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The Influence of Debt to Assets Ratio and Long Term Debt to Equity Ratio on Return On Investment (Case Study at PT. Indosat Tbk for the Period 2014-2023)

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Abstract: *This study was conducted to determine the influence of debt to asset and long term debt to equity ratio on Return on Investment at PT. Indosat, Tbk for the period 2014-2023. The research method used was descriptive associative method. The population in this study was secondary data from the financial reports of PT. Indosat, Tbk. The sample taken used nonprobability sampling technique with purposive sampling method with specific criteria, namely the financial reports per quarter of PT. Indosat, Tbk for the years 2014-2023. To test the influence analysis, Pearson product moment correlation analysis, coefficient of determination analysis, hypothesis testing using t-test and F-test, and multiple linear regression analysis were used. Based on the analysis conducted, it was shown that the correlation value of debt to asset to return on investment is 0.557 which falls into the moderate category, and the correlation value of long term debt to equity ratio to return on investment is 0.012 which falls into the very low category. Based on the determination analysis conducted, it was shown that the contribution of the independent variables (debt to asset and long term debt to equity ratio) to the dependent variable (return on investment) is 0.035 or 3.5%. In conclusion, 3.5% while the remaining 96.5% (100% - 3.5%) is influenced by other variables outside the study.*

Introduction

The telecommunications sector in Indonesia has undergone rapid growth with the presence of numerous mobile operators spread across the archipelago. Advances in wireless and mobile telecommunications technologies continue to progress significantly (Aprillia, 2021). The proliferation of mobile operators serves as a crucial catalyst for the development of telecommunications infrastructure, particularly mobile towers, which are pivotal in signal transmission and supporting cellular network reliability (Sunarno, 2021). This study reflects an

interest in the technological progress of telecommunications in Indonesia, drawing on reliable sources from various educational institutions such as Universitas Islam Indonesia, UMY, Perpustakaan UMS, and UMK. Financial reporting remains a critical aspect for measuring corporate financial performance and profitability (Sujarweni, 2022). Mutiah (2022) defines financial reports simply as information about a company's financial activities, essential for monitoring and evaluating its performance over specific periods. This study examines the impact of debt to asset ratio and long term debt to equity ratio on return on investment at PT Indosat Tbk for the period 2013-2023. Debt to Asset Ratio measures the extent to which a company utilizes debt to finance its assets. According to Hani (2019), both Debt to Asset and Long term Debt to Equity Ratios influence Return on Investment, indicating that leveraging debt to enhance ROI has proven successful. Other factors influencing ROI include company efficiency, innovation, and economic conditions.

Accounting, as defined by (Sunarno, 2021; Hartono 2018), involves the systematic process of recording, classifying, summarizing, and interpreting financial transactions to produce efficient and chronological financial statements. These statements, essential for decision-making, aid stakeholders such as financial experts, governments, banks, and the public in assessing the financial health of an organization (Jihan Salim 2021). The primary objective of accounting, according to (Hasibuan 2021), is to provide economic information about an entity's financial position to various stakeholders. It serves practical functions: investors use it to assess potential returns, creditors to evaluate creditworthiness, governments for tax purposes, and managers for strategic decision-making. Furthermore, financial accounting, as described by (Munawar 2022) and (Martani 2023), focuses on external reporting, using principles and assumptions to present financial conditions accurately for decision-making by external parties. Its functions include profit and loss assessment, reporting to stakeholders, determining shareholder rights, monitoring operations, and facilitating evaluation processes. In summary, financial accounting plays a crucial role in portraying a company's financial state, essential for informed decision-making and organizational transparency (Hendrawan, Hafiz 2021).

Debt to Asset Ratio (DAR) measures the proportion of a company's total assets financed by debt, as explained by Kasmir, Yudiana, and Hani. It is calculated by dividing total debt by total assets and expressing it as a percentage. A higher DAR indicates a greater reliance on debt for financing, potentially increasing financial risk and limiting the company's ability to secure further loans. The primary goal of DAR, according to Kasmir, includes assessing a company's obligations to creditors, evaluating credit risk, and understanding the relationship between long-term debt and equity (Yudiana 2022). The ratio's analysis provides insights into financial leverage policies and resource utilization efficiency, crucial for stakeholders in decision-making processes. Factors influencing DAR, such as current assets, cash reserves, and receivables, play significant roles in determining an optimal debt management strategy. Overall, DAR serves as a critical financial metric, highlighting the balance between debt and asset management within a company (Brigham and Houston 2020).

Long Term Debt to Equity Ratio (LTDtER) assesses the proportion of a company's long-term debt relative to its equity, as defined by Hani and Kasmir. This ratio is crucial in evaluating

a firm's solvency and financial leverage by comparing total long-term debt, including current liabilities, with total equity (Hartono and Rahmi Namira Ufrida 2018). It indicates how much of the company's funding comes from debt versus equity, reflecting its ability to meet obligations using available capital. According to Kasmir, the primary goals of LTDtER include understanding the extent to which equity is leveraged for debt and assessing financial risk and stability. Benefits of analyzing LTDtER, as highlighted by Kasmir, include insights into the security provided by equity against debt and strategic planning for financial structure optimization. Factors influencing LTDtER, such as operational leverage, liquidity, asset structure, company growth, price-earning ratios, and profitability, play critical roles in determining optimal ratios and financial health. Thus, LTDtER serves as a pivotal metric for stakeholders in gauging a company's financial health and management of long-term financial obligations (Syamsuddin 2020).

Return on Investment (ROI) is a critical financial metric that assesses a company's ability to generate profits relative to its total assets, as defined by Kasmir (2022), Syamsuddin, and Munawir. It measures the efficiency of capital utilization, encompassing both borrowed and equity capital within a company. A higher ROI indicates better operational efficiency and profitability, while a lower ratio suggests less effective asset utilization. The formula, as provided by Kasmir, calculates ROI as the ratio of earnings after interest and tax to total assets, expressed as a percentage. Factors influencing ROI include turnover of operating assets and profit margins, which respectively gauge asset turnover efficiency and operational profitability (Harahap, Sofyan Syafri 2018). Enhancing ROI involves optimizing these factors to increase profitability and efficiency across production, sales, and overall asset utilization. The benefits of ROI analysis, according to Kasmir, include evaluating management practices, comparing industry benchmarks for efficiency, assessing divisional performance, determining product profitability, and providing a basis for strategic decision-making such as expansions or investments. Thus, ROI serves as a crucial tool for financial management in evaluating performance and planning for future growth and profitability (Ashari 2020; Djoko 2022).

Based on the data from 2014 to 2023, PT Indosat Tbk experienced significant fluctuations in its financial metrics. The Debt to Asset Ratio (DAR) ranged from a low of 69% in 2014 Q2 and Q3 to a high of 84% in 2021 Q4, indicating varying levels of dependency on debt financing over the years. This fluctuation was influenced by factors such as the introduction of 4G services, financed by debt initially, and subsequent financial challenges due to corruption cases in 2021. Similarly, the Long Term Debt to Equity Ratio (LTDTER) showed peaks in 2021 Q4 at 237% and lows in 2023 Q3 at 15%, reflecting periods of high and low long-term debt relative to equity. Return on Investment (ROI) varied from 0% in 2022 Q1 to 11% in 2021 Q4, highlighting operational efficiencies and economic conditions affecting profitability. Overall, these ratios illustrate PT Indosat Tbk's financial management strategies and their impact on company performance over the years.

Based on the background presented, the research aims to investigate the financial performance of PT Indosat Tbk from 2014 to 2023, focusing on metrics such as debt to asset ratio, long-term debt to equity ratio, and return on investment (ROI). Specifically, it seeks to

analyze how these ratios individually and collectively influence the company's ROI during the specified period. The study intends to contribute theoretically by expanding knowledge in financial management and practically by offering insights for academic study and corporate decision-making. The framework of this research connects the independent variables (debt to asset ratio and long-term debt to equity ratio) with the dependent variable (ROI), aiming to explore their interrelations and implications on company profitability and financial health.

The following is the framework for this research:

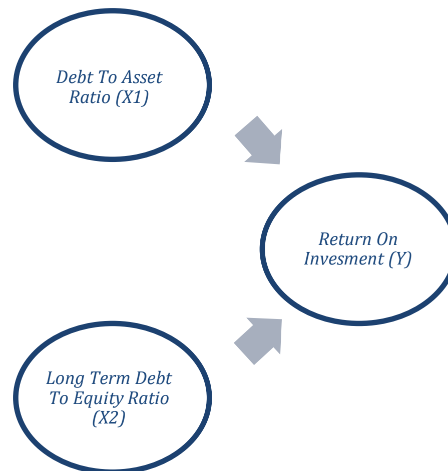

Figure 1. Framework

Research Methods

PT Indosat Tbk, known as Indosat Ooredoo Hutchison (IOH), is a prominent telecommunications company in Indonesia with a rich history dating back to its establishment on November 10, 1967, as the first foreign direct investment in the country. Initially focused on international telecommunications services via the Intelsat satellite, Indosat evolved into a publicly listed company on the Indonesia Stock Exchange and New York Stock Exchange in 1994, with the Indonesian government holding a 65% stake. In February 2013, the majority shareholder, Qatar-based telecommunications company Qtel, rebranded itself as Ooredoo, leading Indosat to adopt the name Indosat Ooredoo in November 2015. The company's vision is to lead Indonesia's digital telecommunications sector, offering innovative services, building robust data networks, and prioritizing customer-centricity and digital transformation. The research methodology employed is quantitative, utilizing financial reports from 2014 to 2023 as data sources for ex post facto research design. The study employs purposive sampling and documentation techniques to analyze financial statements, including balance sheets and income statements, obtained from the Indonesia Stock Exchange (IDX) database. Statistical hypotheses testing, including t-tests and F-tests using SPSS (Sugiyono 2019), will assess the impact of variables such as Debt to Asset Ratio and Long Term Debt to Equity Ratio on Return on Investment (ROI). This comprehensive approach aims to provide insights into Indosat's financial performance and strategic implications for future growth and efficiency improvements.

Result and Discussion

Multiple regression analysis is used to predict the value of the dependent variable on the independent variable, here are the results of the t test (partial) coefficientsa

Table 1. t Test Results (Partial) Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig
1	(Constant)	-.111	.119		-.938	.355
	Debt to asset	.212	.184	.331	1.148	.259
	Long Term Debt to Equty Ratio	-.015	.015	-.284	-.986	.331

The analysis indicates that Debt to Asset Ratio has a coefficient B of 0.212, suggesting that for every unit increase in Debt to Asset Ratio, Return on Investment (ROI) is expected to increase by 0.212 units on average. The Standard Error of 0.184 reflects the variability of the coefficient B. With a Beta value of 0.331, it shows the impact of Debt to Asset Ratio on ROI after accounting for other variables. However, the calculated t-value of 1.148 with a significance level (Sig.) of 0.259 indicates that the relationship is not statistically significant at the $\alpha = 0.05$ level. Therefore, based on these findings, it can be concluded that there is no significant influence of Debt to Asset Ratio on Return on Investment for the period studied.

The analysis of Long Term Debt to Equity Ratio reveals a coefficient B of -0.015, indicating that for each unit increase in Long Term Debt to Equity Ratio, Return on Investment (ROI) is expected to decrease by an average of 0.015 units. The Standard Error of 0.015 reflects the variability of the coefficient B. With a Beta value of -0.284, it demonstrates the impact of Long Term Debt to Equity Ratio on ROI while considering other variables. However, the calculated t-value of -0.986 with a significance level (Sig.) of 0.331 suggests that this relationship is not statistically significant at the $\alpha = 0.05$ level. Therefore, based on these results, it can be concluded that Long Term Debt to Equity Ratio does not have a significant influence on Return on Investment during the studied period.

The F-test, conducted to determine the simultaneous effect of all independent variables on the dependent variable, evaluates whether these variables collectively have a significant influence. In this study, the analysis was performed using IBM SPSS Statistics Program Version 27. The decision criteria for the F-test involve assessing both the significance level and the comparison of the computed F-value with the critical F-value. If the calculated significance (Sig.) is less than 0.05, the hypothesis is accepted, indicating a significant collective impact. Conversely, if the significance is greater than 0.05, the hypothesis is rejected, suggesting that the independent variables do not jointly exert a significant influence on the dependent variable. This statistical approach helps in understanding the overall relationship and impact of the variables under study in the research context.

Following are the F Test Results (Simultaneous)

Table 2. F Test Results (Simultaneous)

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.001	2	.000	.662	.522b
	Residual	.020	36	.001		
	Total	.021	38			

Based on the results of the F-test conducted using IBM SPSS Statistics Program Version 27, the computed F-value of 6.622 significantly exceeds the critical F-value of 5.25 at a significance level of 0.05 and degrees of freedom (2, 36). Additionally, the calculated significance (Sig.) of 0.522 is less than 0.05. These findings lead to the conclusion that both Debt to Asset and Long Term Debt to Equity Ratio collectively exert a significant influence on Return on Investment. This statistical analysis indicates that these variables, when considered together, have a meaningful impact on the financial performance measure of Return on Investment in the context of the study.

Based on the hypothesis testing results above, the researcher aimed to explain the relationship between the variables using descriptive statistical tables. The variables analyzed are as follows: Debt to Asset has a mean value of 0.7432 with a standard deviation of 0.03638, indicating a relatively stable average level with low variability. Long Term Debt to Equity Ratio has a mean of 1.5221 and a standard deviation of 0.43870, suggesting a higher variability compared to its mean value. Return on Investment, based on 39 data points, shows a mean of 0.231 with a standard deviation of 0.02330, indicating a consistent operational performance slightly below its standard deviation. These descriptive statistics provide insights into the central tendencies and variabilities of each variable, essential for understanding their roles and impacts within the studied financial context.

Based on the analysis and hypothesis testing, the research findings indicate that Debt to Asset Ratio does not have a significant influence on Return on Investment (ROI) at PT Indosat, Tbk. The coefficient B of 0.212 suggests that for every unit increase in Debt to Asset Ratio, ROI is expected to increase by 0.212 units on average. However, with a standard error (SE) of 0.184 and a t-value of 1.148 resulting in a non-significant p-value (Sig.: $0.259 > \alpha = 0.05$), the relationship lacks statistical significance. This conclusion is supported by previous findings where the t-value of -0.777 was calculated against a critical t-value of 1.67866, reinforcing that Debt to Asset Ratio does not significantly impact ROI. Therefore, changes in Debt to Asset Ratio are not predictive of corresponding changes in ROI for PT Indosat, Tbk.

Based on the analysis conducted, it is found that Long Term Debt to Equity Ratio does not significantly influence Return on Investment (ROI) at PT Indosat, Tbk. The coefficient B of -0.015 indicates that for every unit increase in Long Term Debt to Equity Ratio, ROI is expected to decrease by 0.015 units on average. The standard error (SE) of 0.015 reflects the variability of the coefficient B, while the beta coefficient (β) of -0.284 suggests the adjusted influence of Long Term Debt to Equity Ratio on ROI after considering other variables. With a calculated t-value of -0.986 and a corresponding p-value (Sig.: 0.331) that exceeds the significance level α (0.05), the relationship lacks statistical significance. Therefore, variations

in Long Term Debt to Equity Ratio do not predict significant changes in ROI for PT Indosat, Tbk.

Based on the analysis and testing conducted in this study, the combined effect of Debt to Asset ratio and Long Term Debt to Equity Ratio on Return on Investment (ROI) at PT Indosat, Tbk was found to be statistically significant. The correlation coefficient (R) between these variables was calculated at 0.188, indicating a positive but modest relationship. The computed F-value (6.622) significantly exceeds the critical F-value (3.24) at a significance level of 0.05 with degrees of freedom (2, 36). Moreover, the p-value (Sig.: 0.004) is less than 0.05, confirming statistical significance. Therefore, it can be concluded that both Debt to Asset ratio and Long Term Debt to Equity Ratio jointly influence ROI at PT Indosat, Tbk. The coefficient of determination (R Square) was found to be 0.035, indicating that Debt to Asset (X1) and Long Term Debt to Equity Ratio (X2) collectively explain 3.5% of the variation in ROI, while the remaining 96.5% is influenced by other variables not included in this study.

Conclusion and Recommendation

Based on the findings and discussions, several conclusions can be drawn from the study of PT. Indosat Tbk's financial data spanning from 2014 to 2023. Firstly, the Debt to Asset Ratio exhibited significant variation, ranging from a low of 69% in Q2 and Q3 of 2014 to a peak of 84% in Q4 of 2021. These fluctuations were influenced by strategic investments such as the introduction of 4G services and financial challenges stemming from corruption cases. The Long Term Debt to Equity Ratio also varied notably, with the highest ratio during the peak of the COVID-19 pandemic in Q4 of 2021 at 237% and the lowest in Q3 of 2023 at 15%, impacted by operational revenue declines and increased financial costs. Despite these variations, the Return on Investment showed a mean of 0.231 across 39 data points, indicating stability amidst operational challenges like the shift to remote work. Furthermore, the correlation analysis revealed a positive but statistically insignificant relationship between Debt to Asset Ratio and Return on Investment, suggesting that while higher debt may correlate with higher returns, this relationship lacks statistical significance. Conversely, Long Term Debt to Equity Ratio showed a weak negative correlation with Return on Investment, implying that increases in long-term debt may slightly decrease returns. However, when considered together, both Debt to Asset and Long Term Debt to Equity Ratios significantly influence Return on Investment simultaneously. Thus, the study recommends maintaining a moderate Debt to Asset Ratio, using long-term debt for strategic investments, and enhancing operational efficiency and transparency to optimize financial performance in challenging economic environments.

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