Predicting Financial Distress in the Indonesian Retail Industry

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ABSTRACT

The threat of financial distress necessitates that companies develop appropriate strategies to anticipate conditions that may lead to financial instability. One effective method for predicting financial distress is through the analysis of financial ratios. This study focuses on four key financial ratios: operating capacity, profitability, leverage, and cash flow, to examine their predictive power regarding financial distress. The research encompasses the entire population of retail sector companies in Indonesia, with data spanning from 2019 to 2022. The findings indicate that all four variables—operating capacity, profitability, leverage, and cash flow—are significant predictors of financial distress. Specifically, operating capacity, profitability, and cash flow exhibit a negative relationship with financial distress, suggesting that higher values in these variables are associated with lower financial distress risk. Conversely, leverage demonstrates a positive relationship, indicating that higher leverage increases the risk of financial distress. In conclusion, the study underscores the importance of these financial ratios in predicting financial distress within Indonesia's retail industry, highlighting the need for companies to monitor and manage these variables proactively to mitigate potential financial challenges.

Keywords: Financial Distress; Operating Capacity; Profitability; Leverage; Cash Flow.

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ABSTRAK

Adanya ancaman *financial distress* membuat perusahaan harus memiliki strategi yang tepat untuk mengantisipasi kondisi yang dapat menyebabkan masalah pada keuangan perusahaan. Untuk memprediksi *financial distress* dapat dianalisis dari rasio-rasio keuangan perusahaan. Pada penelitian ini peneliti menggunakan *operating capacity*, profitabilitas, *leverage*, dan arus kas sebagai variabel independen dan mengkaji bagaimana keterkaitannya dalam memprediksi *financial distress*. Penelitian menggunakan seluruh populasi perusahaan sektor ritel yang ada Indonesia dengan periode pengamatan tahun 2019-2022. Kesimpulan penelitian ini adalah keempat variabel yaitu *operating capacity*, profitabilitas, *leverage,* dan arus kas memiliki pengaruh dalam memprediksi *financial distress. Operating capacity*, profitabilitas dan arus kas menunjukkan arah negatif dalam pengaruhnya memprediksi *financial distress*, sedangkan *leverage* menunjukkan arah positif dalam pengaruhnya terhadap *financial distress*.

Kata Kunci: Financial Distress; Operating Capacity; Profitabilitas; Leverage; Arus Kas.

Artikel dapat diakses : https://ojs.unud.ac.id/index.php/Akuntansi/index

INTRODUCTION

The ideal condition for a company is to be a healthy one, benefiting all stakeholders, both internal and external. However, there are times when a company may not operate as planned and face financial challenges such as liquidity issues, hindering its ability to meet operational expenses. If such situations are not promptly addressed, they may escalate to solvency issues, potentially leading to bankruptcy. Many cases of business bankruptcy stem from financial distress due to poor financial management. Therefore, effective financial management is crucial to maintaining the continuity of a company's operations (going concern).

The phenomenon of financial distress in Indonesia's retail sector in 2021 serves as a stark example. Several companies, such as Centro, Giant, Matahari Department Store, and Ramayana, experienced significant financial difficulties. Centro was declared bankrupt, Giant closed its operations permanently, Matahari reported increased net losses, and Ramayana exhibited poor performance (Sembiring, 2021). Research by (Angin & Muliyani, 2024) corroborates these findings, noting that by 2021, PT. Hero Supermarket (Giant) permanently closed 359 outlets, PT. Ramayana Lestari Sentosa closed 19 outlets, and PT. Matahari Department Store closed 19 outlets, with an additional 10 under observation. These companies faced financial distress due to mismanaged financial difficulties, ultimately leading to bankruptcy.

Financial distress poses a threat to companies of all sizes, necessitating appropriate strategies to anticipate and mitigate potential financial problems. Financial distress can be defined as a stage of declining conditions that occur before bankruptcy or liquidation, observed when a company struggles with unhealthy financial conditions or difficulty repaying its debts. Factors contributing to financial distress include cash flow difficulties, high levels of debt, operational losses, and macroeconomic factors such as rising loan interest rates or natural disasters (Sutra & Mais, 2019).

Financial distress is a stage of financial deterioration preceding bankruptcy or liquidation (Srikalimah, 2017). According to (Suprihatin & Giftilora, 2020), financial distress occurs when a company experiences unfavorable financial conditions, which, if not addressed, can lead to failure or bankruptcy. A company is considered bankrupt if it can no longer meet its obligations to creditors and lacks the financial resources to continue operations. Signs of financial distress include declining sales, reduced dividend profits, operational closures due to high costs and declining sales, continuous losses, mass layoffs, executive departures, falling stock prices, and equity nearing zero or negative values.

Understanding financial distress is beneficial for several reasons. It helps management take timely actions to prevent issues from escalating to bankruptcy, aids in making decisions regarding mergers or takeovers to ensure obligations are met and operations are managed effectively, and provides early warning signals of potential future bankruptcy (Srikalimah, 2017).

The research conducted by (Handayati et al., 2022) indicates that financial distress is influenced by financial ratio indicators. Therefore, predicting financial distress can be effectively analyzed through a company's financial ratios. This

study utilizes operating capacity, profitability, leverage, and cash flow as key indicators to predict financial distress within the retail sector in Indonesia.

Previous research on financial distress, such as those by (Maysaroh et al., 2022), (Miswaty & Novitasari, 2023), (Sutra & Mais, 2019), (Tran et al., 2023) and (Luu Thu, 2023), has extensively used Altman's model. However, this study employs the Grover model, an extension of the Altman model, to predict corporate bankruptcy. In Indonesia, the application of the Grover model remains relatively limited compared to the Altman model. Understanding financial distress through such models is crucial as it highlights which financial ratios are predictive of financial distress, offering valuable insights for stakeholders, including company management and investors, in their decision-making processes.

Signaling theory is utilized in this research to explain how company management conveys information to investors regarding the company's prospects. According to (Sutra & Mais, 2019), signaling theory posits that financial reports provide both positive (good news) and negative (bad news) signals to their users, reflecting management's actions to fulfill the owner's objectives. This theory helps reduce information asymmetry by ensuring high-quality financial reporting, which is essential for evaluating a company's performance and financial condition, thereby predicting potential bankruptcy.

Operating capacity describes the accuracy of an entity's operational performance, commonly measured by the total assets turnover ratio (operating capacity = sales/total assets). A higher turnover ratio indicates more effective use of total assets in generating sales. Inefficient asset utilization can hinder sales maximization, increasing the risk of financial distress. Research by (Larasati & Wahyudin, 2019) on property, real estate, and construction service companies in Indonesia demonstrated that higher operating capacity negatively impacts financial distress, consistent with signaling theory. This theory suggests that higher operating capacity signals to investors that the company is in good health and a viable investment, whereas lower operating capacity indicates potential financial distress, signaling poor health.

Conversely, (Widhiari & Merkusiwati, 2015) found that in Indonesian manufacturing companies, higher operating capacity can still lead to financial distress. (Miswaty & Novitasari, 2023) support this, explaining that more effective asset utilization, while yielding higher profits, might encourage controlling shareholders to maximize their interests, inadvertently increasing financial distress.

Based on these insights, the developed hypothesis is as follows:

H_1: Operating capacity has a negative effect on predicting financial distress.

The profitability ratio is a crucial metric for measuring a company's performance in generating profit. It is typically assessed using Return on Assets (ROA), which evaluates whether investments yield the desired returns (Aisyah et al., 2017). A low ROA indicates inefficiency in asset utilization and a lack of productivity in generating profits. This inefficiency can impact internal funding sources for investment and may lead to financial distress. (Srikalimah, 2017) concluded that ROA significantly affects the occurrence of financial distress in manufacturing companies listed on the IDX. Similarly, (Aisyah et al., 2017) found that ROA has a significant effect on financial distress in textile and garment

companies listed on the IDX. (Mahaningrum & Merkusiwati, 2020) stated that a smaller profitability ratio increases the probability of financial distress, based on their study of chemical industry companies listed on the IDX. (Bui & Thach, 2023) discovered a negative relationship between the profit-to-total-assets ratio and financial difficulties in export companies listed on the Vietnam stock market, indicating that lower profitability ratios heighten the risk of financial distress. (Tran et al., 2023) also identified net income divided by total assets as a significant predictor of financial distress. Based on these findings, the hypothesis is formulated as follows:

H_2: Profitability has a negative effect on predicting financial distress.

The leverage ratio is an indicator of a business's operational efficiency and the distribution of business risk between owners and creditors. It measures a company's ability to settle its obligations and indicates the proportion of company assets financed by liabilities (Hery, 2021). Companies heavily reliant on loans may accumulate excessive liabilities, increasing the risk of financial distress. A higher leverage ratio implies a greater likelihood of financial distress due to the burden of substantial liabilities. (Handayati et al., 2022) indicated that leverage, measured by the debt-to-assets ratio, is a strong predictor of financial distress. (Christine et al., 2019) found that high leverage impacts financial distress in property and real estate companies, as significant debt obligations can lead to bankruptcy. (Maysaroh et al., 2022) also concluded that leverage is a predictor of financial distress. However, (Nukmaningtyas & Worokinasih, 2018) found that leverage does not affect financial distress, suggesting that the magnitude of leverage alone does not determine a company's financial condition. Conversely, (Larasati & Wahyudin, 2019) and (Dwiantari et al., 2021) concluded that high leverage levels are associated with an increased risk of financial distress. Based on these insights, the hypothesis is as follows:

H_3: Leverage has a positive effect on predicting financial distress.

Cash flow represents the net calculation of cash inflows and outflows from a company's operational, investment, and financing activities. Despite high profits, a company with insufficient cash flow will face financial difficulties. The pattern of cash flow has predictive power in determining the onset of financial difficulties, both in the current period and previous periods (Aderin & Amede, 2022). Positive cash flow, where inflows exceed outflows, indicates financial health, while negative cash flow suggests the opposite, leading to potential financial distress. Negative cash flow can adversely affect a company by hindering its ability to pay debts, finance operations, pay dividends, or maintain creditor trust.

This study focuses on operating cash flow, which reflects the recurring activities and transactions impacting a company's cash inflows and outflows. Operating cash flow encompasses the main revenue-generating activities and excludes investment and financing activities (Safiq et al., 2020). (Phan et al., 2022) found that operating cash flow has a negative relationship with financial distress in companies listed on the Vietnam Stock Market. Similarly, (Sehgal et al., 2021) identified operating cash flow as a key determinant in predicting a company's financial difficulties. Research by (Christine et al., 2019) and (Bui & Thach, 2023) further supports the significance of cash flow in predicting financial distress. A

company with cash outflows exceeding inflows and lacking liquid reserves is likely to encounter financial difficulties.

Based on these insights, the hypothesis is formulated as follows:

H_4: Cash flow has a negative effect on predicting financial distress.

Below is a representation of the research model used in this study:
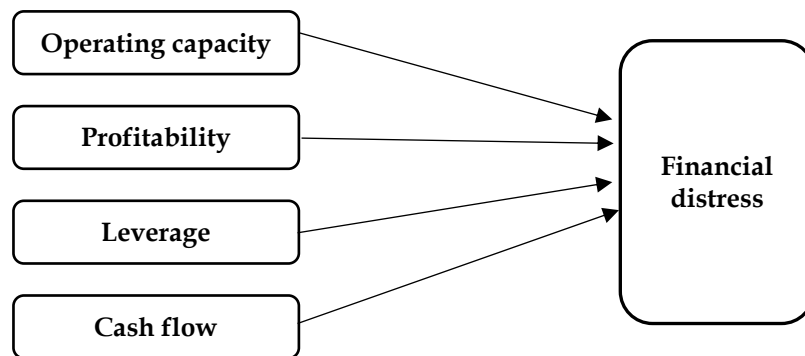
Picture 1. Research Model

Source: research data, 2023

RESEARCH METHOD

In this study, the author utilized the entire population of retail companies in Indonesia from 2019 to 2022. The retail sector was chosen due to the significant financial distress and bankruptcies observed in 2021 (Sembiring, 2021), (Angin & Muliyani, 2024). Secondary data was sourced from Refinitiv, a financial market data provider. The sample was selected using a purposive sampling method to ensure a representative sample based on the following criteria: companies with complete data on operating capacity, profitability, leverage, cash flow, and other necessary data to calculate financial distress scores during the 2019-2022 period, and companies that use the Indonesian rupiah currency.

The Grover model was employed to measure financial distress. Developed by Jeffrey S. Grover, this model is a redesigned and reassessed version of the Altman Z-Score model. The formula for the Grover model is as follows (Kumar, 2023), (Kassidy & Handoko, 2022):

G score $= 1,650\ X1 + 3,404\ X2 - 0,016\ ROA + 0,057$

Notes:

X1 = Working Capital / Total asset

X2 = Earning before interest and taxes/ Total asset

ROA = Net income/ Total asset

Score category :

G ≤ -0,02 = The company is in a bankrupt condition

G ≥ 0,01 = The company is considered healthy

X1 Variable = Operating capacity is proxied using total asset turn over.

X2 Variable = Profitability is proxied using return on assets.

X3 Variable = Leverage is proxied using debt to assets.

X4 Variable = Cash flow is proxied by operating cash flow.

This study employed various data analysis methods using the SPSS 25 program. Hypothesis testing was conducted through logistic regression, following

several stages: model feasibility tests using the omnibus test of model coefficients, overall model fit assessment (-2 log likelihood), and the Hosmer and Lemeshow test to evaluate the model's predictive capability. Additionally, variable variability was assessed using Nagelkerke R Square, and model classification was validated through a classification matrix test. Multicollinearity was also tested to ensure the robustness of the model (Ghozali, 2018).

RESULTS AND DISCUSSION

The population of this study comprises retail companies in Indonesia with an observation period of 4 years (2019-2022). Based on the process and results of sample selection, the following samples were obtained:

Table 1. Sampe Selection

Information	Total
Retail companies in Indonesia	36
Companies that provide incomplete data during the observation period (2019-2022)	(3)
Retail companies that meet the sample criteria	33
Total research data (2019-2022)	132

Source: research data, 2023

From 132 observational data obtained descriptive statistical results of financial distress in table 2.

Table 2. Financial Distress Descriptive Statistical Results

	item	percent
Not financial distress	101	77%
Financial distress	31	23%
N total	132	100%

Source: research data, 2023

The results of descriptive statistics of TATTOO, ROA, DAR, OCF are presented in table 3.

Table 3. TATO, ROA, DAR, OCF Descriptive Statistical Results

	N	Minimum	Maximum	Mean	Std. deviation
TATO	132	0.01	15.35	1.6113	1.91353
ROA	132	-87.42	47.97	-0.5671	16.15098
DAR	132	0.07	79.88	20.483	20.41552
OCF	132	-128.6	48.17	3.0256	18.95037
Valid N (listwise)	132				

Source: research data, 2023

The Total Assets Turnover (TATO) ratio in this study ranged from a minimum of 0.01 to a maximum of 15.35, with an average value of 1.61 and a standard deviation of 1.91. The Return on Assets (ROA) displayed a minimum value of -87.42 and a maximum value of 47.97, with an average of -0.57 and a standard deviation of 16.15. The Debt to Asset Ratio (DAR) had a minimum value of 0.07 and a maximum of 79.88, with an average of 20.28 and a standard deviation of 20.42. Lastly, the Operating Cash Flow (OCF) ranged from -128.60 to 48.17, with an average value of 3.03 and a standard deviation of 18.95.

The next step involves testing the data, with the results as follows:

Table 4. Data Test Result

Test		result	description
Omnimbus test of model	sig	0.000	The model is suitable for use as research
-2log likelihood	begin	154.691	ending value of -2log likelihood lower than beginning value, model fit with data
	end	43.479	
Hosmer and Lemeshow	sig	0.517	The model is able to predict the observed values
Nagelkerke R Square		0.825	The variability of the dependent variable that can be explained by the independent variable is 82.5%
Classification matrix test		93.2%	overall percentage, model regresi logistik memiliki akurasi sebesar 93.2%
Multicollinearity test	OC	0.867	Independent variable values below 1.000, no multicollinearity
	ROA	0.099	
	DAR	0.019	
	OCF	0.081	

Source: research data, 2023

The results of the Omnibus test indicate a significance level of 0.000, which is less than the 0.05 threshold, confirming the model's suitability for this research. The -2 log likelihood value decreased from the initial to the final value, demonstrating that the model fits the data well. The Hosmer and Lemeshow test results show a significance level of 0.517, which is greater than 0.05, indicating that the research model accurately predicts the outcomes of its observations. Additionally, the Nagelkerke R Square test yielded a value of 0.825, meaning that 82.5% of the variability in the dependent variable is explained by the independent variables (Ghozali, 2018). The classification matrix test showed an overall accuracy of 93.2%, confirming the logistic regression model's high predictive accuracy. The multicollinearity test revealed that the standard error values of the independent variables were less than 1.000, indicating the absence of multicollinearity (Statistikapedia, 2022), (Putra, 2023).

The results of the logistic regression hypothesis test are as follows:

Table 5. Hypothesis Test Results

	B	S.E.	Wald	df	Sig.	Exp(B)
TATO	-0.654	0.867	0.569	1	0.045	0.520
ROA	-0.349	0.099	12.521	1	0.000	0.706
DAR	0.065	0.019	11.510	1	0.001	1.067
OCF	-0.115	0.081	2.020	1	0.037	1.122
Constant	-3.881	1.116	12.093	1	0.001	0.021

Source: research data, 2023

The hypothesis testing yielded the following results: The significance value for Total Assets Turnover (TATO) is 0.045, which is less than the 0.05 threshold, thus accepting H1. This indicates that TATO has a significant negative effect on financial distress. The significance value for Return on Assets (ROA) is 0.000, also less than 0.05, leading to the acceptance of H2. This implies that ROA has a

significant negative effect on financial distress. Similarly, the significance value for the Debt to Asset Ratio (DAR) is 0.001, below 0.05, confirming H3. This signifies that DAR has a significant positive effect on financial distress. Finally, the significance value for Operating Cash Flow (OCF) is 0.037, under 0.05, thus accepting H4. This demonstrates that OCF has a significant negative effect on financial distress.

The first hypothesis in this study is accepted, indicating that operating capacity, as proxied by total assets turnover, has a significant negative effect on predicting financial distress. Greater efficiency in utilizing assets to generate sales benefits the company, thereby reducing the probability of financial distress. This finding aligns with the research conducted by (Larasati & Wahyudin, 2019), (Sehgal et al., 2021), (Sutra & Mais, 2019), (Widhiari & Merkusiwati, 2015), all of which suggest that operating capacity negatively impacts financial distress. However, this study contrasts with (Miswaty & Novitasari, 2023), who concluded that the operating capacity ratio has a positive effect on financial distress.

The second hypothesis is also accepted, demonstrating that profitability, as proxied by return on assets (ROA), has a significant negative effect on predicting financial distress. Profitability serves as a key indicator for both investors and companies in assessing a company's ability to generate profit. High profitability reflects the company's ability to generate earnings from its assets, thus reducing the risk of financial distress. This result is consistent with studies by (Agustini & Wirawati, 2019), (Bui & Thach, 2023), (Nukmaningtyas & Worokinasih, 2018), (Mahaningrum & Merkusiwati, 2020), which all indicate that profitability negatively affects financial distress. However, this study contradicts (Suprihatin & Giftilora, 2020), who found no effect of profitability on financial distress.

The third hypothesis, which posits that leverage, proxied by the debt to asset ratio, has a significant positive effect on predicting financial distress, is accepted. A higher leverage ratio increases the risk of financial distress, as the company may struggle to repay principal and interest costs due to insufficient assets to cover its debts. Conversely, a lower leverage ratio suggests a lower likelihood of financial distress, sending a positive signal to investors regarding the company's health and suitability for investment. This finding is supported by research from (Agustini & Wirawati, 2019), (Bui & Thach, 2023), (Larasati & Wahyudin, 2019), (Mahaningrum & Merkusiwati, 2020), (Tran et al., 2023), (Dwiantari et al., 2021). However, it contrasts with (Yazdanfar & Öhman, 2020), who concluded that leverage negatively affects financial distress, and does not support the findings of (Aisyah et al., 2017), (Suprihatin & Giftilora, 2020), (Nukmaningtyas & Worokinasih, 2018), (Puspaningsih et al., 2023), who found no effect of leverage on financial distress.

The fourth hypothesis, that cash flow, proxied by operating cash flow, has a significant negative effect on predicting financial distress, is also accepted. Operating cash flow reflects the company's ability to generate cash receipts and disbursements through its core activities. Adequate operating cash flow ensures that the company can repay loans, sustain operations, pay dividends, and make new investments without relying on external financing. Low operating cash flow hampers the company's ability to run its operations and meet obligations, reducing investor confidence and leading to financial distress if the condition persists. This

finding aligns with the research of (Phan et al., 2022), (Sehgal et al., 2021), (Bui & Thach, 2023), (Christine et al., 2019), but contrasts with the studies by (Miswaty & Novitasari, 2023), (Suprihatin & Giftilora, 2020).

CONCLUSIONS

The conclusions drawn from this research are as follows: Operating capacity, proxied by total assets turnover, has a significant negative effect on predicting financial distress. Profitability, proxied by return on assets, also shows a significant negative effect on predicting financial distress. Leverage, proxied by the debt-to-asset ratio, has a significant positive effect on predicting financial distress. Cash flow, proxied by operating cash flow, demonstrates a significant negative effect on predicting financial distress.

However, this research has limitations. It focuses solely on retail companies in Indonesia, which restricts the generalizability of the findings to other sectors or countries. Additionally, some companies did not provide the necessary data, and the study is limited to analyzing only four independent variables. Therefore, other potential factors influencing financial distress were not examined.

Both company management and investors are advised to pay attention to financial ratios such as operating capacity, profitability, leverage, and operating cash flow, as these have been shown to predict financial distress. According to signaling theory, increasing sales can lead to higher profits and operating cash flow, sending a positive signal to investors. Reducing debt ratios is also recommended to avoid financial distress.

Future researchers should consider studying different populations, such as all manufacturing companies in Indonesia, to obtain a larger sample size. They could also incorporate additional variables beyond financial ratios, such as Environmental, Social, and Governance (ESG) disclosures, to further develop factors predicting financial distress.

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