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Determinants of Firm Value in the Telecommunications Sub-Sector: Evidence from the 2011–2021 Period

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ABSTRACT

This research aims to analyze the effect of return on assets and debt to equity ratio on firm value in telecommunications sub-sector companies on the Indonesia Stock Exchange. The research data uses secondary data, data collection techniques through library research and documentation from the official IDX website. The research sample consisted of 18 companies that met the specified criteria. This study uses multiple regression analysis to evaluate the effect of return on assets and debt to equity ratio variables on firm value. The results of this research show that return on assets and debt to equity ratio significantly affect firm value.

Keywords: *Return On Assets, Debt to Equity Ratio, Company Value, Indonesia Stock Exchange*

INTRODUCTION

Indonesia's economy has experienced significant development, as reflected in economic growth and technological advancement. The national telecommunications industry is facing increasingly intense competition, characterized by three major trends: the evolution of social networking platforms, the advancement of mobile phones, and the stronger bargaining power of consumers.

The telecommunications sector plays a crucial role in Indonesia's economic growth. Rapid expansion within this sub-sector is evident from both the technological progress in telecommunications and the rising demand for information among society. Competition among telecommunications companies has compelled firms to continuously improve and provide more advanced telecommunication facilities compared to their rivals.

The sale of securities by telecommunication companies is considered a profitable business option due to the increasing demand for telecommunication services in response to the accelerating flow of information.

The rapid advancement of technology and information has brought significant changes to the field of investment, as many investors now conduct transactions online through the Indonesia Stock Exchange.

Firm value has become an important benchmark for investors when deciding to invest. The Price-to-Book Value (PBV) ratio, which measures a company's value relative to the amount of capital invested, serves as a key indicator in assessing a company's ability to create value for its shareholders.

Intensifying competition compels telecommunication companies to continuously improve their quality and attract potential investors. Before making investment decisions,

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investors need to obtain a clear picture and evaluate a company's ability to generate expected profits. To acquire such information, investors rely on financial reports and company performance, which provide insights into the firm's financial position. Within these reports, investors can analyze ratios such as Return on Assets (ROA) and Debt-to-Equity (DER).

Profitability is a critical factor used by investors and owners as a benchmark when evaluating company performance, as it reflects the firm's capacity to generate profits and its efficiency in utilizing assets. Profitability can be assessed by comparing a company's profits over a given period with its total assets or equity, expressed as a percentage (Sartono, 2010: 122). Return on Assets (ROA) is the profitability ratio indicator employed in this study.

According to Sabeth (2022:142), leverage reflects the extent to which a corporation relies on debt or equity to finance its operations.

The Return on Assets (ROA) of issuers in the telecommunications subsector has fluctuated from year to year. For the issuer TLKM, ROA increased from 2011 to 2013, then fluctuated between 2015 and 2021. For EXCL, the highest ROA occurred in 2011 and declined consistently each subsequent year. ISAT exhibited fluctuations in ROA, while FREN experienced a continual decline over time.

Return on Assets is a financial indicator used to evaluate a company's efficiency and performance in generating profits from its assets. This ratio is calculated by comparing a company's net income with its total assets. ROA reflects the degree of effectiveness with which a company manages its assets and provides an overview of its profit-generating potential. Monitoring changes in ROA over time helps companies assess financial performance and take corrective measures when necessary. The higher the ROA, the more efficiently a company generates profits from its assets.

The Debt-to-Equity Ratio (DER) of issuers has also fluctuated over the years. TLKM and ISAT both showed fluctuations in DER, with the highest levels occurring in 2021. EXCL maintained a DER above 1, with fluctuations, and its highest DER also recorded in 2021. Meanwhile, FREN experienced a decrease in DER in 2012, but from 2015 to 2021, its DER remained stable above 1.

A high Debt-to-Equity Ratio indicates that a company relies heavily on debt to finance its operations. Conversely, a low DER suggests limited reliance on debt. Companies with a high proportion of debt bear greater obligations to external parties such as creditors.

This condition can negatively affect firm value, as investor confidence tends to decrease. Furthermore, companies may face difficulties in attracting new funds, since creditors may hesitate to extend loans if debt levels are excessively high. Lenders, such as banks, generally assume that companies with leverage exceeding reasonable limits will face difficulties in meeting future payment obligations.

LITERATURE REVIEW

Signaling Theory

According to Brigham and Houston (2011), signaling theory refers to the signals conveyed by a company's management to investors regarding the firm's future prospects. These signals may take the form of either positive or negative information. An improvement in a company's performance over time can be interpreted as a positive signal, whereas a decline in performance from year to year may serve as a negative signal.

Return On Asset

According to Mardiyanto (2009:196), Return on Assets (ROA) is a ratio used to assess a company's ability to generate profits from the utilization of its assets. ROA reflects the returns

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derived from the company's operational activities. Hery (2014:193) states that the higher the ROA, the greater the net income generated per unit of funds invested in total assets. Conversely, if ROA is low, the net income earned per unit of invested funds is also low. ROA is useful in measuring management's effectiveness in generating overall profits through asset utilization. A higher ROA indicates more efficient use of assets, which in turn contributes to an increase in profitability.

Debt to Equity Ratio

The Debt-to-Equity Ratio (DER) is used to measure the proportion between funds provided by creditors and those originating from the company's owners (Hery, 2017:168). According to Said (2012:24), if the DER equals one, it indicates that the company's long-term debt is equal to its equity. A lower DER value suggests that the company has a greater proportion of equity compared to external debt. Conversely, a higher DER value indicates that the company relies more heavily on debt than on its own equity.

Firm Value

Firm value is the outcome of a company's long-standing operations and activities from its establishment to the present. It reflects the level of public trust in the company. To measure firm value, valuation ratios or market ratios can be employed. These ratios are used to illustrate how the market recognizes the financial condition achieved by the company (Wiagustini in Rudangga, 2016:4402). Several methods can be applied to measure firm value, including:

a. Price-to-Earnings Ratio (PER): measures the comparison between the company's stock price and the earnings received by shareholders.
b. Price-to-Book Value (PBV): indicates whether a stock is overvalued or undervalued compared to its book value, reflecting the extent to which the market values the company's book equity.
c. Tobin's Q: calculates the comparison between the market value of a company's stock and the book value of its equity.

In this study, the Price-to-Book Value (PBV) ratio is used as the indicator to measure firm value. PBV represents the comparison between a company's stock price and its book value, reflecting how the market values the company's book equity.

Price Book Value

The Price-to-Book Value (PBV) ratio is used to measure how the capital market or investors value a company. Although two companies may generate the same net income after tax, the market may assign different valuations to each. Similarly, two companies with identical book values of equity may receive different market valuations (Suad, 2012:84).

METHODS

This study employs a quantitative research approach, utilizing secondary data. The data were collected through a literature review and documentation obtained from the Indonesia Stock Exchange (IDX). The population of this study consists of 18 companies in the telecommunications subsector listed on the IDX. The criteria used to determine the research sample are as follows:

a. Telecommunications subsector companies listed on the Indonesia Stock Exchange.
b. Telecommunications subsector companies that provide operator services.
c. Companies that publish complete financial reports for the period 2011–2021 on the official IDX website.

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RESULTS AND DISCUSSION

Classical Assumption Test

In this study, the classical assumption test indicates that all the data used satisfy the requirements of classical assumptions. Accordingly, the data exhibit a normal distribution, no autocorrelation, no multicollinearity, and no heteroscedasticity.

Table 1: Kolmogorov-Smirnov Test Results

Kolmogorov-Smirnov Z	Asymp. Sig (2-tailed)	Adv.
0.790	0.473	Normally Distributed Data

The results of the Kolmogorov-Smirnov test presented in Table 1 show a significance value of 0.473. This value is greater than the established significance level of 0.05. Therefore, it can be concluded that the data are normally distributed, and the regression model used is appropriate for application.

Multicollinearity Test

Table 2: Multicollinearity Test Results

Variable	Collinearity Tolerance	Statistics VIF
ROA	0.810	2.171
DER	0.723	1.731

a. ROA has a VIF value of 2.171, which is less than 10; in other words, its tolerance value is 0.810, which is greater than 0.10.
b. DER has a VIF value of 1.731, which is less than 10; in other words, its tolerance value is 0.723, which is greater than 0.10.

Based on the results presented in Table 2, it can be concluded that there is no multicollinearity among the independent variables in this study.

Heteroscedasticity Test

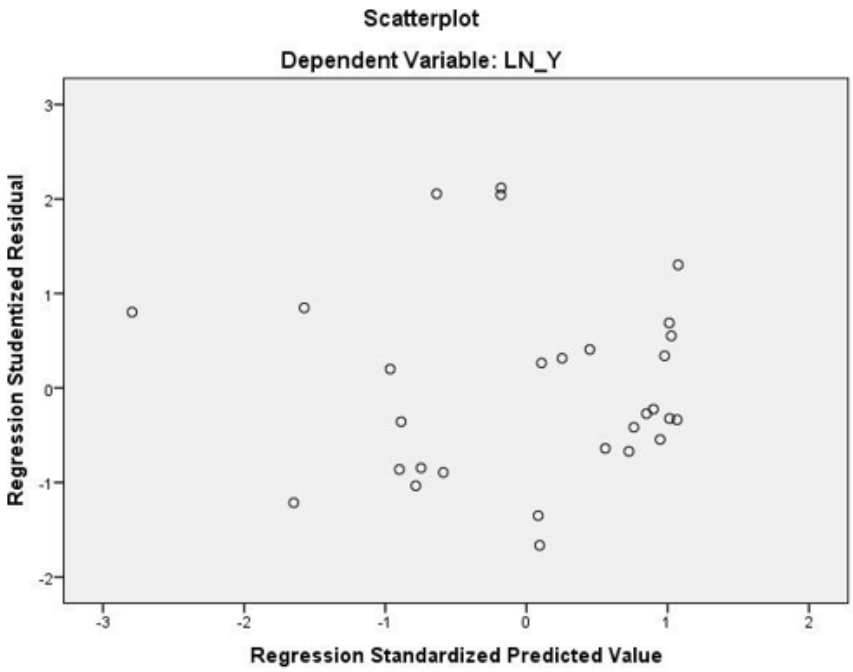


Figure 1: Scatterplot

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Based on Figure 1, the data points are evenly distributed above and below the zero line, without any discernible pattern or significant clustering. This indicates that there is no tendency of heteroskedasticity in this regression analysis.

Autocorrelation Test

Table 3: Autocorrelation Results

Criteria	Result	Adv.
dU<DW<4-dU	1,4226<1,899<	No Autocorrelation
4-dU	2,5774	Detected

Based on the results in Table 3, it can be concluded that the Durbin-Watson (DW) statistic of 1.912 falls between dU and 4–dU (dU < DW < 4–dU), specifically within the range 1.4226 < 1.912 < 2.5774. This indicates that the assumption of no autocorrelation has been satisfied.

Multiple Regression Test

Table 4: Multiple Regression Results

Model	Unstandaraized Coefficient		Standard	Sig.
	B	Std, Error	Beta	
α	1.026	7.211		0.751
ROA	3.918	0.359	0.935	0.000
DER	0.449	1.141	0.734	0.000

a. Based on the results in Table 4, the coefficient of return on assets (ROA) is 3.918. This indicates that for every one-unit increase in ROA, the dependent variable increases by 3.918.
b. Based on the results in Table 4, the coefficient of the debt-to-equity ratio (DER) is 0.449. This indicates that for every one-unit increase in DER, the dependent variable increases by 0.449.

The significance (Sig.) value for all coefficients is 0.000, indicating that both ROA and DER significantly influence the dependent variable in the model.

Partial Test

Table 5: Partial Test Results

Variable	t	Sig.
(Constant)	0.142	0.751
ROA	10.904	0.000
DER	6.894	0.000

a. The results of the partial statistical test in Table 5 show that the calculated t-value is 10.904, while the critical t-value at a 5% significance level (α = 0.05) is 0.68011. In this case, the calculated t-value is greater than the critical t-value. In addition, the significance value (Sig.) of 0.000 is smaller than the significance threshold of 0.05. These findings indicate that H1 is accepted and H0 is rejected. Therefore, it can be concluded that return on assets (ROA) has a significant influence on firm value in this study.
b. The results of the partial statistical test in Table 5 show that the calculated t-value is 6.894, while the critical t-value at a 5% significance level (α = 0.05) is 0.68011. In this case, the calculated t-value is greater than the critical t-value. In addition, the significance value (Sig.) of 0.000 is smaller than the significance threshold of 0.05. These findings indicate that H2 is accepted and H0 is rejected. Therefore, it can be concluded that the debt-to-equity ratio (DER) has a significant influence on firm value in this study.

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Simultaneous Test

Table 6: Simultaneous Test Results

ANOVA			
dF	Mean Square	F	Sig.
2	36.198	4.313	0.001
41	18.926		

Based on the results in Table 6, the calculated t-value of 4.313 is greater than the critical t-value of 3.232. In addition, the significance value of 0.001 is smaller than the predetermined significance level of 0.05. Therefore, it can be concluded that return on assets (ROA) and the debt-to-equity ratio (DER), taken together (simultaneously), have a significant influence on firm value.

Coefficient of Determination Test

Table 7: Determination Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error
1	00.774	0.675	0.554	0.77195

Based on the data analysis, the coefficient of determination (R^2) was found to be 0.554. This indicates that 55.4% of the variation in the dependent variable, firm value, can be explained by variations in the independent variables, namely return on assets (ROA) and debt-to-equity ratio (DER). The remaining 44.6% represents variations attributable to other independent variables that affect firm value but were not included in this research model.

CONCLUSION

The findings of this study indicate that the variables Return on Assets (ROA) and Debt-to-Equity Ratio (DER), both individually and jointly, have a significant influence on firm value. Among the two, ROA demonstrates a stronger effect compared to DER. Furthermore, the data in this study meet the requirements of the classical assumptions, including normal distribution, absence of multicollinearity, and absence of heteroscedasticity.

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