



## The Effect Of Financial Performance, Good Corporate Governance, Asset Structure, Dividend Policy On Debt Policy

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### Abstract

This study aims to determine the variables affecting the debt-to-equity ratio (DER) in manufacturing companies listed on LQ-45 in 2017–2022. The independent variables used are return on assets (ROA), return on equity, managerial ownership (KM), institutional ownership (KI), the ratio of fixed assets to total assets (SA), and the dividend payout ratio (DPR). The method used in this research is quantitative using multiple regression statistical methods, and the data used is secondary data. The results of this study show that the effect of return on assets (ROA) on DER is positive and significant, the effect of managerial ownership (KM) on DER is positive and significant, the effect of fixed assets to total assets ratio (SA) on DER is negative and significant, and the effect of dividend payout ratio (DPR) on DER is positive and significant. At the same time, other variables have no effect. The implications of this study can help stakeholders, including investors, analysts, and policymakers, better understand the factors influencing funding decisions in this vital manufacturing sector.

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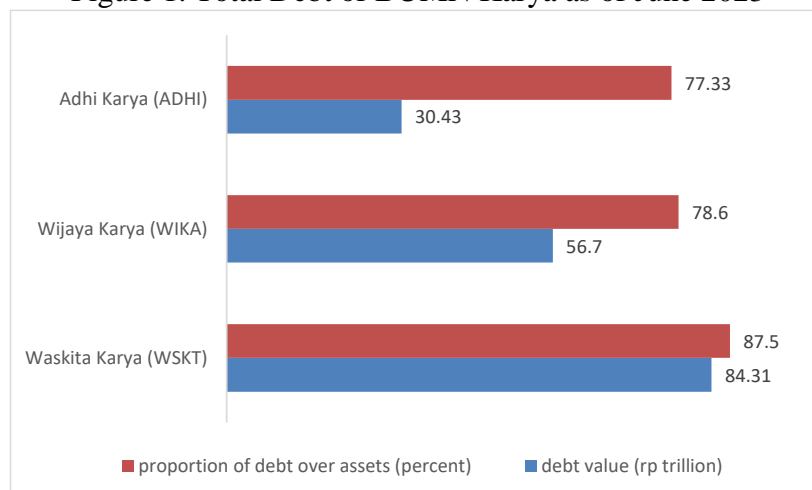
## INTRODUCTION

In today's business, establishing a small or large-scale company primarily aims to maximize profits and minimize losses. Furthermore, one way to get optimal profits is through cash flow management, effective budgeting, cost control, and wise investment so that sound financial management allows companies to support daily operations, face financial risks, and invest in growth opportunities (Fauziyyah et al., 2021; Manurung et al., 2022; Sponerova et al., 2021). In addition, to run their operations, companies need capital that can come from internal and external sources. Capital sourced from internal

sources can be in the form of retained earnings and operational efficiency, while capital sourced from external sources can be in the form of debt and the issuance of new shares (Allini et al., 2018). Choosing the right source of capital is crucial for the continuity and growth of the company. These decisions should be made carefully, considering various factors, including the cost of capital, risk, and potential return on investment. If the use of capital, especially from external sources such as debt, is not carried out with the right strategy, it can have a negative impact on the company's finances. Therefore, consideration is needed that debt will increase the interest costs to be paid so that it can reduce net profit, so the management of the company must ensure that the rate of return from the use of borrowed funds is higher than the cost of debt (Tejos & Larre, 2021; Utami et al., 2022).

The phenomenon of companies that are not optimal in choosing sources of capital for their company operations occurs in several companies created by state-owned enterprises (SOEs-BUMN), as shown in the figure below:

Figure 1. Total Debt of BUMN Karya as of June 2023



Source: Ahdiat (2023)

BUMN karya is a term for state-owned enterprises engaged in construction. Furthermore, according to Figure 1 above, it can be seen that the portion of debt from BUMN Karya in Indonesia compared to its assets is above 50%, consisting of BUMN Adhi Karya by 77.3%, BUMN Wijaya Karya by 78.6% and BUMN Waskita Karya by 87.5%. The high portion of the debt to assets in state-owned enterprises in Indonesia, such as Adhi Karya, Wijaya Karya, and Waskita Karya, shows significant financial leverage. Leverage or the use of debt in a company's capital structure can increase potential returns to shareholders but also increase financial risk. In the context of SOEs with a debt-to-asset ratio exceeding 50%, there are several important implications to consider, namely that significant interest payments can suppress the company's liquidity significantly if operating income fluctuates so that companies need to ensure that they have sufficient operating cash flow to meet this interest obligation.

Companies with a high return on assets (ROA) and return on equity (ROE) may be more selective in accessing external funding. They may finance a project or expansion through retained earnings or issuing new equity instead of increasing debt. An increase in ROA indicates that the company managed to generate higher revenue from the assets it owns (Menicucci & Paolucci, 2016; Nugroho et al., 2022). This can indicate better operational efficiency and effective resource management so that with

higher revenues relative to its assets, the company can generate retained earnings better. These retained earnings can fund operations or expansions, reducing the need for external capital and lowering the debt-to-equity ratio (DER). In addition, an increase in return on equity (ROE) indicates that the company can generate income more significantly than its capital, including shareholders' equity. This can be interpreted as the effectiveness of the company in using shareholder investment to generate profits so that with a higher ROE, the company can rely more on the income generated for financing rather than having to rely on external sources of funds with interest expense (Lusiana, 2020; Pasaribu & Nugroho, 2023; Purba et al., 2023).

In addition, managerial ownership affects the debt-to-equity ratio (DER); higher managerial ownership tends to align more with shareholder interests. Managers who own shares are likelier to make decisions that maximize long-term company value, including optimal capital structure management (Fahlenbrach & Stulz, 2009; Ruan et al., 2009). On the other hand, institutional ownership, which refers to shares of companies owned by institutional investors such as pension funds, insurance companies, investment funds, and banks, also has the potential to affect the debt-to-equity ratio (DER) because institutional investors are often actively involved in overseeing company management and can encourage the adoption of healthier financial practices, including the use of efficient leverage (Hikmah et al., 2019). A company's asset structure is vital in determining its debt-to-equity ratio (DER) proxy. Asset structure refers to the composition of a company's current and fixed assets. This study uses the ratio of fixed assets to total assets, which refers to research conducted by Matemilola & Ahmad (2015) and Alipour et al. (2015) on companies with a high proportion of fixed assets (such as property, plant, and equipment) tend to have higher DER because fixed assets can be used as collateral for debt, allowing companies to access financing with more favorable conditions.

On the other hand, dividend policy, often measured by the dividend payout ratio (DPR), can influence a company's debt policy, which is proxied through the debt-to-equity ratio (DER). DPR is a percentage of net income paid to shareholders as dividends. At the same time, DER measures the level of financial leverage of a company by comparing total debt to shareholders' equity so that if a high dividend payment policy can potentially reduce the cash available to the company, which has the effect of limiting the company's ability to finance operations and investments through internal sources (Maldajian & El Khoury, 2014; Malini & Fitratama, 2020). Therefore, these conditions encourage companies to increase debt to increase DER.

As for this study, manufacturing companies listed in the LQ45 index are the object of research for 2017-2022 to be the right choice, especially in understanding the dynamics of using external capital in their business activities. The LQ45 Index itself is an index that measures the price performance of 45 stocks selected based on liquidity and market capitalization on the Indonesia Stock Exchange (IDX). Companies listed on LQ45 generally have better access to capital markets, allowing them to more easily raise funds by issuing new shares or debt instruments. Studies of these companies can provide insight into how access to capital markets affects funding decisions, and the manufacturing sector generally requires significant investments in fixed assets such as plants, machinery, and equipment. To finance these expansions and asset purchases, companies often rely on external capital, both in debt and equity.

Referring to the above phenomena and several variables that have the potential to affect DER, the problem formulations are as follows:

- Does return on assets (ROA) affect the debt-to-equity ratio (DER)?

- Does return on equity (ROE) affect the debt-to-equity ratio (DER)?
- Does managerial ownership (KM) affect the debt-to-equity ratio (DER)?
- Does institutional ownership (KI) affect the debt-to-equity ratio (DER)?
- Does the fixed assets to total assets (SA) ratio affect the debt-to-equity ratio (DER)?
- Does the dividend payout (DPR) affect the debt-to-equity ratio (DER)?

Following the above phenomenon, this study aims to provide valuable insights into funding practices in the manufacturing sector, including how companies manage their capital structures in facing operational and strategic challenges. In addition, the implications of the results of this study can help stakeholders, including investors, analysts, and policymakers, better understand the factors influencing funding decisions in this critical manufacturing sector.

## LITERATURE REVIEW

Agency theory, which describes the relationship between owners (principals) and managers (agents) of a company, is powerfully relevant in research on the Debt-to-equity ratio (DER). This relationship is closely related to how funding decisions and capital structure are influenced by potential conflicts between owners and managers and how control mechanisms can be utilized to reduce the misalignment of interests (Liu et al., 2016; Tripathi, 2019). Agency theory explains that managers (agents) with operational control over the company may have different preferences from owners (principals) regarding capital structure (Yazdanfar & Öhman, 2015; Zunckel & Nyide, 2019). On the other hand, debt can act as an agency control mechanism. Through regular interest payment obligations, the existence of debt will force managers to be disciplined in managing the company's cash (Zhang, 2009). It may restrict them from investing funds in less profitable or high-risk projects. Therefore, this study uses agency theory as the main theoretical framework to analyze the factors influencing companies' debt-to-equity ratio (DER), offering an exciting perspective on corporate finance. Agency theory addresses the conflicts that may arise between a company's shareholders (principal) and management (agent), where management may not always act in the best interest of shareholders, particularly concerning financial decision-making such as the use of debt and dividend policy (D'Mello et al., 2001). Through this perspective, DER can be seen as a critical instrument in managing the company's operational and financial risks and minimizing agency conflicts. The factors that have a potential impact on DER are as follows:

- Profitability aspect: The agency theory suggests that more profitable companies may have a lower incentive to take on debt as they can fund operations and expansions through profits generated. Higher profitability also signals management's efficiency in utilizing the company's resources, which may reduce the need for external financing and, therefore, lower DER (Alipour et al., 2015).
- Aspects of Share Ownership: Managerial and institutional ownership can influence debt policy. Agency theory suggests that managers who own shares are likelier to act in shareholders' interest by minimizing risky debt use (Jادیyappa et al., 2020).
- Asset Structure Aspects: Asset structure, especially the proportion of fixed assets to total assets, can affect a firm's financial flexibility and ability to meet its obligations. Furthermore, agency theory recognizes that firms with higher fixed assets may require a more conservative approach to debt to avoid liquidity and solvency problems (Pontoh, 2017).

- Aspects of Dividend Policy: Dividend policy, represented by the Dividend Payout Ratio (DPR), can be a signal from management to shareholders regarding the company's financial stability and prospects. According to agency theory, a high DPR may indicate that management is committed to returning value to shareholders, reducing the need and desire to increase DER (Le & Le, 2017).

Furthermore, the development of hypotheses in this study is as follows, drawing from some of the aforementioned literature reviews:

### **Does ROA affect DER**

Return on assets (ROA) is an essential financial indicator in assessing a company's financial health because it shows how effectively it manages its assets to generate profits. Thus, a high ROA can indicate that the company can generate more significant revenue from its assets, indicating that management is performing well. Furthermore, according to Gaud et al. (2007) and Tuškan & Stojanović (2016), companies with a high ROA have more profits that can be used to finance operations and investments, thus reducing dependence on external financing such as debt. This strategy is preferred because it can reduce financial risk, especially in volatile market conditions or high loan interest rates. Thus, a high ROA can help companies reduce dependence on debt because the profits generated can be used to finance investment or operational needs to lower debt the debt-to-equity ratio (DER), which signifies a healthier capital structure and lower financial risk. Therefore, the hypothesis in this study is:

H01: ROA no affects on DER

Ha1: ROA affects DER

### **Does ROE affect DER**

ROE measures management's effectiveness in generating profits from each unit of equity invested by the company's owners. A high ROE indicates that the company can generate significant returns from investments made by shareholders, so it is often considered a sign of efficient and effective management by management. Further, a high ROE indicates that the company can generate sufficient returns from the invested equity. Companies can use higher profits for operations and investments rather than relying on debt financing (Dwaikat et al., 2021). As a result, this could allow the company to maintain or even reduce its debt levels, which directly impacts the reduction of DER, so the hypothesis in the study is as follows:

H02: ROE no affects on DER

Ha2: ROE affects DER

### **Does Managerial Ownership affect DER**

Managerial ownership in a company does have a significant influence on strategic decisions, including in terms of financing and managing capital structures. Managerial ownership refers to the proportion of a company's shares or equity that its senior managers and executives hold. Therefore, managerial ownership provides incentives to managers to improve company performance. When the company generates better earnings, the shares' value increases, directly benefiting the shareholder manager (Margaretha & Firzitya, 2015). This could encourage management to seek expansion

and growth through projects financed with external funds, increasing revenues and profits in the long run.

Further, along with the expansion of the company and the need for external funds, the company's DER may increase due to debt issuance. However, if the expansion is successful and results in a significant increase in revenue, the higher returns could be used to pay down debt or further investments, which could ultimately raise equity and possibly lower DER in the long run. Furthermore, the hypothesis in this study is as follows:

H03: Managerial ownership has no affects on DER

Ha3: Managerial ownership affects DER

### **Does Institutional Ownership affect DER**

Institutional ownership in the context of a company refers to shares or equity held by institutional investors such as pension funds, insurance companies, mutual funds, and other financial institutions. Such institutions' ownership often significantly impacts corporate policies and strategies, including decisions regarding capital structure and debt use. Institutional investors tend to be conservative compared to individual investors because of their responsibility in managing funds on behalf of third parties. They are more likely to emphasize financial stability and prudent risk management. Therefore, companies with high levels of institutional ownership may be more cautious about taking on debt, significantly if it can add to high-interest expenses and risks increasing financial difficulties (Elyasiani et al., 2010; Joher et al., 2011).

Further, the interest expense of significant debt can reduce net income. Hence, shareholders, including institutional investors, are often very concerned with the impact of interest expense because it can directly affect their investment return. This encourages companies to prioritize using internal capital or look for cheaper sources of financing. Thus, the hypothesis in this study is as follows:

H04: Institutional ownership has no affects on DER

Ha4: Institutional ownership affects DER

### **Does the ratio of fixed assets to total assets affect DER**

The ratio of asset structure, specifically the ratio of fixed assets to total assets, provides essential insights into a company's asset composition and how those assets are used to support its operations and growth strategies. Fixed assets, such as property, plant, and equipment, are long-term investments that are not easily converted into cash in the short term. In this context, the composition of more considerable assets concentrated in fixed assets can influence management decisions related to capital structure and debt use (debt-to-equity ratio-DER) (Mota & Moreira, 2017). Further, companies with a high proportion of fixed assets may be more cautious in taking on debt because fixed assets tend to have lower liquidity than current assets. In a tight financial situation, a company may face difficulty converting its assets into cash to meet short-term obligations, including debt repayment. Therefore, management may maintain a lower DER to maintain financial flexibility and reduce risk. Furthermore, the research hypothesis is as follows:

H05: The ratio of fixed assets to total assets has no affects on DER

Ha5: The ratio of fixed assets to total assets affects DER

### Does the DPR affect DER

Dividend Payout Ratio (DPR) is a ratio that shows the percentage of net profit paid to shareholders in the form of dividends compared to the total net income generated by the company. High dividend payments relative to net income can signal that the company has substantial cash flow and solid financial performance, allowing it to return value to shareholders without relying too heavily on debt. A high DPR may indicate that the company prioritizes returning value to shareholders and managing its resources efficiently (Sharma & Bakshi, 2019). This can reflect management's confidence that the company can finance operations and expansion through operating cash flow and internal investment without the need to take on additional debt that will increase DER, so the hypothesis is as follows:

H06: The dividend payout ratio has no effects on DER.

Ha6: The dividend payout ratio affects DER.

## METHODOLOGY

The methodological approach in this study deals with the relationship between certain factors and debt-equity ratio (DER) in manufacturing companies listed in the LQ-45 index during the period 2017-2022. Furthermore, quantitative methods using secondary data allow systematic and objective analysis of patterns that may arise from historical data (Napitupulu et al., 2020; Oktris et al., 2022). The data in this study are secondary data sourced from the financial statements of manufacturing companies in the LQ-45 index, providing a credible and accessible database for analysis. Furthermore, the period used in this study is 2017-2022, allowing this study to analyze market dynamics and changes in economic conditions that may affect the company's capital structure. The secondary data used in this study are 108 of 18 manufacturing companies from 2017 to 2022 (six years) listed on LQ-45 and disclose all variables used in their financial statements.

Furthermore, the dependent variable in this study, debt-to-equity ratio (DER), is used as the dependent variable, which shows the company's choice of capital structure and level of financial leverage. The formulation of DER is as follows:

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}} \quad (1)$$

In addition, the formulas of the independent variables used in this study are as follows:

- Return on asset (ROA):

$$ROA = \frac{\text{Return}}{\text{Total Asset}} \quad (2)$$

- Return on equity (ROE):

$$ROE = \frac{\text{Return}}{\text{Total Equity}} \quad (3)$$

- Managerial ownership (KM):

$$KM = \frac{\text{Managerial ownership}}{\text{Total outstanding shares}} \quad (4)$$

- Institutional ownership (KI):

$$KI = \frac{\text{Institutional ownership}}{\text{Total outstanding shares}} \quad (5)$$

- The ratio of fixed assets to total assets (SA):

$$SA = \frac{\text{Fix assets}}{\text{Total assets}} \quad (6)$$

- Dividend payout ratio (DPR)

$$DPR = \frac{\text{Dividend}}{\text{Return}} \quad (7)$$

Furthermore, the statistical analysis method in this study uses multiple regression, which aims to:

- Knowing the causal relationship between the independent variables and DER.
- Know the strength and direction of the relationship (positive or negative).
- Know the statistical significance of the relationship, which indicates whether the pattern found in the sample can be generalized to a larger population.

Based on this, the multiple regression equation formula in this study is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon \quad (8)$$

Y: Debt-to-equity ratio (DER)  
X1: Return on asset (ROA)  
X2: Return on equity (ROE)  
X3: Managerial ownership (KM)  
X4: Institutional ownership (KI)  
X5: Ratio of fixed assets to total assets (SA)  
X6: Dividend payout ratio (DPR)

Before analyzing the hypothesis and interpreting the results in the context of agency theory, a regression assumption test is carried out, which includes the normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test. In addition, the statistical software used is IBM for SPSS version 26.

## RESULTS AND DISCUSSION

### Results

In this study, multiple regression methods were used, and two main test groups were carried out: the assumption and hypothesis tests. Both of these tests have an essential role in ensuring the validity and reliability of research results

### Assumption Test

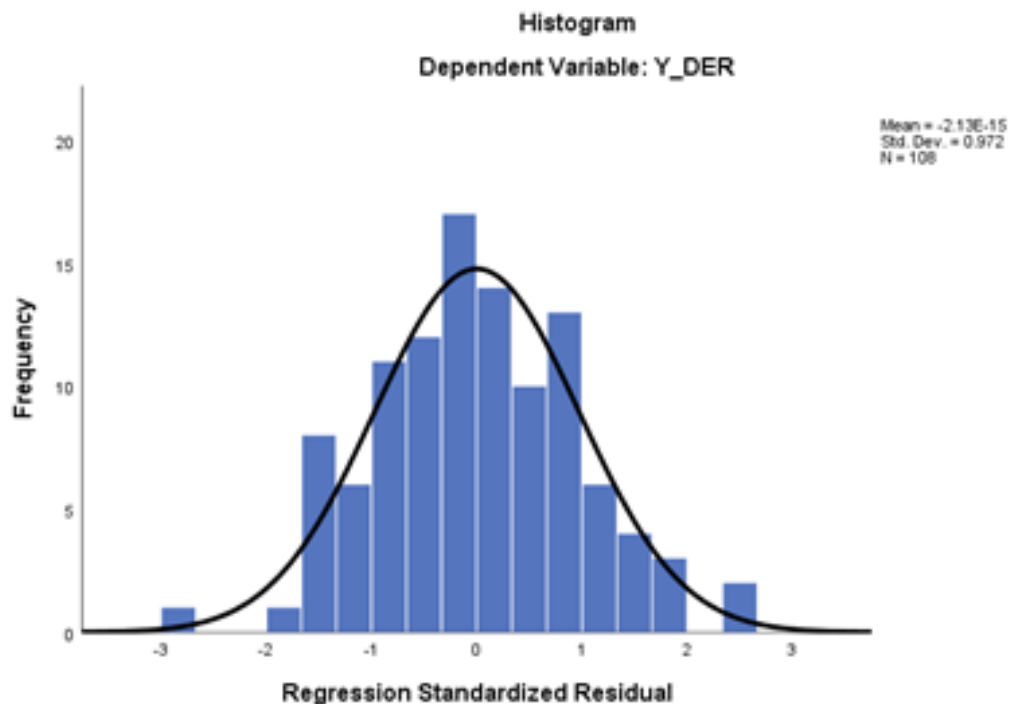
The assumption test in this study includes several tests, namely normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test:

- **Normality Test**

The normality test in this study uses the histogram shown in the figure below:



Figure 2. Normality Test Results



*Source: Data processing using SPSS version 26*

Referring to Figure 2 above, the data in this study are normally distributed, as evidenced by the residual histogram resembling a bell's shape. The normal distribution of residues is one of the critical assumptions in linear regression, which ensures that parameter estimation is unbiased and efficient (Schmidt & Finan, 2018). Furthermore, assuming residual normality is met in this study, hypothesis testing regarding regression coefficients becomes more valid.

#### ▪ Multicollinearity Test

The multicollinearity test is an essential step in regression analysis to determine whether there is a high correlation between the independent variables in the model. A high correlation between independent variables can cause multicollinearity problems, resulting in difficulty in determining the individual effect of each independent variable on the dependent variable. Multicollinearity can reduce the accuracy of regression coefficient estimates, making them unstable and difficult to interpret. Therefore, a regression model is considered good if no significant correlation exists between the independent variables (Krasniqi-Pervetica & Ahmeti, 2022). Furthermore, to detect multicollinearity in this study, two metrics that are often used are tolerance and Variance Inflation Factor (VIF). Tolerance measures the extent to which other independent variables in the model can explain an independent variable. In general, a tolerance value below 0.1 is considered to indicate serious multicollinearity. Meanwhile, VIF is the opposite of tolerance, where a VIF more significant than 10 indicates multicollinearity, which can cause problems. The results of the multicollinearity test data processing are as follows:

Table 1. Multicollinearity Test Results

	Model	Collinearity Statistics	
		Tolerance	VIF
1	X1_ROA	0.335	2.987
	X2_ROE	0.423	2.364
	X3_KM	0.899	1.112
	X4_KI	0.866	1.155
	X5_SA	0.638	1.568
	X6_DPR	0.927	1.079

Source: Data processing using SPSS version 26

Following Table 1 above, it is known that no variables in this study have tolerance values below 0.1 and VIFs above 10. Hence, the regression model in this study is free from multicollinearity problems. This is important because it shows that the independent variables in the study have a relatively low correlation, which allows for a more accurate and stable interpretation of the regression coefficient. Therefore, this research model has better predictability because each independent variable contributes uniquely to the dependent variable.

#### ▪ Autocorrelation Test

In addition, the autocorrelation test is an essential step in regression analysis to ensure that confounding errors (residuals) in one time period are not correlated with confounding errors in the previous time (Martellosio, 2010). Autocorrelation often occurs in time series data where successive observations can be correlated. One of the most common methods of detecting autocorrelation, particularly first-order autocorrelation, is to use the Durbin-Watson test. This test produces a value that ranges between 0 and 4, whereas if the Durbin-Watson test results produce a value close to 2, it indicates the absence of autocorrelation. The results of the autocorrelation test data processing are as follows:

Tabel 3. Hasil Uji Autokorelasi

Model	R	R Square	Durbin-Watson
1	.594 <sup>a</sup>	0.353	1.846

Source: Data processing using SPSS version 26

Based on Table 3 above, where the Durbin-Watson value is 1.846, which is close to the value of 2, then in this research data, there is no significant evidence of autocorrelation in the regression model, indicating that the model has good predictive ability because the assumption that residuals are independent of time has been fulfilled.

#### ▪ Heteroscedasticity test

The heteroscedasticity test aims to determine whether the variance of the errors (residuals) in the regression model varies across different independent variable levels or along the prediction range. Heteroscedasticity occurs when the variance of the errors is not constant, which can cause the standard error estimates to be biased and, consequently, hypothesis testing on the coefficients to be inaccurate. One of them is the Glejser Test, which is one of the methods used to detect the presence of heteroscedasticity in the regression model where, in general, analyzing this test is

by analyzing the interpretation approach of the significance value (Sig.), namely, if the significance value is more significant than 0.05, it means that there is no significant evidence of heteroscedasticity. The model is considered homoscedastic. The results of the heteroscedasticity test in this study are as follows:

Table 4. Heteroscedasticity Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.53	1.726		1.466	0.146
X1_ROA	0.023	0.075	0.051	0.31	0.758
X2_ROE	0.028	0.102	0.041	0.278	0.781
1 X3_KM	0.061	0.034	0.18	1.779	0.078
X4_KI	-0.34	0.391	-0.09	-0.868	0.387
X5_SA	-0.001	0.046	-0.002	-0.014	0.989
X6_DPR	-0.077	0.078	-0.098	-0.985	0.327

Source: Data processing using SPSS version 26

By Table 4 above, it can be seen that all variables in the study have a significance value above 0.05 in the heteroscedasticity test using the Glejser test so that it can be concluded that the data in this study are homoscedastic, that is, the variance of the residuals in the regression model in this study is constant. It does not depend on the predicted values or independent variables.

## Hypothesis Test

In research that uses multiple linear regression, two main types of hypothesis tests are often carried out: the determination test and the partial test (T-test). These two tests provide different and vital information to help us understand the relationship between the independent and dependent variables.

### ▪ Determination Test

The determination test refers to using the coefficient of determination (R<sup>2</sup> and adjusted R<sup>2</sup>) to assess how well the independent variables can collectively explain the dependent variable. The results of the determination test provide an overview of the strength of the relationship between the independent and dependent variables as a whole. The results of the determination test in this study are as follows:

Table 5. Determination Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.594 <sup>a</sup>	0.353	0.315	1.04039

Source: Data analysis using SPSS version 26

Following Table 5 above, the result shows that the adjusted R-squared of the model is 0.315 or 31.5%, which has some critical implications in the context of this study regarding the relationship between the independent variables (ROA, ROE, Managerial Ownership, Institutional Ownership, Fixed Assets to Total Assets Ratio, Dividend Payout Ratio) on the company's Debt Policy (debt-to-equity ratio-DER). Furthermore, these results explain that all independent variables of the study

amounted to 31.5% or had a significant, but not dominant, influence on debt policy (DER).

▪ **Partial Test (T-test)**

A partial test or T-test is conducted for each independent variable in the regression model to assess the statistical significance of its effect on the dependent variable. It tests the null hypothesis that the regression coefficient for a particular independent variable is equal to zero (no effect) on the dependent variable. Furthermore, the results of the partial test in this study are as follows:

Table 6. Partial Test Results (T-Test)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.857	3.04		1.927	0.057
X1_ROA	0.363	0.133	0.377	2.728	0.008
X2_ROE	-0.131	0.18	-0.09	-0.728	0.468
1 X3_KM	0.161	0.06	0.226	2.682	0.009
X4_KI	-0.296	0.689	-0.037	-0.43	0.668
X5_SA	-0.411	0.081	-0.507	-5.056	0.000
X6_DPR	0.497	0.137	0.301	3.616	0.000

Source: Data analysis using SPSS version 26

By table 6 above, the partial test results in this study are the results of the multiple linear regression equation as follows:

$$DER = 5.857 + 0.363ROA - 0.131ROE + 0.161KM - 0.296KI - 0.411SA + 0.497DPR \quad (9)$$

In addition, referring to Table 6 above, the hypothesis test can be partially summarized in the table below

Table 7. Hypothesis Test Results

Hypothesis	Sig.	Decision
ROA → DER	0.008	Reject H01
ROE → DER	0.468	Accept H02
KM → DER	0.009	Reject H03
KI → DER	0.668	Accept H04
SA → DER	0.000	Reject H05
DPR → DER	0.000	Reject H06

Source: Data analysis using SPSS version 26

Following Table 7 above, the hypothetical results of the research can be explained as follows:

- 1) Rejecting H01 means that the ROA hypothesis has a significant positive effect on DER and is acceptable.
- 2) Accepting H02, which means that the ROE hypothesis does not affect DER, is acceptable.
- 3) Rejecting H03 means that the KM hypothesis has a significant positive effect on DER and is acceptable.
- 4) Accept H04, which means that the KI hypothesis does not affect DER is acceptable.

- 5) Rejecting H05, which means that the SA hypothesis significantly negatively affects DER, is acceptable.
- 6) Rejecting H06 means that the DPR hypothesis has a significant positive effect on DER and is acceptable.

## DISCUSSION

Moreover, under the results of the assumption test and hypothesis test, the analysis of the statistical results is as follows:

### **The relationship between return on assets (ROA) and debt-to-equity ratio (DER)**

The COVID-19 pandemic (2019-2021) poses unique company challenges and opportunities. On the one hand, many companies face declining demand, supply chain disruptions, and economic uncertainty (Aryana et al., 2021; Lisa et al., 2023). On the other hand, policy responses from governments and central banks, such as lower interest rates, create more favorable conditions for external funding. Therefore, this study's finding that ROA has a positive and significant effect on DER suggests that manufacturing companies that can maintain or improve their operational performance during the pandemic are likelier to take advantage of low-interest rate conditions to finance their expansion or operations through debt (Ayhan Kose et al., 2022). This is also consistent with agency theory, which states managers seek to optimize capital structure to increase and meet firm value.

### **The relationship between return on assets (ROE) and debt-to-equity ratio (DER)**

In addition, the findings of this study state that Return on Equity (ROE) does not significantly affect the debt-to-equity ratio (DER) during the COVID-19 pandemic. It can be explained that the pandemic has affected various aspects of corporate financial decisions and investor behavior, which creates unique dynamics that affect the relationship between a company's financial performance and its capital structure (Mertzanis et al., 2023; Mightyn et al., 2022; Yusufa et al., 2022). The pandemic increases market uncertainty, causing companies and investors to be more conservative in taking risks (Minh & Vinh, 2022). This explains why an increase in ROE does not encourage firms to increase their leverage through higher DER; they may prefer to retain cash or invest in more liquid and safe assets.

### **The relationship between managerial ownership (KM) and debt-to-equity ratio (DER)**

The findings of the data processing results in this study show that managerial ownership (KM) in manufacturing companies in Indonesia, especially those listed on the LQ-45, has a positive and significant effect on the debt-to-equity (DER), which is attractive to interpret within the agency theory framework. High managerial ownership indicates that managers have a significant stake in the company. This could motivate them to seek business expansion and growth, often through debt-financed investments, to increase the firm's value and, in turn, their personal wealth (Gabrielsen et al., 2002; Lin et al., 2014; Nugroho et al., 2018). In addition, a significant amount of managerial ownership can also reduce agency conflicts between owners and managers as both become more aligned in optimizing firm value. This may lead to bolder funding decisions, including using debt to finance expansion. Thus, as the results in this study highlight the dynamic relationship between managerial ownership and capital structure

decisions in the context of agency theory, it suggests that higher ownership by managers may encourage the use of debt as a tool for growth and expansion (Beyer et al., 2012).

### **The relationship between institutional ownership (KI) and debt-to-equity ratio (DER)**

The findings in this study that institutional ownership (KI) does not affect the debt-to-equity ratio (DER) in manufacturing companies listed in LQ-45 during the period 2017-2022 draw several meaningful interpretations and implications in the context of financial management and investment. The results of this study suggest that institutional investors may prioritize the sustainability and long-term stability of companies over specific financial ratios such as DER (Nugroho et al., 2019; Semenova, 2020). This could reflect a more holistic investment approach considering various factors, including operational practices, market position, innovation, and corporate social responsibility. Furthermore, institutional investors often hold large, diversified portfolios to mitigate risk. Furthermore, high DER in one company may not be significant in their overall portfolio, provided that the investment promises sustainability and long-term growth potential so that KI does not affect DER in manufacturing companies listed in LQ-45 in 2017-2022.

### **The relationship between the ratio of fixed assets to total assets (SA) with debt-to-equity ratio (DER)**

Referring to the research results, that the ratio of fixed assets to total assets (SA) has a negative and significant effect on the debt-to-equity ratio (DER) in manufacturing companies listed in LQ-45 during the period 2017-2022 provides essential insights into asset management strategies and funding decisions in manufacturing companies. This finding shows that the higher the proportion of fixed assets to total assets, the lower the tendency of companies to use debt as a source of funding (DER). This can be interpreted as firms with more considerable fixed assets that may have a production capacity that is not fully utilized or assets that have not been optimally used. Furthermore, to optimize asset utilization and improve operational efficiency, firms may choose to sell some less or less productive fixed assets (Chadha & Sharma, 2015). The revenue from the sale of such assets can then be used to reduce the debt burden, lowering the DER (Nishihara & Shibata, 2016).

### **The relationship between dividend payout ratio (DPR) and debt-to-equity ratio (DER)**

The dividend payout ratio (DPR) is one of the leading indicators investors use to make investment decisions. Therefore, the finding that dividend payout ratio (DPR) has a positive and significant effect on debt-to-equity ratio (DER) in manufacturing companies listed in LQ-45 during 2017-2022 provides important insights regarding the company's funding strategy and dividend policy. This interpretation shows the dynamics between dividend distribution policies and funding decisions taken by companies, especially in accessing external sources of funds. A high DPR indicates that companies distribute more of their profits to shareholders as dividends (Bernardo et al., 2020). Companies that pay high dividends may require external funding sources, such as debt, to maintain their operations and investments, increasing DER. In addition, the market often sees high dividend payouts as a positive signal, indicating the company has confidence in its financial performance (Nurhikmawaty et al., 2020). However, the need

to finance such payments through debt represents a trade-off between maintaining liquidity and meeting shareholder expectations (Alexeeva-Alexeev, 2023).

## CONCLUSION

Based on the results of data processing and discussion in this study, the conclusion of the research on the determination of debt-to-equity ratio (DER) in manufacturing companies listed on LQ-45 in Indonesia during the period 2017-2022, it can be seen that financial and ownership factors and dividend payment policies have a significant influence on the company's capital structure decisions, namely:

- The effect of Return on Asset (ROA) on DER is positive and significant, indicating that the higher the efficiency of the company in generating profits from its assets, the greater its tendency to use debt in its capital structure. This could be because companies that perform well tend to be more confident in taking and servicing debt thanks to adequate cash flow.
- The effect of Managerial Ownership (KM) on DER is positive and significant, where higher ownership by management seems to encourage greater use of debt because share ownership by managers in the company will feel more confident in investment decisions and risk-taking, reflecting greater alignment between management and shareholders.
- The effect of Fixed Assets to Total Assets Ratio (SA) on DER is negative and significant, i.e., a larger proportion of fixed assets to total assets indicates lower debt utilization. This could be because companies with many fixed assets may be more cautious in taking on additional debt or choose to finance fixed asset investments through other sources rather than debt.
- The effect of the Dividend Payout Ratio (DPR) on DER is positive and significant. Higher DPR is associated with higher DER, suggesting that companies that pay larger dividends tend to fund those payments partly through debt.

## SUGGESTION

Based on the conclusion of the research on the determination of debt-to-equity ratio (DER) in manufacturing companies listed in LQ-45 in Indonesia during the period 2017-2022, the following are some suggestions for future research can explore other factors that may affect DER but are not disclosed in this study, such as company liquidity, company size, or macroeconomic factors such as interest rates and economic growth. This approach may provide a broader understanding of the dynamics influencing capital structure decisions.

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