The Influence of Bank Health Level Using RGEC on Financial Distress of Banks in Indonesia

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Introduction

Banks are business entities that have the function of collecting funds in the form of deposits and redistributing them to the public in the form of credit or other forms. The important role of banks for the country's economy can be seen from the special functions of banks as agents of trust, agents of services, and agents of development. Until mid-1997, the growth of the banking sector in Indonesia was still very good (Sari & Fakhruddin, 2016). However, in July 1997, the rupiah exchange rate began to weaken against the US dollar, causing liquidity difficulties in the banking sector and the beginning of financial difficulties in Indonesia. In response, Indonesia requested assistance from the IMF by liquidating 16 insolvent banks as a step-in banking restructuring.

In 2008, the Indonesian economy again felt the impact of the financial crisis that occurred in the United States as a result of the subprime mortgage crisis. This event caused Indonesian banks to experience a liquidity crisis due to rising interest rates, a decline in the value of earning assets in the form of loans and securities purchased by banks, and a decrease in capital adequacy ratio. In mid-2013, when the central bank of the United States announced plans to stop the monetary stimulus policy that resulted in a number of countries, especially developing countries, experiencing considerable pressure due to fluctuating currency exchange rates with a tendency to weaken. While in 2015, the rupiah exchange rate weakened again to reach 14,728 per US dollar and there was an increase in the benchmark interest rate (The Fed), (Bagus & Taswan, 2019) and (Yuliani & Haryati, 2022).

On the other hand, the emergence of the Covid-19 virus in March 2020 in Indonesia caused excessive concern. The economic sector, stock market, and business actors experienced stagnation, and the value of the rupiah weakened due to the Covid-19 virus (Pertiwi, 2022). This pandemic has disrupted the health of banks through deterioration in credit quality. This will have an impact on the banking sector by increasing the number of non-performing loans as a result of non-payment of loans that have been disbursed.

How to Cite:
Based on the experience of the global financial crisis and to avoid the onset of financial distress, banks need to assess banking health. In accordance with Undang-Undang No. 7 of 1992 concerning Banking as amended by Undang-Undang No. 10 of 1998 states that banks must maintain their health. Bank Indonesia has established a risk-based bank rating (RBRR) system in Bank Indonesia Regulation No. 13/1/PBI/2011 on Health Level Assessment of Commercial Banks replacing Bank Indonesia Regulation No. 6/10/PBI/2004 regarding the Health Level Assessment System of Commercial Banks with the CAMELS approach (Capital, Asset Quality, Management, Earnings, Liquidity, Sensitivity to Market Risk). This is reinforced by Financial Services Authority Regulation No.4/POJK.03/2016 regarding the Assessment of the Health Level of Commercial Banks, Financial Services Authority Circular Letter No.14/SEOJK.03/2017 regarding the Assessment of the Health Level of Commercial Banks, Financial Services Authority Regulation No.8/POJK.03/2014 regarding the Assessment of the Health Level of Sharia Commercial Banks and Sharia Business Units, and Financial Services Authority Circular Letter No.10/SEOJK.03/2014 regarding the Assessment of the Health Level of Sharia Commercial Banks and Sharia Business Units.

According to the Financial Services Authority Regulation No.4/POJK.03/2016 on the Assessment of the Health Level of Commercial Banks, banks conduct a self-assessment of the bank’s health level by using a risk-based approach or RBRR (Risk Based Bank Rating) or better known as RGEC. This assessment is carried out individually or consolidated with the scope of the assessment including risk profile, good corporate governance, earning, and capital. Risk profile is measured by Non Performing Loan (NPL)/Non Performing Financing (NPF) and liquidity risk is measured by Loan to Deposit Ratio (LDR)/Financing to Deposit Ratio (FDR). GCG is assessed from self-assessment results sourced from each bank's annual report, earnings is measured by Return on Assets (ROA), Net Interest Margin (NIM), and Operating Expenses to Operating Income (BOPO), and Capital is measured by Capital Adequacy Ratio (CAR).

Financial distress is an early symptom before bankruptcy. According to Harahap (2016), financial distress is used to describe situations where there is failure, inability to pay off debt, negative financial performance, liquidity problems, and default. The potential financial distress of a bank is measured using the Altman Z-score model. This model is considered to be better used and shows the financial condition of banking companies because it has more ratios to measure financial conditions so that the company can be careful about the condition of its financial difficulties (Salman & Wulandari, 2021).

This study aims to analyze the effect of Risk Profile on financial distress of banking companies, to analyze the effect of Good Corporate Governance on financial distress of banking companies, to analyze the effect of Earnings on financial distress of banking companies, and to analyze the effect of Capital on financial distress of banking companies.

**Method**

This study uses a quantitative approach with a causal associative research type. The type of data used is secondary data sourced from annual reports of banking companies listed on the Indonesia Stock Exchange (IDX) for the 2018-2021 period with data collection techniques in the form of documentation and literature study. This study uses binomial logistic regression analysis to determine the effect of independent variables on the dependent variable and data processing using SPSS 26 software. The dependent variable in this study is financial distress, while the independent variables are Risk Profile as measured by Non-Performing Loan (NPL)/Non-Performing Financing (NPF), Loan to Deposit Ratio (LDR)/Financing to Deposit Ratio (FDR), Good Corporate Governance, Earning measured by Return on Asset (ROA), Net Interest Margin, Operating Expenses to Operating Income, and Capital measured by Capital Adequacy Ratio (CAR).

The research population includes all banking companies listed on the Indonesia Stock Exchange (IDX) during the observation period 2018-2021. The sampling technique uses non-probability sampling, precisely saturated sampling. The sample obtained was 43 banking companies listed on the IDX and regularly reporting annual reports during 2018-2021. The number of observations used was 215 (43 x 5 years) annual reports, which were obtained from multiplying the sample by the number of years of observation.

**Result and Discussion**

**Table 1. Hosmer and Lemeshow Test Results**

<table>
<thead>
<tr>
<th>Step</th>
<th>Chi-square</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.390</td>
<td>8</td>
<td>0.820</td>
</tr>
</tbody>
</table>

Source: Data processed by the author using SPSS 26 (2023)

Based on the regression model feasibility test using Hosmer and Lemeshow’s Goodness of Fit shown in table 1, the chi square value is 4.390 with a significance
value of 0.820. These results mean that the significance value is greater than 0.05, so the regression model is suitable for further analysis, because there is no difference between the predicted classification and the observed classification.

Overall Model Fit Test
Table 2. LogLikelihood (block number = 0)
Iteration Historya,b,c
<table>
<thead>
<tr>
<th>Iteration</th>
<th>-2 Log likelihood</th>
<th>Coefficients Constant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 0</td>
<td>146.747</td>
<td>-0.625</td>
</tr>
<tr>
<td>Step 1</td>
<td>146.734</td>
<td>-0.647</td>
</tr>
<tr>
<td>Step 2</td>
<td>146.734</td>
<td>-0.647</td>
</tr>
</tbody>
</table>

Source: Data processed by the author using SPSS 26 (2023)

Table 3. LogLikelihood (block number = 1)
Iteration Historya,b,c,d
<table>
<thead>
<tr>
<th>Iteration</th>
<th>-2 Log likelihood</th>
<th>Constant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>98.176</td>
<td>-1.300</td>
</tr>
<tr>
<td>Step 2</td>
<td>80.894</td>
<td>-1.831</td>
</tr>
<tr>
<td>Step 3</td>
<td>72.776</td>
<td>-2.131</td>
</tr>
<tr>
<td>Step 4</td>
<td>70.006</td>
<td>-2.507</td>
</tr>
<tr>
<td>Step 5</td>
<td>68.061</td>
<td>1.916</td>
</tr>
<tr>
<td>Step 6</td>
<td>67.562</td>
<td>6.231</td>
</tr>
<tr>
<td>Step 7</td>
<td>67.555</td>
<td>6.764</td>
</tr>
<tr>
<td>Step 8</td>
<td>67.555</td>
<td>6.778</td>
</tr>
<tr>
<td>Step 9</td>
<td>67.555</td>
<td>6.778</td>
</tr>
</tbody>
</table>

Source: Data processed by the author using SPSS 26 (2023)

The results of the calculation of -2 Log Likelihood (block number = 0) show a value of 164.734 greater than -2 Log Likelihood (block number = 1) with a value of 67.553. These results indicate a good regression model because the -2 Log Likelihood value (block number = 0) is greater than -2 Log Likelihood (block number = 1) and there is a decrease in the second block (block number = 1).

Cox and Snell R Square and Nagelkerke R Square Test
Based on table 4, the Cox and Snell R Square value is 0.532 or 53.2% and the Nagelkerke R Square value is 0.735 or 73.5%. These results indicate that the independent variables NPL, LDR, GCG, ROA, NIM, BOPO, and CAR are able to explain the occurrence of financial distress by 73.5%, while the remaining 26.5% by other variables outside the study.

Table 4. Cox and Snell R Square and Nagelkerke R Square
<table>
<thead>
<tr>
<th>Step</th>
<th>-2 Log likelihood</th>
<th>Cox &amp; Snell R Square</th>
<th>Nagelkerke R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Data processed by the author using SPSS 26 (2023)

Based on the table of simultaneous test results with the omnibus test of the model, it can be seen that the significance value is 0.00 and smaller than 0.05. This means that the independent variables, namely NPL, LDR, GCG, ROA, NIM, BOPO, and CAR together have an influence on the financial distress of banking companies listed on the Indonesia Stock Exchange for the period 2018-2021.

Partial Test
Table 6. Partial Test Result (Wald)
<table>
<thead>
<tr>
<th>B</th>
<th>Wald</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPL/NPF</td>
<td>10.185</td>
<td>0.121</td>
</tr>
<tr>
<td>LDR/FDR</td>
<td>-9.514</td>
<td>9.825</td>
</tr>
<tr>
<td>GCG</td>
<td>4.508</td>
<td>8.416</td>
</tr>
<tr>
<td>ROA</td>
<td>-166.076</td>
<td>2.363</td>
</tr>
<tr>
<td>NIM</td>
<td>41.764</td>
<td>3.078</td>
</tr>
<tr>
<td>BOPO</td>
<td>-3.617</td>
<td>0.200</td>
</tr>
<tr>
<td>CAR</td>
<td>-25.811</td>
<td>15.172</td>
</tr>
<tr>
<td>Constant</td>
<td>6.778</td>
<td>0.652</td>
</tr>
</tbody>
</table>

Source: Data processed by the author using SPSS 26 (2023)

Based on table 6, the results of logistic regression testing aim to determine the effect of NPL/NPF, LDR/FDR, GCG, ROA, NIM, BOPO, and CAR on the financial distress of banking companies listed on the IDX during 2018-2021 which can be explained as follows: The risk profile variable as measured by Non-Performing Loan (NPL) has a significance value of 0.728 greater than the significance level of 0.05, meaning that NPL has no effect on financial distress. This is because there is no difference between the NPL/NPF values of bank companies experiencing financial distress and banks that are not experiencing financial distress according to the research data. The NPL/NPF value of the sample of banking companies ranges from > 2% to > 5%. The only NPL/NPF data outside this range is Bank Neo Commerce with an NPL value of 9.92% in 2018. The absence of differences between banks experiencing financial distress and banks that are not experiencing financial distress causes NPL/NPF to be unable to
influence the occurrence of financial distress in banking companies. The results of this study support the research of Harahap (2016), Kuncoro & Agustina (2017), and Widiyanto & Dwijayanti (2022) which state that NPL/NPF has no effect on the financial distress of banking companies. While studies that do not support the results of this study are Africa (2019), Suotet al. (2020), and Yuliani & Haryati (2022) which state that NPL affects the financial distress of banking companies.

The risk profile variable as measured by the Loan to Deposit Ratio (LDR) has a significance value of 0.002 less than the significance level of 0.05 with a regression coefficient of -9.514. This means that LDR/FDR has a negative influence on the financial distress of banking companies, meaning that the higher the LDR/FDR value of a bank, the lower the potential for financial distress. A high LDR/FDR ratio will affect the income of a bank because lending to customers increases so that bank income from interest on loans disbursed also increases, thus the possibility of banks experiencing financial distress is low. This is reinforced by research data which proves that banks that do not experience financial distress have LDR/FDR values ranging from 85% to 100%. This research is in accordance with the results of research conducted by Bagus & Wikuana (2017), Mahmud et al. (2021), and Sriyanto & Agustina (2020) that LDR/FDR has an influence on financial distress. Meanwhile, different results were shown by Ermar & Suhoono (2021), Sadida (2018) and Widiyanto & Dwijayanti (2022) which stated that the LDR/FDR ratio had no effect in predicting financial distress.

The Good Corporate Governance (GCG) variable as measured through self-assessment has a significance value of 0.004 less than the significance level of 0.05 with a regression coefficient of 4.508. This means that GCG has a positive influence on the financial distress of banking companies, meaning that the smaller the GCG rating, the better the implementation of a bank's governance. The research data shows that the GCG rating obtained by the bank is said to be good, which ranges from 1 to 3. This means that the bank has implemented GCG principles well, so that the bank is healthy and stable and far from financial distress. The results of this study are in line with Diwanti & Purwanto (2020), Mahmud et al. (2021), and Yuliani & Haryati (2022) which explain that GCG affects financial distress. Meanwhile, the results of research by Harahap (2016), Mugiarti & Mranani (2020), and Qoriah & Nurdin (2019) show that GCG has no influence on the financial distress of banking companies.

The earning variable as measured by Return on Asset (ROA) has a significance value of 0.124 greater than the significance level of 0.05, meaning that ROA has no effect on the financial distress of banking companies. This is because if a bank has sufficient liquidity and capital and efficient expense management, it can be said that ROA has no effect on financial distress (Limpong et al., 2022). The results of this study are in accordance with the research of Africa (2019), Nisak (2021), dan Sriyanto & Agustina (2020) which state that ROA has no effect on financial distress. While different results are shown in the research of Diwanti & Purwanto (2020), Labita & Yudowati (2020), Prianti & Musdholifah (2018), and Suhartanto et al., (2022) which show that ROA affects financial distress.

The earning variable as measured by Net Interest Margin (NIM) has a significance value of 0.079 greater than the significance level of 0.05, meaning that NIM has no effect on financial distress. The research data shows that the NIM value of the sample of banking companies during the observation period ranges from > 3% to 1.25% which is categorized as good, where there is no difference between banks experiencing financial distress and banks that are not experiencing financial distress. Bank BTPN Syariah and Bank Panin Dubai Syariah, which are banks that are not experiencing financial distress, have NIM values in the range of <1.5% to negative values and Bank Neo Commerce, Bank BJBR, Bank Permata, Bank Artha Graha International, Bank Nationalnobu, and Bank MNC International, where these banks are banks experiencing financial distress, have NIM values >3%, thus this condition causes NIM to not be able to influence the financial distress conditions of banking companies. The results of this study are consistent with the research of Nisak (2021) and Prianti & Musdholifah (2018) which show that NIM has no effect on financial distress. Meanwhile, research conducted by Harahap (2016), Sadida (2018), and Suotet al., (2020) states that NIM has an influence on financial distress.

The earning variable as measured by Operating Expenses to Operating Income (BOPO) has a significance value of 0.655 greater than the significance level of 0.05, meaning that BOPO has no effect on financial distress. This is because the company has been able to cover its operating costs with its operating income. This condition is reinforced by research data that the average BOPO value of the sample of banking companies is 92% which is still below the Bank Indonesia standard of 97%, meaning that the bank's ability to carry out its operational activities is quite good. The BOPO value shows that there is no difference between banks experiencing financial distress and banks that are not experiencing financial distress, thus BOPO has no influence on the company's financial distress.
condition. This causes BOPO not to be used as a reference by stakeholders in assessing the potential for banking financial distress. The results of this study are in line with research conducted by Ismawati & Istria (2015), Mugiarti & Mranani (2020), and Prianti & Musdholifah (2018) which state that BOPO has no influence on the financial distress of banking companies. Meanwhile, different results are shown by the research of Sriyanto & Agustina (2020) and Suot et al., (2020) which say that BOPO has a positive effect on financial distress.

The capital variable as measured by the Capital Adequacy Ratio (CAR) has a significance value of 0.00 less than the significance level of 0.05 with a regression coefficient of -25.811 which shows that CAR has a negative influence on financial distress, meaning that the higher the CAR value, the lower the possibility of a bank experiencing financial distress. CAR is a ratio used to assess banks in managing capital so that it can cover assets that contain risk. Banks with sufficient capital can reduce the risk of failure of productive assets. The maintenance of the CAR value means that the capital owned by the bank is also maintained so that the bank can survive if the bank experiences losses from their risky assets. This is supported by the average value of CAR for banking companies during 2018-2021 which can be said to be good, namely 9% to > 12%. The results of this study are in accordance with the results shown in the research of Limbong et al. (2022), Putri (2018), and Suot et al. (2020) that CAR affects financial distress. Meanwhile, in the research of Alvidianita & Rachmawati (2019) and Prianti & Musdholifah (2018) stated that CAR has no effect on financial distress.

**Conclusion**

Based on the results of logistic regression analysis, it is concluded that NPL/NPF, ROA, NIM, and BOPO have no influence on financial distress, while LDR/FDR, GCG, and CAR have an influence on the financial distress of banking companies. The results of this study contain implications so that in the future parties related to financial distress conditions or in other words stakeholders pay more attention to the ratios that affect financial distress and keep these ratios in good condition.

The suggestion in this study is for stakeholders, especially bank management and potential investors, should pay more attention to the LDR, GCG, and CAR ratios and be careful about the possibility of financial distress. Meanwhile, for future research, it is better to develop research by adding independent variables such as external factors such as inflation, exchange rates, economic growth or other macroeconomic factors and can classify banks in three categories following the Altman Z-Score so that they can use logistic regression.

The limitations of the study are the test results of the Nagelkerke R Square value of 0.735 or 73.5%, meaning that the independent variables are able to explain the occurrence of financial distress by 73.5% and there are still 26.5% other variables outside the study that can affect financial distress and this study classifies banks experiencing financial distress and non-financial distress in two categories.

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**References**


