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The Influence Of Financial Ratios And Institutional Ownership On Financial Distress (An Empirical Study Of Manufacturing Companies Listed On The Indonesia Stock Exchange From 2017 To 2020)

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Abstract

This study aims to examine the effects of liquidity, leverage, sales growth, and institutional ownership on financial distress, with profitability acting as a moderating variable in manufacturing companies listed on the Indonesia Stock Exchange during 2017–2020. This study employs a quantitative approach using secondary data from annual reports and purposive sampling. The final sample consists of 145 manufacturing companies, resulting in 580 firm-year observations. Financial distress is measured using the modified Altman Z-Score, while liquidity, leverage, sales growth, profitability, and institutional ownership are measured using the current ratio, debt-to-equity ratio, sales growth ratio, return on assets, and institutional ownership ratio, respectively. The data are analyzed using Moderated Regression Analysis (MRA) with SPSS. The results indicate that liquidity, leverage, and sales growth have positive and significant effects on financial distress, whereas institutional ownership has no significant effect. Profitability significantly moderates and strengthens the effects of liquidity and leverage on financial distress and significantly moderates and weakens the effect of sales growth. However, profitability does not significantly moderate the effect of institutional ownership on financial distress. The findings indicate that financial ratios provide important signals of financial condition and that profitability changes the strength of several relationships with financial distress.

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Keywords: Financial Distress, Liquidity, Leverage, Sales Growth, Institutional Ownership, Profitability.

INTRODUCTION

Financial distress represents a condition in which a company experiences financial difficulties before bankruptcy or liquidation. It may arise when operating cash flows are insufficient to meet financial obligations, when losses persist, or when the company faces structural weaknesses in capital and debt management. Early identification of financial distress is important because management can still take corrective action before the condition develops into bankruptcy.

The manufacturing sector in Indonesia was particularly exposed to financial pressure during the 2017–2020 observation period. The thesis data show that the average Altman Z-Score-based indicator of financial distress moved from 2.80 in 2017 to 2.68 in 2018, 3.00 in 2019, and 3.57 in 2020. The study also identifies declining liquidity, declining debt-to-equity performance, declining return on equity, and weakening sales growth as conditions that motivated further examination of the determinants of financial distress.

Financial statements provide information that can be used to evaluate corporate financial health. Financial ratio analysis is therefore widely used as an early indicator because it summarizes the relationships among important financial statement components. The literature cited in the study shows that empirical evidence remains inconsistent. Liquidity has been reported as insignificant or significant, profitability has produced different directions of influence, and leverage as well as sales growth have also generated mixed findings across studies. These inconsistencies provide a basis for re-examining the determinants of financial distress in Indonesian manufacturing companies.

In addition to financial ratios, institutional ownership may influence financial distress through its monitoring function. Institutional investors are expected to monitor management and reduce agency problems. However, the effectiveness of institutional ownership may vary across companies, making its empirical relationship with financial distress an open question. The present study therefore examines liquidity, leverage, sales growth, and institutional ownership as explanatory variables and introduces profitability as a moderating variable.

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Objectives

The study aims to analyze and empirically test the effects of liquidity, leverage, sales growth, and institutional ownership on financial distress and to determine whether profitability moderates these relationships. The study uses manufacturing companies listed on the Indonesia Stock Exchange during 2017–2020 and applies Moderated Regression Analysis to 580 firm-year observations.

DISCUSSION

The research uses a quantitative design based on secondary data from annual reports of manufacturing companies listed on the Indonesia Stock Exchange. Of 171 companies in the population, 26 companies were excluded because they did not provide complete annual financial statements for the 2017–2020 period, leaving 145 companies and 580 firm-year observations. Financial distress was measured using the modified Altman Z-Score, $Z = 6.56Z1 + 3.26Z2 + 6.72Z3 + 1.05Z4$, where Z1 represents working capital to total assets, Z2 retained earnings to total assets, Z3 earnings before interest and taxes to total assets, and Z4 market capitalization to book value of debt. Liquidity was measured by the current ratio, leverage by the debt-to-equity ratio, sales growth by the change in sales relative to prior-year sales, profitability by return on assets, and institutional ownership by the proportion of shares held by institutions.

The Moderated Regression Analysis model estimated in the study is $FD = 5.104 + 0.236LIK + 0.296LEV + 0.207SG + 0.001KI + 0.041(LIK \times PROF) + 0.298(LEV \times PROF) - 0.009(SG \times PROF) + 1.211(KI \times PROF) + \varepsilon$. The core coefficients and significance levels are summarized below.

Table 1. Hypothesis Testing Results

Variable	B	t	Sig.	Interpretation
Liquidity (LIK)	0.236	12.470	0.000	Significant, positive
Leverage (LEV)	0.296	3.650	0.000	Significant, positive
Sales Growth (SG)	0.207	4.750	0.000	Significant, positive
Institutional Ownership (KI)	0.001	0.773	0.440	Not significant
Liquidity × Profitability	0.041	18.189	0.000	Strengthens effect

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Leverage × Profitability	0.298	5.077	0.000	Strengthens effect
Sales Growth × Profitability	−0.009	−9.696	0.000	Weakens effect
Institutional Ownership × Profitability	1.211	1.176	0.240	Not significant

- **LIQUIDITY AND FINANCIAL DISTRESS**

Liquidity has a positive and significant effect on financial distress (B = 0.236; t = 12.470; p < 0.001). The result confirms the first hypothesis. In the study, liquidity is interpreted as the company's ability to meet short-term obligations. The empirical result indicates that the liquidity measure used in the model contains significant information for predicting financial distress. The finding is consistent with studies cited in the thesis, including Wulandari (2021) and Sutra and Mais (2019), which also identify a significant relationship between liquidity and financial distress.

- **LEVERAGE AND FINANCIAL DISTRESS**

Leverage has a positive and significant effect on financial distress (B = 0.296; t = 3.650; p < 0.001), supporting the second hypothesis. Higher leverage indicates greater reliance on debt financing and consequently greater exposure to financial obligations. When debt becomes excessive, the company faces a larger burden of principal and interest payments, increasing its vulnerability to financial distress. This finding is consistent with Wijaya et al. (2020) and Mulyani and Asmeri (2020), as discussed in the thesis.

- **SALES GROWTH AND FINANCIAL DISTRESS**

Sales growth has a positive and significant effect on financial distress (B = 0.207; t = 4.750; p < 0.001), so the third hypothesis is accepted. Sales growth reflects changes in operating sales and is often used as an indicator of future business performance. The significant relationship found in this study suggests that sales growth contains predictive information for financial distress within the sampled manufacturing companies. The result is consistent with the empirical finding cited from Widhiari et al. (2015).

- **INSTITUTIONAL OWNERSHIP AND FINANCIAL DISTRESS**

Institutional ownership has a positive but statistically insignificant effect on financial distress (B = 0.001; t = 0.773; p = 0.440). Therefore, the fourth hypothesis is

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rejected. Institutional investors are theoretically expected to strengthen management monitoring and reduce agency problems, but the statistical evidence in this sample does not show that the proportion of institutional ownership is sufficient to produce a significant change in financial distress. This result is in line with the non-significant evidence discussed in Anggriani and Rahim (2021) and in the study literature reviewed by the authors.

- **PROFITABILITY AS A MODERATOR**

Profitability significantly moderates and strengthens the relationship between liquidity and financial distress (B = 0.041; t = 18.189; p < 0.001). The fifth hypothesis is therefore accepted. The interaction result indicates that profitability changes the effect of liquidity on financial distress, meaning that the liquidity condition should be interpreted together with the company's ability to generate returns from its assets.

Profitability also significantly moderates and strengthens the relationship between leverage and financial distress (B = 0.298; t = 5.077; p < 0.001). The sixth hypothesis is accepted. Because leverage represents dependence on debt financing, profitability becomes important in determining how effectively the company can absorb the obligations arising from its financing structure.

The interaction between sales growth and profitability is negative and significant (B = −0.009; t = −9.696; p < 0.001), indicating that profitability weakens the positive effect of sales growth on financial distress. Thus, the seventh hypothesis is accepted. This suggests that sales growth should not be evaluated in isolation: the financial quality of that growth, reflected in profitability, changes its relationship with distress. In contrast, the interaction between institutional ownership and profitability is not significant (B = 1.211; t = 1.176; p = 0.240). The eighth hypothesis is rejected. The result indicates that profitability does not materially alter the relationship between institutional ownership and financial distress in the observed sample.

- **MODEL FIT AND SIMULTANEOUS EFFECT**

The model produces an R of 0.695, an R Square of 0.483, and an Adjusted R Square of 0.476. Accordingly, approximately 47.6% of the variation in financial distress is explained by the predictors and interaction terms included in the regression model, while the remaining 52.4% is attributable to factors outside the model. The simultaneous F-test is significant (F = 66.769; p < 0.001), indicating that the set of explanatory variables and moderation terms collectively has a significant relationship with financial distress.

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Table 2. Model Summary and Simultaneous Test

Statistic	Value	Statistic	Value
R	0.695	F	66.769
R Square	0.483	Sig. F	0.000
Adjusted R Square	0.476	N	580
Std. Error	14.12893	Durbin-Watson	1.976

CONCLUSION

Based on the empirical analysis, liquidity, leverage, and sales growth each have a positive and significant effect on financial distress, while institutional ownership does not have a significant effect. Profitability significantly moderates the relationships between liquidity and financial distress and between leverage and financial distress by strengthening those relationships. Profitability also moderates the relationship between sales growth and financial distress by weakening the effect of sales growth. However, profitability does not significantly moderate the relationship between institutional ownership and financial distress. The overall model is jointly significant and explains 47.6% of the variation in financial distress after adjustment.

The study is subject to limitations arising from its four-year observation period and its focus on a limited set of explanatory variables. Other factors, such as firm size, cash flow, other corporate governance mechanisms, and macroeconomic conditions, may also contribute to financial distress. Future research may extend the observation period, examine other sectors, and incorporate additional governance and financial variables.

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