

The Influence of Financial Ratios on Financial Distress: An Empirical Study of Banks Listed on the Indonesia Stock Exchange

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Abstract. This study aims to analyze the effect of financial ratios on financial distress conditions in banking companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2024 period. The independent variables in this study include the liquidity ratio (Current Ratio), the solvency ratio (Debt to Assets Ratio), the profitability ratio (Return on Equity), and the activity ratio (Total Assets Turnover), while the dependent variable is financial distress measured using a dummy variable. The sampling method uses a non-probability sampling approach with a purposive sampling technique, resulting in 20 banking companies that meet the research criteria. Data analysis was carried out using the logistic regression method to test the extent to which the probability of financial distress can be predicted through the financial ratios used. The results show that the Current Ratio, Debt to Assets Ratio, Return on Equity, and Total Assets Turnover do not have a significant effect on financial distress conditions in banking companies in Indonesia. This finding indicates that traditional financial ratios have not been able to effectively detect potential financial difficulties in the banking sector which has special characteristics in capital structure and asset management. This research is expected to be a reference for researchers and practitioners in developing a more comprehensive financial distress prediction model in the future.

Keywords: Activity; *Financial Distress*; Liquidity; Profitability; Solvency.

1. BACKGROUND

Banking sector stability plays a vital role in maintaining the resilience of the national financial system. Indonesia's economic history has shown that turmoil in the banking industry is often a major trigger for macroeconomic crises. The 1997/1998 monetary crisis, which began with the liquidation of 16 national banks, led to a surge in poverty rates, reaching 49.5 million (Smith and Nunn, 2021). This crisis exposed the weakness of Indonesia's banking structure in dealing with exchange rate pressures and its high dependence on foreign loans. Following the crisis, national banks faced the significant challenge of restoring public trust by strengthening risk management and capitalization (Unnava and Smith, 2021).

The 2008 global financial crisis once again tested the resilience of the banking sector in various countries, including Indonesia. The shock caused a sharp decline in business activity and increased the risk of *financial distress* in various public companies (Johri et al., 2022). The impact was also felt in the Indonesian capital market, where several issuers had to *delist* due to deteriorating financial conditions. Subsequent global uncertainty, such as falling commodity prices and fluctuations in global interest rates in 2015, also put pressure on the stability of the domestic financial industry, including the banking sector (Sahminan, 2021).

At a micro level, banking is a trust *-based institution*, so the potential for *financial distress* can threaten operational continuity if not detected early. *Financial distress* does not

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emerge suddenly, but rather begins with liquidity imbalances, operational inefficiencies, and the inability to meet long-term obligations (Michalkova and Ponisciakova , 2024). Therefore, early analysis of a bank's financial health is crucial to prevent bankruptcy.

Rejimon and Usha (2024) define *financial distress* as a phase of financial decline preceding bankruptcy, typically detected within three years of a company's failure. To identify this condition, researchers often use financial ratio indicators as a predictive tool (*early warning system*) (Rahma, 2020). Financial ratios provide a comprehensive overview of a company's ability to manage assets, liabilities, and capital to maintain stable financial performance.

Several previous studies have used financial ratios as predictors of *financial distress* , but the results show inconsistencies between periods and industries. For example, Oktaviani and Lisiantara (2022) found that the activity ratio (*total assets turnover*) influences *financial distress* in the tourism sector, while Rahma (2020) stated that the profitability ratio negatively influences *financial distress* in the transportation sector. Research by Fildzah and Rachmawati (2025) also shows variations in the influence of liquidity, leverage, and profitability on distress in the manufacturing subsector. These diverse results indicate that industry context plays a significant role in determining the predictive power of financial ratios.

Similar findings have been confirmed in an international context. Mehmood and Luca (2023) found that liquidity ratios and operational efficiency play a significant role in reducing the risk of *financial distress* in the European banking sector. Seretidou *et al.* (2025) added that profitability ratios have a negative relationship with the potential for financial failure in the global financial industry. Meanwhile, a study by Sylwestrzak and Słomkowska (2025) highlighted the importance of integrating traditional ratios and cash flow ratios to improve the accuracy of *financial distress predictions* .

In the Indonesian context, several recent studies have emphasized the relevance of this topic. Kawakibi *et al.* (2019) and Kawakibi and Kurniawan (2025) emphasized that macroeconomic volatility and weak credit risk management can accelerate *financial distress* in banks. Sitorus *et al.* (2022) also emphasized that asset efficiency and liquidity management are determining factors for bank financial stability. Furthermore, research by Ariyani *et al.* (2025); Thi *et al.* (2025); and Ummayah and Hertina (2024) shows that financial ratios (liquidity, solvency, profitability, and activity) are still relevant as early indicators of *financial distress* , although they need to be adjusted to industry characteristics and the crisis period faced.

gap remains due to inconsistencies in results and limitations of studies specifically focusing on the Indonesian banking industry in the current period. The research findings are expected to provide theoretical contributions to strengthening *financial distress prediction models* based on financial ratios, as well as provide practical benefits for management and regulators in early detection and mitigation of financial risks in the national banking sector.

2. THEORETICAL STUDY

Financial statements

According to PSAK 201: Presentation of Financial Statements, effective January 1, 2024 (replacing PSAK 1 version 2015), financial statements are a structured presentation of the financial position, financial performance, and cash flows of an entity, which aims to provide economic information for users in decision-making and demonstrate management's accountability for the resources entrusted to it (Indonesian Institute of Accountants, 2024). Complete financial statements include a statement of financial position, a statement of profit or loss and other comprehensive income, a statement of changes in equity, a statement of cash flows, as well as notes to the financial statements and disclosure of significant accounting policies. The main objective of financial statements is in line with *International Accounting Standard* IAS 1, namely to provide relevant and reliable information about the company's assets, liabilities, equity, revenues-expenses, and cash flows so that users can assess the company's performance and financial position accurately.

Recent research also emphasizes the strategic role of financial reports in supporting economic decisions. Popa and Nedelea (2022) highlight that financial reports serve as the primary basis for investors and creditors to evaluate an entity's position and

prospects. Furthermore, Biehl *et al.* (2024) demonstrate that quality financial reporting has a significant impact on the efficiency of resource allocation and corporate investment behavior. A study by Chandawarkar (2024) supports these findings with evidence that financial report transparency can increase stakeholder trust and improve decision-making. Thus, financial reports serve not only as a historical reporting tool but also as a prospective analysis tool for assessing an entity's financial risk and performance.

Liquidity Ratio

Liquidity ratios describe a company's ability to meet short-term maturing obligations using current resources. In this study, the chosen liquidity ratio proxy is the *current ratio* (CR), which assesses the adequacy of current assets relative to current liabilities as a liquidity cushion to prevent cash pressures and potential *financial distress* (Mehmood and Luca, 2023; Rejimon and Usha, 2024; Seretidou *et al.*, 2025; Rahma, 2020).

$$CR = \frac{\text{Aktiva Lancar}}{\text{Hutang Lancar}} \times 100\%$$

- Current assets : cash and cash equivalents, current receivables, inventory, and other assets that can be realized within a period of less than 12 months.
- Current liabilities : trade payables/expenses, long-term debt maturing in less than 12 months, other current liabilities.

A higher CR indicates a lower risk of *financial distress due to greater liquidity room for maneuver*; however, empirical evidence suggests its significance may vary across periods/industries (Seretidou *et al.*, 2025; Michalkova and Ponisciakova, 2024; Rahma, 2020; Oktaviani and Lisiantara, 2022). Comparative studies confirm liquidity indicators as a core *early warning indicator of distress*, alongside profitability, leverage/solvency, and efficiency/activity (Mehmood and Luca, 2023; Seretidou *et al.*, 2025; Sitorus *et al.*, 2022; Fildzah and Rachmawati, 2025).

Solvency Ratio

The solvency ratio is a measure that indicates the extent to which a company's assets are financed by debt and reflects the company's ability to meet all its short-term and long-term obligations using its total assets. This ratio is used to assess the company's level of dependence on external funding sources (debt) and illustrates the financial risks faced by the company. In this study, the proxy used to measure solvency is the *debt-to-assets ratio* (DAR), which indicates the proportion of total assets financed by total liabilities. The higher the DAR value, the greater the company's dependence on borrowed funds, which means a higher risk of *financial distress* (Fildzah and Rachmawati, 2025; Seretidou, *et al.*, 2025; Rejimon and Usha, 2024; Kawakibi and Kurniawan, 2025). Conversely, a lower ratio indicates a healthier financial condition and the company's ability to repay its obligations more safely.

$$DAR = \frac{\text{Total Hutang}}{\text{Total Aset}} \times 100\%$$

- Total liabilities : all of the company's short-term and long-term debts.
- Total assets : all company assets, both current and non-current.

Kawakibi *et al.* (2019) and Sitorus *et al.* (2022) emphasized that high solvency can worsen the capital structure and increase vulnerability to *financial distress*, especially in highly leveraged financial sectors such as banking. Mehmood and Luca (2023) found a positive relationship between debt ratios and bankruptcy risk in European financial companies, indicating that high leverage accelerates the transition from *distress* to default. Michalkova and Ponisciakova (2024) and Rahma (2020) showed that DAR is consistently an important proxy in financial ratio-based *distress prediction models* due to its ability to describe solvency risk and long-term funding sustainability. Sylwestrzak and Słomkowska (2025) and Ariyani *et al.* (2025) emphasized that increasing debt burdens without a corresponding growth in productive assets can reduce a company's financial stability and increase the likelihood of *distress*.

Profitability Ratio

Profitability ratios measure a company's ability to generate profits from managed resources and reflect the operational efficiency and resilience of its business model. In the

context of assessing financial health, strong profitability is typically associated with a lower risk of *financial distress* because the company has the internal capacity to absorb shocks and meet obligations (Mehmood and Luca, 2023; Seretidou et al., 2025; Rejimon and Usha, 2024; Rahma, 2020). The proxy used in this study is return on equity (ROE). ROE evaluates a company's ability to generate net profits for shareholders on each unit of equity invested. ROE is relevant for *financial distress studies* because it captures the quality of earnings after financing costs. A higher ROE indicates a greater buffer against cash flow and liability pressures (Seretidou et al., 2025; Sitorus et al., 2022; Fildzah and Rachmawati, 2025).

$$\text{ROE} = \frac{\text{Laba Bersih}}{\text{Total Ekuitas}} \times 100\%$$

- Net income : profit after tax in the current period.
- Total equity : total shareholder equity at the end of the period (can use the average equity at the beginning–end of the period if you want to reduce seasonal bias).

A higher ROE generally indicates stronger profitability and a lower probability of *distress* (Seretidou et al., 2025; Rahma, 2020; Oktaviani and Lisiantara, 2022). In the banking/financial context, sustainable profitability is correlated with resilience to funding and interest rate shocks (Mehmood and Luca, 2023; Sitorus et al., 2022; Ariyani et al., 2025). ROE can be distorted by leverage; excessively thin equity can mechanically increase ROE but increase solvency risk (Kawakibi and Kurniawan, 2025; Michalkova and Ponisciakova, 2024; Sylwestrzak and Słomkowska, 2025). Therefore, ROE interpretation should be read in conjunction with leverage/solvency indicators (e.g., DAR) for a more comprehensive risk evaluation.

Activity Ratio

The activity ratio illustrates a company's efficiency in utilizing all its assets to generate revenue through sales. This ratio indicates how effectively management utilizes available resources to support operational activities and increase productivity. In general, the higher the activity ratio, the more efficient the company is in using its assets to generate sales and profits (Oktaviani and Lisiantara, 2022; Ariyani et al., 2025; Sitorus et al., 2022). In this study, the proxy used to measure the activity ratio is *total asset turnover* (TATO). The TATO ratio assesses the overall ability of assets to generate revenue, thus serving as an indicator of a company's operational efficiency. This ratio is relevant for *financial distress research* because a low asset turnover rate is often an early sign of operational inefficiency and potential financial stress (Mehmood and Luca, 2023; Seretidou et al., 2025; Sylwestrzak and Słomkowska, 2025).

$$\text{TATTOO} = \frac{\text{Penjualan Bersih}}{\text{Total Aset}} \times 100\%$$

- Net sales : total revenue from the company's main activities after deducting sales returns and discounts.
- Total assets : all company assets, both current and non-current, which are used to support operational activities.

Oktaviani and Lisiantara (2022) found that activity ratios influence *financial distress*, where a decline in asset turnover efficiency is an indicator of weakening financial performance. Fildzah and Rachmawati (2025) emphasized that a high TATO indicates a company's ability to utilize resources productively, thereby reducing the potential for *distress*. Mehmood and Luca (2023) showed that asset efficiency is positively correlated with financial stability and long-term performance. Michalkova and Ponisciakova (2024) and Rejimon and Usha (2024) confirmed that low asset turnover rates often precede declining profit performance and increased financial risk. On the other hand, Kawakibi and Kurniawan (2025) and Ariyani et al. (2025) highlighted the importance of linking activity ratios with profitability and leverage to obtain a comprehensive picture of a company's financial efficiency.

Financial Distress

Financial distress is a condition where a company experiences serious financial pressure due to its inability to meet its operational and financial obligations in a timely manner. This condition describes the pre -*bankruptcy stage of financial performance decline*,

characterized by an imbalance between cash inflows and outflows, increasing debt burdens, and declining profitability (Michalkova and Ponisciakova, 2024; Rejimon and Usha, 2024; Seretidou *et al.*, 2025). According to Mehmood and Luca (2023), *financial distress* does not appear suddenly but develops gradually, from decreased liquidity to failure to meet long-term obligations. This condition can be a signal for management to take corrective action to prevent bankruptcy. Meanwhile, Sylwestrzak and Słomkowska (2025) emphasize that *financial distress analysis* serves as an *early warning system tool* that helps investors, creditors, and regulators assess business sustainability. In the banking context, *financial distress* is often associated with declining asset quality, rising *non-performing loans* (NPLs), and operational inefficiencies, which impact a bank's ability to maintain capital ratios and customer trust (Kawakibi and Kurniawan, 2025; Sitorus *et al.*, 2022; Ariyani *et al.*, 2025). Therefore, early detection of distress conditions is crucial so that corrective actions can be taken before a solvency crisis occurs. In this study, *financial distress* is proxied using a *dummy variable* with the following criteria:

FD = 1, if the company experiences pre-tax losses for two consecutive years;
FD = 0, if the company does not experience losses or is in a healthy condition.

- A score of 1 (*distress*) is given to companies that experience *losses before tax* for two consecutive years, indicating ongoing financial pressure.
- A value of 0 (*non-distress*) indicates that the company is in a healthy financial condition or has stable profitability.

dummy approach aligns with research by Rahma (2020), Oktaviani and Lisiantara (2022), and Fildzah and Rachmawati (2025), which categorizes *financial distress* based on net loss indicators over a specific period. Furthermore, Kawakibi *et al.* (2019) and Thi *et al.* (2025) emphasized the effectiveness of using binary variables to test the probability of *distress* through a logistic model because they can describe a company's financial condition dichotomously: healthy or distressed.

Michalkova and Ponisciakova (2024) state that *financial distress* is a transitional phase from normal performance to potential bankruptcy. Seretidou *et al.* (2025) and Mehmood and Luca (2023) show that a combination of financial ratios (liquidity, profitability, solvency, and activity) is effective as a predictor of *distress*. Sitorus *et al.* (2022) and Ummayah and Hertina (2024) emphasize that a ratio-based *financial distress prediction model* is relevant for the Indonesian banking sector because it can assist regulators in overseeing financial system stability.

3. RESEARCH METHODS

Types of research

This type of research is explanatory research *with* a quantitative approach. Explanatory research aims to explain the causal relationship between variables that have been formulated in the theoretical framework through hypothesis testing based on relevant theories. In the context of this research, the independent variables consist of financial ratios that include the liquidity ratio (*Current Ratio / CR*), solvency ratio (*Debt to Assets Ratio / DAR*), profitability ratio (*Return on Equity / ROE*), and activity ratio (*Total Assets Turnover / TATO*), while the dependent variable is *financial distress* which is proxied by a *dummy variable* (0 for healthy companies and 1 for companies experiencing *financial distress*). This study seeks to explain how changes in these financial ratios can affect the probability of *financial distress* in banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2019–2024. Thus, this research design is not only descriptive, but also analytical and confirmatory, because it attempts to empirically test the theoretical relationships that have been previously formulated based on previous research.

Population and Sample

The population in this study is all banking companies (issuers) listed on the Indonesia Stock Exchange (IDX) for the 2019–2024 period. This population was chosen because the banking sector is a strategic sector that plays an important role in maintaining the stability of the national financial system and is a key indicator of a country's economic health. The sampling technique used in this study is the *judgment sampling method*, which is a sample selection method based on certain considerations tailored to the objectives and

problems of the study (Ferdinand, 2014). The criteria for determining the sample in this study are as follows: (a) Is a banking sector company listed on the IDX during the 2019–2024 period. (b) Has been registered as an active issuer on the IDX since at least 2019. (c) Published a complete annual financial report for the period December 31, 2019–2024, presented in Rupiah (IDR).

Data Analysis Methods

The data analysis method used in this study was *logistic regression*, which can be used to test whether the probability of occurrence of the dependent variable can be predicted by its independent variables (Ghozali, 2024). The feasibility of the regression was assessed using *Hosmer and Lemeshow's Goodness of Fit Test* to test the null hypothesis that there is no difference between the model and the data. Cox and Snell R Square and Nagelkerke R values Square is also used to assess model fit. The Nagelkerke R-square value is interpreted similarly to the R² value in multiple regression (Ghozali, 2024). According to Sekaran and Bougie (2019), the regression model for logistic regression analysis can be formulated as follows:

$$Y = \ln \frac{P}{1-P} = b_0 + b_1 X_1 + b_2 X_2 + \dots + b_n X_n + e$$

Information:

Y	: Financial Distress Status
b ₀	: Constant
b ₁ ... b ₄	: Regression direction coefficient
X ₁	: Current Ratio (CR)
X ₂	: Debt to Assets Ratio (DAR)
X ₃	: Return on Equity (ROE)
X ₄	: Total Assets Turnover (TATO)
e	: Interfering error (error)

Hypothesis Testing

Hypothesis testing in this study uses binary logistic regression analysis as a statistical method to predict the likelihood of *financial distress* in companies. Binary logistic regression was chosen because the dependent variable in this study is dichotomous, namely having two categories (companies experiencing financial difficulties and companies that are not experiencing financial difficulties). According to Ghozali (2024), logistic regression is an analytical method that does not require the fulfillment of classical assumption tests like in multiple linear regression, because the dependent variable is categorical. Hypothesis testing in this model is conducted through the Wald test, which is used to assess the significance of the influence of each independent variable on the probability of *financial distress*.

4. RESULTS AND DISCUSSION

Model Feasibility Analysis Regression

After data processing, the results of the *Hosmer and Lemeshow Goodness of fit test* were obtained, which are shown in Table 1 below:

Table 1 Model Feasibility Test

Step	Chi-square	df	Sig.
1	43,841	8	1,000

Source: Processed data, 2025

Table 1 shows a *Chi-square value* of 43.841 with a significance level (p) of 1.000. Based on these results, because the significance level is greater than 0.05, the model can be concluded as being able to predict the observed values, or it can be said that the model is acceptable because it fits the observed data.

Analysis of the Coefficient of Determination

The coefficient of determination serves to indicate the extent to which variations in the dependent variable can be explained by the independent variables in the model. In logistic regression analysis, the coefficient of determination is not expressed as R² as in linear

regression, but rather is estimated through the Nagelkerke R Square value, which provides an overview of the model's ability to explain changes in the dependent variable. The *Nagelkerke R Square* value can be seen in Table 2 below:

Table 2 Coefficient of Determination

Step	-2 Log likelihood	Cox and Snell R Square	Nagelkerke R Square
1	43,841	.578	.742

Source: Processed data, 2025

The coefficient of determination in a logistic regression model is indicated by the Nagelkerke R Square value. In this study, the Nagelkerke R Square value was 0.742, indicating that approximately 74.2% of the variation in the dependent variable can be explained by the independent variables used in the model. Meanwhile, the remaining 25.8% reflects the influence of other factors outside the variables included in this research model.

Logistic Regression Analysis

Table 3 Logistic Regression Analysis

		B	SE	Wald	df	Sig.	Exp(B)
Step 1 ^a	CR	-.022	17,588	.000	1	.888	.871
	DAR	-.215,715	98566.687	.000	1	.887	.987
	ROE	-.535,215	43674.382	.000	1	.889	.897
	TATTOO	-.22,675	87141.302	.000	1	.999	.887
	Constant	175,537	80836.312	.000	1	.887	1.038E+70

Source: Processed data, 2025

Based on the results of the logistic regression test from Table 3 above, the regression equation obtained is as follows:

$$FD = 175,537 - 0.022 \text{ CR} - 215,715 \text{ DAR} - 535,215 \text{ ROE} - 22,675 \text{ TATO}$$

Hypothesis Test Results

The partial test results based on Table 3 are as follows:

- The influence of *the current ratio on financial distress conditions*
Table 3 above shows that the *Wald value* of CR is 0.000 (sig. 0.888). The significance value of 0.888 is greater than the 0.05 (5%) level of significance. Therefore, it can be concluded that the hypothesis is rejected, namely that the CR variable does not significantly influence the *financial distress* of banking in Indonesia.
- The influence of *the debt to assets ratio on financial distress conditions*
Table 3 above shows that the *Wald value* of DAR is 0.000 (sig. 0.887). The significance value of 0.887 is greater than the 0.05 (5%) level of significance. Therefore, it can be concluded that the hypothesis is rejected, namely that the DAR variable does not significantly influence the *financial distress* of banking in Indonesia.
- The effect of *return on equity on financial distress conditions*
Table 3 above shows that the *Wald value* of ROE is 0.000 (sig. 0.889). The significance value of 0.889 is greater than the 0.05 (5%) level of significance. Therefore, it can be concluded that the hypothesis is rejected, namely that the ROE variable does not significantly influence the *financial distress* of banking in Indonesia.
- The influence of *total assets turnover against financial distress conditions*
Table 3 above shows that the *Wald value* The significance value of TATO is 0.000 (sig. 0.999). The significance value of 0.999 is greater than the significance level of 0.05 (5%). Therefore, it can be concluded that the hypothesis is rejected, namely that the TATO variable does not have a significant effect on the *financial distress conditions* of banking in Indonesia.

Discussion of Results

The Influence of *Current Ratio* Against *Financial Distress* Conditions

The results of this study indicate that the liquidity ratio, proxied by *the current ratio*, does not significantly influence *financial distress* in banking companies listed on the

Indonesia Stock Exchange (IDX) for the 2019–2024 period. This finding indicates that a company's ability to meet its short-term obligations does not directly determine whether a bank will experience financial distress. No influence of *current ratio* towards *financial distress* can be explained by the characteristics of the banking sector itself.

Banking companies essentially operate with a highly dynamic asset and liability structure, where third-party funds (TPF) and credit distribution are key elements in liquidity management. Therefore, a high or low *current ratio* does not necessarily reflect the true financial health of the bank, considering that the majority of bank assets consist of loans that are not fully liquid (Kawakibi and Kurniawan, 2025; Mehmood and Luca, 2023; Seretidou *et al.*, 2025). Furthermore, in the banking industry, liquidity management is more influenced by Bank Indonesia regulations regarding the *loan-to-deposit ratio* (LDR) and *capital adequacy ratio* (CAR) than by general liquidity ratios such as CR (Sitorus *et al.*, 2022; Ariyani *et al.*, 2025). Therefore, even if a company has a high *current ratio*, this does not necessarily guarantee that the company is free from the risk of *financial distress* if management fails to maintain the quality of productive assets or experiences a surge in non-performing loans (Rahma, 2020; Thi *et al.*, 2025).

These findings align with research by Oktaviani and Lisiantara (2022) and Michalkova and Ponisciakova (2024), which showed that the liquidity ratio does not significantly influence *distress*, especially in highly regulated sectors such as banking. Fildzah and Rachmawati (2025) also emphasized that excessive liquidity can reduce operational efficiency because idle funds are not allocated to productive assets that generate income. Therefore, these research findings reinforce the view that liquidity (*current ratio*) cannot be used as the sole indicator for detecting *financial distress* in banks. Other factors such as asset management efficiency, funding structure, and credit distribution policies play a more significant role in determining a bank's ability to withstand financial stress (Sylwestrzak and Słomkowska, 2025; Ummayah and Hertina, 2024; Rejimon and Usha, 2024).

The Influence of *Debt to Assets Ratio* Against *Financial Distress* Conditions

The results of this study indicate that the solvency ratio, proxied by *the debt-to-assets ratio*, does not significantly influence *financial distress* in banking companies listed on the Indonesia Stock Exchange (IDX) for the 2019–2024 period. This finding indicates that the level of company asset financing through debt does not directly influence the likelihood of financial distress in the banking sector.

In the banking industry, a high *debt-to-assets ratio* does not necessarily indicate increased financial risk, as the characteristics of banking businesses differ from those of the non-financial sector. Most bank operations rely on external funding in the form of third-party funds (TPF) and other debt instruments, which are the primary source of profits through lending (Sitorus *et al.*, 2022; Ariyani *et al.*, 2025). Therefore, a high *debt-to-assets ratio* in banks does not necessarily reflect financial pressure or the threat of bankruptcy, but rather indicates a well-managed operational leverage strategy (Rahma, 2020; Rejimon and Usha, 2024).

These results also align with research by Mehmood and Luca (2023) and Michalkova and Ponisciakova (2024), which found that in the financial sector, solvency ratios often have no significant impact on *distress* because funding structures and liquidity risks are strictly regulated by monetary authorities. Regulations such as *the capital adequacy ratio* (CAR) and *the loan-to-deposit ratio* (LDR) play a greater role in maintaining bank capital stability than the general debt-to-asset ratio (Kawakibi and Kurniawan, 2025; Sahminan, 2021). Furthermore, Seretidou *et al.* (2025) emphasized that the relationship between leverage and *distress* is highly dependent on the efficiency of productive asset management. Banks with good risk management can maintain high solvency without incurring financial stress, as long as loan repayment rates and asset quality remain under control. Conversely, Fildzah and Rachmawati (2025) added that increasing debt ratios without adequate risk management will only become a significant factor contributing to *distress*.

Thus, the absence of an effect on *the debt-to-assets ratio* in this study reflects that Indonesian banks are able to maintain a stable funding structure through effective liquidity monitoring and risk management. These results reinforce the views of Kawakibi *et al.* (2019) and Sylwestrzak and Słomkowska (2025) that in a highly regulated financial system, traditional solvency ratios such as *the debt-to-assets ratio* are not sensitive enough to detect

early financial stress, necessitating other approaches such as measuring credit risk and operational efficiency (Thi *et al.*, 2025; Ummayah and Hertina, 2024).

The Influence of *Return on Equity* Against *Financial Distress* Conditions

The results of this study indicate that the profitability ratio, proxied by *return on equity*, does not significantly influence *financial distress* in banking companies listed on the Indonesia Stock Exchange (IDX) for the 2019–2024 period. This indicates that a bank's ability to generate net profit based on its capital does not directly influence the probability of financial distress. The lack of effect of *return on equity* on *financial distress* may be due to the specific characteristics of the banking sector, which has a revenue and expense structure that is heavily influenced by external factors, such as interest rates, monetary policy, and the quality of productive assets (Sitorus *et al.*, 2022; Rahma, 2020). Under these conditions, fluctuations in net profit often do not represent long-term financial stability, as bank profits can increase while asset quality and liquidity deteriorate (Ariyani *et al.*, 2025; Kawakibi and Kurniawan, 2025). Furthermore, a high *return on equity* does not necessarily indicate financial health, as this ratio can be artificially inflated due to high *leverage* or declining equity without a commensurate increase in earnings (Mehmood and Luca, 2023; Michalkova and Ponisciakova, 2024). Conversely, a low *return on equity* does not necessarily indicate distress, as banks with conservative capital structures can have lower return on equity ratios while remaining stable (Sylwestrzak and Slomkowska, 2025; Seretidou *et al.*, 2025).

This finding also supports the research findings of Fildzah and Rachmawati (2025) and Oktaviani and Lisiantara (2022), which concluded that profitability does not significantly influence *distress*, especially in sectors with strict regulations and strong capital oversight mechanisms, such as banking. Bank Indonesia's capital regulations, which set a minimum *Capital Adequacy Ratio (CAR)*, mean that changes in net profit do not necessarily imply the risk of financial failure. Therefore, *return on equity* cannot be the sole indicator for detecting *distress* in banking companies, as high or low profitability must be analyzed in conjunction with other factors such as operational efficiency, asset quality, and risk management capabilities (Rejimon and Usha, 2024; Ummayah and Hertina, 2024). The lack of effect of *return on equity* in this study indicates that banks rely more on funding stability and effective risk management than on return on equity alone to maintain business sustainability (Thi *et al.*, 2025; Unnava and Smith, 2021).

The Influence of *Total Assets Turnover* Against *Financial Distress* Conditions

The results of this study indicate that the activity ratio, proxied by *total asset turnover*, does not significantly influence *financial distress* in banking companies listed on the Indonesia Stock Exchange (IDX) for the 2019–2024 period. This finding indicates that the aggregate level of asset turnover efficiency is insufficient to explain the probability of distress in the banking sector. Conceptually, *total asset turnover* reflects the ability of assets to generate income; however, in banking, asset composition is dominated by long-term financial assets (credit, securities), whose turnover does not mirror the sales patterns of the non-financial sector. Bank revenue is also significantly influenced by interest margins, asset quality, operational costs (*cost-to-income*), and regulatory policies—not solely the speed of asset turnover (Sitorus *et al.*, 2022; Ariyani *et al.*, 2025; Mehmood and Luca, 2023). Consequently, a high or low *total assets turnover value* does not automatically indicate a risk of distress if, for example, asset quality is maintained, loss reserves are adequate, and the funding structure is stable (Seretidou, *et al.*, 2025; Michalkova and Ponisciakova, 2024).

Furthermore, the heterogeneity of bank business models (*fee-based* versus interest-based income), balance sheet management practices (e.g., securitization/portfolio realignment), and adherence to prudential ratios (CAR, LDR) make *total asset turnover* less sensitive as an early indicator of *distress* in highly regulated industries (Kawakibi and Kurniawan, 2025; Sahminan, 2021). Similarly, other empirical evidence suggests that activity ratios are insignificant in predicting *distress*, especially when operational efficiency and risk quality are key determinants of financial institution resilience (Oktaviani and Lisiantara, 2022; Fildzah and Rachmawati, 2025; Rahma, 2020). Thus, the absence of an effect on *total asset turnover* in this study confirms that the aggregate asset turnover efficiency indicator needs to be read together with more specific banking metrics (such as NIM, NPL, *cost-to-income*, CAR, and LDR) for more accurate early detection of *financial distress*.

(Rejimon and Usha, 2024; Sylwestrzak and Słomkowska, 2025; Thi, et al., 2025; Ummayah and Hertina, 2024).

Implications of Research Results

The implications of this study's results indicate that financial ratios proxied by *the current ratio*, *debt to assets ratio*, *return on equity*, and *total assets turnover* do not significantly influence *financial distress conditions* in banking companies listed on the Indonesia Stock Exchange for the 2019–2024 period. This finding provides several important implications both theoretically and practically. Theoretically, these results reinforce the view that *financial distress indicators* in the banking sector cannot be fully explained by conventional financial ratios commonly used in the non-financial sector. This is because the asset structure, income characteristics, and banking risks are highly dependent on external factors such as interest rates, credit quality, and prudential policies regulated by monetary authorities. Thus, it is necessary to develop a more specific prediction model for the banking sector by incorporating variables such as *non-performing loans*, *Capital Adequacy Ratio*, *loan to deposit ratio*, and *net interest margin* as more relevant indicators in detecting potential *distress*.

Practically, the implication for banking management is the need to focus on strengthening operational fundamentals and managing risk more comprehensively, rather than simply improving short-term financial ratios. Banks need to strengthen asset quality through prudent credit management, maintain capital adequacy, and improve operational efficiency through cost control and revenue diversification. For regulators such as the Financial Services Authority (OJK) and Bank Indonesia, these findings emphasize the importance of a *risk-based supervision approach* that emphasizes capital stability, liquidity resilience, and a bank's credit risk profile, rather than just general financial performance. On the other hand, for investors and creditors, the results of this study indicate that traditional financial ratios such as CR, DAR, ROE, and TATO are not yet sufficient as primary analytical tools in assessing bank bankruptcy risk. Therefore, investors need to expand fundamental analysis by considering prudential indicators and bank asset stability before making investment decisions. From an academic perspective, the results of this study provide an opportunity to develop a more comprehensive *financial distress prediction model* by integrating macroeconomic factors, corporate governance, and bank-specific variables to create a more accurate and applicable *early warning system*.

5. CONCLUSION AND SUGGESTIONS

This study aims to examine the effect of liquidity (CR), solvency (DAR), profitability (ROE), and activity (TATO) financial ratios on *financial distress conditions* in banking companies listed on the Indonesia Stock Exchange for the 2019–2024 period. Using binary logistic regression and a *dummy* variable as a proxy for *financial distress* (coded 1 for companies experiencing pre-tax losses for two consecutive years, and 0 for healthy companies), the estimation results show that the four ratios do not significantly influence the probability of *financial distress*. Bank performance and resilience are more determined by banking-specific prudential indicators (e.g., NPL, CAR, LDR/NSFR, NIM, and *cost-to-income ratio*) as well as macro dynamics (interest rates, exchange rates, credit cycles) and governance factors. Thus, prediction models based on CR, DAR, ROE, and TATO tend to be *under-specified* for the Indonesian banking context.

For bank management, focus improvements on asset quality (reducing NPLs and strengthening reserves), capital adequacy, funding stability, margin resilience, and operational efficiency. Build an internal *early warning system* that integrates prudential indicators, PSAK 71/ECL staging, portfolio concentration, and scenario testing for interest rate shocks, exchange rates, and rising NPLs. For regulators (OJK/BI), strengthen risk-based supervision by standardizing quarterly EWS reporting, expanding structural liquidity monitoring, and implementing macroprudential instruments anticipatory as the credit cycle heats up. For research development, it is recommended to conduct robustness tests using alternative definitions of *financial distress*, evaluate *cutoffs* using ROC–AUC/Youden's J curves, and address class imbalances. Models can be enriched with macro control variables (*BI Rate*, inflation, credit growth) and governance indicators, and compared with probit, Firth-logit, or decision tree/ *gradient boosting approaches* to capture non-linearity. Segmentation based on bank type (conventional vs. Islamic), asset size, and

ownership is also recommended to more clearly identify heterogeneity in risk behavior. These steps are expected to improve the accuracy and practical utility of *financial distress prediction models* in the banking sector.

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