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The Influence of Financial Ratios on Financial Distress in Companies in the Various Industrial Sectors

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ABSTRACT
This study aims to determine the effect of financial ratios on financial distress. The dependent variable is financial distress, while the independent variables are profitability, leverage, sales growth, and operating capacity. The study population consists of companies miscellaneous industrial sector listed on the IDX in 2022-2024. The sample selection used a purposive sampling technique, with 29 companies meeting the established criteria. The research method used is multiple linear regression analysis. Based on the research results, profitability has a positive effect on financial distress, leverage has a negative effect on financial distress, sales growth and operating capacity have no effect on financial distress.The limitations in this research are the limitations of the research object of manufacturing companies which only focus on miscellaneous industrial sectorlisted on the IDX in 2022-2024.

KEYWORDS: profitability, leverage, sales growth, operating capacity, financial distress

INTRODUCTION
Industrial companies play a strategic role in the national economy due to their significant contribution to industrial activity and job creation (Rohmah et al., 2024). Industrial companies face financial risks that can lead to business failure, one form of which is financial distress (Tarigan, GMF 2024). Financial distress is a condition of declining financial condition of a company characterized by the inability to meet financial obligations in the near future and is an early sign of bankruptcy (Saputri, B. 2024). A company's financial distress is influenced by factors that can be identified through financial ratio analysis (Yosandra & Sembiring, 2022).

Signaling theory explains that companies need to provide accurate signals to stakeholders regarding the company's financial information to assess the company's financial condition in decision-making (Susilowati, 2021). Financial difficulties that occur in a company if not addressed can lead to bankruptcy and the delisting of the company's shares by the IDX. A phenomenon that has occurred in Indonesia in recent years after the Covid-19 pandemic is the delisting of companies PT Mas Murni Indonesia Tbk. (MAMI), PT Forza Land Indonesia Tbk. (FORZ), PT Hanson International Tbk. (MYRX), PT Grand Kartech Tbk. (KRAH), PT Cottonindo Ariesta Tbk. (KPAS), from PT Steadfast Marine Tbk. (KPAL), PT Prima Alloy Steel Universal Tbk. (PRAS), and PT Nipress Tbk. which will be effective on July 21, 2025 (Bisnis.com, 2024).

Financial distress is a condition of significant decline in financial performance and has the potential to lead to bankruptcy if not addressed promptly. This condition can be prevented, minimized, and detected early by regularly analyzing a company's financial ratios (Kurniadi, A. 2021). Financial ratios are a crucial tool in evaluating a company's financial health because they provide an overview of the company's profitability, capital structure, sales growth, and operational efficiency (Yunika & Rahmizal, 2022). Financial ratios for analyzing potential financial distress include profitability, measured by Return on Assets (ROA) (Hanifah & Meikhati, 2024). Other financial ratios include leverage, measured by the Debt to Asset Ratio (DAR), growth ratios, namely sales growth, and operational efficiency ratios such as Total Asset Turnover (TATO), which

represents the company's operating capacity (Ramli & Yusnaini, 2022). Financial distress can be analyzed and detected using the Grover model. The Grover model is a development of the Altman z-score model developed by Jeffrey S. Grover and is designed to improve accuracy in predicting financial distress, especially in companies listed on the capital market (Munawarah & Hayati, 2019). Previous researchers have examined the relationship between financial ratios and the potential for financial distress, such as (Mahaningrum & Merkusiwati, 2020), (Idawati, W. 2020), (Purwaningsih & Safitri, 2022), (Chalid et al., 2022), (Aji & Anwar, 2022), (Kinanti & Arsjah, 2025), (Wibowo & Susetyo, 2020), (Solikhin & Parasetya, 2023), and (Pebrianti et al., 2023). Previous studies have found discrepancies in the results of these studies, so further research is needed in accordance with the current situation regarding the influence of financial ratios on financial distress.

Research by Pebrianti et al., (2023) and Candrayani et al., (2024) proxied financial distress using the Altman z-score model. This study used the Grover model introduced by Jeffrey S. Grover in 2001 as a development of the Altman model, taking into account financial components that are more relevant to manufacturing companies and claimed to have a higher level of accuracy in predicting potential bankruptcy (Munawarah & Hayati, 2019). The research object was manufacturing companies in various industrial sectors listed on the Indonesia Stock Exchange (IDX). This study aims to analyze the effect of profitability, leverage, sales growth, and operating capacity on financial distress.

METHODOLOGY

This research uses a quantitative research approach because the data used is secondary data (Prastiwi & Hanifah, 2023). The quantitative research approach is a scientific approach related to data collection methods, data analysis, and interpretation of the analysis results in the form of numbers to obtain information that is used as a basis for drawing conclusions through statistical analysis (Waruwu, M. 2023). The data analysis method uses Multiple linear regression analysis with the help of the IBM SPSS 26 application. The data analysis methods used include descriptive statistics, classical assumption tests (normality test, multicollinearity test, heteroscedasticity test and autocorrelation test), as well as hypothesis testing (multiple linear regression analysis, coefficient of determination (R^2), F statistical test, and t statistical test).

The research population is a company miscellaneous industrial sector. The sample size was 29 companies listed on the Indonesia Stock Exchange (IDX) in 2022-2024. The sample selection used a purposive sampling technique, with 29 companies meeting the established criteria. The data collection method used documentation and a literature review. The data for this research comes from secondary data in the form of annual reports and audited financial reports from manufacturing companies miscellaneous industrial sectorlisted on the IDX in 2022-2024. Data obtained from the Indonesia Stock Exchange (IDX) website, namelywww.idx.co.id.

RESULTS AND DISCUSSION

Table 1. Descriptive Statistics

Descriptive Statistics Results

	N	Minimum	Maximum	Mean	Standard Deviation
Profitability(ROA)	59	-.03	.12	.0438	.03220
Leverage(DAR)	59	.06	1.04	.4187	.21746
Sales Growth(SG)	59	-.25	.36	.0726	.13526
Operating Capacity(TATO)	59	.41	1.51	.9796	.28517
Financial Distress(Grover)	59	-.38	1.51	.6104	.42954
Valid N (listwise)	59				

Source: SPSS Output version 26 (Data processed by researcher, 2025)

The descriptive statistical results of the profitability variable (X1) have the lowest value of -0.03 and the highest value of 0.12, the average value (mean) is 0.0438 with a standard deviation of

0.03220. The average value of the company's profitability is 4.38%, indicating a fairly stable value because the spread is relatively small based on the standard deviation of 0.03220.

The descriptive statistical results of the leverage variable (X2) have the lowest value of 0.06 and the highest value of 1.04 with an average value of 0.4187 with a standard deviation of 0.21746. The average value of the company's leverage is 41.87%, indicating a fairly moderate level of debt, with a fairly varied data distribution based on a standard deviation of 0.21746.

The descriptive statistical results of the sales growth variable (X3) have the lowest value of -0.25 and the highest value of 0.36, an average value of 0.0726 with a standard deviation of 0.13526. The average value of the company's sales growth is 7.26%, indicating relatively low sales growth, with a fairly large spread of data based on a standard deviation of 0.13526.

The descriptive statistical results of the operating capacity variable (X4) have the lowest value of 0.41 and the highest value of 1.51 with an average value of 0.9796 with a standard deviation of 0.28517. The average value of the company's operating capacity is 0.9796, indicating an efficiency in the use of assets that is close to optimal, with a fairly varied data distribution based on a standard deviation of 0.28517.

The descriptive statistical results of the financial distress variable as a dependent variable have the lowest value of -0.38 and the highest value of 1.51 with an average value of 0.6104 with a standard deviation of 0.42954. The standard deviation of 0.94491 (above the average) indicates that there is a fairly high spread of data from the average value, which means that there are significant differences between companies in terms of the level of financial distress.

Table 2. One-Sample Kolmogorov-Smirnov Test

Normality Test Results

		Unstandardized Residual
N		59
Normal Parametersa,b	Mean	.0000000
	Standard Deviation	.30111983
Most Extreme Differences	Absolute	.102
	Positive	.102
	Negative	-.077
Test Statistics		.102
Asymp. Sig. (2-tailed)		.197c

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
Source: SPSS Output version 26 (Data processed by researcher, 2025)

Test results the normality test conducted using the Kolmogorov-Smirnov test showed a significance value of 0.197, which is above the 0.05 significance level. This indicates that the data is normally distributed. If the test is carried out, the data is normally distributed.

Table 3. Coefficients

Multicollinearity Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.738	.195		3,791	.000		
Profitability(ROA)	4,275	1,404	.320	3,046	.004	.822	1,216
Leverage(DAR)	-.968	.208	-.490	-4,659	.000	.823	1,215
Sales Growth(SG)	.315	.311	.099	1,011	.316	.948	1,055
Operating Capacity(TATO)	.069	.149	.046	.461	.647	.925	1,081

a. Dependent Variable:Financial Distress

Source: SPSS Output version 26 (Data processed by researcher, 2025)

The results of the multicollinearity test that has been carried out show that if the tolerance value is more than 0.10 and the VIF value of each variable is less than 10, it can be said that it is free from multicollinearity symptoms.

Table 4. Coefficients
Heteroscedasticity Test Results

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.148	.118		1,251	.216
	Profitability(ROA)	.051	.853	.008	.060	.952
	Leverage(DAR)	-.220	.126	-.239	-1,740	.088
	Sales Growth(SG)	.189	.189	.128	1,002	.321
	Operating Capacity(TATO)	.155	.091	.221	1,705	.094

a. Dependent Variable: RES_5

Source: SPSS Output version 26 (Data processed by researcher, 2025)

The results of the heteroscedasticity test that has been carried out show that the significance value of the independent variable is greater than the significance level of 0.05, so it can be said that there are no symptoms of heteroscedasticity in the regression model.

Table 5.Model Summary
Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	Durbin-Watson
1	.713a	.509	.472	.31207	2,405

a. Predictors: (Constant), Operating Capacity, Leverage, Sales Growth, Profitability
b. Dependent Variable: Financial Distress

Source: SPSS Output version 26 (Data processed by researcher, 2025)

The results of the autocorrelation test that has been carried out show that the dw (Durbin Watson) value obtained is 2.405, dL: 1.4385, dU: 1.7266, 4-dU: 2.2734, 4-dL: 2.5615. These results indicate that 4-dU < d < 4-dL, thus it is stated to be inconclusive.

Table 6. Coefficients
Multiple Linear Regression Test Results

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.738	.195		3,791	.000
	Profitability(ROA)	4,275	1,404	.320	3,046	.004
	Leverage(DAR)	-.968	.208	-.490	-4,659	.000
	Sales Growth(SG)	.315	.311	.099	1,011	.316
	Operating Capacity(TATO)	.069	.149	.046	.461	.647

a. Dependent Variable: FD

Source: SPSS Output version 26 (Data processed by researcher, 2025)

Based on the results of the linear regression test, a multiple linear regression equation can be prepared as follows:

$$Y = \alpha + \beta 1\ X2 + \beta 2\ X2 + \beta 3\ X3 + \beta 4\ X4 + e$$

$$Y = 0.738 + 4.275\ ROA + (-0.968)\ DAR + 0.315\ SG + 0.069\ TATO + e$$

Based on the regression equation, an analysis can be carried out regarding the magnitude of the influence of each independent variable on the dependent variable, namely:

1. The constant (intercept) value of 0.738 indicates that if all independent variables profitability, leverage, sales growth, and operating capacity are zero, the estimated Financial distress value is 0.738. This constant reflects the baseline value of Financial distress when there is no influence from the independent variables in the model.
2. The profitability coefficient (X1) of 4.275 means that every 1 unit increase in profitability (ROA) will increase the financial distress score by 4.275, assuming other variables remain constant. This positive coefficient indicates that profitability has a directional relationship with the Grover model score, indicating that higher profitability means a company's financial health tends to be healthier and the risk of financial distress decreases.
3. The leverage coefficient (X2) of -0.968 indicates that every 1 unit increase in leverage (DAR) will decrease the financial distress score by 0.968, assuming other variables remain constant. This negative coefficient indicates that the higher the company's debt level, the lower the Grover model score, indicating the company is in a less healthy financial condition and has a higher risk of financial distress.
4. The sales growth (X3) coefficient value of 0.315 indicates that every 1 unit increase in sales growth will increase the financial distress score by 0.315, assuming other variables remain constant. Although the direction of the relationship is positive, the t-test results indicate that the effect is not statistically significant, so its contribution to financial distress is not strong enough in this model.
5. The operating capacity (X4) coefficient of 0.069 indicates that every 1 unit increase in operating capacity will increase the financial distress score by 0.069, assuming other variables remain constant. However, because this coefficient is relatively small and the t-test results show no statistical significance, its influence on the company's financial condition is considered less dominant in the model.

Table 7. Model Summary b

Results of the Coefficient of Determination (R2) Test

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.713a	.509	.472	.31207

a. Predictors: (Constant), Operating Capacity, Leverage, Sales Growth, Profitability

b. Dependent Variable: Financial Distress

Source: SPSS Output version 26 (Data processed by researcher, 2025

The results of the R^2 test that have been carried out show that the adjusted R square value is 0.472, so it is said that 47% of the variation in financial distress is influenced by profitability, leverage, sales growth, and operating capacity, while 53% is influenced by other variables outside the study.

Table 8. ANOVAa

Simultaneous Test Results (F)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,442	4	1,361	13,970	.000b
	Residual	5,259	54	.097		
	Total	10,701	58			

a. Dependent Variable: Financial Distress

b. Predictors: (Constant), Operating Capacity, Leverage, Sales Growth, Profitability

Source: SPSS Output version 26 (Data processed by researcher, 2025

Test results the f test that has been carried out shows that the significance value is 0.000 < 0.05, so it can be said that profitability, leverage, sales growth, and operating capacity simultaneously have a significant effect on financial distress.

Table 9. Coefficients
Partial Test Results (t)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.738	.195		3,791	.000
	Profitability(ROA)	4,275	1,404	.320	3,046	.004
	Leverage(DAR)	-.968	.208	-.490	-4,659	.000
	Sales Growth(SG)	.315	.311	.099	1,011	.316
	Operating Capacity(TATO)	.069	.149	.046	.461	.647

a. Dependent Variable: FD

Source: SPSS Output version 26 (Data processed by researcher, 2025

The results of the t-test show that profitability has a significant positive effect on financial distress, as seen from the t value = 3.046 and a significance value of 0.004 < 0.05. The leverage variable has a significant negative effect on financial distress, as seen from the t value = -4.659 and a significance value of 0.000 < 0.05. The sales growth value does not have a significant effect on financial distress, as seen from the t value = 1.011 and a significance value of 0.316. The operating capacity value does not have a significant effect on financial distress, as seen from the t value = 0.461 and a significance value of 0.647.

The effect of profitability on financial distress

The results of the multiple linear regression test of the profitability variable show a coefficient of 4,275 and the significance value is 0.004 < 0.05, so Ha is accepted, which means the profitability hypothesis has a positive effect significant on financial distress because the significance value is less than 0.05. Higher company profitability indicates a healthier financial condition and a lower risk of financial distress (Baros et al., 2022). This finding aligns with signaling theory, which states that high profitability is a positive signal to external parties about a company's ability to generate profits and meet financial obligations (Mahaningrum & Merkusiwati, 2020). This is in line with research (Idawati, W. 2020; Purwaningsih & Safitri, 2022; Chalid et al., 2022)

The effect of leverage on financial distress

The results of the multiple linear regression test of the leverage variable show a coefficient of -0.968 and the significance value is 0.000 > 0.05 then Ha is accepted which means the leverage hypothesis has a negative influence significant against financial distress because the significance value is less than 0.05. Higher leverage levels indicate a company's worsening financial condition and an increased risk of financial distress (Chalid et al., 2022). A company's reliance on debt can increase financial pressure, especially if cash flow is unable to cover short-term obligations. In line with research from (Kinanti & Arsjah, 2025; Aji & Anwar, 2022).

The influence of sales growth on financial distress

The results of the multiple linear regression test for the sales growth variable show a coefficient of 0.315 and significance value 0.316 > 0.05 then Ha is rejected which means the sales growth hypothesis has no influence significant against financial distress because the significance value is greater than 0.05. Sales growth is not strong enough to explain a company's financial distress because increased sales do not necessarily reflect the company's ability to manage finances and meet obligations (Setyowati & Sari, 2019). In line with research from (Kinanti & Arsjah, 2025;Wibowo & Susetyo, 2020)

The effect of operating capacity on financial distress

The results of the multiple linear regression test for the operating capacity variable show a coefficient of 0.069 and significance value 0.0647 > 0.05 then Ha is rejected which means the operating capacity hypothesis has no influence significant against financial distress because the significance value is greater than 0.05. A company's operational capacity does not necessarily reflect a healthy financial condition because the efficiency of asset use does not always indicate the company's ability to avoid financial distress, especially if it is not balanced with good financial management and income stability (Santika, 2023). In line with research (Idawati, W. 2020; Solikhin & Parasetya, 2023; Pebrianti et al., 2023).

CONCLUSION

The conclusion obtained from this study is that profitability has a significant positive effect on financial distress, leverage has a significant negative effect on financial distress, sales growth and operating capacity do not have a significant effect on financial distress. The limitations in this research are the limitations of the research object of manufacturing companies which only focus on miscellaneous industrial sector listed on the IDX in 2022-2024. Suggestions for future researchers include expanding the research object and data scope to include all manufacturing and banking sectors and considering the use of operational variables other than those in this study to provide a more comprehensive picture in detecting and preventing financial distress.

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