155)^2)}}$$

$$z = \frac{0,448}{\sqrt{0,039}}$$

$$z = \frac{0,448}{0,197}$$

$$z = 2,477$$

Referring to the calculation presented above, the obtained z-score is 9.384. Since this value exceeds the critical threshold of 1.96 at the 5% significance level ($z = 2.477 > 1.96$), it can be concluded that the profitability variable effectively mediates the relationship between leverage and firm value. An alternative approach to assessing this mediating effect is through the Sobel test. The outcomes derived from the Sobel test analysis are described in the following section:

Input:		Test statistic:	Std. Error:	p-value:
a	742	Sobel test: 2.25698312	198569.495351	0.02400913
b	604	Aroian test: 2.20916089	202867.976980	0.02716345
s _a	268	Goodman test: 2.30805184	194175.881313	0.02099625
s _b	155	Reset all	Calculate	

Based on the tests conducted, namely the z test and the sobel test. The z test obtained a z value of $2.477 > 1.96$ with a significance level of 5%, while the sobel test obtained a significance value of $0.024 < 0.05$. From the tests conducted above, it can be concluded that profitability is able to mediate the indirect effect between leverage and company value. These results indicate that H6 is accepted.

b) The Effect of Liquidity on Firm Value Through Profitability

The z-score for the Sobel test is not directly available from the regression output and must be computed manually using the Sobel test formula. The results of the z value calculation of the Sobel test are:

$$z = \frac{ab}{\sqrt{(b^2SEa^2) + (a^2SEb^2)}}$$

$$z = \frac{0,408 \times 0,604}{\sqrt{((0,604)^2(0,191)^2) + ((0,408)^2(0,155)^2)}}$$

$$z = \frac{0,246}{\sqrt{0,017}}$$

$$z = \frac{0,246}{0,130}$$

$$z = 1,892$$

The result of this manual calculation produces a z-value of 1.892. Since this value falls below the critical threshold of 1.96 at the 5% significance level, it indicates that the profitability variable does not serve as a significant mediator in the relationship between liquidity and firm value. An alternative method for assessing mediation is the Sobel test, and the findings from this analytical procedure are presented as follows:

Input:		Test statistic:	Std. Error:	p-value:
a	408	Sobel test: 1.87314663	131560.442747i	0.06104814
b	604	Aroian test: 1.82744852	134850.310051!	0.06763236
s _a	191	Goodman test: 1.92245389	128186.169577i	0.05454867
s _b	155	Reset all	Calculate	

Based on the tests conducted, namely the z test and the sobel test. The z test obtained a z value of 1.892 <1.96 with a significance level of 5%, while the sobel test obtained a significance value of 0.067 > 0.05. From the tests conducted above, it can be concluded that profitability is unable to mediate the indirect effect between liquidity and company value. These results indicate that H7 is rejected.

Leverage has no effect on firm value

The results of the regression analysis indicate that the leverage coefficient is 0.903, reflecting a positive association with firm value; however, the relationship is statistically insignificant, as evidenced by a p-value of 0.371, which exceeds the 0.05 threshold. This suggests that although leverage exhibits a positive directional trend toward firm value, the effect lacks sufficient statistical strength to be deemed significant. Consequently, it can be concluded that leverage does not exert a meaningful influence on firm value.

Based on data on leverage (DER) and firm value (PBV) for technology companies listed on the Indonesia Stock Exchange for the 2021–2024 period, there appears to be no consistent relationship between leverage levels and firm value. For example, at Anabatic Technologies (ATIC), a very high DER of 35.00 in 2021 was accompanied by a similarly high PBV of 35.82. However, when the company's DER dropped significantly to 6.80 in 2024, its PBV also plummeted to just 1.43. At first glance, this seems to indicate a positive relationship between leverage and firm value in these companies.

However, a different situation is evident in a number of other companies. For example, M Cash Integrasi (MCAS), despite having a low DER of 0.29 to 0.72, managed to record a fairly high PBV, reaching 12.91 in 2022. Meanwhile, companies like Wira Global Solusi (WGSJ) and Sentral Mitra Informatika (LUCK), which consistently have low DERs, also exhibited relatively low PBVs. This fact illustrates the lack of a consistent linear pattern between DER and PBV in the technology sector.

Within the framework of signaling theory, high leverage should be interpreted by the market as an indication of management confidence in future business prospects. However, in the technology industry, which relies heavily on

intangible assets, investors focus more on innovation and a company's ability to expand its market rather than simply examining its funding structure. This finding aligns with the research findings of Putri et al. (2023) and Novianti & Wijaya (2024) showed that investors in this sector tend to prioritize growth potential and innovation strategies over solely considering debt levels.

Practically, the results of this study imply that technology companies need to be more careful in managing leverage, as high leverage does not automatically increase a company's value in the eyes of investors. Companies should prioritize strategies that can increase growth and innovation, which the market places greater importance on when assessing the prospects of technology companies.

Liquidity does not affect the firm value.

The regression analysis reveals that the liquidity coefficient is -0.043, accompanied by a significance value of 0.844, which substantially exceeds the 0.05 level. These results indicate that liquidity does not have a statistically significant impact on firm value. This implies that a firm's capacity to fulfill its short-term liabilities as measured by the Current Ratio (CR) does not necessarily influence investor perceptions regarding the firm's worth, as reflected in its Price to Book Value (PBV). Consequently, a high level of liquidity alone cannot be considered a reliable indicator of enhanced market valuation in the context of technology-sector firms.

Based on data on the liquidity ratio (CR) and firm value (PBV) of technology companies listed on the Indonesia Stock Exchange during the 2021–2024 period, there is no consistent pattern between liquidity levels and firm value. For example, Elang Mahkota Teknologi (EMTK) has a relatively high liquidity ratio, ranging from 3.08 to 5.27 throughout the observation period. However, the company's value, as reflected in its PBV, fluctuated and tended to decline from 4.91 in 2021 to just 1.85 in 2024. This indicates that the company's strong ability to meet short-term obligations is not always accompanied by increased market appreciation.

A similar situation can be seen in Wira Global Solusi (WGSJ), which recorded a very high CR, reaching 18.83 in 2023, but its PBV actually declined from 3.67 in 2021 to just 1.56 in 2024. Conversely, Multipolar Technology (MLPT), which has a relatively low CR, averaging around 1, managed to record a very high PBV in 2024, at 31.16. This fact suggests that low liquidity does not necessarily negatively impact a company's market value.

From a signaling theory perspective, a high liquidity ratio should ideally be interpreted by investors as a positive indication of a company's short-term financial health. However, in the technology industry, which relies heavily on intangible assets such as patents, software, and digital platforms, investors prioritize innovation and expansion prospects over liquidity strength. This finding aligns with previous research by Samsi & Indrabudiman (2024) and Astawinetu et al. (2023), which concluded that liquidity is not the primary determinant of company value in this sector.

Practically, the results of this study imply that technology company management cannot rely solely on improving liquidity ratios to increase company value in the eyes of investors. Therefore, companies need to optimize

their innovation, product development, and market expansion strategies to increase value, as these factors predominantly influence investor perceptions of technology companies.

Leverage has a Positive and Significant Effect on Profitability

The regression results indicate that the leverage variable has a coefficient of 0.742 with a significance level of 0.008, which is below the 0.05 threshold. This finding demonstrates that leverage exerts a positive and statistically significant influence on profitability. Specifically, an increase in the Debt to Equity Ratio (DER) tends to be associated with an improvement in Return on Assets (ROA). This suggests that technology firms utilizing debt strategically whether to scale operations or finance innovation are often able to enhance their profitability relative to their total asset base.

An analysis of leverage (DER) and profitability (ROA) data from technology sector firms listed on the Indonesia Stock Exchange between 2021 and 2024 reveals a consistent pattern that aligns with the study's findings. Specifically, the data demonstrate that leverage, as indicated by DER, has a positive and statistically significant association with profitability, as reflected in ROA. For example, at Indointernet Tbk. (EDGE), the DER in 2021 was recorded as quite high at 5, followed by ROA of 6.7%. However, as EDGE's DER gradually decreased from 5.1 in 2022 to 1.8 in 2024, the company's ROA also decreased from 5.63% to 3.87%. This indicates a positive relationship between leverage levels and a company's ability to generate profits. This reinforces the indication that higher leverage contributes to a company's increased capacity to maximize assets to generate greater profits.

These results align with signaling theory, where increased leverage is often interpreted by investors and creditors as a positive signal of management optimism about the company's future. In the highly dynamic technology sector, which requires significant investment in research and development, leveraging leverage is a crucial strategy for accelerating innovation and expanding markets, ultimately boosting profitability. This research is also consistent with the results of studies by Safitri et al. (2025) and Amelia et al. (2025), which found that leverage has a positive effect on profitability.

From a practical perspective, these findings imply that technology company management can wisely utilize leverage as a strategic tool to drive profitability growth. However, companies still need to carefully manage their capital structure to avoid incurring excessive financial risk. Interest expenses arising from debt use must be offset by increased operating profit to maintain an optimal capital structure. Thus, leverage can be an important tool in increasing the profitability of technology companies, as long as it is used with careful risk assessment.

Liquidity has a Positive and Significant Effect on Profitability

The findings reveal that the liquidity variable holds a coefficient of 0.408, suggesting a positive influence on profitability. With a significance level of 0.037, which falls below the conventional threshold of 0.05, the relationship is deemed statistically significant. Accordingly, the data analysis conducted in this study

confirms that liquidity exerts a favorable and meaningful impact on profitability among technology firms listed on the Indonesia Stock Exchange during the 2021–2024 timeframe.

Analysis of data from firms in the technology sector reveals a consistent trend that reinforces the research conclusion: liquidity represented by the Current Ratio (CR) demonstrates a statistically significant and positive relationship with profitability, measured by Return on Assets (ROA). This trend is evident in companies such as Trimegah Karya Pratama Tbk (UVCR) and Zyrexindo Mandiri Buana Tbk (ZYRX). In 2021, both firms recorded high CR values of 4.97, which corresponded with elevated ROA levels of 7.68%. However, by 2023–2024, as their CRs declined to approximately 3.04–3.6, their ROA figures also dropped to between 3.81% and 4.35%. These patterns indicate that stronger short-term liquidity positions may enhance a company's ability to generate profits.

The results of this study are consistent with signaling theory, which posits that a high level of liquidity serves as a favorable indicator to investors and the broader market, reflecting a company's capability to fulfill short-term financial commitments and manage its working capital effectively. Such positive signals can enhance stakeholder trust, improve access to external financing, and support potential business expansion-factors that ultimately contribute to increased profitability. These findings are in line with the empirical evidence presented by Rahmanto et al. (2024) and Ceunfin et al. (2024), who similarly reported a significant and positive relationship between liquidity and profitability across various industry sectors. This further substantiates the argument that liquidity plays a vital role in sustaining a firm's profit-generating capacity.

Practically, these findings imply that technology companies should continue to maintain optimal liquidity levels. Good working capital management not only helps companies meet short-term obligations but can also be used to finance strategic needs that support increased profitability. Companies also need to ensure that excess liquidity is not solely held in cash or cash equivalents but is allocated to profitable short-term investments that continue to generate returns for the company.

Profitability has a Positive and Significant Effect on Firm Value

The analysis reveals that the profitability variable has a coefficient of 0.604, signifying a positive relationship with firm value. This relationship is statistically significant, as evidenced by a p-value of less than 0.001, which falls well below the 0.05 threshold. These findings suggest that profitability exerts a favorable and significant influence on firm value among technology sector companies listed on the Indonesia Stock Exchange during the 2021–2024 period. In practical terms, an increase in a firm's profitability measured by Return on Assets (ROA) tends to enhance its market valuation, as reflected in the Price to Book Value (PBV) ratio.

An analysis of financial data from Indonesian technology firms during the 2021–2024 period reveals a consistent trend supporting the assertion that profitability represented by Return on Assets (ROA) positively and significantly influences firm value, as indicated by the Price to Book Value (PBV) metric. For instance, Indointernet Tbk. (EDGE) experienced a decline in ROA from 6.7% in

2021 to 3.87% in 2024, accompanied by a notable drop in PBV from 5.82 to 1.43. Comparable trends were observed in Zyrexindo Mandiri Buana Tbk. (ZYRX) and Trimegah Karya Pratama Tbk. (UVCR), where both firms saw ROA decrease from approximately 7.68% in 2021 to 3.81% in 2024, coinciding with a contraction in PBV from around 6.95 to 3.0. These patterns imply that diminished profitability is often followed by a reduction in market valuation, indicating that a firm's ability to generate earnings is closely tied to investor assessments of its intrinsic value.

Viewed through the lens of signaling theory, the data provide consistent evidence that robust profitability serves as a favorable signal to the market, reflecting optimistic expectations about a firm's future performance. Companies exhibiting high Return on Assets (ROA) are generally perceived by investors as having strong asset management capabilities and a lower likelihood of financial distress, which enhances their investment appeal. This heightened interest typically leads to increased demand for shares, resulting in higher stock prices and, consequently, a rise in the Price to Book Value (PBV).

Furthermore, these findings align with prior studies, such as those conducted by Komalasari & Yulazri (2023) as well as Adhyasta & Sudarsi (2023), which also concluded that profitability exerts a positive and statistically significant influence on firm value. This consistency across research underscores the importance of profitability as a key determinant of firm valuation, particularly within the technology sector and more broadly across various industries.

Practically, these research findings provide implications for technology company management to continuously improve their profitability performance, whether through operational efficiency, product innovation, or market expansion. This is crucial not only for maintaining business sustainability but also for increasing the company's value in the eyes of investors and the capital market.

Leverage has a Positive Effect on Firm Value Through Profitability

The z-test results yielded a z-value of $2.477 > 1.96$ with a significance level of 5%. The Sobel test yielded a p-value of $0.024 < 0.05$. Therefore, this study demonstrates that leverage has a positive and significant effect on firm value through profitability in technology companies listed on the Indonesia Stock Exchange for the 2021–2024 period.

Based on data from technology companies in Indonesia for the 2021–2024 period, a pattern supports the study's findings: leverage, measured using the Debt to Equity Ratio (DER), has an indirect effect on firm value (PBV) through increased profitability (ROA). For example, at Indointernet Tbk. (EDGE), leverage was quite high in 2021, at 5%, followed by an ROA of 6.7% and a PBV of 5.82. However, when the DER dropped significantly to just 1.8 in 2024, ROA also weakened to 3.87%, and PBV plummeted to 1.43. This illustrates that a drastic reduction in leverage can reduce a company's profit-generating drive, which in turn leads to a decline in market confidence in the company's value.

This finding aligns with signaling theory, which states that a company's decision to take on debt can be interpreted as a signal of management optimism regarding future cash flow prospects. Companies with manageable leverage demonstrate confidence in their ability to generate profits to meet their debt obligations. When this leverage strategy successfully increases profitability, this is a positive indicator for investors, ultimately driving increased company value through higher PBV.

The findings of this study are consistent with prior research conducted by Safitri et al. (2025) and Amelia et al. (2025), both of which observed that leverage can influence firm value indirectly through its impact on profitability. Within the technology sector – characterized by high capital requirements for innovation, research, and expansion activities – leverage serves as a vital financial instrument that facilitates profitability enhancement. This improvement in profitability, in turn, contributes to more favorable investor assessments of a firm's financial performance and future outlook, which is ultimately reflected in a rise in its market valuation.

Practically, these findings imply that technology company management needs to utilize debt financing wisely to fund productive projects that can increase profitability. However, companies must also manage leverage risk effectively to prevent excessive interest and liability burdens that could reduce future financial performance.

Liquidity Does Not Affect Firm Value Through Profitability

The z-test yielded a z-value of $1.892 < 1.96$ with a significance level of 5%. The Sobel test yielded a p-value of $0.067 > 0.05$. Therefore, this study indicates that liquidity does not significantly influence firm value through profitability in technology companies listed on the Indonesia Stock Exchange during the 2021–2024 period.

Based on data from technology companies in Indonesia during the 2021–2024 period, the relationship between liquidity (CR) and profitability (ROA), which in turn affects firm value (PBV), does not show a consistent pattern. For example, Sentral Mitra Informatika Tbk (LUCK), where its CR has remained relatively stable at around 3.5 to 4.2 throughout the period. However, the company's ROA is very low, fluctuating between 0.09% and 3.50%, while its PBV has continued to decline from 1.97 in 2021 to just 0.37 in 2024. This phenomenon further clarifies that high liquidity does not directly translate into increased profitability that could drive a company's market value.

The findings of this study diverge from the conventional assertions of signaling theory, which posits that elevated liquidity levels function as favorable indicators to investors regarding a firm's capacity to fulfill short-term obligations and sustain operational stability. Under this theoretical framework, a robust liquidity ratio is expected to bolster investor confidence and positively influence firm value. However, in the context of the technology sector, such signals appear insufficient to significantly impact firm value through the pathway of enhanced profitability.

These results align with prior studies, including those by Ceunfin et al. (2024) and Anggraini & Hwihanus (2025), which concluded that liquidity does

not exert a mediating effect on firm value via profitability, particularly in sectors driven by innovation. This suggests that investors in technology industries are more inclined to assess company value based on metrics that are more strongly linked to long-term growth potential rather than short-term liquidity indicators.

Practically, these findings imply that technology companies cannot rely solely on high liquidity levels to increase profitability, leading to increased company value. Companies need to maximize available funds for investment in productive assets and innovation to increase profitability and create added value for shareholders. Working capital management remains important, but must be balanced to avoid hindering the potential for higher returns from the company's core investments.

CONCLUSIONS AND RECOMMENDATIONS

The hypothesis testing outcomes in this study reveal that leverage does not exert a statistically significant influence on firm value. Similarly, liquidity also demonstrates no significant impact on firm value. Conversely, leverage shows a positive and statistically significant relationship with profitability, as does liquidity. Furthermore, profitability is found to significantly and positively affect firm value. Additionally, leverage contributes positively and significantly to firm value through the mediating role of profitability. However, liquidity does not exhibit a significant indirect effect on firm value via profitability. Future studies are encouraged to expand the scope to include various industrial sectors, thereby enabling broader generalizations and facilitating comparative analyses of financial behavior across industries. Incorporating moderating variables such as Good Corporate Governance (GCG) or Corporate Social Responsibility (CSR) could provide further insights into whether the strength or direction of these relationships varies depending on governance quality. To deepen the analysis, subsequent research might consider a mixed-methods approach, combining quantitative techniques with qualitative insights derived from interviews with company executives or financial analysts. This research is subject to several limitations. Firstly, it exclusively focused on technology firms listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period, which may limit the applicability of the findings to other sectors with different operational dynamics. Secondly, the observation period encompassed years of minimal systemic financial shocks but was nonetheless influenced by broader economic fluctuations, including the pandemic. Thirdly, the study utilized a limited set of financial indicators – specifically DER, CR, ROA, and PBV – without accounting for other potentially influential variables such as sales growth or macroeconomic indicators. Lastly, the analysis was grounded in signaling theory and trade-off theory, excluding alternative perspectives such as agency theory and pecking order theory, which could offer valuable explanatory power. These constraints underscore the need for future investigations to broaden the research design in terms of objects, variables, and theoretical frameworks.

ADVANCED RESEARCH

Future research could expand by conducting cross-sectoral analyses to compare the financial behavior and value creation mechanisms among different industries, thereby enhancing the generalizability of the findings. Incorporating moderating variables such as Good Corporate Governance (GCG) or Corporate Social Responsibility (CSR) could provide deeper insights into how governance quality or social responsibility practices influence the relationship between leverage, liquidity, profitability, and firm value. Moreover, employing a mixed-method approach by integrating quantitative analysis with qualitative insights from interviews with company management or financial analysts may uncover contextual factors and strategic considerations that are not captured through numerical data alone.

REFERENCES

- Adhyasta, D., & Sudarsi, S. (2023). Pengaruh Profitabilitas, Likuiditas, Solvabilitas, Ukuran Perusahaan, terhadap Nilai Perusahaan pada Perusahaan Manufaktur yang Terdaftar di BEI. *Ekonomis: Journal of Economics and Business*, 7(1), Article 1. <https://doi.org/10.33087/ekonomis.v7i1.866>
- Amelia, R., Nurlia, & Juwari. (2025). PENGARUH LIKUIDITAS, STRUKTUR MODAL, DAN UKURAN PERUSAHAAN TERHADAP NILAI PERUSAHAAN DENGAN PROFITABILITAS SEBAGAI VARIABEL MEDIASI PADA PERUSAHAAN SUBSEKTOR FOOD AND BEVERAGES. *Accounting Profession Journal (APAJI)*, 7(1), Article 1. <https://doi.org/10.35593/apaji.v7i1.274>
- Andriani, S., & Triyono. (2023). THE EFFECT OF COMPANY SIZE AND LEVERAGE ON FIRM VALUE WITH COMPANY FINANCIAL PERFORMANCE AS AN INTERVENING VARIABLE (STUDY ON THE CONSUMER NON-CYCLICALS SECTOR LISTED ON THE INDONESIA STOCK EXCHANGE 2018-2021). *International Journal of Business Management and Economic Review*.
- Anggraini, D. I. S. L. P., & Hwihanus, H. (2025). Pengaruh Struktur Modal, Likuiditas, dan Pertumbuhan Penjualan terhadap Nilai Perusahaan dengan Profitabilitas sebagai Variabel Mediasi Studi pada Perusahaan yang Terdaftar di BEI Periode 2019 – 2024. *AKSIOMA : Jurnal Sains Ekonomi Dan Edukasi*, 2(1), Article 1. <https://doi.org/10.62335/8f182576>
- Anita, R., Abdillah, M. R., & Suseno, G. (2023). Leverage On Firm Value: The Role of Financial Performance Mechanisms. *Jurnal Aplikasi Bisnis Dan Manajemen (JABM)*, 9(3), Article 3. <https://doi.org/10.17358/jabm.9.3.751>
- Artanti, R. A., & Rahmiyati, N. (2022). PENGARUH LIKUIDITAS, LEVERAGE DAN STRUKTUR MODAL TERHADAP NILAI PERUSAHAAN DENGAN PROFITABILITAS SEBAGAI VARIABEL MEDIASI. *Prima Ekonomika*, 13(2), 76–93. <https://doi.org/10.37330/prima.v13i2.152>
- Ceunfin, Y. M., Zuhroh, D., & Sihwahjoeni. (2024). Analysis of the Effect of Leverage, Company Size and Liquidity on Firm Value with Return On Asset as an Intervening Variable in Healthcare Companies Listed on the Indonesia Stock Exchange for the 2019-2022 Period. *International Journal of*

- Research in Social Science and Humanities (IJRSS) ISSN:2582-6220, DOI: 10.47505/IJRSS, 5(7), Article 7. <https://doi.org/10.47505/IJRSS.2024.7.16>*
- Jihadi, M., Vilantika, E., Hashemi, S. M., Arifin, Z., Bachtiar, Y., & Sholichah, F. (2021). The Effect of Liquidity, Leverage, and Profitability on Firm Value: Empirical Evidence from Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(3), 423–431. <https://doi.org/10.13106/jafeb.2021.vol8.no3.0423>
- Komalasari, D. N., & Yulazri, Y. (2023). PENGARUH PENGUNGKAPAN LIKUIDITAS, SOLVABILITAS, UKURAN PERUSAHAAN DAN PROFITABILITAS TERHADAP NILAI PERUSAHAAN. *SCIENTIFIC JOURNAL OF REFLECTION: Economic, Accounting, Management and Business*, 6(2), 470–479. <https://doi.org/10.37481/sjr.v6i2.670>
- Krismunita, D., & Imronudin, I. (2021). THE EFFECT OF LIQUIDITY AND LEVERAGE ON COMPANY VALUE WITH PROFITABILITY AS A MEDIATING VARIABLE ON MANUFACTURING COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE PERIOD OF 2017-2019. *Journal of Management and Islamic Finance*, 1(2), 231–248. <https://doi.org/10.22515/jmif.v1i2.4102>
- Oktaviani, F., Suryaningprang, A., Herlinawati, E., & Sudaryo, Y. (2022). Pengaruh CR, QR, DER dan TATO terhadap ROA PT Pyridam Farma Tbk Periode 2012-2021. *Journal of Business, Finance, and Economics (JBFE)*, 3(2). <https://doi.org/10.32585/jbfe.v3i2.3474>
- Permana, G., Hariyanto, E., Amir, A., & Winarni, D. (2024). Pengaruh Likuiditas, Solvabilitas, Ukuran Perusahaan, dan Dewan Komisaris Independen Terhadap Nilai Perusahaan. *SEIKO : Journal of Management & Business*, 7(2), Article 2. <https://doi.org/10.37531/sejaman.v7i2.6533>
- Pratiwi, A., & Muthohar, A. M. (2021). Pengaruh growth opportunity, likuiditas, dan leverage terhadap nilai perusahaan dengan profitabilitas sebagai variabel intervening. *Journal of Accounting and Digital Finance*, 1(3), Article 3. <https://doi.org/10.53088/jadfi.v1i3.175>
- Purwohedi, U. (2022). *Metode Penelitian Prinsip dan Praktik*. Raih Asa Sukses.
- Putri, D. C. Y., Widiyanti, M., & Thamrin, K. M. H. (2022). Pengaruh Intensitas Penelitian dan Pengembangan dan Aset Tidak Berwujud Terhadap Nilai Perusahaan dengan Kinerja Keuangan sebagai Variabel Intervening. *JMBI UNSRAT (Jurnal Ilmiah Manajemen Bisnis dan Inovasi Universitas Sam Ratulangi)*, 9(1). <https://doi.org/10.35794/jmbi.v9i1.37228>
- Putri, M. A., Yuliusman, & Rahayu. (2023). The Effect of Profitability, Leverage, Corporate Social Responsibility and Firm Size on Company Value with Good Corporate Governance as a Moderating Variable in Technology Companies Listed on the Bej in 2019-2022. *Indonesian Journal of Economic & Management Sciences*, 1(4), Article 4. <https://doi.org/10.55927/ijems.v1i4.5050>
- Rahmanto, B. T., Lasmiatun, K. M. T., Ar, N., Toalib, R., & Syamsinar, S. (2024). Analysis of the Effect of Liquidity, Leverage, and Profitability on the Financial Performance of Companies in the Indonesian Capital Market.

- West Science Business and Management*, 2(04), Article 04.
<https://doi.org/10.58812/wsbm.v2i04.1499>
- Ramadhanti, M., & Dara, S. R. (2022). Pengaruh Solvabilitas dan Likuiditas Terhadap Nilai Perusahaan dengan Kinerja Keuangan sebagai Variabel Mediasi. *KALBISIANA Jurnal Sains, Bisnis Dan Teknologi*, 8(4), Article 4.
- Safitri, V. D., Karnadi, K., & Subaida, I. (2025). PENGARUH INTENSITAS MODAL DAN LEVERAGE TERHADAP KINERJA KEUANGAN DENGAN NILAI PERUSAHAAN SEBAGAI VARIABEL INTERVENING PADA PERUSAHAAN MAKANAN DAN MINUMAN YANG TERDAFTAR DI BURSA EFEK INDONESIA PERIODE 2019-2021. *Jurnal Mahasiswa Entrepreneurship (JME)*, 2(9), 1984-2000.
<https://doi.org/10.36841/jme.v2i9.3610>
- Samsi, & Indrabudiman, A. (2024). THE EFFECT OF LIQUIDITY AND LEVERAGE ON COMPANY VALUE WITH PROFITABILITY AS AN INTERVENING VARIABLE. *Jurnal Comparative: Ekonomi Dan Bisnis*.
<http://dx.doi.org/10.31000/combis.v6i1>
- Sari, M., & Iلمي, N. (2024). Pengaruh Rasio Profitabilitas Likuiditas Dan Aktivitas Terhadap Nilai Perusahaan. *Jurnal Riset Akuntansi Dan Bisnis*, 24(1), Article 1. <https://doi.org/10.30596/19329>
- SECURITIES, P. I. P. (2024, September 3). *Empat Sektor Alami Kontraksi Dalam Tahun Berjalan, IDXTECHNO Paling Tertekan*. IPOTNEWS.
https://www.indopremier.com/ipotnews/newsDetail.php?jdl=Empat_Sektor_Alami_Kontraksi_Dalam_Tahun_Berjalan_IDXTECHNO_Paling_Tertekan&news_id=186241&group_news=IPOTNEWS&news_date=&tag_ing_subtype=INDEKS INDONESIA&name=&search=y_general&q=IDXTECHNO&halaman=1
- Setyawan, D. (2021). PENGARUH LIKUIDITAS DAN LEVERAGE TERHADAP PROFITABILITAS DAN NILAI PERUSAHAAN PADA PERUSAHAAN-PERUSAHAAN IDXTECHNO PERIODE 2017-2019. *JEA17: Jurnal Ekonomi Akuntansi*, 6(2), 211-224. <https://doi.org/10.30996/jea17.v6i2.5966>
- Yudha, A. M. Y., Putra, R. B., & Fitri, H. (2022). ANALISIS PENGARUH LIKUIDITAS, PERTUMBUHAN PERUSAHAAN, UKURAN PERUSAHAAN TERHADAP NILAI PERUSAHAAN DENGAN PROFITABILITAS SEBAGAI VARIABEL INTERVENING. *Journal of Innovation Research and Knowledge*, 1(12), Article 12.
<https://doi.org/10.53625/jirk.v1i12.2118>