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The Effect of Liquidity and Profitability Ratios on Firm Value: A Study of PT Telkom Indonesia (Persero) Tbk, 2020 to 2023

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Abstract

This study examines the effect of liquidity and profitability ratios on the firm value of PT Telkom Indonesia (Persero) Tbk for the period 2020 to 2023, motivated by fluctuations in financial performance and firm value that do not consistently reflect financial ratios. Firm value was measured by the price-to-book value (PBV), liquidity by the current ratio, and profitability by return on equity, using secondary data from annual financial statements published on the Indonesia Stock Exchange. The analysis applied regression with classical assumption tests using Eviews 12. The results show that, in this sample, liquidity has a positive but statistically non-significant effect on firm value (significance of 0.771), profitability has a negative and non-significant effect (significance of 0.939), and the two ratios jointly have no significant effect on firm value (F-probability of 0.934), with a coefficient of determination of 0.127. These findings indicate that, over the short observation window, accounting ratios alone do not explain the market valuation of the firm, which appears to be shaped more by external and forward-looking factors. The study should be read as exploratory, given the very small sample of four annual observations, and it contributes to the firm-value literature by underscoring the limits of ratio-based valuation in strategic sectors.

Keywords: *Liquidity; Profitability; Firm value; Price-to-book value; Telecommunications*

1. Introduction

The telecommunications industry is a strategic sector that supports national economic growth, digital transformation, and connectivity. Its rapid development in the era of digitalisation creates complex market dynamics, so that telecommunications firms must sustain competitiveness while increasing firm value, which reflects market perceptions of future prospects and financial performance (Febriyanto & Gusma, 2021). Financial management concerns how firms obtain, use, and distribute capital to enhance this value.

As a leading player in the sector, PT Telkom Indonesia (Persero) Tbk exhibited fluctuations in firm value, measured by the price-to-book value (PBV), during 2020 to 2023. The PBV rose from 2.42 in 2020 to 3.50 in 2023, alongside an increase in share price from around 2,500 to 4,200 rupiah. However, this increase did not always align with financial ratios such as liquidity and profitability, which varied across years: the current ratio remained relatively stable between 1.41 and 1.71, while return on equity peaked at around 22 percent in 2022.

Liquidity ratios measure a firm's ability to meet short-term obligations and can signal financial health to investors (Akbar & Fahmi, 2020; Amihud, 2002), while profitability ratios capture the firm's capacity to generate returns (Nissim & Penman, 2001). Signalling theory holds that healthy liquidity and profitability convey positive signals that raise firm value (Connelly et al., 2011; Ross, 1977). Yet

prior studies report inconsistent results: some find that liquidity significantly affects market perceptions, while others find that profitability is not always a primary determinant of firm value, particularly in the telecommunications sector (Hirdinis, 2019; Sucuahi & Cambarihan, 2016).

These inconsistencies raise the question of whether liquidity and profitability genuinely affect the firm value of PT Telkom Indonesia. The study addresses three questions: whether liquidity affects firm value, whether profitability affects firm value, and whether the two jointly affect firm value over the 2020 to 2023 period.

Accordingly, this study analyses the partial and simultaneous effects of liquidity and profitability on firm value, measured by PBV. The study contributes to the financial-management literature on the relationship between financial ratios and firm value in strategic sectors, while recognising the limits of inference imposed by a short observation window. The objectives are to analyse the partial and simultaneous effects of liquidity and profitability on firm value.

2. Literature Review and Theoretical Framework

2.1 Theoretical Foundation

Firm value represents the market's assessment of a firm's achievements and prospects and reflects public confidence in its performance (Penman, 1996). It is commonly measured by the price-to-book value, which compares market price with book value of equity and captures growth expectations (Fairfield, 1994; Nissim & Penman, 2001). Signalling theory provides a framework in which financial indicators convey information to investors who cannot directly observe firm quality, so that strong liquidity and profitability may signal value (Connelly et al., 2011; Ross, 1977).

Liquidity, measured by the current ratio, reflects the firm's capacity to meet short-term obligations and is associated with financial stability and investor confidence (Akbar & Fahmi, 2020; Amihud, 2002). Profitability, measured by return on equity, reflects the firm's ability to generate returns on shareholder capital and is theorised to strengthen firm value, although empirical evidence is mixed, particularly in capital-intensive, regulated industries (Hirdinis, 2019; Sucuahi & Cambarihan, 2016).

2.2 Hypothesis Development

Drawing on signalling theory and prior evidence, liquidity is expected to affect firm value through its signal of financial stability (Ross, 1977), and profitability is expected to affect firm value through its signal of earnings capacity (Connelly et al., 2011). The hypotheses are therefore:

H1: Liquidity has a significant effect on firm value.

H2: Profitability has a significant effect on firm value.

H3: Liquidity and profitability jointly have a significant effect on firm value.

3. Research Methodology

3.1 Research Design

This study employed a quantitative design using regression analysis to examine the effect of liquidity and profitability on the firm value of PT Telkom Indonesia (Persero) Tbk for the period 2020 to 2023. The independent variables were liquidity, measured by the current ratio, and profitability, measured by return on equity, and the dependent variable was firm value, measured by the price-to-book value.

3.2 Data Collection

The study used secondary data obtained through documentation from the annual financial statements of the firm, published on the Indonesia Stock Exchange, for the four years from 2020 to 2023. The

firm was selected purposively as a telecommunications company with complete annual financial statements over the study period.

3.3 Data Analysis

Data were analysed using regression in Eviews 12, preceded by classical assumption tests of normality, multicollinearity, heteroscedasticity, and autocorrelation. Hypothesis testing was conducted through the partial t-test, the simultaneous F-test, and the coefficient of determination.

4. Results and Discussion

4.1 Results

The financial indicators that motivated the study are summarised in Table 1, showing rising firm value alongside relatively stable liquidity and variable profitability.

Table 1. Financial indicators of PT Telkom Indonesia, 2020 to 2023

Indicator	Value over 2020 to 2023
Price-to-book value (PBV)	Rose from 2.42 (2020) to 3.50 (2023)
Share price	Rose from about 2,500 to 4,200 rupiah
Current ratio (liquidity)	Relatively stable between 1.41 and 1.71
Return on equity (profitability)	Variable, peaking at about 22% in 2022

Source: Annual financial statements, processed, 2026

The classical assumption tests, summarised in Table 2, confirmed that the model met the required conditions: the residuals were normally distributed (Jarque-Bera probability of 0.633), there was no multicollinearity (inter-variable correlation of -0.002), there was no heteroscedasticity, and the Durbin-Watson statistic indicated no autocorrelation.

Table 2. Classical assumption test results

Test	Statistic	Conclusion
Normality (Jarque-Bera prob.)	0.633	Normal
Multicollinearity (X1-X2 correlation)	-0.002	None
Heteroscedasticity (X1; X2, prob.)	0.975; 0.141	None
Autocorrelation (Durbin-Watson)	1.534	None

Source: Processed with Eviews 12, 2026

The regression results are presented in Table 3. The estimated equation is Y = 28.539 + 0.066X1 - 0.150X2. Liquidity recorded a positive coefficient with a significance of 0.771, and profitability a negative coefficient with a significance of 0.939, both well above 0.05. Neither predictor is statistically significant, so H1 and H2 are not supported.

Table 3. Regression coefficients

Variable	Coefficient	t-Statistic	Prob.
Constant	28.539	1.334	0.410
Liquidity (X1)	0.066	0.377	0.771
Profitability (X2)	-0.150	-0.096	0.939

Source: Processed with Eviews 12, 2026. Dependent variable: firm value (PBV).

The simultaneous test, summarised in Table 4, produced an F-statistic of 0.073 with a probability of 0.934, far above 0.05, so liquidity and profitability jointly have no significant effect on firm value, and H3 is not supported. The coefficient of determination is 0.127, and the adjusted value is negative, confirming that the two ratios explain almost none of the variation in firm value over this period.

Table 4. Simultaneous test and coefficient of determination

Statistic	Value	Conclusion
F-statistic (probability)	0.073 (0.934)	Not significant
R-squared	0.127	-
Adjusted R-squared	-1.619	No explanatory power

Source: Processed with Eviews 12, 2026

4.2 Discussion

Contrary to the initial hypotheses, the results indicate that liquidity does not significantly affect firm value in this sample, despite its positive coefficient. Although signalling theory suggests that healthy liquidity should reassure investors (Ross, 1977), the very high significance value (0.771) means that the relationship cannot be distinguished from zero over the period examined. The rising PBV therefore appears to be driven by factors other than the current ratio, such as growth expectations and market sentiment (Penman, 1996).

Profitability likewise has no significant effect on firm value, with a negative coefficient and a significance of 0.939. This is consistent with evidence that profitability is not always a primary determinant of firm value in capital-intensive, regulated sectors, where investors weigh external conditions and long-term prospects over current earnings (Hirdinis, 2019; Sucuahi & Cambarihan, 2016). The non-significant simultaneous effect, together with a negative adjusted coefficient of determination, indicates that the two ratios jointly explain almost none of the variation in firm value, pointing to the dominance of macroeconomic, regulatory, and industry factors.

These findings must be interpreted with considerable caution because the study rests on only four annual observations, which is far too few to support reliable inference about two predictors. The results should therefore be regarded as exploratory and descriptive rather than confirmatory. Theoretically, the study illustrates the limits of ratio-based valuation in a strategic sector over a short horizon, while practically it suggests that investors and management should look beyond liquidity and profitability ratios when assessing firm value.

5. Conclusion

This study examined the effect of liquidity and profitability ratios on the firm value of PT Telkom Indonesia (Persero) Tbk for the period 2020 to 2023. In this sample, liquidity has a positive but non-significant effect on firm value, profitability has a negative and non-significant effect, and the two ratios jointly have no significant effect, with the model explaining almost none of the variation in firm value. These results indicate that, over the short observation window, accounting ratios alone do not explain the market valuation of the firm, which appears to be shaped more by external and forward-looking factors.

The study recommends that management continue to manage liquidity prudently through effective cash-flow and working-capital management to sustain investor confidence, and that investors consider non-financial factors such as government policy and industry dynamics. The principal limitation is the very small sample of four annual observations, which precludes robust inference; future research should extend the observation period, include additional telecommunications firms, and incorporate external variables such as macroeconomic conditions and capital structure to obtain more comprehensive and representative results.

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