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Effect of Return on Assets (ROA) and Debt to Equity (DER) on Firm Value (Study of One of The Selected Bank Companies on the IDX)

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Abstract

The motivation behind this study stems from the occurrence of issues within a specific bank company listed on the IDX. These issues are reflected in the suboptimal performance of Return on Assets (ROA) and Debt to Equity (DER), which in turn impact the bank company's overall firm value on the IDX. This study aims to assess the extent to which Return on Assets (ROA) and Debt to Equity (DER) impact the perceived firm value of a chosen bank company listed on the IDX.

The present study employs a quantitative research methodology, precisely a Descriptive and Verification approach. The data for this study is obtained from the financial reports of a chosen bank company listed on the IDX. The data collection spans from 2016 to 2021, encompassing quarterly reports issued by the company. The study utilizes financial report data from a selected bank company listed on the IDX. The data is processed using SPSS 25 software.

This research's findings demonstrate a statistically significant positive relationship between Return on Assets (ROA) and Firm Value. This result is evidenced by a Sig value of 0.048, less than the conventional significance level of 0.05. Additionally, the T-count value of 2.101 exceeds the critical value, further supporting the significance of this relationship. The table displaying the 2.07961 (2) coefficient for the Debt to Equity (DER) ratio indicates a statistically significant positive impact on Firm Value. This result is evidenced by the Sig value of 0.001, which is less than the conventional significance level of 0.05.

Additionally, the T-count value of -4.043, which is greater than the critical value, further supports the significance of this relationship. The study conducted on the relationship between Return on Assets (ROA) and Debt to Equity (DER) on Firm Value found that a coefficient of 2.10982 ($p < 0.05$) indicates a direct effect of 66.7%. However, it is essential to note that the remaining 33.7% of Firm Value is influenced by other variables not examined in this study.

Keywords: Return on Assets (ROA), Debt to Equity (DER), Firm Value

Introduction

A corporation's valuation indicates its operational effectiveness, impacting investor sentiment toward the organization. The valuation of a corporation, which is intricately linked to investors' perspectives, is frequently correlated with fluctuations in stock prices. Stocks are reliable indicators of a company's value, as a substantial increase in stock price indicates a correspondingly elevated company value. In the context of publicly traded companies, the stock prices actively traded on the stock market indicate their respective valuations. The valuation of a company, which is closely correlated with its stock prices, serves as an indicator of the company's level of achievement. A considerable increase in the stock price has a favorable effect on both present and future market sentiment.

The financial sector, encompassing banking, is among the sectors represented in the stock exchange. This study examines a company operating within the financial sector, specifically focusing on the banking sub-sector. The banking sector is a crucial component of the financial industry, facilitating the mobilization and allocation of funds to the general public. Moreover, financial institutions strive to fulfill their shareholders' capital and investment requirements. The banking sub-sector is anticipated to exhibit strong performance, with the stocks within this sector expected to maintain their appeal for the year.

The present investigation employs ¹ the Price Book Value (PBV) ratio to assess the company's worth. This ratio juxtaposes the stock price against the company's book value. The metric of PBV is employed as a means to evaluate the equitable valuation of a company's shares, as well as to gauge its capacity to generate value.

A lower ¹ price-to-book value (PBV) ratio implies that the stock price is relatively lower than its book value. In contrast, a higher PBV signifies a higher stock price than ¹ its book value. A company's valuation indicates its operational effectiveness, and as such, it ¹ has the potential to shape investors' perceptions of the company.

In 2016, a specific bank company, publicly traded on the stock exchange, exhibited a ¹ Price-to-Book Value (PBV) ratio of 0.56. The PBV value of the subject experienced a notable increase in 2017, reaching a value of 0.89. This value represents the highest PBV value observed ¹ within the previous six years of calculation. The primary factors contributing to the elevated ¹ price-to-book value (PBV) ratio in 2017 were the upward trajectory of stock prices and the corresponding growth in the company's book value. Nevertheless, the PBV value experienced a decline in 2018, reaching a value of 0.72. This decrease can be attributed to sluggish growth in stock prices and the company's book value, which can be attributed to various economic challenges both on a global and domestic scale. The PBV value experienced a notable decrease in 2019, reaching 0.57, primarily attributed to a decline in stock prices and sluggish growth in the company's book value. This decline can be attributed to foreign investors who opted to sell their shares. The PBV value experienced a further decrease to 0.50 in 2020 due to the volatility of stock prices and the adverse effects of the early 2020 pandemic. The PBV value in 2021 exhibited a persistent decline, reaching a level of 0.48. This downward trajectory is primarily attributed to the volatility observed in stock

prices and the sluggish expansion of the company's book value. These factors can be traced back to the strategic decisions the chosen bank entity implemented.

Based on the information above, it is apparent that the chosen banking institution consistently witnessed a decrease in its worth due to its volatile stock prices and sluggish growth in the company's book value. The company's declining value can be attributed to various factors, including the lack of substantial improvement in the Return on Asset (ROA). As stated by Harahap (2007), the concept of Return on Asset (ROA) pertains to the capacity of a company to generate profits within a designated timeframe by utilizing its assets. The relationship between Return on Asset (ROA) and a company's value suggests that a higher ROA value signifies greater efficiency in utilizing company resources to generate profits and enhance overall company worth. Consequently, this maximizes the wealth of shareholders.

Financial ratios offer a method for assessing the performance and challenges faced by a company. Financial ratios encompass various categories, namely profitability ratios, liquidity ratios, activity ratios, and market ratios. This study will employ profitability and solvency ratios. The measurement of the profitability ratio will be conducted through the utilization of Return on Asset (ROA). In contrast, the assessment of the solvency ratio will be carried out by employing Debt to Equity (DER). Profitability ratios evaluate a company's capacity to generate profits and derive advantages from its operational endeavors. The evaluation of a company's performance can be ascertained by examining its profitability level, which indicates the efficacy of the company's management.

The profitability ratio, assessed through the Return on Asset (ROA) metric, offers insight into a company's capacity to generate profits by comparing its net income to total assets. In the year 2017, the chosen banking institution experienced a notable increase of 20.1% in its financial gains when compared to the conclusion of the preceding year, 2016. The selected bank company experienced a 10.3% increase in profits compared to the end of 2017, attributed to the growth in credit observed throughout 2018. In the fiscal year of 2019, the chosen banking institution experienced modest profit growth, with a marginal increase of 2.5% compared to the preceding year. This growth can be attributed to the establishment of loss provisions, which ultimately contributed to a slightly elevated level of profitability. Nevertheless, the company experienced a significant decline in profitability of 78.7% in 2020 as a direct consequence of the adverse effects of the global pandemic.

The selected bank company has not achieved an optimal Return on Asset (ROA), as the profits obtained have exhibited a relatively diminished performance. This matter has the potential to diminish the company's overall worth. A high return on assets (ROA) signifies the favorable financial health of a company, as it indicates a greater company valuation.

The Debt to Equity (DER) ratio is a metric that assesses a company's capacity to handle its debt in proportion to its equity effectively. The solvency ratio is a significant financial metric that assesses a company's capacity to fulfill its financial obligations, encompassing short-term and

long-term commitments. This ratio becomes particularly relevant in scenarios involving liquidation. The solvency ratio indicates a company's capacity to effectively handle its debt obligations, generate profits, and meet its debt repayment obligations. The Debt to Equity (DER) ratio is a financial metric that assesses the relationship between a company's total debt and equity. A higher ratio signifies that the company possesses a more significant amount of debt relative to its equity. It is advisable to maintain a debt-to-equity ratio that prevents the accumulation of excessive financial obligations. Calculating the Debt to Equity (DER) ratio entails the comparison of the aggregate debt to the equity.

Over time, the chosen banking institution's Debt-to-Equity Ratio (DER) exhibited a consistent upward trend, signifying a substantial debt accumulation. Debt constitutes a fundamental element influencing investor evaluations of a firm's financial state, thereby exerting an impact on the company's overall value.

In conclusion, returns on assets (ROA) and Debt to Equity (DER) are crucial variables in attaining a favorable corporate valuation. When a company's return on assets (ROA) is favorable, investors will carefully evaluate its ability to generate profits from its sales and investments, thereby positively influencing the company's overall value. A rising debt-to-equity ratio signifies that the organization is increasingly reliant on external funding sources, such as debt providers, instead of relying primarily on its internal revenue. Investors typically prefer companies characterized by lower Debt to Equity (DER) ratios. A company's perceived value in the eyes of investors is influenced by the extent of its debt or obligation to repay both short and long-term debts, which is directly related to the ratio of debt to equity.

Based on the extant phenomena and empirical research in the background, the primary objective of this study is to identify and address the research problem. This study aims to assess the magnitude of the impact exerted by Return on Asset (ROA) and Debt to Equity (DER) on the valuation of a specific bank company listed on the stock exchange within the timeframe spanning from 2016 to 2021. The primary aim of this research is to examine and assess the degree of impact exerted by Return on Asset (ROA) and Debt to Equity (DER) on the valuation of a specific bank company listed on the stock exchange within the timeframe spanning from 2016 to 2021.

Method

This study utilizes a sample that represents specific characteristics of the overall population. Specifically, the population of interest is a single bank company publicly listed on the stock exchange (BEI). Using samples significantly aids research endeavors by enabling researchers to reduce the duration, expenses, and resources involved. By choosing a specific company as the sample, this study can concentrate on conducting a more in-depth analysis of the impact of Return on Asset (ROA) and Debt to Equity (DER) on the company's valuation.

Subsequently, the researcher employed the classical assumption test approach to analyze the collected sample data. The classical assumption test comprises a set of hypothesis tests designed to evaluate the appropriateness of the regression model prior to conducting additional tests. The testing procedure encompasses various diagnostic tests: normality, multicollinearity, autocorrelation, and heteroscedasticity. By performing the classical assumption test, the researcher can ascertain the reliability and accuracy of the regression model employed in this study for analyzing the association between Return on Assets (ROA) and Debt-to-Equity Ratio (DER) with the company's valuation.

This research employs two distinct data analysis approaches: descriptive analysis and verificative analysis. *Descriptive analysis* is a research method employed to comprehensively depict the data about each variable under investigation. The observed data encompasses various statistical measures, such as the count of data points, the minimum and maximum values, the mean, and the standard deviation. This study examines two independent variables, specifically Return on Asset and Debt to Equity, concerning the dependent variable, the Company's Value. A *verificative method* is an approach employed to examine the relationship between multiple variables to test hypotheses through statistical data calculations. Through analysis, the researcher can ascertain the magnitude of the impact that the independent variables have on the dependent variable.

The research employed the verificative approach of multiple linear regression analysis. Through this analysis, researchers can understand the simultaneous relationship between Return on Assets (ROA) and Debt-to-Equity Ratio (DER) with the Company's Value. In addition, the analysis of the Coefficient of Determination is performed to assess the degree to which the variability of the Company's Value can be accounted for by the independent variables, specifically ROA and DER. The outcomes of this analysis will yield a more comprehensive understanding of the influence that Return on Assets (ROA) and Debt-to-Equity Ratio (DER) have on determining the company's value.

Result and Discussion

Table 1. Classic assumption test

No.	Items	Criteria	Result	Decision
1.	Normality test	Kolmogorov-Smirnov Test Sig value > 0,05	0,054	Normal
2.	Multicollinearity Test	Coefficients VIF 1 < > 10	X1= 1.405 X2= 1.405	Multicollinearity does not occur
3.	Heteroscedasticity Test	Scatterplot	Data menyebarkan	Heteroscedasticity does not occur

4.	Autocorrelation Test	Durbin Watson by looking at Du and dl values. (k,n=2,20)	3,325	There is no autocorrelation
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According to the findings presented in Table 1, the results of the normality test conducted in this study indicate a value of 0.054, which exceeds the threshold of 0.050. The findings of this study suggest that the Kolmogorov-Smirnov test has been satisfied, indicating that the dataset exhibits a normal distribution. The tolerance values for the ROA and DER variables exhibit tolerance numbers more significant than 0.10, while all values for the VIF are less than 10. These findings suggest the absence of multicollinearity. Based on the available evidence, it meets the Multicollinearity Test criteria. The results of the heteroscedasticity test conducted in this study suggest the absence of heteroscedasticity. The assertion mentioned above is substantiated by the absence of an identifiable trend in the scatterplot and the distribution of data points above and below the origin on the Y-axis. Therefore, it states that the heteroscedasticity test has been fulfilled.

The study conducted an autocorrelation test and found that the Durbin-Watson value (DW) was 0.675. In order to evaluate the presence of autocorrelation, the calculated autocorrelation value is compared to the Durbin-Watson table using a significance level of 5%. The study utilized a 24 (n) sample size and examined the effects of 2 independent variables (k = 2). The lower limit value (dl) was determined to be 1.1878, while the upper limit value (du) was calculated as 1.5464. Upon conducting a comparative analysis, it is evident that the value of dl is smaller than the discrepancy between 4 and DW, which is quantified as 3.325. Furthermore, it is worth noting that the value of du is less than 3.325, as indicated by the inequality $dl < (4 - DW) > du = 1.1878 < 3.325 > 1.5464$. As a result, there is no positive or negative autocorrelation.

Table 2. Multiple regression test results

No.	Variable	Unstandardized Coefficients	t	Sig	Decision
	Constanta	1.304	6.145	0.000	
1.	Return on Asset	5.548	2.101	0.048	Significant
2.	Debt to Equity	-0.133	-4.043	0.001	Significant
R	0.817 ^a				
R Square	0.667	Error	0,333		

Researchers will employ the multiple linear regression equation to assess the correlation between the independent variables, specifically Return on Asset (ROA) and Debt to Equity (DER), and the dependent variable, Company Value. By utilizing this equation, scholars can examine the magnitude of the impact of Return on Assets (ROA) and Debt-to-Equity Ratio (DER) on the overall value of the company in a concurrent manner. Furthermore, the researchers will perform a Coefficient of Determination analysis to assess the extent to which company value fluctuations can be accounted for by the variables of Return on Assets (ROA) and Debt-to-Equity Ratio (DER).

The findings of this analysis will offer a more comprehensive understanding of the significance of Return on Assets (ROA) and Debt-to-Equity Ratio (DER) in determining the company's valuation. Based on the findings derived from the data presented in Table 2, it is possible to formulate the multiple linear regression equation in the following manner:

$$Y = 1,304 + 5,548X_1 - 0,133X_2 + e$$

The constant term in the multiple linear regression equation, which is 1.304, represents the mathematical value of Firm Value (PBV) under the assumption that Return on Assets (ROA) and Debt to Equity (DER) are both equal to zero. The regression coefficient for Return on Assets (ROA) is estimated at 5.548. This result indicates that a 1% increase in Return on Assets (ROA) is associated with a 5.548% increase in the company's value (PBV), assuming that all other variables remain constant (ceteris paribus). The regression coefficient for the Debt to Equity (DER) variable is -0.133, indicating that a 1% increase in the Debt to Equity ratio will result in a decrease of 0.133% in the company's value (PBV), assuming all other variables remain constant (ceteris paribus).

The coefficient of determination, also known as R-square, is 0.667. This study examines the joint impact of Return on Assets (X1) and Debt to Equity (X2) on Firm Value (Y) within a specific bank company listed on the IDX. In the subsequent section, the outcomes of concurrent implementation are presented utilizing the coefficient of determination formula in a subsequent manner:

$$\begin{aligned} KD &= R^2 \times 100\% \\ &= (0,817)^2 \times 100\% \\ &= 66,7\% \end{aligned}$$

Based on the analysis above, it is evident that the variables of Return on Asset (ROA) and Debt to Equity (DER) collectively account for 66.7% of the influence on Company Value (Y), leaving the remaining 33.3% to be attributed to unexplored variables. The F-test, which examines the simultaneous influence, indicates that the calculated F-ratio (F_{calculated}) of 21.002 exceeds the critical value of the F-table at 0.344. At a significance level of 5%, the null hypothesis (H₀) is rejected, while the alternative hypothesis (H_a) is accepted. Hence, based on a 95% confidence level, both Return on Asset and Debt to Equity significantly influence Company Value. The research findings hold significant implications for both company management and stakeholders. Management can strategically direct their efforts toward enhancing financial performance by optimizing ROA and prudently managing DER by examining the impact of Return on Assets (ROA) and Debt-to-Equity Ratio (DER) on Company Value. The augmentation of Return on Assets (ROA) can be attained by enhancing a company's profitability and preserving its assets.

Similarly, the influence of the Debt-to-Equity Ratio (DER) can be improved by reducing debt and increasing equity. The optimization of the combined influence on the company's value necessitates the careful balancing of Return on Assets (ROA) and Debt-to-Equity Ratio (DER).

Moreover, the findings of this research indicate that additional variables account for 33.3% of the Company Value, which was not investigated within the scope of this study. Hence, it is recommended that forthcoming studies incorporate additional variables, such as company size, liquidity, and capital structure, to conduct a more extensive examination of the factors influencing financial performance and firm valuation. The Return on Asset (ROA) metric serves as a measure of profitability and influences a company's valuation. Profitability is widely regarded as a means of establishing a level of assurance regarding a company's prospects.

Furthermore, specific experts posit that a correlation exists between Return on Assets and the overall value of a company. Companies employ the Debt to Equity ratio to assess the degree to which their assets are funded through debt. The valuation of a company is established by the interplay between buyers and sellers in the market, resulting in the determination of its market price.

The valuation of a company, as determined by its stock market value, is subject to the influence of investment opportunities that potential investors take into account. The ratios of Return on Asset and Debt to Equity impact a company's valuation. Companies that exhibit a high Return on Asset (ROA) are often associated with a correspondingly high market value. This relationship can be attributed to the positive perception of the company by the market, which is influenced by the company's robust profitability.

Consequently, investors tend to regard such companies as more valuable entities. Companies with solid liquidity are likely to receive favorable evaluations from the market due to their ability to meet short-term obligations and maintain a liquid financial position. Likewise, firms exhibiting a favorable Debt to Equity ratio are likely to cultivate a favorable reputation within the market, as they are perceived to possess the capability to fulfill both immediate and future financial responsibilities. Consequently, such entities are regarded as mitigating the likelihood of insolvency. The Debt to Equity ratio serves as an indicator of the level of risk encountered by investors. It is widely acknowledged that investors anticipate a substantial return on their investments while minimizing risk. Intelligent investors typically take into account multiple factors prior to allocating their capital in order to mitigate potential risks. Hence, an increase in the solvency ratio is expected to correspondingly lead to an increase in the number of investors, as evidenced by the volume of shares traded in the market.

Conclusion

The findings of the study conducted between 2016 and 2021 indicate that the Return on Asset (ROA) and Debt to Equity (DER) ratios significantly impact the valuation of the chosen bank company listed on the BEI. Both financial ratios are significant indicators for evaluating a company's performance and financial stability. Return on assets (ROA) is a metric that evaluates a company's profitability by considering its net income from its total assets. On the other hand,

the debt-to-equity ratio (DER) quantifies the degree to which a company relies on debt to finance its operations compared to the funds provided by its owners.

Enhancing the company's profitability generation capabilities is one strategy to augment the impact of Return on Assets (ROA) on the firm's valuation. Company managers must prioritize implementing strategies aimed at augmenting revenue generation and optimizing operational efficiency to attain enhanced profitability. Furthermore, preserving owned assets is pivotal in enhancing return on assets (ROA). Effective asset management and the appropriate utilization of technology can assist organizations in optimizing their asset utilization.

Conversely, measures can be implemented to bolster equity and mitigate debt to augment the impact of distributed energy resources (DER) on the firm's valuation. A lower ² debt-to-equity ratio (DER) enhances ² the company's financial resilience and fosters confidence among creditors and investors. Company managers should explore strategies to enhance equity using issuing new shares or utilizing internal funding.

Moreover, to enhance the impact of ² Return on Assets (ROA) and Debt-to-Equity Ratio (DER) ² on the firm's valuation, organizations should strive to optimize their capacity to augment profits while taking into account the extent of debt employed. Achieving a harmonious equilibrium between the generated returns and the potential risks associated with using debt is crucial. This strategy has the potential to facilitate sustainable expansion for businesses and enhance the trust and assurance of stakeholders.

Organizations must consistently consider ³ the prevailing market and industry conditions when implementing strategies to enhance ³ Return on Assets (ROA) and Debt-to-Equity Ratio (DER). The selection ³ of suitable strategies should be customized to align with the unique circumstances and requirements of the organization. Furthermore, it is imperative to consistently monitor and assess the financial performance of the organization in order to identify possible enhancements and effectively tackle any forthcoming obstacles.

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