ASSESSING THE DETERMINANTS OF FINANCIAL DISTRESS IN CONVENTIONAL RURAL BANKS: CASE STUDY IN INDONESIA

Dien Noviany Rahmatika ✉

Faculty of Economics and Business, University of Pancasakti Tegal, Indonesia

diennovi@upstegal.ac.id

Tabrani

Faculty of Economics and Business, University of Pancasakti Tegal, Indonesia

Teguh Budi Raharjo

Faculty of Economics and Business, University of Pancasakti Tegal, Indonesia

Abstract

To overcome or minimize the occurrence of a bankruptcy in the company, management must always supervise the financial condition of the company by using financial statement analysis. This study aims to determine the effect of Capital Adequacy Ratio (CAR), Non Performing Loans (NPL), Operating Costs on Operating Income (BOPO), Return On Assets (ROA) and Loan to Deposit Ratio (LDR) in predicting financial distress. Data analysis is using multiple linear regression analysis. The samples in this study are all Conventional Rural Banks in city and regency Tegal which are listed on the Ototitas Jasa Keuangan website (OJK). The data collected in this research is quantitative data. Study used secondary data sources obtained from the published annual financial statements of the Otoritas Jasa Keuangan (OJK) for the period 2015-2018. Technique of data collection is Documentation Technique. The results of this study indicate Non Performing Loans (NPL), and Operational Costs to Operating Income (BOPO) have an effect on predicting financial distress while Capital Adequacy Ratio (CAR) and Return On Assets (ROA) and Loan to Deposit Ratio (LDR) have no effect on predict financial distress.

Keywords: Capital Adequacy Ratio (CAR), Non Performing Loans (NPL), Operating Costs to Operating Income (BOPO), Return On Assets (ROA), Loan to Deposit Ratio (LDR), Financial Distress

INTRODUCTION

The economic condition of a country can be marked by the movement of the business world in the country. The business world can be used as the main indicator to see whether the country's economic condition is in good or bad condition. Deteriorating business world movement can lead to the survival of a business, it can even lead to liquidity or bankruptcy (financial distress). Many questions about why do companies fall into financial distress or even go bankruptcy. Should the companies develop an early warning system that is powerful in predicting corporate financial distress? There are ample researches trying to develop early warning systems based on financial statements and other related information. (Lee and Yeh, 2004). The survival of a business unit is always associated with the ability of management to bring the business unit to survive as long as possible. Therefore, it is only natural that the first mistake was addressed to the management. However, allegations of errors also have the potential to extend to the auditor.

Financial distress can be experienced by all companies, especially if the economic conditions in a country are experiencing an economic crisis. To overcome or minimize the occurrence of a bankruptcy in the company, management must always supervise the financial condition of the company by using financial statement analysis (Ramadhani and Lukviarran, 2009). Providing quality financial reporting information is important because it will positively affect capital providers and other stakeholders in making investment, credit, and resource allocation decisions at improving the efficiency of the overall market (Rahmatika, 2014).

Financial distress occurs before a company experiences bankruptcy, so financial distress models need to be developed. By knowing the condition of corporate financial distress from the outset it is hoped that actions can be taken to anticipate conditions that lead to bankruptcy (Almilia and Kristijadi, 2003). The statement of financial distress is also supported by Platt and Platt (2002), financial distress is defined as the initial stage of the decline in financial conditions that occur before the occurrence of bankruptcy or liquidation.

Health conditions in a bank play a very important role in an economy of a country, if the condition of a bank is not healthy, it will certainly make the economy in that country become disrupted. Thefore, the purpose of this study is to determine what factors influence financial distress, especially in terms of financial ratios such as Capital Adequacy Ratio (CAR), Non Performing Loans (NPL), Operational Costs to Operating Income (BOPO), Return on Assets (ROA) and Loan to Deposit Ratio (LDR).

LITERATURE REVIEW

Theory of Liquidity Management

Liquidity management is the ability of bank management to provide sufficient funds to fulfill all obligations, as well as commitments that have been issued to customers at all times (Suhardjono, 2002: 279).

The theory of managing banking liquidity is almost as old as banking in the 18th century. Banking theory, which generally relates to liquidity issues and efforts to achieve adequate levels of profitability, develops in line with management practices that regulate bank moves to survive and be able to develop well. The key is public trust. According to Sinungan (2000), the focus of various theories of liquidity management is how credit can be made with the element of safety as the main support. The profit earned by safe is the dream of all bankers throughout the world.

Financial Distress

Financial distress is a step in reducing the financial condition of a company prior to bankruptcy or liquidation. By knowing financial distress conditions in banking companies in Indonesia, bankruptcy prevention measures can be carried out. The earlier knowledge helps companies to improve their performance (Rahmania, Fitri dan Hermanto, 2014).

Financial distress is a broad concept consisting of several situations where a company experiences financial problems or difficulties. The general term to describe the situation is bankruptcy, failure, inability to pay off debt (Atmini, 2005).

Financial ratio analysis is useful for the internal analysis of the company to find out the results of the financial that has been achieved in order to do future planning and also to conduct internal analysis for creditors and investors to determine the policy of giving credit and investing in a company (Asmoro, 2010).

In measuring and predicting financial distress, the researcher uses financial ratios:

a. Capital Adequacy Ratio (CAR)

Capital Adequacy Ratio (CAR) is a bank performance ratio that is used to measure the capital adequacy of banks in order to support risk-bearing assets (Abolladaka, 2015). If the Capital Adequacy Ratio (CAR) owned is lower, it means that the smaller bank capital is owned to bear risk assets, so the more likely the bank will experience problematic conditions because the bank's capital is not enough to bear the decline in risk assets (Bestari, 2013).

$$CAR = \frac{Capital}{Risk\ Weighted\ Asset.} \times 100\%$$

b. Non Performing Loan (NPL)

Non Performing Loans (NPL) according to Wiyono (2013), is a ratio that shows the ability of bank management in managing non-performing loans provided by banks. Aryati and Balafif (2007), in their study show that the ratio of Non Performing Loans (NPL) has a positive and significant influence on the probability of a healthy level of the bank. Wicaksana (2011), states that the ratio of Non Performing Loans (NPL) has a significant positive effect on financial distress.

NPL = (Non-performing loans) / (Total Credit) X100%

c. Operational Costs for Operating Income (BOPO)

This ratio, often called the efficiency ratio, is used to measure the ability of bank management to control operational costs against operating income (Almilia and Herdiningtyas, 2005). The Operational Cost to Operational Income (BOPO) ratio tolerated by Bank Indonesia is 96%, and more than 96% is considered to be unhealthy and inefficient in carrying out its operations.

BOPO = (Operational Costs) / (Operational Income) X100%

d. Return On Asset (ROA)

Return On Assets (ROA) is the ability of capital invested in all company assets to generate profits. Return On Assets (ROA) uses earnings as one way to assess effectiveness in the use of company assets in generating profits. The higher the profit generated, the higher the Return on Assets (ROA) (Ottay and Alexander, 2015).

ROA = (profit before tax) / (average total assets) X 100%

e. Loan to Deposit Ratio (LDR)

Loan to Deposit Ratio (LDR) is a ratio between the total amount of credit given by the bank and the funds received by the bank. This Loan to Deposit Ratio (LDR) is used to determine the ability of a bank to pay to depositors with a loan guarantee given to them (Dendawijaya, 2005). Loan to Deposit Ratio (LDR) according to Nugroho (2012), is the ability of banks to channel funds from third parties they collect. According to Bestari dan Rahman (2013), the Loan to Deposit Ratio (LDR) has a positive and significant effect on bank bankruptcy.

LDR = (Total Credit) / (Third Party Fund Total) X 100%

CONCEPTUAL FRAMEWORK AND HYPOTHESES

Effect of Capital Adequacy Ratio (CAR) in predicting financial distress

Capital Adequacy Ratio (CAR) has a significant negative effect on the prediction of problematic conditions in the banking sector (Almilia and Herdiningtyas, 2005). The lower the Capital Adequacy Ratio (CAR), the higher the potential signal of Rural Credit Banks is in a problematic

condition, conversely if the higher the Capital Adequacy Ratio (CAR), the more potential the problematic conditions will be lower (Wiyono, 2013).

H1: Capital Adequacy Ratio (CAR) has an effect on predicting financial distress.

Effect of Non Performing Loans (NPL) in predicting financial distress

Almilia and Herdiningtyas (2005), states that the worse the quality of bank credit that causes the number of problem loans to be greater, the greater the likelihood of a bank in problematic conditions and the Non Performing Loan (NPL) having a positive effect. The higher the ratio, the worse the quality of the bank, which causes the number of problem loans to be even greater (Wicaksana, 2011).

H2: Non Performing Loans (NPL) in predicting financial distress

Effect of Operational Costs on Operating Income (BOPO) in predicting financial distress

Banks that are inefficient in their business activities will result in the inability to compete in mobilizing public funds and in channeling these funds to the people in need as venture capital (Kuncoro and Suhardjono, 2002). Operational Cost of Operational Income (BOPO) has a significant positive effect on problematic conditions. Operational Cost of Operational Income (BOPO) plays a role in measuring the level of efficiency and ability of banks in carrying out their operational activities (Almilia, Spica dan Herdiningtyas, 2005)

H3: Operational Cost of Operational Income (BOPO) has an effect on predicting financial distress.

Effect of Return On Assets (ROA) in predicting financial distress

Return On Assets (ROA) has a negative and significant effect on prediction of problems with banks (Martharini, 2012). Where Return On Assets (ROA) is the ability of bank management to obtain profits. The greater the Return on Assets (ROA), the greater the level of profit achieved by the bank so that the possibility of a bank in a troubled condition gets smaller. Thus, the higher the assets of banks are allocated by banks to fail increasingly (Riyadi, 2008).

H4: Return On Assets (ROA) is influential in predicting financial distress.

Effect of Loan to Deposit Ratio (LDR) in predicting financial distress

Wiyono (2013), in his research suggested that the Loan to Deposit Ratio (LDR) has the potential as an indicator of a problematic condition by comparing the total credit with the funds obtained from third parties. The loan to deposit ratio (LDR) has a positive and significant effect on bank bankruptcy. The higher the Loan to Deposit Ratio (LDR), the lower the bank's liquidity ability

towards third party funds (Mulyaningrum, 2008). In the research of Sumantri and Jurnali (2010), the Loan to Deposit Ratio (LDR) has a positive and significant effect on predictions of bankruptcy in banks.

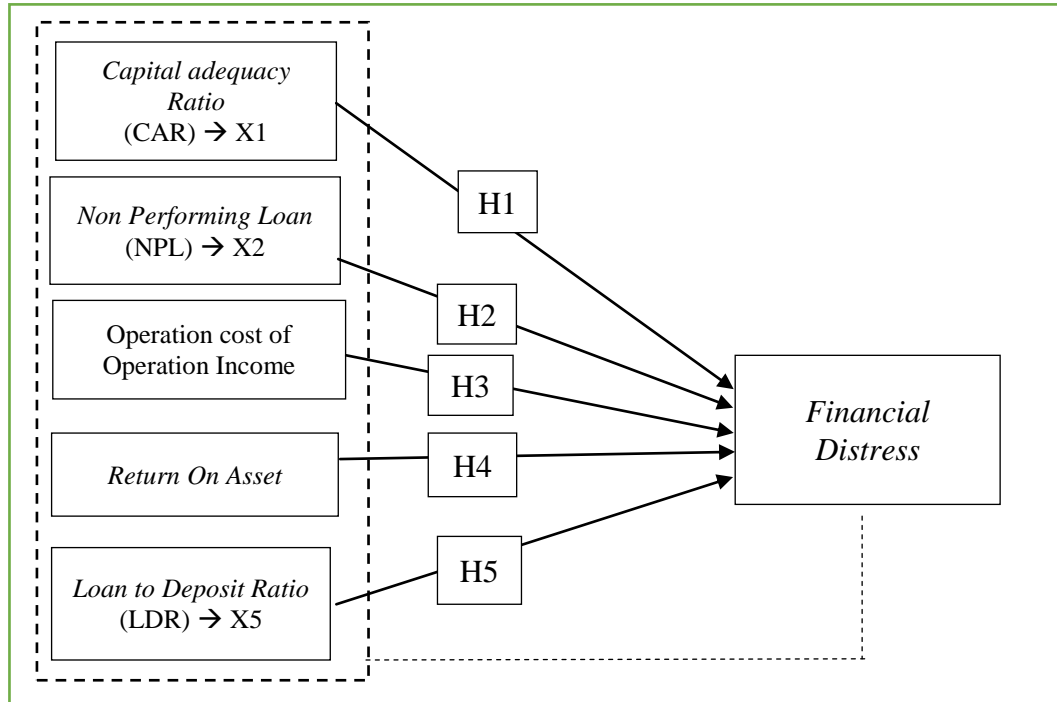H5: Loan to Deposit Ratio (LDR) has an effect on predicting financial distress.

Figure 1: Conceptual Model

RESEARCH METHODOLOGY

This research is a quantitative research that aims to determine the effect of the Capital Adequacy Ratio (CAR) ratio, Non Performing Loans (NPL), Operating Costs on Operating Income (BOPO), Return On Assets (ROA) and Loan to Deposit Ratio (LDR) in predicting financial distress of Conventional Rural Banks in Tegal City and Regency through the website of the Financial Services Authority (www.OJK.co.id).

The method of determining the sample used in this study is the census, where all the Rural Banks registered on the Financial Services Authority website from 2015-2018 were used as research samples. The population in this study were 14 Conventional Rural Banks in the City and Tegal District, Indonesia registered in Financial Services Authority with data taken and analyzed every month

The independent variables in this study are Capital Adequacy Ratio (X1), Non Performing Loans (X2), Operational Costs to Operating Income (X3), Return On Assets (X4) and Loan to Deposit Ratio (X5) while the dependent variable in this study is financial distress

(Y). The technical data analyst used is a multiple linear regression analysis model with the help of SPSS . To produce a good model, multiple linear regression analysis requires descriptive statistical analysis, classical assumption before testing the hypothesis.

According to Ghozali (2011: 140), many normality tests are used to test whether in a regression model, both the residual and disturbing variables have a normal distribution as already known that the t and F test can assume that the residual value follows a normal distribution. This multicollinearity test aims to test whether there is a correlation in the regression model used between independent variables. The common cutoff value used to indicate the presence of multicolonity is the Tolerance value ≤ 0.1 or equal to the VIF value ≥ 10. Each researcher must determine the level of correlation 0.95. The autocorrelation test is used to test whether in the linear regression model used there is a correlation between the error in period t and the error in period t-I (previous period) using the Durbin Watson Test. Heteroroskedasticity test is used to test whether in the regression model variance occurs from the residual inequality or observations to other observations. To detect the presence or absence of Heteroskedasticity is to look at the plot graph between the predictive value of the dependent variable that is "ZPRED" with the residual "SRESID".

RESULTS AND DISCUSSION

Descriptive Statistics Analysis shows that the Capital Adequacy Ratio (CAR), Non Performing Loans (NPL), Operational Costs to Operating Income (BOPO), Loan to Deposit Ratio (LDR) and Financial Distress have a positive minimum value while Return On Assets (ROA) has negative minimum value. For maximum values, all variables have positive values.

The Normality Test results show the magnitude of the Kolmogorov-Sminrnov value by using the SPSS program. It is obtained that the Statistical Test value is 0.182 and the significance is 0.200, concluding that the data are normally distributed because p-value> α (0.200> 0.05).

Based on the results of the multicollinearity test, the VIF value is less than 10 and tolerance is less than 1. This shows that there is no multicollinearity, so that it meets the requirements to do a regression analysis.

Autocorrelation Test results have a DW value of 1.746 (d). This value will compare the researcher with the table value by using a significance of 5%, the number of observations (n) as many as 56 publication report data and the number of independent variables 5 (k = 5). Based on the Durbin Watson table, the upper limit value (du) is 1.725 and the lower limit value (dl) is 1.420. Therefore, the DW value can be stated 1,725 (du) <1,746 (d) <2,275 (4-du). Based on these observations it can be concluded that there is no positive or negative autocorrelation.

The heterocedasticity test results using a scatterplot graph that obtained points that spread randomly and did not form a particular pattern and spread both above and below the number 0 on the Y axis.

The Determination Coefficient Test results using the summary model show the coefficient (r) of 0.168 which means that the correlation or relationship between financial distress and its independent variables (Capital Adequacy Ratio / CAR, Non Performing Loans / NPL, Operational Costs to Operational Income / BOPO, Return On Asset / ROA, Loan to Deposit Ratio / LDR) is weak because it is less than 0.5. Adjusted R Square number or coefficient determination is 0.380. This means that 38% of variations or changes in predicting financial distress can be explained by variations in the Capital Adequacy Ratio (CAR) ratio, Non Performing Loans (NPL), Operating Costs on Operating Income (BOPO), Return On Assets (ROA), and Loans to Deposit Ratio (LDR) while the rest (62%) is explained by other variables not included in the equation.

Table 1. Results of Multiple Liner Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	19,152	8,440		2,269	0,028
CAR	0,103	0,184	0,082	0,561	0,577
NPL	0,278	0,550	0,074	2,506	0,002
BOPO	0,049	0,056	0,125	2,871	0,001
ROA	-0,052	0,154	-0,050	-0,339	0,736
LDR	0,013	0,054	0,034	0,238	0,849

Based on the results of the regression analysis in the table a regression equation can be arranged as follows:

$$FD = 19{,}152 + 0{,}103 \text{ CAR} + 0{,}278 \text{ NPL} + 0{,}049 \text{ BOPO} - 0{,}052 \text{ ROA} + 0{,}013 \text{ LDR} + e$$

The regression equation above can be explained as follows:

α = 19,152. The constant is positive 19,152. This means that if the Capital Adequacy Ratio (CAR), Non Performing Loans (NPL), Operational Costs to Operating Income (BOPO), Return On Assets (ROA) and Loan to Deposit Ratio (LDR) are zero, the financial distress will increase by 19.152%.

β1 = 0.103. Regression coefficient Capital Adequacy Ratio (CAR) is positive 0.103. This means that if the Capital Adequacy Ratio (CAR) increases by one unit and other variables constant value then financial distress also increases by 0.103%.

β2 = 0.278. The Non Performing Loan (NPL) regression coefficient is positive 0.278. This means that if the Non Performing Loan (NPL) increases by one unit and the other variables are constant, then financial distress also increases by 0.278%.

β3 = 0.049. The regression coefficient of Operational Costs to Operational Income (BOPO) is positive at 0.049. This means that if the Operational Cost of Operational Income (BOPO) increases by one unit and the other variable is constant, financial distress also increases by 0.049%.

β4 = -0,052. Regression coefficient Return on Assets (ROA) is negative 0.052. This means that if Return On Assets (ROA) increases by one unit and other variables are constant, then financial distress will decrease by 0.052%.

β5 = 0.013. Regression coefficient of Loan to Deposit Ratio (LDR) has a positive value of 0.013. This means that if the Loan to Deposit Ratio (LDR) increases by one unit and the other variables are constant, then financial distress will increase by 0.013%.

Effect of Capital Adequacy Ratio (CAR) on financial distress predictions

The test results of the significance of individual parameters (statistical test t) partially Capital Adequacy Ratio (CAR) does not affect the 95% significance level in predicting financial distress because the significance value shows a number greater than 0.05, which is 0.577> 0.05.

From the results of these studies it can be said that the Capital Adequacy Ratio (CAR) has no effect in predicting financial distress, this shows that the Capital Adequacy Ratio (CAR) in the 2013-2016 period experienced a high increase in which banks did not allocate funds collected in the form of credit and too much capital reserves and results in a lot of unemployed funds so that funds that should be allocated into more productive banking business activities do not even provide an opportunity for banks to obtain greater profits. With the existence of capital reserves resulting in Capital Adequacy Ratio (CAR) has no effect in predicting financial distress.

Effect of Non Performing Loans (NPL) on financial distress predictions in Conventional Rural Banks

The results of the test on the significance of individual parameters (statistical test t) Non Performing Loans (NPL) partially have an effect on the 95% significance level in predicting financial distress where the significance value is 0.002 <0.05. The results of this study support the results of the research of Almilia and Herdiningtyas (2005), that the worse the quality of bank credit that causes the number of problem loans to be greater, the greater the likelihood of a bank in problematic conditions and Non Performing Loans (NPL). Wicaksana (2011), also supports the results of this study where in the research that has been carried out states that

Non Performing Loans (NPL) have a significant positive effect on bank bankruptcy. The higher the ratio, the worse the quality of the bank, which will increase the number of problem loans.

Non-Performing Loans (NPLs) show asset quality in connection with credit risk faced by banks due to lending and investment of bank funds in different portfolios. Each investment of bank funds in earning assets can be assessed for quality by determining the collectability level, which is whether it is smooth, substandard, doubtful or jammed. The higher the Non Performing Loan (NPL), the more influential it will be in predicting financial distress.

Effect of Operational Costs on Operating Income (BOPO) on financial distress predictions

The test results of the significance of individual parameters (statistical test t) Operational Cost of Operational Income (BOPO) partially have an effect on the 95% significance level in predicting financial distress, where the significance value is 0.001 <0.05. This supports the research conducted by Almilia and herdiningtyas (2010), in his study showed that the BOPO ratio had a significant positive effect on problematic conditions. BOPO plays a role in measuring the level of efficiency and ability of banks in carrying out their operational activities. Rosita (2016) also suggested that the BOPO ratio had a positive effect on financial distress.

Operational Costs for Operational Income (BOPO) from the results of research obtained have a percentage number below the minimum limit set by Bank Indonesia (BI). This indicates that the operational costs borne by the bank are too high because of the ability of banks to manage their operational activities which are low, thus influencing the level of banking efficiency and the ability of banks to generate net income. When a bank experiences a negative net income, it is possible to indicate that the bank is threatened with financial distress. So that in this case the Operational Cost of Operational Income (BOPO) has an effect on predicting financial distress.

Effect of Return On Assets (ROA) on financial distress predictions prediction

Test results of the significance of individual parameters (statistical test t) Return On Assets (ROA) partially has no effect on the 95% significance level in predicting financial distress where the significance value is greater than 0.05 (0.736> 0.05). These results support the research of Wiyono (2013), where the lower the Capital Adequacy Ratio (CAR), the higher the signal potential of the bank is in a problematic condition, conversely if the higher the Capital Adequacy Ratio (CAR), the more potential the problematic conditions will be lower.

From the results of this study Return On Assets (ROA) has a percentage above the minimum set by Bank Indonesia (BI). With the high percentage, it means that the bank has been

able to invest its assets to make a profit. Banks can get profits not only from credit, but also from the investment income they earn, so that this study shows that Return on Assets (ROA) has no effect in predicting financial distress.

Effect of Loan to Deposit Ratio (LDR) on financial distress predictions

The results of the test on the significance of individual parameters (statistical test t), the Loan to Deposit Ratio (LDR) partially has no effect on the 95% significance level in predicting financial distress where the significance value is 0.849> 0.05. The results of this study support the research of Sofiasani and Gautama (2016), in his study the Loan to Deposit Ratio (LDR) has no effect in predicting financial distress.

Loan to Deposit Ratio (LDR) is a ratio that shows the level of ability of banks to channel third party funds collected and then redistribute it in the form of credit. In this study prove that the amount of Loan to Deposit Ratio (LDR) affects the level of bank profitability in the opportunity to get interest and increase bank income, but the value of Loan to Deposit Ratio (LDR) that is too high will disrupt the level of liquidity.

Banks can reduce the liquidity risk when invested bank assets are sufficiently liquid if they have to disburse these assets to cover their funding needs. So that the high credit disbursed using third party funds will not disrupt the operational activities of the company (banks will still benefit) so that the Loan to Deposit Ratio (LDR) has no effect in predicting financial distress.

CONCLUSIONS

Based on the results of data analysis and discussion that have been put forward, the conclusions that can be drawn from this study are the effect of the Capital Adequacy Ratio (CAR), Non Performing Loans (NPL), Operating Costs on Operating Income (BOPO), Return On Assets (ROA) and Loans to Deposit Ratio (LDR) in predicting financial distress in Credit Banks in Tegal City and Regency in the period 2015 – 2018 as follows:

1. Capital Adequacy Ratio (CAR) in Rural Banks tends to increase so that the Capital Adequacy Ratio (CAR) partially has no effect in predicting financial distress.

2. Non-Performing Loans (NPL) in Rural Banks tend to increase so that Non-Performing Loans (NPLs) are partially influential in predicting financial distress.

3. Operational Costs of Operational Revenues (BOPO) in Rural Banks tend to decrease so that Operational Costs to Operational Revenues (BOPO) are partially influential in predicting financial distress.

4. Return On Assets (ROA) in Rural Banks tends to increase so that the Return on Assets (ROA) partially has no effect in predicting financial distress.

5. Loan to Deposit Ratio (LDR) in Rural Banks tends to increase so that the Loan to Deposit Ratio (LDR) partially has no effect in predicting financial distress.

SUGGESTIONS AND IMPLICATIONS

To increase investor and creditor trust in the company, the company must be able to show good company performance and convey sufficient information to investors and creditors regarding the development of the company.

For creditors and prospective creditors, it is advisable to utilize the information that has been published by the company, especially information about financial statements which include the income statement and balance sheet to find out how the condition of the company. This information is useful for the purpose of making decisions relating to funding made by creditors or what prospective creditors will do.

For further studies, it is recommended to increase the number of variables because there are still many other variables that influence the predictions of financial distress. Further researchers are also expected to add years of observation so that the results obtained can be used as a basis for decision making for the management of the company when making decisions related to predicting financial distress.

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