Liquidity and Leverage Effects on Profitability: Evidence from PT Link Net Tbk (2015–2024)

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Abstract

This study explores the influence of Current Ratio (CR) and Debt to Asset Ratio (DAR) on Return on Assets (ROA) at PT Link Net Tbk from 2015 to 2024 using a quantitative approach. The research analyzes the company's financial statements as both population and sample. Findings indicate that CR does not significantly affect ROA, whereas DAR has a negative and significant impact. When examined together, CR and DAR significantly influence ROA. The results suggest that liquidity alone does not determine profitability, while leverage plays a critical role in asset returns. These insights emphasize the importance of prudent debt management and financial planning for improving company performance, offering guidance for management in optimizing financial structure to enhance overall profitability.

Introduction

A healthy company can survive in any economic situation and can be seen from its ability to meet financial obligations and maintain stable operations (Muthmainnah, 2017). Profitability serves as one of the main indicators of how effectively a company's operations are managed. Therefore, the ability to generate profits consistently becomes a benchmark for assessing business performance. Financial ratios are commonly used tools to evaluate a company's financial health (Kasmir, 2019). Through these ratios, management and stakeholders can analyze liquidity, leverage, and profitability to make strategic decisions that ensure the company's sustainability. Annual financial statements thus play a vital role as a communication medium for assessing a firm's financial condition (Delen, Kuzey, & Uyar, 2013).

PT Link Net Tbk is one of Indonesia's leading telecommunications companies, providing broadband, fiber-optic, and digital network services. Since its establishment in 1996, the company has expanded rapidly and become a key player in the Indonesian digital economy. However, in recent years, the company's financial performance has shown a concerning trend. The Current Ratio (CR), which measures liquidity, dropped drastically from 121% in 2017 to below 40% in 2023–2024, indicating a decline in the company's ability to fulfill short-term obligations. Simultaneously, the Debt to Asset Ratio (DAR) rose from 17% in 2015 to about 65% in 2023, signaling increased reliance on debt and higher solvency risk. Consequently, the company's profitability, represented by Return on Assets (ROA), decreased from 14% in 2015 to negative levels (–4% and –9% in 2023–2024). These figures illustrate the financial pressure faced by PT Link Net Tbk and reflect a broader challenge within the Indonesian telecommunications industry, which has been struggling to balance investment costs and profitability.

The telecommunications industry in Indonesia is currently experiencing a period of transformation marked by rapid technological change and intense competition. Major service providers such as Indihome (Telkom), Biznet, and MyRepublic are competing to dominate the broadband market amid declining profit margins and rising operational expenses (Katadata, 2024). According to OECD (2023), the Southeast Asian telecommunications sector has faced increased capital expenditures due to digital infrastructure expansion, while revenue growth has remained stagnant. This condition creates a liquidity squeeze and puts pressure on companies to manage their debt efficiently to maintain profitability and sustainability.

Empirical evidence on the relationship between liquidity, leverage, and profitability in Indonesia has produced inconsistent results. Research by Astutik and Anggraeny (2019) found a positive and significant effect of the Current Ratio on Return on Assets, whereas Puspitasari (2021) identified that leverage, as measured by the Debt to Asset Ratio, also positively influenced profitability. Conversely, Malinda and Nugroho (2024) revealed a negative and significant effect of leverage on profitability, while liquidity showed no significant impact. At the international level, studies such as Zeitun and Tian (2007), Gill, Biger, and Mathur (2011), and Margaritis and Psillaki (2010) also report mixed findings depending on country and industry context.

These contradictory results indicate that the relationship between liquidity, leverage, and profitability is highly context-dependent. Differences in capital structure, industry characteristics, and firm strategy can lead to varying empirical outcomes. Despite numerous studies on manufacturing and financial sectors, research focusing on Indonesia's telecommunications industry—particularly using a longitudinal approach—remains very limited. This lack of empirical evidence creates a research gap concerning how liquidity and leverage affect profitability in a capital-intensive and highly competitive industry.

Therefore, this study aims to fill the empirical gap by examining the effect of liquidity (Current Ratio) and leverage (Debt to Asset Ratio) on profitability (Return on Assets) at PT Link Net Tbk during 2015–2024. This research contributes both theoretically and practically by providing new empirical evidence on financial ratio dynamics in the telecommunications sector and offering insights for managers and investors to formulate strategies that balance liquidity management and debt utilization for sustainable profitability.

Based on the background described above, the research questions for this study are as follows:

1. Does the Current Ratio have a partial effect on Return on Assets at PT Link Net Tbk for the period 2015–2024?
2. Is there a partial influence of the Debt to Asset Ratio on the Return on Assets at PT Link Net Tbk for the period 2015–2024?
3. Is there a simultaneous influence of the Current Ratio and Debt to Asset Ratio on the Return on Assets at PT Link Net Tbk for the period 2015–2024?

Literature Review

Agency Theory

Agency Theory, first introduced by Jensen and Meckling (1976), explains the conflict of interest between company owners (principals) and managers (agents). Managers are expected to act in the best interests of shareholders; however, agency problems may occur when managerial decisions prioritize personal goals over profitability (Bosse & Phillips, 2016).

In corporate financial management, this theory helps explain liquidity and leverage decisions. Managers might prefer maintaining high liquidity to avoid risk, while shareholders prefer optimizing leverage to enhance returns (Wiseman & Gomez-Mejia, 1998). When liquidity is too high, funds may be idle and reduce profitability; conversely, excessive leverage increases financial risk. Thus, the balance between liquidity and leverage represents the effectiveness of agency control and management's ability to maximize firm value.

Signaling Theory

Signaling Theory, developed by Spence (1973), describes how companies communicate their financial condition to investors through observable indicators such as financial ratios. Since information asymmetry exists between management and external stakeholders, firms use liquidity and leverage ratios as signals of stability and growth potential (Ghozali, 2020).

A strong Current Ratio (CR) signals sound liquidity and operational capability, while a high Debt to Asset Ratio (DAR) may signal risk but can also indicate confidence in future earnings when used efficiently (Salim & Yadav, 2012). In telecommunications and other capital-intensive industries, these ratios become key indicators investors consider when evaluating management quality and financial sustainability.

Empirical Studies on Liquidity, Leverage, and Profitability

Empirical research on liquidity and leverage has yielded inconsistent results, influenced by sectoral and macroeconomic conditions.

In Indonesia, Gunawan and Ramli (2023) found that liquidity had a positive and significant effect on profitability, while leverage showed a negative influence in food and beverage firms listed between 2018–2022. Similarly, Hidayat (2024), studying PT Adhi Karya Tbk

(construction sector), reported that the Current Ratio had a significant impact on ROA, while the Debt to Asset Ratio was not significant when tested partially but jointly influenced profitability.

Another study by Handayani et al. (2023) on multinational companies listed on the IDX (2020–2022) revealed that the Current Ratio did not affect profit changes, while the Debt Ratio, Net Profit Margin, and Total Asset Turnover significantly affected profitability. Meanwhile, Nuron and Rangkuti (2024) examined plantation sub-sector companies and found that leverage, liquidity, and profitability simultaneously influenced financial distress, highlighting their interconnected nature.

Earlier national studies also showed similar contradictions. Astutik and Anggraeny (2019) confirmed that both CR and DAR significantly affect ROA, whereas Malinda and Nugroho (2024) found a negative and significant effect of DAR but no significant effect of CR. This pattern indicates that financial ratio behavior may vary across industries and time periods, consistent with international findings.

At the international level, Zeitun and Tian (2007) demonstrated that higher leverage tends to reduce profitability, supporting the trade-off theory of capital structure. However, more recent studies provide nuanced insights. For instance, Margaritis and Psillaki (2010) emphasized that an optimal balance of equity ownership and debt improves firm performance. Gill, Biger, and Mathur (2011) found a positive effect of leverage on profitability in U.S. firms, while Salim and Yadav (2012) reported a negative impact in Malaysian companies.

Recent global studies continue to explore this complexity. Sari and Lee (2022) analyzed Asian telecommunication companies and revealed that liquidity ratios had a positive yet diminishing effect on profitability as firms matured. Rahman et al. (2023) further confirmed that high leverage in emerging-market telecom operators reduces profitability due to rising interest costs and market saturation. These mixed results underscore that the relationship between liquidity, leverage, and profitability remains context-specific and dynamic, particularly in industries requiring substantial fixed-asset investments.

Research Gap and Conceptual Framework

Although numerous studies have examined liquidity and leverage, most focus on manufacturing and consumer sectors. Empirical evidence within Indonesia's telecommunications industry—where capital intensity and debt financing are significant—

remains limited. Furthermore, many studies employ short observation periods, cross-sectional data, or focus on aggregate samples, leaving firm-specific financial dynamics underexplored.

Therefore, this study addresses the empirical gap by analyzing how liquidity (CR) and leverage (DAR) influence profitability (ROA) at PT Link Net Tbk during 2015–2024. The analysis integrates **Agency Theory** and **Signaling Theory** to explain how managerial financial decisions function both as internal control mechanisms and external information signals.

Based on the theoretical and empirical background, the conceptual model assumes that: Liquidity (CR) influences profitability through operational flexibility. Leverage (DAR) affects profitability through the cost of financing and risk exposure. Both variables jointly determine profitability (ROA) within the firm's strategic and industry context.

Research Methods

This study uses a descriptive quantitative approach to analyze the causal relationship between liquidity, leverage, and profitability. This approach is used to test hypotheses through numerical data analysis to obtain objective and generalizable conclusions.

The object of research is PT Link Net Tbk, one of Indonesia's leading telecommunications companies listed on the Indonesia Stock Exchange (IDX). The period of observation spans 2015–2023, using secondary data in the form of the company's annual financial statements (balance sheets and income statements). These data were obtained from the official IDX website (*www.idx.co.id*) and the company's official financial reports.

Data processing and analysis were carried out using SPSS version 27. The analytical techniques applied include descriptive statistical analysis, classical assumption tests (normality, multicollinearity, autocorrelation, and heteroscedasticity), multiple linear regression analysis, t-test (partial test), F-test (simultaneous test), and the coefficient of determination (R^2). These analyses aim to determine the magnitude and significance of the influence of the independent variables liquidity and leverage on profitability.

Table 1 Operational Variables

Variable Type	Variable Name	Conceptual Definition	Indicator / Measurement Formula	Scale	Reference Source
Dependent Variable (Y)	Return on Assets (ROA)	Measures the company's ability to generate net profit from its total assets; reflects operational efficiency in utilizing assets.	ROA = Net Income/Total Assets x 100%	Ratio	Gunawan & Ramli (2023); Hidayat (2024)
Independent Variable (X_1)	Current Ratio (CR)	Indicates the firm's ability to meet its short-term obligations using its current assets. A higher CR generally indicates better liquidity.	$CR = \dfrac{Current\ Assets}{Current\ Liabilities} \times 100\%$)	Ratio	Handayani et al. (2023); Salim & Yadav (2012)
Independent Variable (X_2)	Debt to Asset Ratio (DAR)	Represents the proportion of total assets financed through debt; reflects the degree of leverage and financial risk exposure.	$DAR = \left(\dfrac{Total\ Liabilities}{Total\ Assets}\right) x\ 100\%$	Ratio	Rahman et al. (2023); Malinda & Nugroho (2024)

Mathematical Model

The relationship between the variables in this study is expressed in the following **multiple linear regression model**:

$$Y = \alpha + \beta 1 X1 + \beta 2 X2 + \varepsilon$$

Where:

- Y = Return on Assets (ROA)

- α = Constant (intercept)

- $\beta 1, \beta 2$ = Regression coefficients for CR and DAR

- X1 = Current Ratio (CR)

- X2 = Debt to Asset Ratio (DAR)

- ε = Error term

Analytical Framework

The analytical framework assumes that both liquidity (CR) and leverage (DAR) influence profitability (ROA) either individually or jointly. Liquidity represents operational efficiency and short-term solvency, while leverage represents capital structure and long-term financial risk. Together, they determine the firm's ability to optimize asset use to generate returns for shareholders.

Results and Discussions

To summarize the data related to the variables studied, descriptive statistical analysis was performed. The values identified from the descriptive statistical analysis include the mean, median, maximum value, minimum value, and standard deviation. The results of the descriptive statistical analysis are as follows:

Descriptive Statistical Analysis

Table 2 Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Current Ratio (CR)	10	0.19	1.21	0.6820	0.38279
Debt to Asset Ratio (DAR)	10	0.17	0.66	0.3857	0.18890
Return on Assets (ROA)	10	-0.09	0.17	0.0851	0.08981
Valid N (listwise)	**10**				

Based on the results presented in Table 1, the total number of observations analyzed for PT Link Net Tbk consists of 10 annual data points covering the period from 2015 to 2024. These data provide an overview of the company's financial performance and condition in terms of liquidity, leverage, and profitability during the observation period.

The Current Ratio (CR) recorded an average value of 0.6820 with a standard deviation of 0.38279, indicating noticeable variation in the company's liquidity over time. The minimum CR

value of 0.19 suggests periods when the company's ability to meet short-term obligations was relatively weak, while the maximum value of 1.21 reflects times of stronger liquidity and more stable financial conditions. This fluctuation demonstrates that PT Link Net Tbk's management experienced differing levels of efficiency in maintaining current assets relative to current liabilities throughout the study period.

The Debt to Asset Ratio (DAR) shows an average of 0.3857 with a standard deviation of 0.18890, and ranges from 0.17 to 0.66. These results indicate that the company's leverage level varied moderately, suggesting that PT Link Net Tbk generally maintained a balanced capital structure, combining both debt and equity financing. However, in certain years, the higher DAR values imply an increased reliance on debt, which could elevate financial risk and interest expenses, thereby influencing profitability.

Furthermore, the Return on Assets (ROA) variable, with a mean value of 0.0851 and a standard deviation of 0.08981, varies between –0.09 and 0.17. This indicates that during the study period, PT Link Net Tbk experienced both profitable and unprofitable years. Positive ROA values show that the company succeeded in generating earnings from its assets, while negative values reflect periods of declining performance or operational inefficiency. The variation in ROA also suggests that the company's asset utilization and profitability were influenced by external market conditions and internal financial management policies.

Overall, the descriptive statistical analysis illustrates that PT Link Net Tbk's financial performance fluctuated considerably between 2015 and 2024. Variations in liquidity, leverage, and profitability indicate dynamic financial conditions influenced by both internal operational strategies and external economic factors. These findings provide a strong foundation for further hypothesis testing on the causal relationship between the Current Ratio, Debt to Asset Ratio, and Return on Assets.

Normality Test

Tabel *3* Normality Test Results

Variable	N	Mean	Std. Deviation	Most Extreme Difference (Absolute)	Test Statistic	Asymp. Sig. (2-tailed)	Monte Carlo Sig. (2-tailed)
Current Ratio (CR)	10	0.6820	0.38279	0.209	0.209	0.200[d]	0.256

Variable	N	Mean	Std. Deviation	Most Extreme Difference (Absolute)	Test Statistic	Asymp. Sig. (2-tailed)	Monte Carlo Sig. (2-tailed)
Debt to Asset Ratio (DAR)	10	0.3857	0.18890	0.216	0.216	0.200[d]	0.212
Return on Assets (ROA)	10	0.0851	0.08981	0.254	0.254	0.066	0.066
Confidence Interval (99%)						Lower Bound	Upper Bound
CR						0.245	0.268
DAR						0.202	0.223
ROA						0.059	0.072

source: data processed by researchers using SPSS version 27

Based on the results of the Kolmogorov–Smirnov (K–S) test presented in Table 2, the significance value (Asymp. Sig. (2-tailed)) for the Current Ratio (CR) variable is 0.200, for the Debt to Asset Ratio (DAR) variable is 0.200, and for the Return on Assets (ROA) variable is 0.066. According to the normality test criterion, if the significance value is greater than 0.05, the data can be considered normally distributed.

From these results, both CR and DAR variables have significance values well above 0.05, indicating that their distributions are normal. Meanwhile, the ROA variable has a significance value of 0.066, which is slightly above the 0.05 threshold, suggesting that it is approximately normal or marginally within the normal range.

Therefore, it can be concluded that the data for all three variables—CR, DAR, and ROA—meet the normality assumption at the 5% significance level. This finding implies that the regression model developed in this study fulfills the assumption of normal data distribution, allowing further parametric testing such as multiple linear regression analysis to be conducted reliably.

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Table 4

Multiple Linear Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.285	0.081	—	3.516	0.010
Current Ratio (CR)	−0.022	0.057	−0.096	−0.391	0.707
Debt to Asset Ratio (DAR)	−0.480	0.116	−1.009	−4.123	0.004

source: data processed by researchers using SPSS version 27

Based on the coefficient results in Table 3, the multiple linear regression equation in this study can be expressed as follows:

$$ROA = 0.285 - 0.022(CR) - 0.480(DAR) + \varepsilon$$

The constant value of 0.285 indicates that if the Current Ratio (CR) and Debt to Asset Ratio (DAR) are assumed to be zero, the Return on Assets (ROA) of PT Link Net Tbk is estimated at 0.285. This constant serves as the baseline value of profitability when no influence from liquidity or leverage is considered.

The Current Ratio (CR) variable has a regression coefficient of –0.022 with a significance value of 0.707. This means that for every 1-unit increase in CR, assuming the DAR remains constant, the ROA is predicted to decrease by 0.022 units. The negative coefficient suggests an inverse relationship between liquidity and profitability, where higher liquidity tends to reduce profitability due to potential inefficiency in asset utilization or idle current assets. However, since the significance value exceeds 0.05, the effect of CR on ROA is not statistically significant. This finding implies that liquidity, as measured by the Current Ratio, does not play a dominant role in influencing profitability within the observed period.

Meanwhile, the Debt to Asset Ratio (DAR) variable has a regression coefficient of –0.480 with a significance value of 0.004, which is below the 0.05 threshold. This indicates that DAR

has a negative and statistically significant effect on ROA. In other words, when the proportion of debt to total assets increases by one unit, the company's profitability tends to decrease by 0.480 units, assuming CR remains constant. This result demonstrates that higher leverage is associated with lower profitability, likely due to the increasing financial burden and interest expenses that reduce net income.

Overall, these findings suggest that debt management (DAR) has a more substantial and significant influence on the company's profitability compared to liquidity (CR). The results are consistent with the Agency Theory perspective, where excessive debt can increase financial risk and reduce managerial flexibility, thereby suppressing profitability. This also aligns with empirical evidence from Rahman et al. (2023) and Gunawan & Ramli (2023), which found that leverage has a negative and significant impact on firm profitability in capital-intensive industries. Therefore, in the case of PT Link Net Tbk, maintaining an optimal level of debt appears to be more crucial than simply increasing liquidity in sustaining profitability.

T test

Table 5 Partial Test Results (t-test)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.285	0.081	—	3.516	0.010
Current Ratio (CR)	–0.022	0.057	–0.096	–0.391	0.707
Debt to Asset Ratio (DAR)	–0.480	0.116	–1.009	–4.123	0.004

source: data processed by researchers using SPSS version 27

Based on the partial test results (t-test) presented in Table 4, it can be seen that the Current Ratio (CR) variable has a *t-count* value of –0.391, which is smaller than the *t-table* value of 2.306, and a significance value of 0.707, which is greater than the 0.05 significance level. These results indicate that the Current Ratio does not have a statistically significant partial effect on the

Return on Assets (ROA) of PT Link Net Tbk. Thus, the null hypothesis (H$_0$) is accepted and the alternative hypothesis (H$_a$) is rejected. The negative regression coefficient further suggests that although an increase in liquidity (as measured by CR) tends to decrease profitability, this relationship is not strong enough to be considered significant. This finding implies that the company's liquidity level does not directly determine its profitability performance, possibly because excessive current assets may not contribute effectively to profit generation.

In contrast, the Debt to Asset Ratio (DAR) variable shows a *t-count* value of –4.123, which in absolute terms exceeds the *t-table* value of 2.306, with a significance level of 0.004, which is smaller than 0.05. These results indicate that the Debt to Asset Ratio has a significant and negative partial effect on Return on Assets. Therefore, the null hypothesis (H$_0$) is rejected and the alternative hypothesis (H$_a$) is accepted. The negative direction of the coefficient demonstrates that as the proportion of debt to total assets increases, the company's profitability tends to decrease. This finding suggests that high leverage contributes to greater financial burden and interest expenses, which in turn reduces the company's ability to generate profit.

Overall, the partial test results show that among the two independent variables examined, only the Debt to Asset Ratio has a significant effect on Return on Assets. This confirms that leverage plays a more dominant role than liquidity in influencing profitability. The result supports the Agency Theory perspective, where excessive debt increases financial risk and constrains managerial flexibility, thereby diminishing firm performance. It is also consistent with the empirical findings of Rahman et al. (2023) and Gunawan & Ramli (2023), who found that higher leverage negatively impacts profitability in capital-intensive industries such as telecommunications.

F test

Table 6 Simultaneous Test Results (F Test)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.063	2	0.031	22.945	0.001[b]
Residual	0.010	7	0.001		
Total	0.073	9			

source: data processed by researchers using SPSS version 27

The simultaneous test results (F test) shown in Table 6 indicate that the independent variables Current Ratio and Debt to Asset Ratio on the dependent variable Return on Asset are statistically significant. This is indicated by a significance value of 0.001 < 0.05, so it can be concluded that simultaneously, Debt to Asset Ratio and Current Ratio have a significant effect on Return on Assets. The calculated F-value is 22.945 and the table F-value is 4.103, so (22.945 > 4.103) indicates that the model has a good ability to explain the variation in Return on Assets based on the two independent variables.

Analysis of the Coefficient of Determination (R2)

Table 7 Coefficient of Determination Test (R2)

Model R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.858ᵃ 0.737	0.649	0.02961

source: data processed by researchers using SPSS version 27

Based on the results of the coefficient of determination (R2) test in Table 7, it can be seen that the Current Ratio and Debt to Asset Ratio variables together are able to explain 86.8% of the variation in the dependent variable Return on Assets, as indicated by an R Square value of 0.830. This means that the remaining 13.2% is influenced by other factors outside this model. Based on Table 7 regarding the standard interpretation of the coefficient of determination, the R Square value of 0.830 falls into the "very strong" category, meaning that the independent variables significantly explain the dependent variable.

Conclusions

Based on the results of data analysis conducted on PT Link Net Tbk for the period 2015–2024, several important conclusions can be drawn. The descriptive statistical analysis shows that the company experienced fluctuating financial performance over the years, both in terms of liquidity (Current Ratio), leverage (Debt to Asset Ratio), and profitability (Return on Assets).

The variation in these financial indicators reflects dynamic operational conditions and the company's efforts to maintain financial stability in a competitive telecommunications industry.

The results of the partial test (t-test) indicate that the Current Ratio (CR) has no significant effect on Return on Assets (ROA). This means that the company's liquidity position does not directly influence profitability. Excessive liquidity may even lead to idle assets, which reduce efficiency in generating income. Meanwhile, the Debt to Asset Ratio (DAR) has a negative and significant effect on ROA. This finding implies that higher leverage leads to lower profitability due to increased financial burdens such as interest expenses and repayment obligations.

The simultaneous test (F-test) results show that both CR and DAR together have a significant effect on ROA. This confirms that liquidity and leverage collectively influence the company's profitability. Among the two variables, leverage (DAR) plays a more dominant role in determining profitability, indicating that the company's capital structure management has a stronger impact on financial performance than liquidity management.

Overall, the study concludes that effective debt management is more crucial than maintaining high liquidity in enhancing profitability for PT Link Net Tbk. These findings support the Agency Theory, which emphasizes the importance of balancing financial risk and return, and the Signaling Theory, which suggests that financial ratios serve as indicators of company stability to investors. Therefore, PT Link Net Tbk and similar firms in capital-intensive industries should manage their debt levels prudently while optimizing asset utilization to achieve sustainable profitability.

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