Analysis of the Effect of Profitability, Liquidity and Assets Structure on Capital Structure

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Abstract*—The objective of this research is to assess the impact of Profitability (Return on Equity), Liquidity (Current Ratio), and Asset Structure on Capital Structure (Debt-to-Equity Ratio). The population for this study consists of 158 manufacturing companies that are listed on the Indonesia Stock Exchange from 2018 to 2022. This study included a total of 40 companies, each with 5 reporting years, resulting in a sample size of 200. The sample was acquired using purposive sampling. The research employs a quantitative strategy utilizing multiple regression statistical analysis. Utilizing Capital Structure as the response variable and Profitability, Liquidity, and Asset Structure as predictor factors. The study's findings indicate that Probability (ROE), Liquidity (CR), and Asset Structure have a favorable and significant impact on Capital Structure (DER). This suggests that the profitability of a company's investments, its ability to quickly convert assets into cash, and the kind of assets it holds significantly influence its decision to finance its operations and investments through debt or stock.

Indexed Terms*—Profitability (ROE), Liquidity (CR), Asset Structure, Capital Structure (DER).

I. INTRODUCTION

A commitment to bringing wealth to the owners or shareholders of a company is why companies are established in the first place. It is possible to accomplish this by boosting the value of the company, with the knowledge that owners or shareholders will have a sense of prosperity if their money increases (Martha, 2018). According to Suherman (2019), in order to accomplish this objective, it is necessary to pay attention to all of the activities of the organization, including the administration of the company's finances. The company's financial management is directly influenced by the decisions that are made regarding finances, and one of the most significant of these decisions is whether or not to provide money or financing. It is possible to raise the value of a company by defining the optimal capital structure, which is defined as deciding the proportion of debt and equity that will be used to finance the firm's investment. (Nurhamdi, 2020)

The decisions that are made regarding funding play a significant part in determining the financial health and stability of a company. In order to determine the ideal capital structure, a company management is required to conduct out comprehensive and strategic analysis and planning (Karlinda, 2023). There is a considerable correlation between the capital structure of a company, which refers to the ratio of debt to equity that is utilized to finance the firm's activities, and the value of the company. When making decisions regarding funding, it is important to strive to strike a healthy balance between equity and debt. As stated by Permatasari (2022), when a company takes on debt, the company will be exposed to a significant amount of risk; nevertheless, there is the possibility that the company may be able to provide larger returns for its shareholders as the company expands.

The utilization of equity, on the other hand, will result in a reduction in shareholdings; however, this may be preferred under precarious circumstances or when the organization is attempting to limit its risks. It is possible for a company to reduce its funding expenses by utilizing the appropriate ratio of debt to equity in its capital structure. Veronika (2022) asserts that debt ownership is typically more cost-effective than equity ownership due to the fact that interest income may be deducted from taxable income. However, an excessive amount of debt can rapidly raise the risk that a firm has in the event that it encounters financial difficulties.

An further advantage of making good funding decisions, as stated by Nur'aini (2020), is that they have the capacity to lessen the likelihood of financial risk. By keeping their debt levels at a reasonable level and ensuring that they have sufficient funding from equity, businesses are able to overcome changes in their cash flow and prevent the threat of filing for bankruptcy. In addition to this, the appropriate combination of the capital structure can also generate additional value for shareholders. This is the case in the event that the firm is able to achieve a return on investment that is more than the expenses of funding (for instance, the interest on a loan), which would result in the creation of value for shareholders (Tamara, 2022). According to Andy (2022) asserts that the necessity of making funding selections that are both careful and successful highlights the significance of financial management in the operational strategy of the organization. It is possible for managers to ensure that the company has a capital structure that will increase the value of the company while simultaneously minimizing risk, so offering the greatest possible advantages to shareholders. This can be accomplished by making decisions that are both appropriate and timely.

This capital structure is formed from the composition of funds obtained from debt and funds obtained from the company's own capital (equity), which includes funds that are used by the company to finance its operations and investments (Mardiyati, 2018). The capital structure of the company is an important factor in determining the value of the company as well as its financial condition. As stated by Amin (2023), the capital structure of a corporation is a description of the manner in which the firm finances its assets by utilizing a combination of debt and equity. The use of debt as a means of financing has direct implications for the risks and rewards that the firm is exposed to. While debt has the potential to raise prospective profits for shareholders, it also increases financial risk because the amount of debt that needs to be serviced increases (Kurniawan, 2023). According to Maria (2023), this risk can be a significant concern for investors because, in the event that the firm is unable to pay its debts, this could result in the company filing for bankruptcy, and shareholders could lose all or the majority of their investment.

According to Erliana (2022), there is a connection between the capital structure of a company and the leverage of the company, which is defined as the utilization of debt in the process of financing activities. Having a high level of leverage can indicate that the company is exposed to a greater degree of risk; nevertheless, it also carries the possibility of larger returns in the event that the company is able to create profits that are equivalent to or greater than the cost of the loan. According to Septiani (2022), capital structure is an essential component of a company's financial strategy. Companies strive to develop an ideal capital structure that strikes a balance between risk and return in order to maximize their profits. In order to maximize the value that is created for shareholders and to increase the productivity and performance of the firm, it is essential to have a solid understanding of and to effectively manage the appropriate capital structure.

The findings of Yusmaniarti, et al (2022) indicate that asset structure has a significant impact on capital structure. Conversely, Muyasaroh's (2022) study reveals that asset structure does not have the ability to influence capital structure. In this study, the investigators selected the entire population of manufacturing companies that were officially registered on the IDX (Indonesia Stock Exchange) throughout the period of 2018-2022. The rationale for choosing this population is that manufacturing companies possess a significant production scale or engage in substantial trade, necessitating substantial capital or funding for product development and market expansion. Consequently, this factor significantly impacts a company's capital structure and funding choices. In addition, manufacturing enterprises were selected as the subjects of research due to their susceptibility to economic fluctuations, both in the long and short term.

II. RESEARCH METHODS

This study is an empirical investigation that examines historical data and employs regression analysis to assess the substantial impact of profitability, liquidity, dividend policy, company growth, and asset structure on the capital structure of manufacturing companies listed on the Indonesia Stock Exchange from 2018 to 2022. The classification of this research

is quantitative due to the utilization of numerical data and statistical analysis. The study encompasses a population of 158 manufacturing companies that are officially listed on the Indonesia Stock Exchange within the time frame of 2018-2022. This study employs a purposive sampling technique, which involves selecting a sample based on defined criteria or from a certain target population.

Table 1. Sample Selection Process Based on Criteria

No.	Research Sample Criteria	Total Emiten
1.	Total manufacturing companies listed on the Indonesian Stock Exchange (BEI) during 2018-2022	158
2.	Minus manufacturing companies that are not listed consecutively participated in the Indonesian Stock Exchange (BEI) and was delisted (exited) from the IDX during the research period, namely from 2018-2022	38
3.	Minus companies that do not present audited annual financial reports as of December 31 for 2018-2022 and do not have complete data required in this research.	40
4.	Reduced financial statements that do not use rupiah units.	40
	Number of research samples that meet the criteria	40
	So the total research observations that meet the criteria for 5 years of observation	200

Source: Data Processed, 2024

The data that was utilized in this investigation were secondary data. Additionally, the financial records (annual reports) of manufacturing businesses that were listed on the Indonesia Stock Exchange throughout the period of 2018-2022 are the secondary data that are being utilized in this investigation. In the course of this investigation, the gathering of data was carried out by means of documentation procedures. These techniques included the collection of information regarding the businesses that served as the research samples through the utilization of internet facilities, official corporate websites, and information obtained from other forms of media.

III. RESULTS AND DISCUSSION

A. Classic Assumption Test

The assumptions that are necessary for testing panel data should be tested and fulfilled. Multicollinearity, heteroscedasticity, and autocorrelation tests are the analyses that are required to be performed.

1) Multicollinearity Test

Initially, we will investigate the assumption that there is no multicollinearity present. Multicollinearity is a term that describes the presence of a connection between variables that are considered to be independent. In order to evaluate the presence of multicollinearity, the tolerance value (1/VIF) and the variance inflation factor (VIF) are utilised. This study applies two different regression models on the data. A regression model is the first one, and its purpose is to investigate the influence that ROE, CR, and SA have on capital structure (DER). The multicollinearity results are displayed in table 2, which may be found below:

Table 2. Multicollinearity Test Results

Variable	VIF	1/VIF
ROE	1,78	0,635
CR	1,61	0,511
SA	1,82	0,621

Source: Data Processed, 2024

The study results indicate that all independent variables have a Variance Inflation Factor (VIF) value below 10 and a tolerance value (1/VIF) above 0.10. The findings indicate the absence of multicollinearity among the independent variables in the regression model.

2) Heteroscedasticity Test

The absence of heteroscedasticity is the second assumption that's being made. When there are variations of disturbance variables (residuals) that are not constant, this phenomenon is referred to as heteroscedasticity. the following are the findings:

Table 3. Heteroscedasticity Test Results

Model	t	Sig.
1 Constant)	1.129	.410
ROE	1.187	.213
CR	1.632	.510
SA	1.712	.331

a. DependentVariable:*DER*

Source: Data Processed, 2024

According to the findings of the heteroscedasticity test, often known as the t-test, the significance of every independent variable is greater than 5%. The results of this analysis demonstrate that there are no independent variables that have a statistically significant impact on the residuals that are produced by the regression model. Because of this, it is possible to draw the conclusion that the regression model does not contain any heteroscedasticity issues.

3) Autocorrelation Test

OLS assumes no association between disturbance variables, yet autocorrelation develops when two disturbance variables are correlated. To detect model autocorrelation, the Durbin Watson test is utilized. Table 4 displays the test results.

Table 4. Autocorrelation Test Results

Model	R	R Square	Durbin-Watson
1	.522[a]	.526	1.6590

Predictors:(Constant),CAR,CR, SA
DependentVariable:DER

Source: Data Processed, 2024

The Durbin-Watson test yields a d value of 1.6590. The Durbin-Watson value (k,n) is compared to this value, where k represents the number of independent variables (3) and n represents the total number of samples (200). If the computed d value falls within the range of du<d<3-du values, it indicates the absence of autocorrelation. The du value in the Durbin-Watson table is 1.6589, which is less than 1.6590 and greater than (3-1.3384). The results suggest that the model employed is devoid of autocorrelation.

B. Hypothesis testing

1) Determination Coefficient Test (Adjusted R^2)

The coefficient of determination data are displayed in table 4 above. The R Square (R2) value for the years 2018 to 2022 is 0.526, which is equivalent to 52.6%. This indicates that the independent variables (ROE, CR, and SA) account for 52.6% of the variation in the dependent variable (capital structure / DER). However, the remaining 47.4% is impacted by additional variables that were not considered in this research model.

2) T-Test (Partial)

Table 5. Partial Test Results (t Statistical Test)

Model	Unstandardized Coefficients		t	Sig.
	B	Std.Error		
1(Constant)	.453	.319	2.889	.009
ROE	.223	.175	3.921	.005
CR	.124	.163	2.611	.013
SA	.217	.256	2.730	.010

Source: Data Processed, 2024

The statistical test analysis in table 5 above can be interpreted as follows:

a) Based on the analysis that has been carried out as shown in table 5, the regression coefficient value obtained in a positive direction is 0.223. The estimated results for the ROE variable are t = 3.921 with a probability of 0.005. The significance value of 0.005 is smaller than 0.05, so it can be interpreted that profitability (ROE) has a positive and significant effect on capital structure (DER), therefore based on this explanation it means the first hypothesis is accepted. This shows that companies with higher profitability tend to have a better capital structure, with a lower proportion of debt and a better level of capital adequacy. The results of this research are in line with research by Andy (2022) and Yusmaniarti (2022) which explains that when a company has higher profitability, the proportion of debt in the company's funding will decrease, creating a more optimal capital structure for the company's future.

b) Based on the analysis results as shown in table 5, the regression coefficient value obtained in a positive direction is 0.124. The estimation result for the CR variable is t = 2.611 with a probability of 0.013. The significance value of 0.013 is smaller than 0.05, so it can be interpreted that liquidity (CR) has a positive and significant effect on capital structure (DER), therefore based on this explanation it means the second hypothesis is accepted. This means that a company with good liquidity shows that the company has sufficient current assets to pay its short-term obligations. Current assets include cash, accounts receivable, and inventory. If a company has good liquidity, they have enough funds to carry out daily operations without having to take on additional debt. The results of this research are in line with research by Nurcahyani (2022) and Muyasaroh (2023) which explains that companies with good liquidity generally have a healthier capital structure, with a lower proportion of debt in their financing.

c) Based on the analysis results as shown in table 5, the regression coefficient value obtained in a positive direction is 0.217. The estimation result for the SA variable is t = 2.730 with a probability of 0.010. The significance value of 0.010 is smaller than 0.05, so it can be interpreted that asset structure (SA) has a positive and significant effect on capital structure (DER), therefore based on this explanation it means the third hypothesis is accepted. What this means is that companies with higher fixed assets tend to have higher debt levels and an increase in asset structure driven by fixed assets is associated with an increase in DER. The results of this research are in line with research by Suherman (2019) and Yusmaniarti (2022), which shows that a company with an asset composition that is mainly dominated by fixed assets has a higher potential to use debt as a source of financing, thereby increasing DER.

CONCLUSION

This study seeks to provide empirical evidence on the impact of profitability (return on equity or ROE), liquidity (current ratio or CR), and asset structure (asset turnover or SA) on capital structure (debt-to-equity ratio or DER) in manufacturing firms that are publicly traded on the Indonesia Stock Exchange (BEI) during the period of 2018-2022. The research findings yield the following conclusions:

a) Based on the findings of the coefficient of determination test (R2), it was discovered that the independent variables (ROE, CR, and SA) were able to provide a 52.6% explanation for the dependent variable (capital structure / DER).

b) To a certain extent, it is possible to draw the conclusion that the capital structure (DER) is significantly impacted by the profitability (ROE), liquidity (CR), and asset structure (SA) parameters.

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