

DEBT LEVELS AND THEIR EFFECT ON THE PROFITABILITY OF BANKING FIRMS AT THE INDONESIA STOCK EXCHANGE

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Abstract. This study aims to determine the impact of debt levels on the profitability of banking companies listed on the Indonesia Stock Exchange. The research focuses on two variables: the Debt-to-Equity Ratio (DER) and Return on Assets (ROA). Quantitative research with simple linear regression analysis is a type of study aimed at understanding the relationship between two variables. The population of this study includes 47 banking companies listed on the Indonesia Stock Exchange (IDX), from which a sample of 4 banking companies was selected using purposive sampling. This qualitative research employs simple linear analysis using SPSS 25.0 as the analytical tool. The results, based on significant values and partial values, indicate that an increase in debt levels among banking companies listed on the Indonesia Stock Exchange leads to a decrease in profitability. This is because the debt of banking companies is not solely used for operational activities but also for providing credit funds to customers.

Keywords: DER, ROA

Abstrak. Penelitian ini bertujuan untuk menentukan dampak tingkat utang terhadap profitabilitas perusahaan perbankan yang terdaftar di Bursa Efek Indonesia. Penelitian ini fokus pada dua variabel: *Debt to Equity Ratio* (DER) dan *Return on Assets* (ROA). Penelitian kuantitatif dengan analisis regresi linier sederhana adalah jenis penelitian yang bertujuan untuk memahami hubungan antara dua variabel. Populasi penelitian ini mencakup 47 perusahaan perbankan yang terdaftar di Bursa Efek Indonesia, dari mana diambil sampel sebanyak 4 perusahaan perbankan menggunakan teknik *purposive* sampling. Penelitian kualitatif ini menggunakan analisis regresi linier sederhana dengan SPSS 25.0 sebagai alat analisis. Hasil penelitian, berdasarkan nilai signifikan dan nilai parsial, menunjukkan bahwa peningkatan tingkat utang di antara perusahaan perbankan yang terdaftar di Bursa Efek Indonesia menyebabkan penurunan profitabilitas. Hal ini disebabkan karena utang perusahaan perbankan tidak hanya digunakan untuk kegiatan operasional tetapi juga untuk memberikan dana kredit kepada nasabah.

Kata Kunci: DER, ROA

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INTRODUCTION

In corporate finance, debt management plays a crucial role in determining a company's financial health and performance (La Rosa et al., 2018). For banking companies, an optimal capital structure is essential to balance risk and profitability. One of the key metrics that is often used to evaluate a company's financial health is the Debt to Equity Ratio (DER) (Dance & Imade, 2019). DER provides an overview of the extent to which companies are using debt as a

source of financing and how this impacts Return on Asset (ROA) (Sari et al., 2022). As the banking industry becomes increasingly complex and competitive, understanding the impact of capital structures on financial performance is becoming increasingly important.

The Debt to Equity Ratio (DER) measures the proportion of debt relative to a company's equity. This ratio is important because it provides an overview of the company's capital structure and its ability to meet long-term obligations (Alzubi & Bani-Hani, 2021; Sari et al., 2022). A high DER indicates that the company uses more debt than equity to finance its operations. While leveraging debt can increase profits, excessively high debt levels can increase financial risk and reduce investor confidence. Return on Assets (ROA) is another important indicator that measures how efficiently a company uses its assets to generate profits. ROA shows how effectively a company's management uses available assets to create value for shareholders (Choiriyah et al., 2020). This ratio is very important in the banking industry because it reflects the bank's ability to optimize assets to generate profits. The relationship between DER and ROA is the main focus in this study, given the importance of understanding how capital structure can affect the operational efficiency of banks (Handema & Haabazoka, 2020; Mehzabin et al., 2023).

One of the things that is highly expected by the company is the company's ability in this case human resources, financial management and company management in managing assets efficiently and effectively to generate greater profits as well as the growth of the company's profit in one period to the next. Because the above can show that the company has good performance in managing assets or assets owned by the company to increase the value of the company's profit. The following are some data displayed to see the phenomenon of problems that occur in state-owned banking companies listed on the Indonesia Stock Exchange.

Table 1. DER and profit of banking companies listed on the indonesia stock exchange.

Bank	Variable	Year				
		2018	2019	2020	2021	2022
BRI	DER	5,89	5,67	5,57	4,75	5,02
	Profit	32.418.4	34.413.8	18.660.3	30.755.7	39.311.4
BNI	DER	86	25	93	66	45
	Profit	6,08	5,51	6,61	6,62	6,34
BTN	DER	15.091.7	15.508.5	3.321.44	10.977.0	18.481.7
	Profit	63	83	2	51	80
Self-Sufficient	DER	11,06	11,03	16,07	15,03	15,98
	Profit	2.807.92	209.263	1.602.35	2.376.22	2.274.79
nt	DER	3		8	7	9
	Profit	5,09	5,03	5,94	5,98	6,12
	Profit	25.851.9	28.455.5	17.645.6	30.551.0	44.952.3
		37	92	24	97	68

Based on the data listed above, several phenomena were found that occurred in state-owned banking companies listed on the Indonesia Stock Exchange, such as an increase in debt value (DER) but not followed by an increase in profit. With debt, the company should experience a decrease in profit level because the company will get an additional burden from debt, but in state-owned banking companies listed on the Indonesia stock exchange for the 2018-2022 period, if they have a high level of debt, the value of profits will fluctuate, a high level of debt does not guarantee that banks will get large profits and even the value of profits can experience a drastic decrease.

Previous research has extensively examined the impact of DER on a company's financial performance. For example, a study by Risman et al., (2021) found a negative relationship between DER and ROA in manufacturing companies. DER significantly affects net profit in non-financial sector companies (Bokhari & Khan, 2013). However, specific research on the impact of DER on ROA in Indonesia banking companies is still limited. In addition, most previous studies have focused on shorter time periods or limited sectors. This study aims to fill this gap by analyzing data from banking companies listed on the Indonesia Stock Exchange during the 2018-2022 period. Therefore, this study is expected to provide a more comprehensive insight into how capital structure affects financial performance in the banking industry.

This phenomenon indicates that the Debt to Equity Ratio does not influence profit growth in companies within the property and real estate sub-sector. The lack of impact suggests that the amount of debt may not affect profit growth, possibly because the company's debt is not utilized optimally for operational activities (Nadapdap et al., 2023; Syarifah, 2021; Widiastuti et al., 2023). Corporate debt will be able to affect the growth of the company's profit if it is used optimally for operational activities that generate revenue so that the company's profit can grow. This study aims to determine how the level of debt held by banking companies listed on the Indonesia Stock Exchange affects the companies' profitability. The research will be limited to analyzing the impact of debt levels, measured using the Debt to Equity Ratio (DER), on profitability. And limit the research conducted so that it focuses on debt measured using DER against profit.

METHOD

The design of this study uses a quantitative descriptive approach, and the data is obtained from secondary data in the form of data on the annual financial statements of banking companies listed on the Indonesia Stock Exchange, for the last 5 years. The analysis technique

used in this study is Simple Linear Regression Analysis in testing hypotheses to estimate the relationship between independent variables and dependent variables. The population in this study is all banking companies listed on the Indonesia Stock Exchange. Based on data from the Indonesia Stock Exchange, there are 47 banking companies registered in 2023. From this population, companies were selected that disclosed data related to research variables during the 2018-2022 period so that 45 companies remained. Of these companies, 31 companies had no profit loss in the current year. Furthermore, from the 31 companies, 4 banking companies owned by SOEs were selected using non-probability sampling techniques adjusted to the research criteria, resulting in PT. Bank Rakyat Indonesia (persero), Tbk, PT. Bank Negara Indonesia (persero), Tbk, PT. Bank Tabungan Negara (persero), Tbk, and PT. Bank Mandiri (persero), Tbk as a research sample. The type of data used in this study is by using quantitative data, which is obtained from secondary data sources or data sources that are not directly received by data collectors, namely through other people or through documents, (according to Sugiyono 2016). Namely in the form of annual financial statements of banking companies listed on the Indonesia Stock Exchange for the 2018-2022 period.

Operational Measurement of Variables

Debt

Debt is the possibility of future sacrifice of economic benefits arising from the current obligation of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events. Therefore, from the opinion about the debt, we must be able to know how to analyze the company's debt to achieve the company's goals. Debt can be measured using *the* Debt-to-Equity Ratio (DER).

$$DER = \frac{\text{Total debt}}{\text{Equitas}} \times 100\%$$

Profit

Profit is excess revenue compared to the amount of costs incurred to obtain such income or profit, in other words profit is net income or reward from the company's activities. From the above opinion, profit can show the level of debt and the level of profit of the company which is a measure of the success of a company. One of the factors that can measure the success of a company can be seen from the company's profit with the calculation of Return on Assets (ROA).

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}} \times 100\%$$

RESULTS

The data analysis in this study uses SPSS 25.0. After the analysis, 20 data on the debt ratio (DER) and profit of banking companies (ROA) listed on the IDX were produced. Based on the data produced, in 2018 the company with the highest debt level (DER) was at Bank BTN at 11,065 and the company with the lowest debt level (DER) was at Bank MANDIRI at 5,092. In 2019, the company with the highest debt level (DER) was at Bank BTN at 11,304 and the company with the lowest debt level (DER) was at Bank MANDIRI at 4,907. In 2020, the company with the highest debt level (DER) was at Bank BTN at 16,079 and the company with the lowest debt level (DER) was at Bank BRI at 5,570. In 2021, the company with the highest debt level (DER) is at Bank BTN at 15,308 and the company with the lowest debt level (DER) is at Bank BRI at 4,751. In 2022, the company with the highest debt level (DER) is at Bank BTN at 16,269 and the company with the lowest debt level (DER) is at Bank BRI at 5,201. In conclusion, the bank that has the highest debt level (DER) is at Bank BTN, while the company that has the lowest debt level (DER) is in the 2020-2022 period, namely Bank BRI, while in the 2018-2019 period the company with the lowest debt level namely Bank Mandiri.

Normality Test

Table 2. One-sample kolmogorov-smirnov test

		Unstandardized Residual
		20
Normal parameters ^{a, b}	Mean	0.000000
	Std. Deviation	0.00584606
Most Extreme Differences	Absolute	0.158
	Positive	0.095
	Negative	-0.158
Test Statistic		0.158
Asymp. Sig. (2-tailed)		.200c, d

So, the results of the analysis of the normality test above are Normal distribution because of the Asymp value. Sig. (2-tailed) produced by 0.200 the value is greater than 0.05 or $0.200 > 0.05$.

Heterokedasticity Test**Table 3. Coefficients**

Capital	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(constant)	0,005	0.002		2.570	0.019
DER	0,000	0.000	-0.105	-0.446	0.661

So, the results of the above test show that the variables included in the model have a significance value of 0.661. The value is greater than 0.05 or $0.822 > 0.05$, then it is concluded that there are no heteroscedasticity symptoms or the assumption that the heteroscedasticity test has been fulfilled.

Autocorrelation Test**Table 4. Summary model**

Type	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.693	0.481	0.452	0.0060063	1.723

The table above shows that the DW value is 1.723, then we will compare this value with the significance table value of 5%, the number of samples $N = 20$, then it can be concluded that there is no autocorrelation in the data of this study.

Linearity Test**Table 5. ANOVA**

			Sum of Squares	Df	Mean Square	F	Sig.
ROA*	Between Groups	(Combined)	.001	4	.000	11.349	.005
		Linearity	.001	1	.001	33.073	.000
		Deviation from Linearity	.000	3	.000	4.107	.230
DER 2	Within Groups		.000	13	.000		
	Total		.001	17			

From the results of the linearity test, based on the significant value, the value of Deviation from Linearity sig is 0.230 greater than 0.05. Therefore, it can be concluded that there is a significant linear relationship between the variable DER (X) and the variable ROA (Y).

Simple Linear Regression

Table 6. Coefficient

	Type	Unstandardized Coefficients		Standardized Coefficients	T	Sig
		B	Std. Error	Beta		
1	(Constant)	.027	.003		8.618	.000
	DER	-.001	.000	-.693	-4.080	.001

From the table above, it is known that the value of the constant (a) is 0.027 while the value of DER (b) is -0.001. So that the regression equation can be written as follows: $Y = 0.027 - 0.001 X$. Because the regression coefficient in the above output is negative (-), so it can be said that the variable DER (X) has a negative effect on the variable ROA (Y).

Hypothesis Testing

The data that will be displayed can determine whether the hypothesis is accepted or rejected.

Table 7. Coefficients

	Type	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std.Error	Beta		
1	(Constant)	.027	.003		8.618	.000
	DER	-.001	.000	-.693	-4.080	.001

Based on the significance value (sig) of $0.001 < 0.05$ and the t-value calculated $> t$ table ($-4,080 < 1.72472$) from the 2 bases for decision-making, it can be concluded that DER has a negative and significant effect on profit, which means that the higher the level of debt owned, the profit generated will decrease. This means that the hypothesis proposed in the case is accepted that debt affects profits in banking companies.

DISCUSSION

Based on the results of the analysis that has been carried out, it can be concluded that the hypothesis proposed is acceptable, which means that the DER (X) variable has a significant and negative effect on the ROA (Y) variable of banking companies listed on the Indonesia stock exchange (Santoso & Ugut, 2021; Saputra, 2022; Setiawan & Sumantri, 2020). This means that when banking debt increases, the profit generated decreases, the higher the DER presentation can show that the amount of corporate debt is greater than the capital owned by

the company so that the costs borne by the company to fulfill its obligations will be greater, from this it will have an impact on the profit generated by the company. This finding indicates that increasing debt often results in a decrease in the bank's ability to generate profits from its assets. Increasing debt results in higher interest expenses, which directly reduce the net income available to shareholders. This suggests that the burden of debt costs can reduce the effectiveness of banks in generating profits from their assets.

In the income statement, one of the accounts is a financial burden of the company in the form of interest from long-term debts and short-term debts taken by the company for the company's operational purposes. If the profit generated by the company is insufficient for the company's needs, the company will use debt to cover the company's operational activities. So that things that can reduce the company's profit are in the form of a larger debt position and an increase in the company's operational costs (Amanda, 2019).

Banks with high levels of debt must contend with higher interest expenses, which can reduce their net profit margins. In unstable market conditions or when interest rates rise, these interest expenses can become a heavy burden for banks. This study shows that highly leveraged banks experience a decline in ROA because high interest costs reduce the net income generated from the use of assets.

Additionally, the financial risks associated with high debt levels also contribute to the decline in ROA (Ekinici & Poyraz, 2019; Sathyamoorthi et al., 2020). Banks with high debt structures tend to be more vulnerable to market fluctuations and adverse economic conditions. These risks may require additional allocations for loan loss provisions, as well as increased operational costs to address potential losses. As a result, banks face challenges in maintaining operational efficiency, which negatively impacts their ROA. These findings highlight the importance of careful debt management and solid managerial strategies. Banks need to balance the benefits and risks of debt and implement effective risk management policies to optimize their capital structure (Gornall & Strebulaev, 2018). By understanding the negative impact of debt on ROA, banks can make better financing and growth strategy decisions, ensuring they can maximize profitability while maintaining stable financial health.

Debt is a source of external funding that companies use to help with operational financing, and must be paid off at the time of maturity that has been agreed upon for creditors and companies that receive debts (Jones & Edwin, 2019). The longer the debt payment maturity period, the greater the company's funding risk. Funding risks that usually occur in companies such as the loss of assets used as debt collateral, lack of current assets which result in the company not being able to fulfill obligations until the predetermined maturity time, thus having

an impact on the supply of funds that must be spent by banking companies for their customers (Guzel, 2021; Wambua, 2019).

CONCLUSION

Based on the results of the study, it can be concluded that the Debt to Equity Ratio has a negative and significant effect on profit (ROA) in trading companies listed on the Indonesia stock exchange for the period 2018-2022. Because the debt of banking companies is obtained from third-party funds which are used to increase the company's capital in providing credit to the community

RECOMMENDATIONS

For banking companies listed on the Indonesia Stock Exchange, it is crucial to manage their debt levels as effectively as possible to achieve the desired profitability. The study indicates that higher debt levels (DER) have a negative impact on profitability (ROA), suggesting that suboptimal debt management can lead to reduced earnings. For future researchers, it is recommended to expand the research sample size to enhance the accuracy of profitability predictions. A larger sample can provide more reliable insights into the relationship between debt levels and profitability. Additionally, incorporating other relevant variables, such as cash turnover and working capital, into future studies could offer a more comprehensive understanding of the factors influencing profitability.

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