

DOES FINANCIAL RATIO IMPACT FINANCIAL DISTRESS IN BANKING SECTOR ?

Rahmania Mustahidda^{1*}, Nur Cahyati², Andi Kartika³, Ika Rosyada⁴, Arman Hadi⁵

Management, Sekolah Tinggi Ilmu Ekonomi Totalwin, Semarang, Central Java, Indonesia

*Corresponding Author: rahmania@stietotalwin.ac.id

Abstract: Banking has an important and strategic role in the progress of the Indonesian economy. Bank bankruptcy is also the biggest contributor to the collapse of the economy. This research aims to determine the influence of liquidity ratios (current ratio), leverage (debt ratio) and activity ratio (TATO) on the occurrence of financial distress in the banking subsector listed on the IDX in 2018-2022. The dependent variable in this research is financial distress and the independent variables in this research are Current Ratio, Debt to Asset Ratio, and Total Asset Turnover Ratio. Sample determination was carried out using the purposive sample method. The total population was 42 sample companies from which 14 companies were selected. This research uses descriptive statistical analysis methods, classical assumption testing, multiple regression analysis and hypothesis testing. The results of this research show that liquidity (Current Ratio) has a significant negative effect on financial distress. Leverage (Debt to Asset Ratio) has a significant positive effect on financial distress. Total Asset Turnover Ratio has a positive and significant effect on financial distress. For further research, it is hoped that additional proxies and years of the study population will be added so that the results are more varied.

Keywords: Current Ratio, Debt to Asset Ratio, and Total Asset Turnover Ratio

1. Introduction

The phenomenon of *financial distress* is that many companies tend to experience liquidity problems, which is indicated by the decreasing ability of the company to fulfill its obligations to creditors. *Financial distress* is a condition when the company's operating cash flow is insufficient to meet current obligations (such as trade credit or interest expenses). One of the things that influences *financial distress* is the financial ratio which can be seen from the financial reports published by the company. In general, research on bankruptcy, failure or *financial distress* can be analyzed using indicators of the company's financial performance in predicting the company's condition in the future. Some ratios used to predict *financial distress conditions* in this study are liquidity ratio, *leverage ratio*, and asset management ratio.

According to *the Economist of the Institute for Development of Economics and Finance* (INDEF), Bhima Yudhistira, one of the causes of the decline in banking profits was because loan interest income had decreased drastically. This was due to the large number of loan relaxations and restructurings amid the pandemic (Afe, 2022). This gives an illustration that decreasing net profit can indicate financial difficulties. This is because the less income or profit obtained will have an impact on the financial condition of the bank. Financial difficulties if continued will have an impact on the bankruptcy of the banking company. To detect *financial distress* in a company can use financial ratio analysis. If a company experiences problems in liquidity then it is very possible that the company is starting to enter a period of financial

distress *and* if the difficult conditions are not quickly resolved then this can result in bankruptcy. (Siti Fatmawati, 2021)

There are several factors that cause financial difficulties other than liquidity, namely the lack of capital. This factor requires an entrepreneur to borrow money from creditors to avoid bankruptcy, but this will result in the company having long-term debt. The use of debt that is too high will endanger the company because the company will fall into the *extreme leverage category*, namely the company is trapped in a high level of debt and it is difficult to release the burden of the debt. The greater the debt, the higher the possibility that the company will not be able to pay off its debts when they fall due, so that it can be an indication that the company will experience *financial distress*. (Maria Theresia Cinthya A.D et al., 2022)

This is supported by the research results that the author summarizes in Table 1.3 shows the results of research testing the influence of the *Current Ratio*, *Debt To Asset Ratio* and *Total Asset Turnover Ratio* to *Financial Distress*. Research conducted by (Fitrianingsih & Novitasari, 2021) shows that the *Current Ratio* has a significant positive influence on *Financial Distress*. While according to (Putra, 2020) has a positive but insignificant influence on *Financial Distress*, then the research (Nurhamidah, 2021) has a significant negative influence on *Financial Distress*, then research that has a negative influence is not significant in the research (Makkulau, 2020).

Meanwhile, on the *Debt to Asset Ratio* variable against *Financial Distress*, research conducted by (R. Setiawan & Fitria, 2020) shows a significant positive influence. Then in the research (M. K. Sari & Sadriatwati, 2020) it has a positive but insignificant influence, in the research (Islamiyatun et al., 2021) it has a negative but insignificant influence, and in the research (Nurhamidah, 2021) it shows that the research is negative but insignificant towards *Financial Distress*.

Meanwhile, in the *Total Asset Turnover Ratio* variable against *Financial Distress*, in the study (Imadudin, 2021) it had a significant positive effect, the study (Angelina et al., 2020) had an insignificant positive effect, while according to the study (Rusli & Dumaris, 2020) it produced a significant negative effect, and in the study (Hidayat et al., 2021) it had an insignificant negative effect on *Financial Distress*.

2. Literature Review

Liquidity and Financial Distress

Based on the theory according to (Siti Fatmawati, 2021), if a company experiences problems with liquidity, it is very possible that the company will start entering a period of financial difficulty (*Financial Distress*), and if the difficult conditions are not quickly resolved, this can result in business bankruptcy. If the company experiences financial difficulties (*financial distress*), then the company starts paying its bills (accounts payable) more slowly, borrowing from banks, and so on.

Previous research conducted by (H. Setiawan & Amboningtyas, 2018) regarding "Financial Ratio Analysis For Predicting Financial Distress Conditions (Study on Telecommunication Companies Listed In Indonesia Stock Exchange Period 2010-2016)" Based on the results of the research conducted, it can be concluded that the liquidity ratio has a negative and significant effect on *Financial Distress* in telecommunications companies listed on the Indonesia Stock Exchange (IDX) for the period 2010-2016. This shows that the higher the company's liquidity

ratio, the less likely the company is to experience *financial distress*. Therefore, company management needs to pay attention to and manage liquidity well in order to prevent *financial distress*. This research is in line with research (S Glousa Lera & L Linda Grace, 2021) and (R. Setiawan & Fitria, 2020) which states that the liquidity ratio has a negative effect on *financial distress*. In this case, the company's ability to meet its short-term obligations increases, the lower the potential for the company to experience *financial distress*.

Leverage and Financial Distress

Debt to asset ratio is one part of the *leverage ratio* that measures the percentage of funds provided by creditors. This ratio shows how much debt influences the management of the company's assets. This ratio can measure how much of the company's assets are financed by creditors by comparing total liabilities with total assets. This ratio is a very comprehensive ratio because it includes both short-term and long-term proportions of assets. The higher this ratio, the more the company is funded by creditors.

Research conducted previously by (R. Setiawan & Fitria, 2020) regarding "The influence of *debt ratio*, *current ratio* and *return on assets* on *financial distress* in manufacturing companies in the basic and chemical industry sectors listed on the Indonesian Stock Exchange" stated that the *Debt to Asset Ratio* has a positive and significant effect on *financial distress*. It can be concluded that *Leverage (Debt to Asset Ratio)* has a positive and significant effect on *financial distress*. This means that the higher the *Debt to Asset Ratio* of a company, the greater the probability of the company experiencing *financial distress*. This shows that companies with high levels of debt tend to have a higher risk of facing financial difficulties and the possibility of bankruptcy.

Activity Ratio and Financial Distress

Total Assets Turnover Ratio (TATO) is an asset management ratio that measures the turnover of all company assets, and is calculated by dividing sales by total assets and measuring how much sales are obtained from each rupiah of assets. If the company does not generate enough business volume for the size of the investment of its total assets, then sales must be increased. Previous research conducted by (Rusli & Bernadetta Dumaris, 2020) entitled "The Effect of Working Capital Management on *Financial Distress*. With Company Size as a Control Variable in Mining Sector Companies" stated that *Total asset turnover* has a significant negative effect on *financial distress*. The higher the *total value assets company turnover*, then *there is a possibility of financial distress* becomes lower. This shows that companies that have high total asset turnover can be said to be productive and able to maximize the use of their assets in increasing profits.

3. Method

The research variables that have been determined are *Current Ratio* (X1) *Debt to Asset Ratio* (X2) *Total Asset Turnover Ratio* (X2) *Financial Distress* (Y).

The formula for *financial distress* using the z-score with the Zmijewski method is:

$$Z = -4.3 - 4.5 x_1 + 5.7 x_2 - 0.004 x_3$$

Information :

Z = Z-Score

x_1 = Current Assets / Current Liabilities (Current Ratio)

$$x_2 = \text{Total Debt} / \text{Total Assets (Debt Ratio)}$$

$$x_3 = \text{Total Asset Turnover Ratio (TATO)}$$

If the resulting score is > 0 (zero) then the company is predicted to go bankrupt, but if the resulting score is < 0 (zero) then the company is predicted to have no potential to go bankrupt. The method used in sampling is the *purposive sample method*. *Purposive sample* is a method of collecting sample data that is not taken randomly. In other words, the sample is selected based on certain considerations based on the purpose of the study. The criteria for companies used as samples in this study are:

No	Criteria	Amount
1	Financial sector companies in the banking sub-sector listed on the Indonesian stock exchange	42
2	Companies that published and published complete annual financial reports consecutively during the 2018 – 2022 research period.	14
3	Companies that have complete data that matches the required variables	14
4	Financial reports published by banks use the rupiah unit in their presentation.	14
Total companies sampled		14
Observation year		5
Amount of data during the research period		70
Final data used		70

Based on Table 3.2, the number of samples to be used is 14 companies from 42 financial sector companies in the banking sub-sector listed on the Indonesia Stock Exchange (IDX) with a total of 5 years of observation, thus obtaining a total of 70 analysis units. The following is a list of the names of the companies that are samples in this study.

The analysis data used to test the hypothesis in this study are the T-Test, and the Determination Coefficient (R^2). In addition, there is also a descriptive statistical test regarding the descriptions of the variables in this study. Then this study uses the classical assumption test which is used to assess whether there are classical assumption problems in a linear regression. The classical assumption tests used in this study are the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test.

4. Result and Discussion

calculate *financial distress* using the *z-score* with the *Zwimjweski method*.

The following is a calculation to see the *financial distress conditions*:

$$Z = -4.3 - 4.5(150.06) + 5.7(0.122) - 0.004(0.079)$$

$$Z = -678.874916$$

Information:

Z = Z-Score

$$x_1 = \text{Current Assets} / \text{Current Liabilities (Current Ratio)}$$

$$x_2 = \text{Total Debt} / \text{Total Assets (Debt Ratio)}$$

$$x_3 = \text{Total Asset Turnover Ratio (TATO)}$$

The calculation results show that Bank Rakyat Indonesia in 2018 did not experience *financial distress* ($Z < 0$).

a) Liquidity (*Current Ratio*)

How to calculate the liquidity ratio with the *current ratio proxy* is by comparing *current assets* with *current liabilities* . The following describes the results of the calculation of the liquidity ratio:

Current Ratio (CR)

$$= \text{Current assets} / \text{current liabilities} \times 100\%$$

$$= 1,269,983,433,000,000 / 8,462,958,000,000 \times 100\%$$

$$= 150.06$$

b) Leverage (*Debt to Asset Ratio*)

How to calculate the *leverage ratio* with the proxy *debt ratio* or *debt to asset ratio* is by comparing *total liabilities* with *total assets* . The following describes the results of the calculation of the *leverage ratio* :

c) *Debt to asset ratio* (DAR)

$$= \text{total liabilities} / \text{total assets} \times 100\%$$

$$= 158,223,066,000,000 / 1,296,898,292,000,000 \times 100\%$$

$$= 0.122$$

d) Activity (TATO)

The way to calculate the activity ratio with the *Total Asset Turn Over* (TATO) proxy is by comparing *total sales* with *total assets* . The following describes the results of the calculation of the activity ratio:

e) *Total Asset Turn Over* (TATO)

$$= \text{Total Sales} / \text{Total Assets} \times 100\%$$

$$= 102,036,924,000,000 / 1,296,898,292,000,000 \times 100\%$$

$$= 0.079$$

The large contribution of current ratio, debt to asset ratio and total asset turnover ratio simultaneously to financial distress is shown by the Adjusted R Square value of 1,000. This means that 100% of financial distress is influenced by the current ratio, debt to asset ratio and total asset turnover ratio .

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 ^a	1.000	1.000	.01250	1.657

The t-Test (t distribution) was conducted to determine the influence of each independent variable on each dependent variable. The results of the t-test can be seen in this table :

		Coefficients ^a			
		Unstandardized Coefficients		Standardized Coefficients	
Model		B	Std. Error	Beta	t
1	(Constant)	-4.301	.009		-485.631
	Current_Ratio	-4.500	.000	-1.000	-1112941.440
	Debt to Asset Ratio	5.696	.008	.001	699.796
	Total Asset Turn Over Ratio	.017	.070	.000	.237
					Sig.
					.000
					.000
					.000
					.814

1. a. Dependent Variable: Financial_Distress

The results of this study indicate that *the current ratio* has a significant negative effect on *financial distress*. This is proven by the t-value of -1112940.200 with a probability of 0.000 where the number is significant because ($p < 0.05$). Liquidity ratio is the company's ability to generate cash in the short term to meet obligations and the reason for the widespread use of the current ratio (Sukanti et al., 2021). If the company is able to fund or pay off its short-term debt obligations smoothly, the potential for the company to experience *financial distress* will be smaller. The liquidity ratio is proxied by the current ratio, which shows the company's ability to meet its short-term obligations using its current assets. The higher the current ratio, the company will have large current assets so that if funds are needed to cover its current obligations at any time the company can provide the funds quickly. Thus, the potential for the company to experience *financial distress* can be avoided. In line with the research conducted (R. Setiawan & Fitria, 2020) which shows that the liquidity ratio with the *current ratio proxy* has a significant negative effect on *financial distress* in a company. The higher the liquidity value, the lower the risk of *financial distress* in the company. Conversely, the lower the liquidity, the higher the risk of *financial distress* in the company.

The results of this study indicate that *Debt to Asset Ratio* has a significant positive effect on *financial distress*. This is proven by the t-value of 699.796 with a probability of 0.000 where the number is significant because ($p < 0.05$). *Leverage ratio* is a ratio to measure how much a company uses debt as its capital to finance the company's operations. The proxy used in measuring the *leverage ratio* is *the debt to asset ratio*. *The debt to assets ratio* is useful for seeing how much capital is financed by creditors. The use of this external source of funds results in the company having a responsibility to return it along with the specified interest. The *leverage ratio* emphasizes the important role of debt financing for the company by showing the percentage of the company's assets that are supported by debt financing. Companies with many creditors experience *financial distress more quickly*, compared to single creditors (Hadi, 2022). This is in accordance with research (Sutanto & Atun, 2020) stating that *the debt to asset ratio* has a positive and significant effect on *financial distress*. The ratio that describes the comparison of the amount of liabilities with the amount of assets. If the company's liabilities exceed the company's assets, then the funding financed by liabilities becomes greater and if the amount of liabilities is greater, the company will have difficulty in paying off liabilities, causing financial difficulties or *financial distress*. However, if the value of assets exceeds liabilities, the company will avoid financial difficulties. This happens because the company can pay off its liabilities, so that the assets owned are able to cover its liabilities.

The results of this study indicate that *the total asset turnover ratio* has a significant positive effect on *financial distress*. This is proven by the t-value of 0.237 with a probability of 0.814 where the number is significant because ($p < 0.05$). Activity ratio is the ability of management to optimize assets to generate income, for example, small assets but able to generate large income, indicating that the management is professional (Pratama & Setiawati, 2022). Activity

ratio (*total asset turnover ratio*) can describe the level of efficiency of the company in utilizing the resources available in the company. High activity from the company will increase the company's profit, this makes the company in a financially safe position . If the company needs funding suddenly and in large amounts, it can be covered by the profits it has. In contrast to the company's activities that are not smooth, meaning that the company's management has not been able to utilize the company's effectiveness to increase the company's sales and increase the company's burden. This makes the company potentially experience *financial distress*. This is in accordance with research (Rusli & Bernadetta Dumaris, 2020) stating that the activity ratio has a significant negative effect on *financial distress* . The better the company's ability to maximize asset turnover, the more profit the company earns and the less potential for the company to experience *financial distress*

5. Conclusions

This study provides significant empirical evidence on the influence of several financial ratios on the level of financial distress in Sub Sector Bank companies on the Indonesia Stock Exchange. The main findings include:

1. Current Ratio as a liquidity has a significant negative impact on the level of financial distress of a company. This means that the higher the Current Ratio , the lower the possibility of a company experiencing financial distress .
2. Debt to Asset Ratio as leverage has a significant positive impact on financial distress . In other words, the higher the debt to asset ratio, the higher the risk of a company experiencing financial distress.
3. Total Asset Turnover Ratio as asset management also has a significant positive impact on financial distress . This means that the higher the total asset turnover ratio, the higher the likelihood of a company facing financial problems.
4. Together, Current Ratio, Debt to Asset Ratio, and Total Asset Turnover Ratio contribute significantly to the company's Financial Distress . All three can simultaneously affect the company's financial distress level with a contribution of 100%.

The results of this study indicate the importance of liquidity management, debt management, and efficient use of assets in managing financial distress risk for Bank Sub-Sector companies in Indonesia. The results of this study are also in line with previous studies that highlight the role of financial factors in anticipating and managing financial distress risk .

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