

Does Bankruptcy Matter in Non-Banking Financial Sector Companies?: Evidence from Indonesia

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Abstract

Bankruptcy is indicated by the inability of the company to meet its maturity obligations. The Covid-19 pandemic has had a terrible impact on the economy and businesses. The aim of this study to determine the effect of the ratios of activity, growth, leverage, and profitability in predicting bankruptcy projected by earnings per share (EPS). The sample of this research was non-banking financial sector companies listed on the Indonesia Stock Exchange in 2015–2019 and the purposive sampling technique was used. The data analysis method used was the logistic regression method to test the hypotheses. Company growth shows the company's ability to manage sales and generate high company profits, as such, the probability of the company experiencing bankruptcy will be lower. The results of this study showed that the debt to assets ratio (DAR), debt to equity ratio (DER), and return on assets (ROA) can predict bankruptcy. Meanwhile, this research found that the total assets turnover (TATO) ratio, sales growth, and net profit margin (NPM) cannot be used to predict bankruptcy.

Keywords: Bankruptcy, Net Profit Margin, Non-Banking Financial Sector

JEL Classification Code: G30, G32, G33

1. Introduction

The financial sector plays a crucial role in the economic development of a nation. Businesses and industries are financed by the financial systems which lead to growth in employment and turn increase economic activity and domestic trade. Financial intermediaries help improve investment efficiency, leading to higher economic growth.

Beck et al. (2000) stated that a country's level of financial development and the legal environment in which financial intermediaries and markets operate critically influence economic development. In countries whose financial sectors are more fully developed and whose legal systems protect the rights of outside investors, economies grow faster, industries dependent on external finance expand more quickly, new firms are created more easily, firms have more access to external financing, and firms grow faster.

Based on DFID (2004) developing countries attach great importance to financial sector development and deepening in the pursuit of their poverty reduction goal. Economists believe that the most important role of the financial sector in facilitating growth is to reduce information, enforcement, and transaction costs. This is achieved through a number of specific functions that the financial sector performs.

The Covid-19 pandemic has had a terrible economic impact on all countries in the world. In Indonesia, in the financial sector in January-March 2020, the capital outflows reached Rp 145.28 trillion, which is higher than the 2008 global financial crisis. Besides, the rupiah also experienced high escalating pressure, and at the end of February, the exchange rate was at Rp. 14,318 per US dollar. In the second week of March, it weakened to IDR 14,778 and continued to its lowest level to IDR 16,575 at the end of March 2020 (BPS, 2020). In these circumstances, the financial sector is the most

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vulnerable sector when there is economic turmoil and this impacts the economic structure of a country. Brandl (2002) stated that for an economy to remain stable, it needs to have a healthy financial sector. When the financial sector does not develop properly, the country's economy will experience a liquidity crisis which can hamper economic growth. A liquidity crisis is a simultaneous increase in demand and decrease in the supply of liquidity across many financial institutions or other businesses. Liquidity crises can be triggered by large, negative economic shocks or by normal cyclical changes in the economy. Ullah et al. (2021) stated economic instability involves a shock to the usual workings of the economy. Instability tends to reduce confidence and lead to lower investment, lower spending, lower growth, and higher unemployment. When the country's economic growth is stunted, it can make the company experiences financial distress. bankrupt. Therefore, the company must maintain the business process to avoid the possibility of financial difficulties. Financial distress is often a harbinger of bankruptcy and can cause lasting damage to one's creditworthiness.

Bankruptcy is indicated by the inability of the company to meet its maturity obligations (Brigham & Gapenski, 1997). Hanafi (2008) explained when an organization is unable to honor its financial obligations or make payment to its creditors, it files for bankruptcy. A company's bankruptcy can be identified from the company size, market capitalization, liquidity ratios, financial position indicators, cash flow measurements, income (earnings), debt and capital structure indicators, loan repayment ratios and interest payment capacity, and the ratios used by the Altman model 1968 (Maricica & Georgeta, 2012). Financial ratios have long been considered as good predictors of business failure and are proved to accurately discriminate between failed and non-failed companies several years before failure. In this study, six ratios of independent variables were used including TATO, sales growth, DAR, DER, ROA, and NPM as the dependent variable. While the dependent variable is measured using company earnings per share. Company bankruptcy can be seen from the value of its earnings per share (Agusti, 2013).

Companies with high earnings per share show higher company efficiency, so that the higher this ratio, the stronger the company's position will be (Kasmir, 2017). If the company's ROE is low, it indicates the company's lack of ability to use equity to generate profits. With ROE, investors can see if they're getting a good return on their money, while a company can evaluate how efficiently they're utilizing the firm's equity. To satisfy investors, a company should be able to generate a higher ROE than the return available from a lower-risk investment (Tahir et al., 2020). When a company has a low ROE, it means that the company has not used the capital invested by shareholders efficiently. It reflects that the company is not in a position to provide investors with substantial returns.

In essence, corporate management utilizes financial leverage primarily to increase the company's earnings per share and to increase its return-on-equity. However, with these advantages come increased earnings variability and the potential for an increase in the cost of financial distress, perhaps even bankruptcy. This research can be used as an early warning system for companies to anticipate conditions of bankruptcy or liquidation. It is hoped that when the company foresees or is able to predict or understand the signs of bankruptcy early, it can make changes to avoid the occurrence of bankruptcy.

Several previous studies on bankruptcy using different ratios have been conducted, including Nurhayati et al. (2017) who stated that TATO did not predict bankruptcy while Asfali (2019) stated that TATO does not predict bankruptcy. Utami (2018) found that sales growth cannot be used to predict bankruptcy. In contrast, Ariadi et al. (2015) stated that sales growth has a significant effect in predicting bankruptcy. Waqas and Md-Rus (2018) stated that DAR and DER have a significant (positive) effect in predicting bankruptcy. Meanwhile, Sekti (2017) stated that DAR and DER cannot be used to predict bankruptcy. Murni (2018) explained that NPM has a significant effect in predicting bankruptcy. Meanwhile, Assaji and Machmuddah (2017) stated that NPM does not help in predicting bankruptcy. Research by Khurshid (2013), Mital and Lavina (2018), Darmawan and Suprianto. (2018), and Lisiantara and Febriana (2018) stated that ROA can be used to predict bankruptcy. Meanwhile, Asfali (2019) found that ROA cannot be used to predict bankruptcy. Based on the research gap above, this study analyses TATO (total asset turnover) analysis, Sales Growth, DAR (debt-asset ratio), DER (debt-to-equity ratio), ROA (return on assets), and NPM (net profit margin) in predicting bankruptcy in financial sector companies (except banking) for the 2015–2019 period.

2. Literature Review

Platt and Platt (2002) defined bankruptcy as a condition where a company is unable to pay off its obligations. It is defined as financial distress in which a company or individual cannot generate sufficient revenues or income, making it unable to meet or pay its financial obligations. Financial distress is often a harbinger of and can cause lasting damage to one's creditworthiness. Bankruptcy is also known as company liquidation or company closure or insolvency (Hadi, 2008). Financial distress can be preceded by the company's inability to fulfill its obligations at maturity (Brigham & Gapenski, 1997). A company becomes bankrupt if it experiences minor financial difficulties (such as liquidity problems) to more serious difficulties, such as solvability (debt is greater than assets) (Hanafi, 2008). There are three types of company bankruptcy, the first is technically insolvent, where the

company cannot fulfill its obligations that are due soon but the value of the company's assets is higher than its debt. Second, legally insolvent, if the company's asset value is lower than the company's debt value. The third is bankruptcy where the company is unable to pay its debt and is declared bankrupt by the court. Bankruptcy is an actual court order that depicts how an insolvent person or business will pay off their creditors, or how they will sell their assets to make the payments.

The methods used to predict corporate bankruptcy include Earning Per Share (EPS). Kasmir (2017) stated that EPS is an important financial measure, which indicates the profitability of a company. It is calculated by dividing the company's net income by its total number of outstanding shares. It is a tool that market participants use frequently to gauge the profitability of a company before buying its shares. EPS can be used to predict bankruptcy and the financial distress of a company (Whitaker, 1999).

2.1. The Effect of Total Assets Turnover (TATO) Ratio in Predicting Bankruptcy

Harahap (2015) stated that the asset turnover ratio, also known as the total asset turnover ratio (TATO), measures the efficiency with which a company uses its assets to produce sales. Brigham (2001) stated The asset turnover ratio formula is equal to net sales divided by the total or average assets of a company. A company with a high asset turnover ratio operates more efficiently as compared to competitors with a lower ratio. Oktariyani (2019) stated that TATO compares the sales of a company to its asset base. The ratio measures the ability of an organization to efficiently produce sales and is typically used by third parties to evaluate the operations of a business. Ideally, a company with a high total asset turnover ratio can operate with fewer assets than a less efficient competitor, and so requires less debt and equity to operate. The result should be a comparatively greater return to its shareholders. Conversely, if a company has a low asset turnover ratio, it indicates it is not efficiently using its assets to generate sales, problems with surplus production capacity, and poor inventory management. As such, the probability of the company becoming bankrupt is higher (Kholisoh & Dwiarti, 2020).

***H1:** Total Assets Turnover (TATO) ratio has a negative effect in predicting bankruptcy.*

2.2. The Effect of Sales Growth in Predicting Bankruptcy

The difference between sales in the current period and the previous period is called sales growth (Harahap, 2015). Kasmir (2017) stated sales growth as an increase in sales from year to year or from time to time. A company's

high sales growth indicates that the company can meet its financial obligations even though the company buys its assets with debt. Sales growth shows the increase in sales over a specific period of time. It is the amount a company derives from sales compared to a previous, corresponding period of time in which the latter sales exceed the former (Brigham & Gapenski, 1997). The signaling theory states that sales growth can be beneficial in assessing a company's performance and to predict future performance (Harahap, 2015).

***H2:** Sales growth has a negative effect on predicting bankruptcy.*

2.3. The Effect of Debt To Assets (DAR) In Predicting Bankruptcy

The debt to assets ratio (DAR) is a leverage ratio that measures the amount of total assets that are financed by creditors instead of investors. In other words, it shows what percentage of assets is funded by borrowing compared with the percentage of resources that are funded by the investors (Kasmir, 2017). A lower DAR suggests a stronger financial structure, just as a higher DAR suggests higher risk. The higher DAR shows that the portion of the use of debt in financing investment in assets is getting bigger so that the risk of the company is also increasing (Sudana, 2011). A high DAR could mean that the company will have trouble borrowing more money, or that it may borrow money only at a higher interest rate than if the ratio were lower. Highly leveraged companies may be putting themselves at risk of insolvency or bankruptcy depending upon the type of company and industry (Prihadi, 2008). DAR gives financial managers critical insight into a firm's financial health or distress. Research conducted by Waqas and Md-Rus (2018) stated that the DAR has a significant effect in predicting bankruptcy.

***H3:** Debt to Assets Ratio (DAR) has a significant effect in predicting bankruptcy.*

2.4. The Effect of Debt to Equity Ratio (DER) in predicting bankruptcy

The debt to equity ratio (DER) is a financial ratio indicating the relative proportion of shareholders' equity and debt used to finance a company's assets (Kasmir, 2017). The ratio is used to evaluate a company's financial leverage. The DER is an important metric used in corporate finance. It is a measure of the degree to which a company is financing its operations through debt versus wholly-owned funds. More specifically, it reflects the ability of shareholder equity to cover all outstanding debts in the event of a business downturn (Haq, 2013). Dance and Made (2019) stated

that the DER has a significant effect on the prediction of company bankruptcy.

H4: *Debt to Equity Ratio (D R) has a significant effect in predicting bankruptcy.*

2.5. The Effect of Net Profit Margin in predicting bankruptcy

Net profit margin (NPM) is the percentage of revenue left after all expenses have been deducted from sales. The measurement reveals the amount of *profit* that a business can extract from its total sales (Warsono & Hariyanto, 2012). A high NPM means that a company is able to effectively control its costs and/or provide goods or services at a price significantly higher than its costs. A low NPM means that a company uses an ineffective cost structure and/or poor pricing strategies. Maricica and Georgeta (2012) stated that NPM has a significant effect in predicting corporate financial distress.

H5: *Net Profit Margin (NPM) has a significant effect in predicting bankruptcy.*

2.6. The Effect of Return On Assets (ROA) in predicting bankruptcy

The return on asset (ROA) ratio an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings. The higher the efficiency of a company, the lower the possibility of the company going bankrupt. Khurshid (2013), Mital & Lavina (2018), Darmawan and Suprianto (2018), and Asfali (2019) stated that ROA can be used to predict bankruptcy.

H6: *Return on Assets (ROA) has a significant effect in predicting bankruptcy.*

3. Methodology

The population in this study was companies in the financial sector (except for the banking subsector) listed on the Indonesian stock exchange in 2015–2019. There are 47 companies as a population and 38 companies were selected as samples by using purposive sampling. Purposive sampling is a form of non-probability sampling in which researchers rely on their own judgment when choosing members of the population to participate in their study. The samples were selected using certain criteria, as follows: 1) The company must be part of the financial services sector (except banking subsector) that have been listed on the Indonesian Stock Exchange and has submitted financial

Table 1: Variables and Measurements

Variable	Measurement
Total Assets Turnover Ratio	$TATO = \frac{\text{Sale}}{\text{Total Asset}}$
Sales Growth	$\text{Sales Growth} = \frac{\text{Sales this Year} - \text{Sales last year}}{\text{Sales last year}} \times 100\%$
Debt to Assets Ratio	$\text{Debt to Assets Ratio} = \frac{\text{Total liabilities}}{\text{Total Asset}}$
Debt to Equity Ratio	$\text{Debt to Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Total Equity}}$
Net Profit Margin	$\text{Net Profit Margin} = \frac{\text{Net Profit after Tax}}{\text{Net Sale}}$
Return on Assets	$ROA = \frac{\text{Net Profit after Tax}}{\text{Total Assets}} \times 100\%$

statements in the period of 2015–2019. 2) The companies must include data on the variable total assets turnover ratio, sales growth, debt to assets ratio, debt to equity ratio, net profit margin, and returns on assets in 2015–2019.

This study uses a logistic regression method with an independent variable of bankruptcy as measured by the company's earnings per share (EPS). Category 0 is for companies in good health and number 1 indicates companies that bankrupt. The dependent variables are as follows:

4. Results

This study uses companies from the financial sector, other than the banking sector, that is listed on the Indonesia Stock Exchange for the period 2015–2019. There are 47 companies as the population of which 38 companies were obtained as samples that met the criteria and we found 1,330 observations. The sample size included 31 normal companies or no indication of bankruptcy and 9 companies that are categorized as experiencing bankruptcy.

The following table describes the descriptive statistical results of companies that have gone bankrupt and companies that are not healthy.

Based on the descriptive statistics in Table 2, the average TATO ratio for the entire sample of companies is 0.27 with a standard deviation of 32.96. The average TATO value for companies that experienced bankruptcy was 0.18 and was 0.29 for companies that did not go bankrupt.

Table 2: Descriptive Statistics of Research Variables

Description	TATO	SG	DAR	DER	NPM	ROA
Panel A. Whole Company						
Minimum	−0.1	−507	0.01	0.01	−107	−19
Maximum	3.58	4272.0	49.7	99	390.1	32.8
Mean	0.27	39.86	1.38	3.77	24.47	4.51
Stand. Dev	32.96	329.61	4.28	9.45	47.7	6.7
Panel B. Companies in Bankruptcy						
Minimum	−0.1	−507	0.01	0.01	−107	−19
Maximum	1.05	4272	1.07	57.1	390	27.1
Mean	0.18	116.87	1.07	57.1	28.9	27.1
Stand. Dev	0.23	761.8	0.35	13.12	105.37	9.16
Panel C. Companies That Are Not Going Bankruptcy						
Minimum	0.00	−93.00	0.01	0.01	−84.90	−11.00
Maximum	3.58	626.00	49.70	99.00	188.50	32.80
Mean	0.29	22.95	1.56	3.32	23.77	5.23
Stand. Dev	0.41	81.70	4.74	8.46	31.50	5.99

Table 3: Test Results -2 Log-likelihood and Nagelkerke's R Square

Model Summary		
−2 Log likelihood Constanta (Block 0)	Constanta (Block 1)	Nagelkerke R Square
127.885 ^a	109.034 ^a	0.877

The average TATO value of companies that have the potential to go bankrupt is lower than companies that do not have the potential to experience bankruptcy.

The average Sales Growth (SG) value of all companies is 39.86 with a standard deviation of 329.61. The average SG value of the companies that experienced bankruptcy was 116.87 and was 22.95 for the companies that did not go bankrupt. The average SG value of companies that have the potential to go bankrupt is greater than companies that do not have the potential to go bankrupt.

The total sample DAR has an average value of 1.38 with a standard deviation of 4.28. The average DAR value for companies that experienced bankruptcy was 1.07 and was 1.56 for companies that did not go bankrupt. The average DAR value of companies that have the potential to go bankrupt is smaller than companies that do not have the potential to go bankrupt.

The average DER of all companies was 3.77 with a standard deviation of 9.45. The average DER value of

companies that experienced bankruptcy was 57.1 and was 3.32 for companies that did not go bankrupt. The DER average value of companies that have the potential to go bankrupt is greater than companies that do not have the potential to go bankrupt.

The average NPM value for all sample companies is 24.47 with a standard deviation of 47.7. The average NPM value of companies that experienced bankruptcy was 28.9 and was 23.77 for companies that did not go bankrupt. The average NPM value of companies that have the potential to go bankrupt is greater than companies that do not have the potential to go bankrupt.

The average value of ROA of all companies is 4.51 with a standard deviation of 6.7. The average ROA value of companies that went bankrupt was 27.1 and was 5.23 for companies that did not go bankrupt. The average ROA value of companies that have the potential to go bankrupt is greater than companies that do not have the potential to go bankrupt.

Logistic regression is a class of regression where the independent variable is used to predict the dependent variable. The 2 log-likelihood value is used to determine whether the use of the independent variable to the model is better and the model fits with the data so that the model can be accepted. If there is a decrease in the value of −2 Log-likelihood, it shows that the hypothesized model fits and the data fit. Meanwhile, Nagelkerke's R^2 shows how capable the independent variable is in explaining the dependent variable. Nagelkerke's R^2 is an adjusted version of the R^2 that adjusts the scale of the statistic to cover the full range from 0 to 1.

Table 4: Logistic Regression Analysis Results

Variable	Koef Reg	Wald value	Sig Level	Description
Constant	−0.332	0.144	0.704	–
TATO	−1.218	0.473	0.491	Not significant
SG	0.001	0.220	0.113	Not significant
DAR	2.530	2.488	0.028	Significant
DER	0.161	1.250	0.023	Significant
NPM	0.010	2.566	0.109	Not significant
ROA	−0.234	12.478	0.000	Significant

The following are the results of the −2 Log-likelihood and Nagelkerke's R-Square Testing Results.

Table 3 shows the result is −2 Log-likelihood with a value of 127.885 at Block 0 before the addition of independent variables in the model. In block 1 after the addition of the independent variable, the value of −2 Log-likelihood becomes 109.034. The decrease in the value of −2 Log-likelihood shows that the addition of the independent variable to the model is better and the model fits with the data so that the model can be accepted. While a value Nagelkerke *R* Square is 0.877, which means that the dependent variable in this study can be explained by the 87.7% of independent variables such as total assets turnover ratio, sales growth, debt to asset ratio, debt-equity ratio, net profit margin, and return on assets. Therefore, The constant of 12.3% is influenced by other variables outside of this study.

Before a model is relied upon to draw conclusions or predict future outcomes, we should check, as far as possible, that the model we have assumed is correctly specified. That is, that the data do not conflict with assumptions made by the model. The Hosmer–Lemeshow test is a statistical test for goodness of fit for logistic regression models, The Hosmer and Lemeshow's Goodness of Fit test was used to test the feasibility of a logistic regression model. The Hosmer–Lemeshow statistic indicates a poor fit if the significance value is less than 0.05. The feasible model based on Hosmer and Lemeshow's is more than 5%, so the model can predict the observed value. The results of the Hosmer and Lemeshow test in this study have a Chi-Square value of 13,359 at a significance of (0.100). This result is not significant because $0.100 > 0.05$, as such the logistic regression model can predict the value of observations in this study, so the model is accepted and is in accordance with the data.

Table 4 shows the results of the Logistic Regression test. Based on the results of logistic regression analysis, create the following equation:

$$Y = \ln [p / (1-p)] = -0.332 - 1.218 \text{ TATO} \\ + 0.001 \text{ SG} + 2.530 \text{ DAR} + 0.161 \text{ DER} \\ + 0.10 \text{ NPM} - 0.234 \text{ ROA}$$

TATO has a regression coefficient value of −1,218 at a significance of 0.491 greater than 0.05. The TATO variable is not significant and H1 is not supported, which means that the TATO variable cannot be used to predict bankruptcy in non-banking financial companies.

The value of the SG regression coefficient is 0.001 at a significance of 0.113 (greater than 0.05). The significance of more than 5% indicates that SG has no effect and H2 is not supported, which means that the SG variable cannot be used to predict bankruptcy.

The DAR variable has a regression coefficient value of 2.530 at a significance of 0.028 (less than 0.05). DAR has a significant positive effect and H3 is accepted, which means that the DAR variable can be used to predict bankruptcy.

The DER variable has a regression coefficient value of 0.161 at a significance of 0.023 (less than 0.05). This value indicates that DER has a positive and significant effect on bankruptcy, which means that the DER variable can be used to predict bankruptcy.

The NPM variable has a regression coefficient value of 0.10 at a significance of 0.109 (greater than 0.05). The NPM variable has no effect and H5 is not supported, which means that the NPM variable cannot be used to predict bankruptcy in non-banking financial companies.

The ROA variable has a regression coefficient value of −0.234 at a significance of 0.000 (much smaller than 0.05). This shows that the ROA variable has a significant negative effect so that H6 is supported, which means that the ROA variable can be used to predict bankruptcy.

5. Discussion

The TATO value is high which indicates that the company is using its assets more efficiently. The higher the TATO ratio, the better the company is performing, since higher ratios imply that the company is generating more revenue per dollar of assets. As such with high sales, the company's liabilities can be paid, the company's net profit increases, and the company is spared from bankruptcy. Results of data analysis of this study indicate that the TATO variable of financial sector companies other than banks does not affect the possibility of the company going bankrupt. Therefore, the increase or decrease in the TATO ratio does not affect the company and this ratio cannot be used to predict bankruptcy. The results of this study are in line with research conducted by Nurhayati et al. (2017), Sekti (2017), Kholisoh and Dwiarti (2020) who stated that the TATO variable cannot be used to predict bankruptcy.

The company's high sales growth shows that the company's growth is increasing year on year. High sales growth shows the company's ability to manage sales and generate high company profits, and the possibility of the company experiencing bankruptcy is not high. The results of this study indicate that the sales growth variable has no effect on bankruptcy. This means the low or high sales growth rate does not affect the company and this ratio cannot be used to predict bankruptcy. This research conducted by Lisiantara and Febriana (2018), Asfali (2019), and Utami (2018) also stated that the variable does not affect sales growth in predicting bankruptcy.

High DAR means the company owns more liabilities than it does assets. It indicates that the company is extremely leveraged. A high ratio also indicates that a company may be putting itself at risk of defaulting on its loans if interest rates were to rise suddenly. The high loan capital used to invest in assets intended to generate profits increases the likelihood of a company going bankrupt. The results of the logistic regression analysis above stated that the DAR variable had a significant positive effect. These results indicate that the DAR variable can be used to predict bankruptcy. The higher the company's DAR, the higher the possibility of the company going bankrupt. The results of this study support the research by Waqas & Rus (2018) and Listriana and Febriana (2011) who stated that DAR has a significant positive effect in predicting bankruptcy.

A low DER indicates a lower amount of financing by debt via lenders, versus funding through equity via shareholders. Lenders and investors usually prefer low debt-to-equity ratios because their interests are better protected in the event of a business decline. Thus, firms with high debt-to-equity ratios may not be able to attract additional capital (equity). Also, the probability of the company going bankrupt is lower. The results of the analysis of this study indicate that the DER variable has a significant positive effect, which means that DER can be used to predict bankruptcy in financial sector companies. Therefore, the higher the value of the DER, the more likely the company will become bankrupt, and vice versa. The results of this study are consistent with research conducted by Nurhayati et al. (2017) who stated that the DER has an effect in predicting bankruptcy.

The increasing value of the company's NPM indicates the company's ability to generate higher net profit after tax so that operational activities can run smoothly and investors will continue to invest their funds in the company. As such, the probability of the company going bankrupt is lower. The logistic regression results above indicate that the NPM variable has no effect on bankruptcy. The fluctuation in the value of the NPM cannot be used as a basis for predicting the company's bankruptcy. The results of this study are in line with research conducted by Assaji and Machmuddah (2019) and Yadiati (2017) who stated that NPM cannot predict bankruptcy.

ROA is an indicator of how profitable a company is relative to its assets or the resources it owns or controls. A higher ROA shows the effectiveness of the company in managing its assets, which means that the company can maximize profits (Qamruzzaman et al., 2020). As such, the probability of the company going bankrupt is lower. This study states that the ROA variable has a significant negative effect on bankruptcy. A lower ROA has the potential to increase the probability of a company experiencing bankruptcy because not all of the assets used to generate returns come from capital within the company. A falling ROA indicates the company might have over-invested in assets that have failed to produce revenue growth, a sign the company may be in trouble (Ud-din et al., 2020). Returns can be used to fulfill some obligations and the circumstances do not warrant the company in a healthy condition, which means the possibility of the company into bankruptcy can not be avoided or higher. The research is in line with research by Khurshid (2013), Mital & Lavina (2018), Darmawan & Suprianto (2018), Nurhayati et al. (2017), and Asfali (2019) who stated that ROA can be used to predict bankruptcy.

6. Conclusions

This study concludes that the variable DAR, DER, and ROA have a positive effect in predicting bankruptcy. Meanwhile, the TATO, Sales Growth, and NPM variables cannot be used to predict bankruptcy. The non-banking financial sector has different characteristics from other sectors in Indonesia; therefore, the factors of bankruptcy also have different characteristics.

The limitation of this research is it focuses on internal factors in predicting bankruptcy in the non-banking sector. So, future research can combine financial variables in the form of the fundamental variables and macroeconomic variables. The fundamental variable is the liquidity ratio (current ratio, the ratio of the board of directors and independent commissioners. Meanwhile, for macroeconomic variables factors such as inflation, interest rates, and exchange rate must be considered. The addition of these variables is intended to get more accurate and stronger results because it combines the company's internal and external variables.

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