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Examining the Moderating Effect of Company Size on the Relationship Between Financial Performance, Capital Structure, and Firm Value

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ABSTRACT

Utilizing company size as a moderating variable, this research seeks to explore the correlation between capital structure, financial performance, and business value. The study employs purposive sampling as a quantitative research data collection strategy, utilizing secondary data extracted from the financial accounts of manufacturing businesses in the consumer products industry sector listed on the Indonesia Stock Exchange from 2020 to 2023. Modified Regression Analysis (MRA) serves as the chosen method for data analysis. The results indicate that financial performance does not impact firm value, and similarly, capital structure does not influence firm value. Furthermore, the study reveals that business size does not have a significant effect on firm value. However, the influence of financial performance on company value remains unaffected by business size, while the impact of capital structure on business value can be moderated by firm size.

1. Introduction

The intensification of economic development has fostered heightened competition in the business realm. Consequently, companies must actively engage in competition to ensure their survival and enhance corporate value through market expansion efforts. Meeting the substantial funding requirements for such endeavors necessitates attracting investments from stakeholders (Zuraida, 2020). The significance of firm value cannot be overstated in the company's endurance. A company's success relies on internal and external factors, with marketing elements being a critical component, as highlighted by (Jamaludin, Huridi, & Hashim, 2018), p.2). Firm value reflects the company's state, as evidenced by its share price. Higher stock prices lead to increased company value, aligning with public company objectives (Sudana, 2020). Equity market premiums provide additional returns for investors, varying based on risk associated with specific companies (Hashim, Abdul Hadi, Aspiranti, & Huridi, 2022). Harjito et al. (2013) emphasize the pivotal role of company value, indicating that its increase translates to heightened prosperity for owners and shareholders, setting the company apart in terms of quality. In the context of the manufacturing sector, the year 2020 witnessed a substantial decline in stock prices, with 13.57% correlations.

The value of shares in this sector decreased significantly, attributed to the disruptive impact of the Covid-15 pandemic. The manufacturing sector's reliance on China, the epicenter of the pandemic, led to disturbances in the global supply chain (Saragih, 2020). External factors, such as market manipulation, can contribute to stock price fluctuations. For instance, PT Indo-cement Tunggal Perkasa, Tbk (INTP) experienced a downtrend in early 2020, with a 3.53% weakening of its share price and a 34.38% decrease in capitalization, coinciding with a surge in world coal prices (Putra, 2023). Financial performance serves as a barometer of a company's fiscal health, assessed through tools of financial analysis. Net Profit Margin (NPM), the ratio of net profit to sales after deducting all expenses, is a key metric. Existing research indicates a positive and significant relationship between financial performance and company value, although some studies present divergent views on this correlation (Mariani and Suryani, 2018; Hermawan and Mafulah, 2014). Capital structure, the blend of debt and equity in a company's long-term financial structure, emerges as a crucial concern. Research outcomes diverge, with some studies highlighting a positive and significant effect on company value, while others suggest a negative impact or no discernible influence (Mudjijah et al., 2020; Nuradawiyah and Susilawati, 2020). Company size, gauged by equity value, sales, or total assets, generates varied research findings on its impact on company value. While some studies indicate a negative effect, others propose a positive relationship or find no conclusive influence (Listyaningsih, 2020; Mudjijah et al., 2020).

2. Literature Review

Several theories explain the market mechanisms of companies' sector (Hadi, Huridi, Zaini, & Zainudin, 2019). Agency theory is one of these theories. Agency theory delves into the valuation of a company by exploring the inherent conflict between the agent, representing the company's management, and the principal, comprising the company's shareholders.

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Originating from the agency theory elucidates the relationships within an organization, conceptualizing the company as an amalgamation of contracts (nexus of contracts) between the economic resource owners (principal) and the managers (agents) entrusted with overseeing and controlling these resources. It delineates the dichotomy between management functions, executed by managers, and ownership functions, held by shareholders. The genesis of agency relationships occurs when individuals hire others for services and delegate decision-making authority to the appointed agent (Wongso, 2013), giving rise to potential information asymmetry between managers and shareholders. The manifestation of agency problems is commonplace in interactions between investors or creditors and management (Brigham and Houston, 2018). Enhancing a company's financial performance not only opens avenues for managerial development but also serves as a means to augment shareholder welfare. Brigham and Houston (2018) posit that both investors and managers possess identical information regarding a company's prospects. The signal theory emerges as a pertinent framework influencing firm value, as it leverages financial reports to mitigate information disparities. Investors interpret the information received as either a positive signal (good news) or a negative signal (bad news). An upswing in reported financial performance is construed as a positive signal, signifying a favorable state of the company. Conversely, a decline in reported financial performance indicates an unfavorable state, constituting a negative signal (Mariani, 2018).

3. Research Methodology

3.1 Research Design

The firm's worth, often known as its market value, is the variable that this study is examining. The concept behind market value selection is that a rise in a company's share price might result in the best possible outcomes for its owners (Damayanthi, 2020). Tobin's Q ratio, a measure of the correlation between market value and the total debt to total assets, is used in this study to evaluate the firm value (Hasibuan et al., 2017). The following formula was used to perform this calculation:

$$Tobin's\ Q = \frac{\text{Market Value of Equity + Debt}}{\text{Total Assets}}$$

$$W = 1{,}3\ (Y_1) + 1{,}4\ (Y_3) + 3{,}3\ (Y_3) + 0{,}7\ (Y_4) + 1{,}0\ (Y_5)$$

3.2 Financial Performance

A company's financial performance may be used to gauge how successful its profits are (Dayanty and Setyowati, 2020). In this study, net profit margin (NPM) is used to gauge financial success. The ratio used to calculate the proportion of net profit on net sales is called net profit margin, or NPM (Hery, 2018). The following formula is applied:

$$Net\ Profit\ Margin\ (\text{NPM}) = \frac{\text{Net Profit}}{\text{Sales}}$$

3.3 Capital Structure

According to Nuradawati and Susilawati (2020), capital structure compares a company's long-term funding sources, as shown by the ratio of long-term debt to equity. The Debt-to-Equity Ratio (DER) is used in this study to quantify capital structure. The ratio used to evaluate debt to equity is called the Debt-to-Equity Ratio (DER) (Kasmir, 2018). The following formula is applied:

$$Debt\ to\ Equity\ Ratio\ (\text{DER}) = \frac{\text{Total liability}}{\text{Total equity}}$$

3.4 Moderating Variable

The study's moderating variable is the size of the firm. The total assets that the firm has and may utilize to do business is a good indicator of its size. Large total assets provide management more leeway in how the firm uses its resources (Prasetia et al, 2014). The natural logarithm (LN) of a company's total assets is used to calculate its size.

3.5 Population and Samples Research

This analysis focuses on the 153 businesses from the products manufacturing sector that are listed on the IDX between 2020 and 2023. Goods-producing factories that are still IDX-listed in the years 2020–2023. The second group consists of manufacturing firms in the products industry that turn a profit between 2020 and 2023.

3.6 Analysis Method

To determine whether the moderating variable enhances or diminishes the link between the independent and dependent variables, researchers employ moderated regression analysis (MRA) (Ghozali, 2018). In this work, we use the following hypothesis-testing equation model:

$$Tobin's\ Q = \alpha + \beta 1\ \text{NPM} + \beta 3\ \text{DER} + \beta 3\ \text{SIZE} + \beta 4\ \text{NPM*SIZE} + \beta 5\ \text{DER*SIZE} + \varepsilon$$

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Information:

Tobin's Q = Firm Value
NPM = Net Profit Margin (Financial Performance)
DER = Debt to Equity Ratio (Capital Structure)
SIZE = Firm Size
α = Constant
β1, β3, β3, β4, β5 = Regression Coefficient
ε = Error term

4. Results and Discussions

4.1 Descriptive Statistics Results

Based With 126 data, the descriptive statistical test in table 1 yields the following. The Tobin's Q-proxied firm value variable averages 0.338. This demonstrates the sample firms' average value is poor. PT Diamond Food Indonesia Tbk had the lowest Tobin's Q value of 0.00041 in 2020, while PT Tiga Pilar Sejahtera Food Tbk had the highest at 1.887 with a standard deviation of 0.335.

Table: 1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Tobin's Q	126	,00041	1,88704	,3547838	,33534900
NPM	126	,00050	,53850	,1187588	,13357381
DER	126	-3,12000	3,83480	,4949851	,74811708
SIZE	126	150787310000	175357200000000	13535707850053,40	20788745411335,758
LNSIZE	126	35,57	33,83	38,5047	1,38578
Valid N (listwise)	126				

Sources: SPSS 14

The NPM-proxied financial performance variable averages 11.87%. This indicates that sample firms produce profits below their potential. In 2020, PT Sekar Bumi Tbk had the lowest NPM value of 0.05% and PT Tiga Pilar Sejahtera Food Tbk the highest at 53.85% with a standard deviation of 0.134. The DER-proxied capital structure variable averages 49.49%. Since debt is less than capital, the sample firms' financial health is strong on average. With a standard deviation of 0.748, PT Tiga Pilar Sejahtera Food Tbk has the lowest DER value of -313% in 2020 and the highest at 383.48% in 2023. SIZE averages 38.50 for corporate size.

4.2 Normality Test

According to the results presented in Table 3, following the outlier test where 17 data points were excluded and the data was transformed using the base-10 logarithm (LG10), the Asymptotic (3-tailed) significance level is reported as 0.085.

Table: 2 One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		57
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	,10732057
Most Extreme Differences	Absolute	,084
	Positive	,084
	Negative	-,074
Test Statistic		,084
Asymp. Sig. (3-tailed)		,085[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Sources: SPSS 14

Since this value is equal to or greater than the conventional significance threshold of 0.05, it can be inferred that the data in this study exhibit a normal distribution. This implies that the assumptions of normality required for the regression model are satisfied.

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4.3 Multicollinearity Test

According to Table 3's data, every independent variable in the research has a tolerance value of at least 0.10 and a variance inflation factor (VIF) of at least 10. A low tolerance suggests a possible problem with multicollinearity. Tolerance is a measure of how effectively an independent variable can be predicted by the other independent variables in the model. Conversely, VIF measures how much multicollinearity has inflated the variance of an estimated regression coefficient.

Table: 3 Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	LG_NPM	,534	1,083
	LG_DER	,885	1,135
	LG_LNSIZE	,570	1,043

a. Dependent Variable: Tobins_Q

Sources: SPSS 14

In this instance, it appears that each variable is reasonably independent and not unduly impacted by others because there are no independent variables with a tolerance below 0.10. Concurrently, the lack of VIF values greater than 10 suggests that multicollinearity—which can skew the interpretation of regression coefficients—is not a substantial issue for this investigation. Consequently, it is reasonable to conclude that the independent variables in the regression model do not significantly multicollinear.

4.4 Autocorrelation Test

The normalised approximation to the Durbin-Watson test is the basis for testing whether the model's explanation is statistically significant (Araya & Miras, 2015; Araya, Dahalan, & Muhammad, 2022). Additionally, the Durbin-Watson (DW) test statistic is a measure used to detect the presence of autocorrelation, which is the correlation of a variable with itself over different time intervals. In Table 4, the reported DW value is 1.003. The DW statistic ranges from 0 to 4, with a value between -3 and +3 being considered normal. Specifically, a DW value around 2 indicates no first-order autocorrelation.

Table: 4 Autocorrelation Test

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Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,800[a]	,741	,731	,05318438	1,003

Sources: SPSS 14

In this study, the DW value of 1.003 falls within the acceptable range, indicating that there is no significant autocorrelation present. The value being close to 2 suggests that there is no systematic pattern of residuals, or in other words, the errors in the regression model are not correlated with each other. Therefore, based on the DW value in Table 4, it can be concluded that autocorrelation is not a concern in this study. From the scatterplot graph, it can be seen that the points spread randomly and are spread both above and below the zero on the Y axis. It can be concluded that in this research heteroscedasticity does not occur, so that the regression model is feasible to use.

4.5 Determination Coefficient Test

In Table 5, the coefficient of determination, often denoted as R Square, is reported as 0.741. This value represents the proportion of the variation in the dependent variable (firm value) that is explained by the independent variables (financial performance and capital structure), along with the moderating variable (firm size) in this study.

Table: 5 Determination Coefficient Test

Model	R	R Square	Adjusted R Square
1	,800[a]	,741	,731

Sources: SPSS 14

Specifically, an R Square of 0.741 implies that approximately 74.1% of the variability in firm value can be accounted for by the combined influence of financial performance, capital structure, and firm size as a moderating variable. The remaining 25.9% (100% - 74.1%) of the variability is not explained by these variables and may be attributed to other factors that are not included in the research model.

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4.6 F-Test

Table: 6 F Test

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1,375	5	,349	33,457	,000[b]
	Residual	,493	51	,008		
	Total	3,153	57			

Sources: SPSS 14

The regression analysis in the study yielded a calculated F value of 33.457 with a significance value of 0.000 (less than the conventional threshold of 0.05). This suggests that the regression model is statistically significant. The conclusion drawn is that the model used in the study is feasible for further testing, indicating its validity and potential for additional analyses.

4.7 Moderated Regression Analysis (MRA)

Table: 7 Moderated Regression Analysis (MRA)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,495	,780		-1,134	,374
	LG_NPM	,001	,033	,004	,041	,549
	LG_DER	-,007	,047	-,017	-,137	,500
	LG_LNSIZE	,498	,475	,038	1,435	,157
	NPM_LNSIZE	-,013	,008	-,173	-1,545	,135
	DER_LNSIZE	,005	,001	,494	7,037	,000

Sources: SPSS 14

4.8 Discussions

The findings of the t test that the level of financial performance has no bearing on the value of the company. This may be the result of the company's strong financial performance, as shown by its Net Profit Margin (NPM), which indicates the degree to which a business is able to produce a profit relative to its net sales. If the NPM value is low, it indicates that the firm is having trouble maximizing the amount of net profit it can generate from each sale. This causes issues that are connected to the firm's financial performance because the company will have a difficult time managing company expenditures such as increases in the cost of raw materials, increases in wage, and payments for interest expense. These issues are caused by the fact that the company will find it difficult to control these costs. A low NPM will most definitely have an effect on investor interest in investing in the firm, which will ultimately lead to a fall in the stock price of the company, which would then result in the value of the company decreasing. The findings of this study provide credence to the findings of Hermawan and Mafulah (2014), which demonstrated that a company's financial success had no bearing on its market value.

5. Conclusions

The value of a company is substantially influenced by its financial performance. A low Net Profit Margin (NPM) indicates that there may be difficulties in maximizing profit per sale, which may influence investor interest and maybe result in a decrease in stock prices as well as the total worth of the firm. Investors pay attention to the effectiveness with which management utilizes available resources rather than relying exclusively on debt as a benchmark since capital structure is also an important factor. When determining a company's worth, investors look at a number of factors, including its performance, financial reports, reputation, and dividend policy. One of such factors is the size of the company. The worth of anything cannot be determined only by its size. Growing companies could find it simpler to earn the trust of creditors, which might lead to a greater reliance on debt as a source of finance. The decisions made by management regarding a firm's finance sources have an effect on the overall value optimization of the organization as its assets increase.

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