Eduvest – Journal of Universal Studies
Volume 6 Number 6, June, 2026
p- ISSN 2775-3735- e-ISSN 2775-3727

The Effect of Company Size and Capital Structure on Financial Performance in Banking Companies Listed on the Indonesian Stock Exchange for the Period 2021–2024

Muhammad Rizky Ramadhan, Marla Setiawati
Sekolah Tinggi Ilmu Ekonomi Harapan Bangsa, Bandung, Indonesia
Email: madankiki2@gmail.com, marla@ithb.ac.id

Keywords:
Firm Size; Capital Structure; Financial Performance; Return on Assets; Banking Sector

ABSTRACT

This research aims to analyze the effect of firm size and capital structure on the financial performance of banking companies listed on the Indonesian Stock Exchange during the 2021–2024 period. Financial performance is proxied by Return on Assets (ROA), firm size is measured by total assets, and capital structure is measured using the Debt to Equity Ratio (DER). This research employs a quantitative approach with panel data regression analysis using secondary data obtained from annual financial reports. The model selection tests indicate that the Random Effect Model is the most appropriate. The results show that firm size has a positive and significant effect on financial performance, indicating that larger banks tend to achieve higher profitability due to better resource utilization and operational efficiency. Meanwhile, capital structure has a negative and significant effect on financial performance, suggesting that higher leverage increases financial risk and financing costs, which may reduce profitability. Simultaneously, firm size and capital structure significantly affect the financial performance of banking companies. These findings imply that banks should optimize asset management and maintain a balanced capital structure to improve profitability and ensure sustainable financial performance.

INTRODUCTION

The development of the financial sector in recent years shows a change in the perspective of assessing the success of companies, especially in the banking industry. Company performance is no longer understood only as the ability to generate profits in the short term, but also as a reflection of the effectiveness of resource management, operational efficiency, and the company's ability to maintain financial stability in the midst of economic dynamics. The banking sector has an important role in the economic system because it functions as an intermediary institution that distributes funds from those who have excess funds to those who need financing. Therefore, the financial performance of banks is an important indicator in assessing the health and sustainability of banking operations.

Banking financial performance is generally measured through profitability ratios, one of which is Return on Assets (ROA), which describes a company's ability to generate profits through the use of its assets. The use of ROA is considered relevant because this ratio reflects the efficiency of asset management and management's ability to optimize the company's resources. Previous research has shown that the level of profitability of banks is closely related to the effectiveness of asset management and operational efficiency, so banks with good asset management tend to have more stable financial performance (Pratiwi et al., 2024; Asy'arie et

al., 2022). In addition, internal factors such as controlling operational costs and the quality of credit management also contribute to determining the level of banking profitability (Aprianti & Sidiq, 2022; Wijayani, 2023).

The difference in profitability levels between banks shows that there are certain factors that affect the bank's ability to generate profits. One of the factors that is widely studied in financial research is the size of the company. The size of a company reflects the amount of resources and operational capacity that the company has. Banks with larger asset sizes generally have better ability to diversify their businesses, manage risk, and gain wider access to funding than banks with smaller scales. This causes company size to often be associated with improved financial performance (Attatur et al., 2024; Yuan et al., 2023).

In addition to the size of the company, capital structure is also an important factor that affects the financial performance of banks. The capital structure describes the composition of the company's funding derived from its own capital and debt. The use of debt in operational activities can increase the company's ability to expand its business and increase profit potential. However, excessive use of debt also has the potential to increase financial risks and funding costs, which can ultimately reduce the company's profitability. Previous research has shown that the relationship between capital structure and financial performance does not always show the same results, as it is influenced by the condition of the company and the industrial environment (Pham et al., 2022; Le & Nguyen, 2020; Mehzabin et al., 2023).

The dynamics of the increasingly competitive banking industry also affect the relationship between company characteristics and financial performance. The development of financial innovation and changes in industrial structures encourage banks to improve operational efficiency and service quality in order to maintain competitiveness. Cross-country research shows that changes in industrial structures and technological innovations can improve the efficiency and stability of financial institutions, ultimately impacting company performance (Haddad & Hornuf, 2023). In addition, the level of competition and characteristics of bank ownership also play a role in determining the stability and profitability of banks (Nguyen et al., 2023).

Other research emphasizes that good company management and the ability to manage resources effectively can improve the quality of financial decision-making. Proper supervision and resource management mechanisms encourage companies to be more careful in determining funding and investment policies, so as to improve the company's financial performance. The results of the study show that the management of corporate resources, including asset and capital management, is related to improving company performance in the long term (Dimitropoulos & Koronios, 2021; Trisnawati et al., 2025).

However, the results of previous research show that there are differences in findings related to the influence of company size and capital structure on the financial performance of banks. Some studies show that the size of a company has a positive effect on profitability, while other studies show that the influence is not always significant. The same is true for capital structure, where some studies have found a positive influence, while other studies have shown a negative or insignificant influence on Return on Assets (ROA). These differences in results suggest that the relationship between variables still requires further testing, taking into account different industry conditions and research periods.

In the banking sector in Indonesia, the difference in banks' ability to generate profits is still visible even though they are in a relatively similar regulatory and industrial environment. This condition is reflected in the variation in the level of Return on Assets (ROA) between banks, which shows that asset management capabilities and funding strategies have not run optimally in all banking companies. Some studies have shown that asset size has a positive relationship with bank profitability because companies with larger assets have greater operational flexibility and access to funding. Nevertheless, the influence of capital structure on financial performance has not shown consistent results, where some studies have found significant effects, while other studies have shown insignificant results (Nazwa et al., 2024; Mubarok et al., 2024). This condition shows that the funding and asset management decisions of each bank are influenced by differences in operational strategies, levels of efficiency, and management's ability to manage financial risks.

In addition, changes in funding structures in the banking industry, characterized by increased capital requirements and the use of external funding sources, are not always followed by improved financial performance. Banks that increase the use of debt have the opportunity to increase their financing capacity and expand their businesses, but at the same time face increased financial risks and the burden of funding costs. If the increase in leverage is not balanced with productive asset management, then profitability can actually decrease. Previous research has shown that increased capital and leverage can cause trade-offs between risk and rate of return, so the relationship between capital structure and profitability is not always one-directional (Dahal et al., 2024). This shows that the effectiveness of capital structures in improving financial performance is highly dependent on the bank's ability to manage operational efficiency and asset quality.

The novelty of this research lies in re-testing the influence of company size and capital structure on the financial performance of banks by using a more up-to-date research period and focusing on banking companies registered in Indonesia. This study not only examines the direct relationship between variables, but also seeks to provide an empirical understanding of the causes of differences in the results of previous research by considering the characteristics of the banking industry and the dynamics of asset management and funding that have occurred in recent years. Thus, this research is expected to contribute to clarifying the relationship between company size, capital structure, and financial performance proxied by Return on Assets (ROA), as well as serve as a reference for future research in developing empirical studies in the field of banking finance.

Based on this description, it can be concluded that company size and capital structure are factors that are related to the financial performance of banks, but the results of previous research still show inconsistencies. Therefore, this study was conducted to analyze the influence of company size and capital structure on financial performance proxied by Return on Assets (ROA) in banking companies in Indonesia for the 2021–2024 period. This research is expected to provide more relevant empirical evidence and strengthen academic studies on factors that affect the financial performance of banks in Indonesia.

This study aims to analyze the influence of firm size and capital structure proxied by Debt to Equity Ratio (DER) on the financial performance of banks proxied by Return on Assets (ROA) in banking companies in Indonesia for the period 2021–2024, both partially and simultaneously. The results of this study are expected to make a theoretical contribution to the

development of financial management and banking science, especially related to factors that affect company profitability, as well as enrich empirical evidence on the differences in previous research results. Practically, this research is expected to be a consideration for the government and regulators in formulating banking policies, assisting management and investors in decision-making, and becoming a reference for future research.

METHOD

Types of Research

This study uses a quantitative approach with the type of explanatory research. The quantitative approach is used because this study aims to objectively test the relationship between variables through the processing of numerical data obtained from the company's financial statements. The type of explanatory research was chosen to explain the causal relationship between company size and capital structure as an independent variable on financial performance proxied with Return on Assets (ROA) as a dependent variable. Through this approach, the research is directed to empirically test whether the characteristics of the company and the funding policy have an influence on the ability of banking companies to generate profits.

This approach is relevant because all research variables are measured using secondary data sourced from the annual reports of banking companies listed on the Indonesia Stock Exchange for the period 2021-2024. The data used is standardized and can be compared between periods and between companies, allowing systematic and objective analysis. Through explanatory research, the hypothesis that has been formulated is tested using statistical analysis methods to obtain valid empirical evidence regarding the influence of company size and capital structure on the financial performance of banking companies in Indonesia.

Research Object

The object of this research is banking companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period. The selection of the banking sector is based on its role as a financial intermediation institution that has an important function in collecting and distributing funds to the public, so that the financial performance of banks is an important indicator in assessing the stability and health of the financial sector. In addition, banking companies are a sector that has complex asset management and liability characteristics, so it is relevant to be analyzed in research that examines the influence of company size and capital structure on financial performance.

The object of the research is limited to banking companies that consistently publish annual reports during the observation period and have complete and accessible financial data. The availability of this data is needed to ensure the accuracy of measuring the company's size variables proxied through total assets, capital structure measured using the Debt to Equity Ratio (DER), and financial performance proxied with Return on Assets (ROA). Thus, this study focuses on banking companies that have complete data and consistency of financial reporting, so that the results of the analysis obtained can more accurately describe the empirical conditions regarding the influence of company size and capital structure on financial performance in banking companies in Indonesia.

Population and Sample

The population in this study is all banking companies listed on the Indonesia Stock Exchange (IDX) during the 2021–2024 period, considering that the banking sector has characteristics that are closely related to asset management, liabilities, and funding policies that are the focus of the research. In addition, banking companies routinely submit standardized and verifiable financial statements, allowing for consistent and relevant comparisons between companies and between periods in assessing financial performance as an indicator of the stability and health of the financial sector.

The research sample was determined using a purposive sampling technique based on certain criteria, namely banking companies listed on the IDX during the 2021–2024 period, not delisted, publishing audited annual financial statements consistently, having complete data related to all research variables, and their financial statements can be accessed through official sources. These criteria are used to ensure that the sample has completeness, consistency, and comparability of the data so that the analysis can be carried out objectively and the results of the research can be accounted for academically.

Data Types and Sources

This research uses secondary quantitative data, namely data in the form of numbers and financial ratios obtained from official company documents. The use of quantitative data was carried out because this study aims to objectively test the relationship between the company size (X_1), capital structure (X_2), and financial performance proxied by Return on Assets (ROA) (Y). Numerical data allows hypothesis testing to be carried out statistically through panel data regression analysis, so that the relationships between variables can be analyzed measurably and produce empirical conclusions.

The data source in this study consists of primary secondary data obtained from the annual financial reports of banking companies listed on the Indonesia Stock Exchange (IDX) for the period 2021–2024. The data used includes information about the company's total assets, total liabilities, total equity, and net profit needed to calculate the variables of company size, capital structure, and financial performance. In addition, supporting data was obtained from official publications of the Indonesia Stock Exchange, banking statistical reports, as well as academic literature and scientific journals relevant to the research topic. All of these data sources are used to ensure that the analysis process is carried out consistently, objectively, and scientifically accountable.

Data Collection Techniques

The data collection technique in this study uses the documentation method, which is the collection of secondary data that has been officially published by the company or related institutions. Data was obtained from the annual financial reports of banking companies listed on the Indonesia Stock Exchange for the period 2021–2024. The document contains the necessary information, such as total assets, total liabilities, total equity, and the company's net profit which is used as the basis for measuring research variables. The use of the documentation method was chosen because the available data has been systematically compiled, has the same reporting standards, and can be verified to support data consistency between companies and between observation periods.

In addition to the main data sourced from the company's financial statements, this study also utilizes supporting data from official publications of the Indonesia Stock Exchange as well as other institutional sources relevant to the banking sector. The collected data is then selected based on the completeness of information and suitability with the observation period before further processing is carried out. This approach allows the analysis to be carried out objectively by taking into account differences in characteristics between companies as well as changes in conditions over time through the use of panel data regression analysis.

Data Analysis Methods

The data analysis technique in this study uses a quantitative approach with regression panel data processed using Eviews 13 software. Descriptive statistical analysis is used to describe the variable data characteristics of company size, capital structure, and financial performance (ROA) through minimum, maximum, average, and standard deviation values as an initial overview before further analysis is carried out.

Panel data regression analysis was used to test the influence of company size and capital structure on ROA by combining inter-company and inter-period data. The model used is determined through the Chow, Hausman, and Lagrange Multiplier tests to choose between Common Effect, Fixed Effect, or Random Effect. The test was performed using a t-test to see for partial effects and an F test for simultaneous effects.

Before hypothesis testing, a classical assumption test was carried out which included normality, multicollinearity, heteroscedasticity, and autocorrelation tests to ensure that the regression model was feasible to use. Furthermore, the feasibility of the model is assessed through the values of F-statistic, R-squared, Adjusted R-squared, and t-statistic to see the model's ability to explain dependent variables. The hypothesis test was carried out with the t-test and the F-test at a significance level of 5% to determine the influence of company size and capital structure on the financial performance of banks proxied by ROA during the 2021–2024 period.

RESULT AND DISCUSSION

This study uses financial statement data of banking companies that have met the research criteria during the 2021–2024 period for further processing and analysis in accordance with the established method. The analysis stage is carried out in stages to test the relationship between company size and capital structure to financial performance proxied by Return on Assets (ROA), so that test results are obtained that can be used as a basis for research discussion.

Descriptive Statistical Analysis Results

Descriptive statistical analysis was conducted to describe the characteristics of the research data which included company size (SIZE), capital structure (DER), and financial performance proxied with Return on Assets (ROA) during the observation period. This analysis presents information about the average value, minimum value, maximum value, and data dissemination rate of each variable, so as to provide a preliminary picture of the condition of the data used in the research. The results of the descriptive statistical analysis are presented in Table 1 below.

Table 1. Descriptive Statistical Analysis Results

Statistics	SIZE	THE	LENGTH
Mean	31,5184	4,4227	0,0062
Median	30,8953	4,2979	0,0080
Maximum	35,4255	15,3080	0,0841
Minimum	28,4072	0,0355	-0,1806
Hours of deviation	1,6696	2,8830	0,0265
Skewness	0,5549	0,8296	-2,6512
Kurtosis	2,4148	3,9795	17,7903
Jarque-Bera	12,3294	29,0777	1933,7950
Probability	0,0021	0,0000	0,0000
Sum	5925,4600	831,4704	1,1627
Sum Sq. Dev.	521,2902	1554,3130	0,1309
Observations	188	188	188

Source: Secondary data processed using EViews 13 (2025)

Based on Table 1, the company size variable (SIZE) has an average value of 31.51841, with a minimum value of 28.40720 and a maximum value of 35.42552. This value shows that there is a difference in the scale of assets between banking companies during the observation period. The standard deviation of 1.669625 indicates that the spread of company size data is relatively stable, so the difference in company size is not too extreme. This condition reflects that companies with a larger asset scale have a wider operational capacity and greater opportunities to utilize assets optimally to support business activities.

The capital structure variable measured using the Debt to Equity Ratio (DER) showed an average value of 4.422715, with a minimum value of 0.035465 and a maximum value of 15.30803. This value indicates that there are differences in funding policies between companies in determining the proportion of debt and equity use. The standard deviation of 2.883025 shows a fairly high level of variation, indicating that each company has a different funding strategy according to its operational needs and the level of risk faced. The high value of DER in some companies indicates a greater degree of dependence on external funding, which has the potential to increase expansion capabilities but also increases financial risk.

Meanwhile, the financial performance variable proxied by Return on Assets (ROA) has an average value of 0.006185, with a minimum value of -0.180577 and a maximum value of 0.084093. A negative minimum value indicates that in certain periods there are companies that have not been able to generate profits from the assets they own, while the maximum value indicates that there are companies that are able to manage assets more efficiently in generating profits. The standard deviation of 0.026458 reflects variation in profitability levels between companies, indicating differences in the effectiveness of asset management, operational efficiency, and funding policies implemented during the study period.

In general, the results of the descriptive statistics show differences in characteristics between banking companies, which are reflected in variations in the scale of assets, the level of debt use, and the ability to generate profits during the observation period. These differences illustrate that each company has different operational policies and funding strategies, both in managing resources and in determining the composition of funding used. This variation shows that a company's internal conditions play a role in shaping financial performance, particularly in terms of asset utilization efficiency and risk control related to the use of funds.

In addition, the differences in value across each variable also indicate that a company's ability to achieve a level of profitability is not only influenced by the size of the assets owned, but also by how the company manages its funding structure effectively. Companies with efficient asset management and a balanced funding composition tend to maintain more stable financial performance than companies that face limited efficiency or high levels of leverage. Therefore, the variations seen in the results of the descriptive statistics serve as an important basis for further analysis to determine the relationship between company size and capital structure and empirical financial performance.

1. Panel Data Regression Model Selection Test Results

The selection of the panel data regression model was carried out to determine the most appropriate estimation approach in explaining the relationship between company size and capital structure to financial performance proxied by Return on Assets (ROA). The data used is a combination of inter-company data (cross section) and time series data, so a model is needed that is able to accommodate the differences in the characteristics of each company as well as the changes that occur during the observation period.

In panel data analysis, there are three commonly used approaches, namely Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). To determine the most appropriate model, a series of tests were carried out which included the Chow test, the Hausman test, and the Lagrange Multiplier (LM) test. The results of each of these tests are the basis for determining the regression model used in the next stage of analysis.

a. Chow Test

The Chow test was carried out as an initial stage in the selection of a panel data regression model to determine whether the approach used was more appropriate using the Common Effect Model (CEM) or the Fixed Effect Model (FEM). This test aims to identify differences in characteristics between companies that can affect the results of the model's estimation. The results of the Chow Test test in this study are presented in Table 2 below.

Table 2. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	4,208765	-46,1390	0,0000
Cross-section Chi-square	164,02554	46	0,0000

Source: Panel data processing results using EViews 13 (2025)

Based on Table 2, the probability value of the Cross-section Chi-square of 0.0000 is smaller than the significance level of 0.05, so the null hypothesis is rejected and the chosen model is the Fixed Effect Model (FEM). These results show that there are differences in characteristics between companies that cannot be ignored in the estimation process, so that models that are able to accommodate these differences are considered more suitable for use. These differences in characteristics can be related to variations in asset scale, funding policies, and the ability of each company to manage resources that have an impact on financial performance during the observation period. Therefore, the use of FEM is considered to be more able to describe the condition of panel data because it takes into account differences in behavior between companies in the analysis model.

b. Haussman Test

The Hausman test was performed to determine the most suitable model between the Fixed Effect Model (FEM) and the Random Effect Model (REM) in the regression analysis of panel data. This test aims to find out if there is a relationship between the individual effects of each company and the independent variables used in the model. The results of the Hausman Test test in this study are presented in the following Table 3.

Table 3. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0,652471	2	0,7216

Source: Panel data processing results using EViews 13 (2025)

Based on Table 3, the probability value of 0.7216 is greater than the significance level of 0.05, so the null hypothesis is accepted and the chosen model is the Random Effect Model (REM). These results show that the differences in characteristics between firms have no relationship with the independent variables used in the model, so the individual effects of firms are considered to be random and do not affect the estimation of regression coefficients systematically. Thus, the use of REM is considered more efficient because it is able to accommodate data variations between companies without having to assume that there is a fixed difference in interception in each company during the observation period.

c. Chow Test

The Lagrange Multiplier (LM) test was performed to determine the most appropriate model between the Common Effect Model (CEM) and the Random Effect Model (REM) in the regression analysis of panel data. This test aims to find out whether there are differences in characteristics between companies that are random so that they need to be accommodated in the estimation model. The results of the Lagrange Multiplier (LM) Test in this study are presented in Table 4 below.

Table 4. Lagrange Multiplier (LM) Test Results

Test	Cross-section	Time	Both
Breusch–Pagan	54,53345	0,041138	54,57459
	(0,0000)	(0,8393)	(0,0000)

Source: Panel data processing results using EViews 13 (2025)

Based on Table 4, the Breusch–Pagan probability value in the cross-section of 0.0000 is smaller than the significance level of 0.05, so the null hypothesis is rejected. These results show that the Random Effect Model (REM) is more appropriate than the Common Effect Model (CEM) because there are differences in individual effects between firms that need to be taken into account in the estimation model. This indicates that the variation in the characteristics of each company contributes to changes in financial performance during the observation period, so the use of REM is considered to be more able to represent the data structure of the panel used in the study.

The test of selecting the panel data regression model was carried out to determine the most appropriate estimation approach in analyzing the relationship between the research variables. This process is carried out in stages through the Chow test, Hausman test, and Lagrange Multiplier (LM) test to compare three alternative models, namely the Common Effect

Model, Fixed Effect Model, and Random Effect Model. The results of the panel data regression model selection test are presented in Table 5 below.

Table 5. Panel Data Regression Model Selection Test Results

No	Types of Testing	Compared Models	Statistical Value	Probability	Verdict
1	Chow Test	Common Effect Model vs Fixed Effect Model	164,0255	0,0000	Fixed Effect Model
2	Hausman Test	Fixed Effect Model vs Random Effect Model	0,6525	0,7216	Random Effect Model
3	Uji Lagrange Multiplier (Breusch-Pagan)	Common Effect Model vs Random Effect Model	54,5335	0,0000	Random Effect Model

Source: Panel data processing results using EViews 13 (2025)

Based on the results of the test of the panel data regression model selection in Table 5, the model used in this study is the Random Effect Model (REM). The selection of the model is based on the results of the Hausman Test which shows that the probability value is greater than the level of significance, so that the Random Effect model is considered more suitable than the Fixed Effect Model. These results show that the differences in characteristics between firms have no relationship with independent variables in the model, so the Random Effect Model approach is considered to be able to provide a more efficient estimate in analyzing the influence of firm size and capital structure on the financial performance of banking firms during the observation period.

2. Classical Assumption Test Results

Classical assumption tests are carried out to ensure that the panel data regression model used meets the statistical requirements so that the estimated results obtained can be used appropriately in hypothesis testing. This test aims to find out whether the regression model is free from problems that can cause bias in the analysis results. In this study, classical assumption testing includes normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test.

a) Normality Test

Normality testing was performed to see the residual distribution pattern resulting from the panel data regression model. The results of this test are presented in the form of a residual histogram that shows the distribution of data and Jarque–Bera statistical values as a basis for decision-making in assessing whether the residual is normally distributed or not. An overview of the results of the normality test can be seen in Figure 4.1 below.

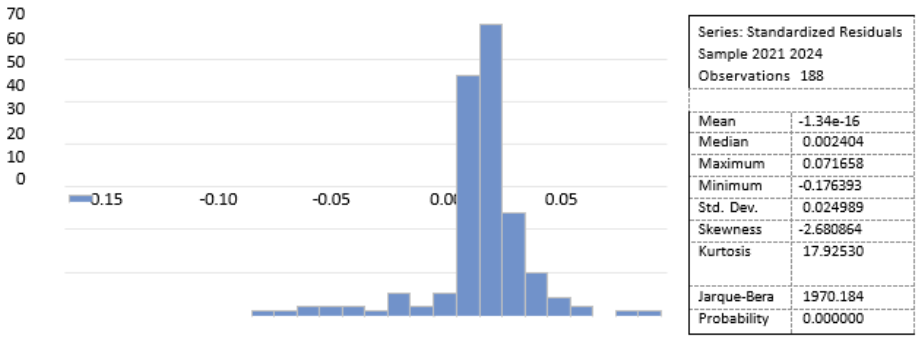

Figure 1. Normality Test Results

Source: Residual normality test results using EViews 13 (2025)

Based on Figure 1, the results of the normality test show that the Jarque–Bera probability value of 0.0000 is smaller than the significance level of 0.05, so the residual in the model is not completely distributed normally. This condition indicates that there are still distribution deviations influenced by the existence of extreme values or differences in data characteristics between companies during the observation period. However, in the analysis of panel data with a relatively large number of observations, these conditions are still tolerable because the residual distribution tends to be close to normal as the amount of data increases, so the regression model can still be used for subsequent testing.

b) Multicollinearity Test

Multicollinearity testing is performed to ensure that the independent variables in the regression model do not have a high correlation relationship with each other, so that the results of the regression coefficient estimation can be interpreted appropriately. The results of the multicollinearity test in this study are presented in the following Table 6:

Table 6. Multicollinearity Test Results

Variabel	SIZE	THE
SIZE	1	0,497288
THE	0,497288	1

Source: Correlation test results between independent variables using EViews 13 (2025)

Based on Table 6, the correlation value between company size (SIZE) and capital structure (DER) of 0.497288 indicates that the relationship between independent variables is at a moderate level and does not indicate a strong relationship. This condition shows that each variable has different characteristics in explaining changes in financial performance, so that there is no overlap of information in the regression model. With no indication of multicollinearity, the model used can produce a more stable coefficient estimate and is able to describe the influence of each independent variable on financial performance more clearly.

c) Heteroscedasticity Test

The heteroscedasticity test aims to find out whether there is an unevenness of residual variance in each observation. The results of the heteroscedasticity test can be seen in Figure 4.2:

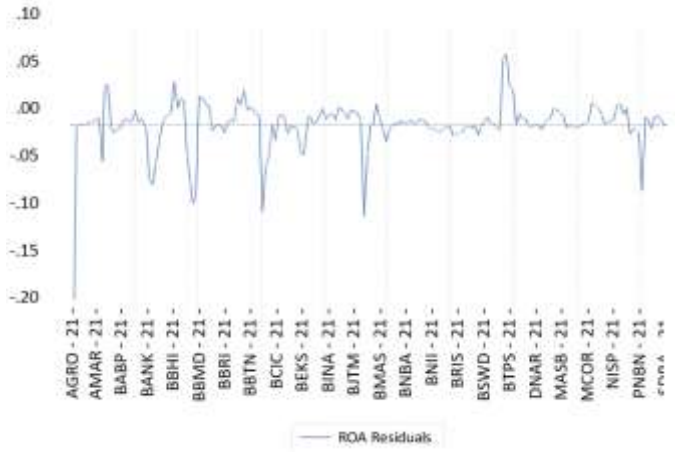

Figure 2. Heteroscedasticity (Residual ROA) Test Graph
Source: Heteroscedasticity test results using EViews 13 (2025)

Based on Figure 2, the residual distribution pattern is seen to be around the zero line and does not form a certain pattern that is systematic, either in the form of an increasing, decreasing pattern, or grouping at certain points. The relatively random residual spread suggests that the variation in disruptive errors at each observation tends to be stable. This condition indicates that the residual variance does not experience significant changes between observations, so the regression model does not show any symptoms of heteroscedasticity. With the fulfillment of these assumptions, the regression model is considered to have an adequate level of reliability to be used in advanced analysis.

d) Autocorrelation Test

Autocorrelation testing was performed to find out if there was a relationship between the residual in one period and the residual in the previous period in the regression model. A good regression model does not show an autocorrelation so that the results obtained can be used to explain the relationship between variables precisely. The test in this study was carried out using the Durbin–Watson value obtained from the results of the panel data regression estimation. The results of the autocorrelation test are presented in Table 7 below.

Table 7. Autocorrelation Test Results (Durbin–Watson Test)

Remarks	Value
Durbin–Watson Statistic	1,255164

Source: Panel data regression estimation results using EViews 13 (2025)

Based on Table 7, the Durbin–Watson value of 1.255164 indicates that the value is in a range that does not indicate a strong autocorrelation in the regression model. This shows that the residuals between observation periods are not systematically correlated with each other, so the regression model used has fulfilled one of the classical assumptions and can be used for further analysis in explaining the relationship between the study variables.

3. Panel Data Regression Analysis Results

Panel data regression analysis was conducted to determine the influence of company size (SIZE) and capital structure (DER) on financial performance proxied by Return on Assets (ROA). Based on the results of the previous model selection test, the model used in this study is the Random Effect Model (REM) because it is considered the most appropriate in explaining

the relationship between variables by considering the characteristics of the panel data used. Estimates were made using the Generalized Least Squares (GLS) method so that it was able to accommodate differences in characteristics between companies and changes during the observation period.

Table 8. Random Effect Model Data Regression Analysis Results

Variabel	Coeficin	Std. Error	t-Statistic	Prob.
C	-0,171103	0,057293	-2,986472	0,0032
SIZE	0,006013	0,001869	3,216416	0,0015
THE	-0,002765	0,000965	-2,866307	0,0046
Remarks			**Value**	
R-squared				0,066359
Adjusted R-squared				0,056266
F-statistic				6,574497
Prob (F-statistic)				0,001744
Durbin-Watson stat				1,255164

Source: Random Effect Model estimation results using EViews 13 (2025)

Based on the results of the panel data regression estimation, the regression equations obtained in this study are as follows:

$$ROAit = -0{,}171103 + 0{,}006013\ SIZEit - 0{,}002765\ DERit + \varepsilon it$$

The regression equation shows that the size of a company has a direct relationship with financial performance, while the capital structure shows the opposite relationship. The constant value of -0.171103 describes the condition of financial performance when the variables of company size and capital structure are at a fixed condition. The company size coefficient of 0.006013 shows that the increase in the size of the company as reflected in the total assets tends to be followed by an increase in the company's ability to generate profits through the utilization of its assets. On the other hand, the capital structure coefficient of -0.002765 shows that an increase in the proportion of debt use compared to own capital has the potential to reduce the company's profitability level.

The results of the partial testing showed that the size of the company had a positive and significant influence on financial performance, which was reflected in the probability value of 0.0015. This condition indicates that companies with larger assets tend to have better operational efficiency, wider access to funding, and higher ability to manage business risks so as to increase profitability. On the other hand, the capital structure shows a negative and significant influence with a probability value of 0.0046, which indicates that an increase in leverage levels without optimal asset management can increase financial expenses and reduce the company's ability to generate profits.

Simultaneously, the F-statistic probability value of 0.001744 indicates that the size of the company and the capital structure together have a significant effect on the company's financial performance. The Adjusted R-squared value of 0.056266 shows that the model's ability to explain variations in financial performance is still limited, so that changes in financial performance are not only influenced by these two variables, but also by other factors outside the model that were not analyzed in this study. This condition shows that the characteristics of the company and the funding policy are part of the internal factors that contribute to the change in the profitability of banking companies during the observation period.

4. Goodness of Fit Model Test Results

The goodness of fit test was carried out to assess the feasibility of the panel data regression model in explaining the relationship between company size and capital structure to financial performance proxied by Return on Assets (ROA). This test aims to ensure that the model used has adequate ability to explain data variations and is suitable for use as a basis for hypothesis testing. The evaluation of the feasibility of the model was carried out by looking at the F-statistical value, the coefficient of determination (R-squared and Adjusted R-squared), and the significance of independent variables in the regression model.

Based on the estimated results, the F-statistical probability value of 0.001744 indicates a value smaller than the significance level of 0.05. These results show that the regression model used is feasible and able to explain the influence of company size and capital structure on financial performance simultaneously. Thus, the two independent variables together have contributed to explaining changes in the financial performance of banking firms during the observation period.

The Adjusted R-squared value of 0.056266 indicates that the variation in financial performance that can be explained by the size of the company and the capital structure in the model is relatively limited, while the rest is influenced by other factors outside the research model. This condition shows that the financial performance of banking companies is not only influenced by the characteristics of company size and funding policies, but also by other factors such as operational efficiency, asset quality, macroeconomic conditions, as well as managerial policies that are not included in the research model. Thus, the regression model used has met the statistical feasibility and can be used in the process of interpreting research results.

5. Hypothesis Test Results

Hypothesis testing was carried out to determine the influence of company size and capital structure on financial performance, both partially and simultaneously. This test uses a t-test to assess the influence of each independent variable individually and an F test to see the influence of the two variables together in the regression model. A summary of the hypothesis test results is presented in Table 9 below.

Table 9. Hypothesis Testing Results

No		Hypothesis	Coeficin	t-Statistic	Probability	Remarks
1	H_1	Company Size (SIZE) → ROA	0,006013	3,221874	0,0015	Accepted (Significant)
2	H_2	Structure Modal (DER) → ROA	-0,002765	-2,861945	0,0046	Accepted (Significant)
3	H_3	FROM YOU SAYS → TWO (Simultaneous)	—	F-statistic = 6,470214	0,00174	Accepted (Significant)

Source: Hypothesis testing results based on panel data regression output using EViews 13 (2025)

Based on Table 9, the results of hypothesis testing can be described as follows:

1) The first hypothesis states that the size of the company affects the financial performance of the banking company. The test results showed that the size of the company had a positive and significant influence on financial performance, so the first hypothesis was accepted. This condition shows that companies with larger total assets tend to have better ability to

manage resources, gain access to funding, and achieve operational efficiency. A larger business scale allows companies to diversify their activities and better risk management, so that asset utilization becomes more optimal and has an impact on increasing profit-making capabilities.

2) The second hypothesis states that the capital structure affects the financial performance of banking companies. The test results show that the capital structure has a negative and significant effect on financial performance, so the second hypothesis is accepted. This suggests that increased debt utilization reflected in the DER ratio can increase the interest expense and financial risk of companies. If the use of debt is not balanced with productive asset management, the profits obtained by the company tend to decrease, so that profitability becomes lower.
3) The third hypothesis states that the size of the company and the capital structure simultaneously affect the financial performance of banking companies. The test results showed that the two variables together had a significant influence on financial performance, so the third hypothesis was accepted. This shows that the company's financial performance is not only influenced by the size of the assets owned, but also by the funding policies implemented by the company. The combination of efficient asset management and proper funding composition is an important factor in determining the level of profitability of a banking company.

The test results show that the financial performance of banking companies is influenced by the internal characteristics of the company, in particular the size of the company and the capital structure used in operational activities. Companies with larger asset scales tend to have better ability to manage resources and improve efficiency, while suboptimal use of debt has the potential to suppress profitability.

The Influence of Company Size on Financial Performance

The test results show that the size of the company has a positive and significant effect on the financial performance proxied by Return on Assets (ROA). These findings indicate that companies with larger total assets tend to have a better ability to utilize the resources they have to generate profits. A larger scale of business allows companies to achieve operational efficiency, expand business activities, and improve risk management capabilities, thereby having an impact on increasing the profitability of banking companies during the observation period.

The findings are in line with research conducted by Attatur et al. (2024) which states that company size has a positive influence on bank profitability, because companies with larger assets have a wider operational capacity and better ability to generate revenue. The same results were also found by Yuan et al. (2023) who showed that bank size is one of the important factors in determining the level of Return on Assets, where companies with a larger scale are able to take advantage of business opportunities more optimally than companies with a smaller size.

In addition, the results of this study are also consistent with the findings of Dahal et al. (2024) who stated that company size is related to improving financial performance because large companies tend to have wider access to funding and better risk management capabilities. This condition allows companies to allocate assets more productively and maintain income stability. In the banking sector, the size of total assets reflects the bank's ability to raise and

distribute funds, so an increase in the size of a company is often followed by an increase in profit-making ability.

However, the positive influence of company size on financial performance is inseparable from management's ability to manage assets effectively. Asset growth that is not followed by improved operational efficiency has the potential to reduce profitability. Therefore, the results of this study reinforce the view that the size of the company can be a factor that supports the improvement of financial performance, as long as the company is able to optimize the utilization of resources and maintain operational efficiency in a sustainable manner.

The Influence of Capital Structure on Financial Performance

The test results show that the capital structure has a negative and significant effect on financial performance proxied with Return on Assets (ROA). These findings show that the increase in debt use reflected in the Debt to Equity Ratio (DER) tends to reduce the profitability level of banking companies. This condition indicates that the increase in liability burden and funding costs arising from the use of debt can reduce the company's ability to generate profits, especially if it is not balanced with productive asset management and adequate operational efficiency.

The results of this study are in line with the research of Dahal et al. (2024) which found that an increase in the debt ratio has a negative effect on banking profitability because high leverage increases financial risks and interest expenses that companies must bear. Similar findings were also put forward by Le and Nguyen (2020) who stated that the relationship between capital structure and profitability is not always unidirectional, where the increase in external funding needs can cause greater financial costs so that it has the potential to suppress the company's financial performance under certain conditions.

On the other hand, these results are different from the research of Mehzabin et al. (2023) which shows that the use of debt at a certain level can increase profitability if companies are able to manage operational costs and funding risks effectively. The difference in findings shows that the effectiveness of the capital structure is highly dependent on the company's condition, the quality of asset management, and the ability of management to maintain a balance between the benefits of using debt and the risks involved.

In the context of banking companies, capital structure has an important role because operational activities are closely related to the management of funds and liabilities. A high level of leverage without an improvement in asset quality and operational efficiency can reduce the company's ability to generate profits. Therefore, the results of this study reinforce the view that non-optimal funding policies have the potential to suppress financial performance, so companies need to maintain a balanced funding composition so that financial risks remain under control and profitability can be maintained.

The Influence of Company Size and Capital Structure on Financial Performance

The test results show that the size of the company and the capital structure simultaneously have a significant effect on the financial performance proxied by Return on Assets (ROA). This shows that the financial performance of a banking company is not only determined by the amount of assets owned, but also by how the company manages funding sources in carrying

out operational activities. The combination of business scale and funding policy is an interrelated factor in determining the company's ability to generate profits optimally.

The larger size of the company reflects the company's wider operational capacity as well as the company's ability to utilize resources more efficiently. Companies with large assets tend to have better access to funding, a higher level of business diversification, and the ability to reduce operational risks. These conditions allow companies to achieve economies of scale that ultimately contribute to increased profitability. These findings are in line with research by Attatur et al. (2024) and Yuan et al. (2023) which shows that company size has a role in improving financial performance through asset utilization optimization.

On the other hand, the capital structure also plays a role in determining the level of financial performance of the company. The use of debt in certain proportions can increase financing capacity and support business expansion, but increased leverage that is not balanced by effective asset management can create financial burdens that depress a company's profits. The results of this study are in line with the findings of Dahal et al. (2024) and Mehzabin et al. (2023) who stated that capital structure has a complex relationship to profitability, as it relates to the balance between potential profits and financial risks.

The simultaneous influence between the size of the company and the capital structure shows that the two variables cannot be separated in explaining the financial performance of banks. Companies with a large business scale have a greater opportunity to determine the optimal funding policy, but these decisions still require good risk management so as not to reduce financial efficiency. This finding is also in line with the research of Le and Nguyen (2020) who explained that the effectiveness of the capital structure is highly dependent on the characteristics of the company and the ability of management to manage its resources.

The results of this study show that the improvement in banking financial performance is influenced by the balance between asset management and funding policies implemented by the company. Companies that are able to efficiently manage asset growth and maintain funding structures at a proportionate level tend to have better financial performance. Therefore, the integration between the management of company size and capital structure is an important factor in supporting the stability and sustainability of financial performance in the banking industry.

Research Implications

The results of this study provide theoretical and practical implications in the field of banking finance, where theoretically the findings that company size has a positive effect on financial performance and capital structure have a negative effect strengthen agency theory and trade-off theory which emphasizes the importance of asset management and optimal funding policies in increasing profitability and managing company risk. In addition, this study enriches the empirical evidence regarding the relationship between company size, capital structure, and financial performance in the Indonesian banking sector by using a more up-to-date research period. Practically, the results of this study provide guidelines for banking management in formulating more efficient asset management strategies and funding structures, become a consideration for investors in assessing company performance and risk, and become an input for regulators in formulating policies that support the stability and sustainability of the financial system.

CONCLUSION

Based on the results of the analysis and discussion, it can be concluded that the size of the company has a positive and significant effect on the financial performance of banks proxied by Return on Assets (ROA), while the capital structure measured by the Debt to Equity Ratio (DER) has a negative and significant effect, thus showing that companies with larger assets tend to be better able to increase profitability, while excessive use of debt can reduce performance Finance. Simultaneously, these two variables have proven to have a significant effect on the financial performance of banking companies on the Indonesia Stock Exchange for the 2021–2024 period, which confirms that a balance between asset management and funding policies is very important in increasing profitability. Therefore, banking companies are advised to improve the efficiency of asset management and control the funding structure optimally, investors can use the results of this research as a consideration in making investment decisions, and the next researcher is expected to add other variables and expand the object and period of the research in order to obtain more comprehensive results.

REFERENCES

Aprianti, & Sidiq. (2022). Analisis pengaruh rasio keuangan perbankan terhadap profitabilitas pada bank umum konvensional di Indonesia.

Asy'arie, Suriana, & Agustin. (2022). Analisis rasio profitabilitas untuk menilai kinerja keuangan pada PT Bank Rakyat Indonesia (Persero) periode 2015– 2021.

Attatur, P., Gymyastiar, S., & Lestari, D. (2024). Determinants of profitability in commercial banks listed on the Indonesian Stock Exchange. Coastal Education and Research Foundation. https://doi.org/10.55549/jmr.v1i2.34

Baltagi, B. H. (2021). Econometric analysis of panel data (6th ed.). Springer.

Brealey, R. A., Myers, S. C., & Allen, F. (2017). Principles of corporate finance (12th ed.). McGraw-Hill Education.

Calvo-Pardo, H., Mancini, A. L., & Olmo, J. (2020). Neural network models for empirical finance.

Dahal, R. K., Joshi, N., Shakya, S., & Joshi, T. (2024). Impact of firm size and capital structure on the profitability of Nepalese commercial banks.

Dimitropoulos, P., & Koronios, K. (2021). Board gender diversity and cash holdings: Empirical evidence from the European sport and leisure sector. International Journal of Financial Studies, 9(4), 56. https://doi.org/10.3390/ijfs9040056

Ghozali, I. (2021). Aplikasi analisis multivariate dengan program IBM SPSS 26 (Edisi 10). Badan Penerbit Universitas Diponegoro.

Haddad, C., & Hornuf, L. (2023). How do fintech start-ups affect financial institutions' performance and default risk? The European Journal of Finance, 29(15), 1543–1561. https://doi.org/10.1080/1351847X.2023.2202950

Le, T. D. Q., & Nguyen, D. T. (2020). Capital structure and bank profitability in Vietnam: A quantile regression approach. Journal of Economic Development, 27(1), 68–82.

Mehzabin, S., Shahriar, S., Hoque, A., Wanke, P., & Azad, A. S. M. S. (2023). The effect of capital structure, operating efficiency and non-interest income on bank profitability: New evidence from Asia. Asian Journal of Economics and Banking, 7(1), 25–44.

Mubarok, Sauqi, Zahra, & Putra. (2024). Determinants of profitability in conventional banks: A review of financial factors.

Nazwa, Purba, Simanjuntak, & Karo-Karo. (2024). DER dan CR terhadap ROA pada perbankan di BEI periode 2020–2022.

Nguyen, N. K. Q. T. (2021). Determinants of bank performance in Vietnamese commercial banks: An application of the CAMELS model. Cogent Business & Management, 8(1), 1979443. https://doi.org/10.1080/23311975.2021.1979443

Nguyen, Nguyen, Le, & To. (2023). The impact of bank competition on bank stability in Vietnam: The moderating role of shadow banking. Cogent Business & Management.

Paddery, Meriana, Hermelinda, & Niarti. (2021). Analisis rasio profitabilitas pada bank syariah di Indonesia pada masa transisi pandemi Covid-19. Jurnal Akuntansi & Keuangan Unja, 6(4), 1–12. https://doi.org/10.22437/jaku.v6i4.17415

Pham, T. H. T., Hoang, T. H., & Pham, H. D. (2022). The impact of capital structure on bank profitability: Evidence from Vietnam. International Journal of Financial Studies, 10(3), 57. https://doi.org/10.3390/ijfs10030057

Pratiwi, Rakhimah, Nugraha, & Oktafia. (2024). Analisis return on asset (ROA): Tinjauan literatur dan implikasinya dalam pengukuran kinerja keuangan perbankan.

S&P Global. (n.d.). EViews (Version 13) [Computer software]. S&P Global. Scott, W. R. (2016). Financial accounting theory (7th ed.). Pearson.

Sutjipto, & Hadi. (2024). Investment in intellectual capital and its impact on the profitability of Islamic banks in Indonesia. International Journal of Management, Entrepreneurship, Social Science and Humanities, 7(2), 161–179. https://doi.org/10.31098/ijmesh.v7i2.2429

Trisnawati, Apollo, Siswanti, & Kurniasih. (2025). Determinants of bank financial performance in Indonesia: The role of governance, capital structure, firm size, and intellectual capital. TEC Empresarial, 20(2), 1017–1034.

Wijayani. (2023). Faktor-faktor yang mempengaruhi profitabilitas bank: Studi pada perbankan swasta di Indonesia. Ganaya: Jurnal Ilmu Sosial dan Humaniora, 6(3), 430–441. https://doi.org/10.37329/ganaya.v6i3.2874

Yuan, J., Gazi, M. A. I., Harymawan, I., Dhar, B. K., & Hossain, M. I. (2023). Profitability determining factors of banking sector: Panel data analysis of commercial banks in South Asian countries. Journal of Economic and Administrative Sciences