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Modeling the Rural Banks' Survival in Semarang City and Regency during the COVID-19 Pandemic

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ABSTRACT

The COVID-19 pandemic has a significant impact on all sectors including the financial sector. Rural banks are one of the financial institutions that has been affected by the pandemic. The pandemic makes debtors unable to repay the loans that can lead to the increase of non-performing loans. This increase will affect the performance of the rural banks which can lead to the liquidation of rural banks. This is reflected by the decrease in the number of rural banks in Indonesia in 2018–2020 periods. On the other hand, it turns out that rural banks in Semarang City and Regency were not affected by the pandemic. Those rural banks are relatively able to survive, which is reflected by the stable level of the bank's health. Therefore, this study aims to determine factors that affect the survival status of rural banks in Semarang whether they survive or not during the COVID-19 pandemic. To achieve this goal, binary logistic regression was used in this study. The results show that firm size, income growth, and debtors' quality have a significant effect on the survival status of rural banks in Semarang City and Regency during the COVID-19 pandemic.

1. Introduction

Rural Banks is one of the financial service providers operating in Indonesia. Rural banks can carry out business activities such as collecting public funds and providing credit. According to the Indonesian Banking Statistics (SPI) in March 2021, around 51% to 53% of loans distributed by rural banks are productive loans. Therefore, it can be said that rural banks have a quite crucial role towards society, especially for MSME owners because the credit application procedure is relatively simpler compared to credit applications made at commercial banks. Furthermore, the applications can be adapted to the conditions of the surrounding community so that it has an impact on the ease of business actors in obtaining the required capital [1].

Nevertheless, the existence of the COVID-19 pandemic has really impacted all sectors of human life, including the financial sector. The policy of restricting people's mobility that was implemented made the wheels of the economy stagnate. As a result, many people, especially business actors, are experiencing difficulties in carrying out their business operations and repaying business loans obtained from financial service providers such as rural banks. It is reflected by the non-performing loan ratio (NPL) of rural banks which shows a positive trend during the period 2018 to 2020. NPL is the value of total non-performing loans divided by total value of loans portfolio at certain banks.

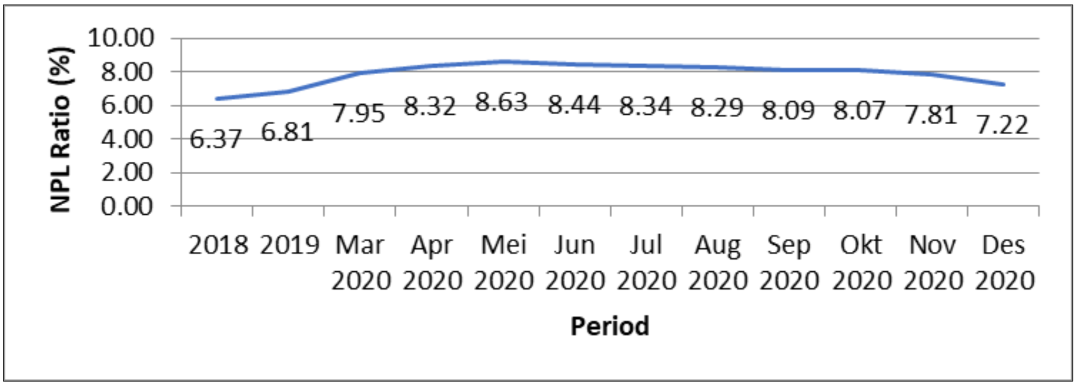

Fig. 1. Rural banks' non-performing loan 2018–2020 (Indonesian Banking Statistics (SPI), March 2021)

Based on Fig. 1, it is known that rural banks' NPL ratio in Indonesia reached 7% to 8% during the COVID-19 pandemic. Before the pandemic, this ratio was still below 7%. This ratio's raise is one of the factors that can cause a decrease in the performance of a rural bank so that it has an unhealthy status. This raise will make the rural bank unable to maximize their profits because of the stagnant flow of money. If a rural bank continues to have an unhealthy status, it may result in the liquidation of the rural bank as a legal entity. This will lead to the decrease in the number of rural banks in Indonesia every year [2].

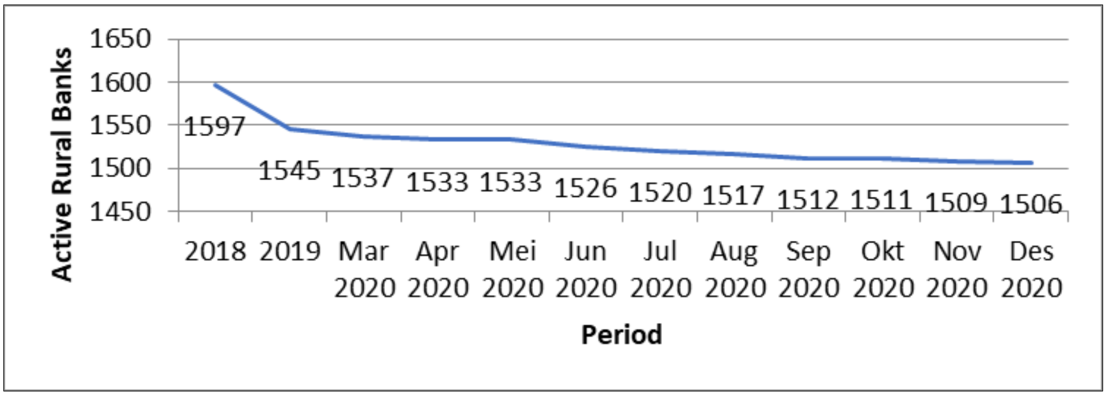

Fig. 2. Number of active rural banks in Indonesia 2018–2020 (Indonesian Banking Statistics (SPI), March 2021)

According to the SPI publication in March 2021, it was known that almost one hundred rural banks in Indonesia had stopped operating in just the last two years. This figure states that there are quite a number of rural banks with unhealthy status and were liquidated during the 2018 to 2020 period.

To measure the health level of a rural bank, Bank Indonesia (BI) uses the CAMEL method which consists of five aspects: Capital, Asset quality, Management, Earnings, and Liquidity. The five aspects will be quantified based on their respective weights and then aggregated into a health level score. The rural banks then will be categorized into four categories: healthy, quite healthy, less healthy, and unhealthy based on their health score. This method is actually good enough to show the rural bank's performance. However, the research related to those applications is still rare to be explored further. Previous research was conducted only to find out the health score and level of rural banks without knowing what factors influence it. This reason makes researchers feel the need to conduct a study that can analyze the influence of internal and external factors on the health level of rural banks. In this study, the internal factors represented by company size, capital structure, and income growth. On the other hand, external factors represented by debtors' quality, credit demand, and public trust.

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Semarang City and Semarang Regency are the two regions that have the highest number of rural banks in Central Java Province. There are 39 rural banks that are still operating in these regions until December 2021. This number can be said to be relatively stable compared to other regions considering that there is no significant change in the number of rural banks in these regions despite the pandemic.

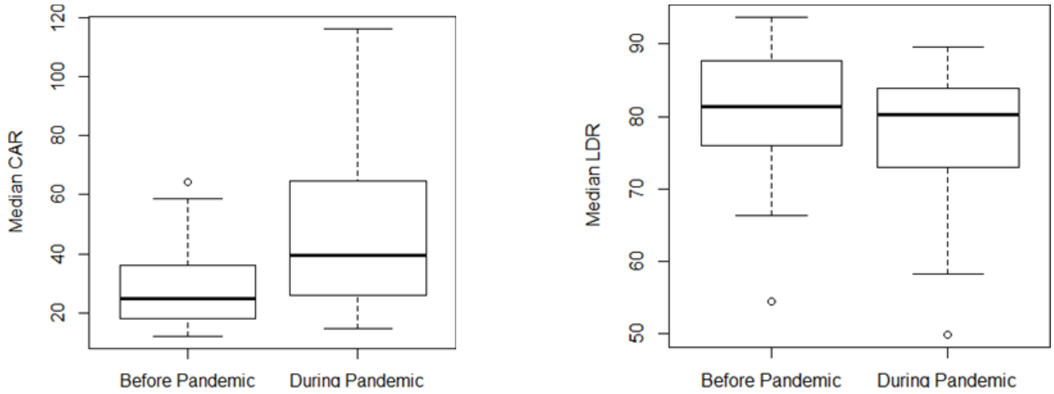

Fig. 3. Rural banks' CAR and LDR in Semarang 2018–2021 (rural bank's financial statement QI 2018–QIII 2021)

The existence of the pandemic does not seem to have a significant impact on the performance of rural banks in these regions. According to the rural bank's financial statement, there was an increase in the capital aspect and a decrease in the liquidity aspect at these rural banks during the COVID-19 pandemic. This indicates a performance raise of rural banks in Semarang City and Semarang Regency.

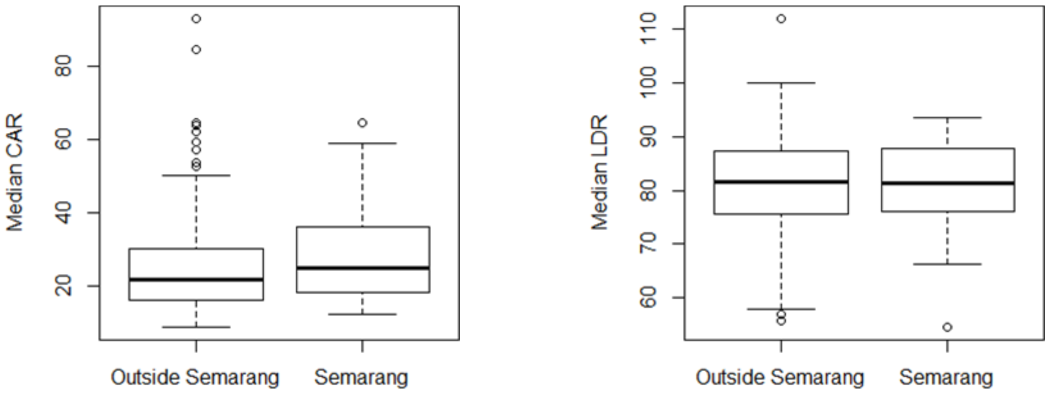

Fig. 4. Rural banks' CAR and LDR in Semarang and other regions 2018–2021 (rural bank's financial statement QI 2018–QIII 2021)

In addition, it is known that rural banks in these regions have better performance than rural banks in other regencies/cities within the scope of Central Java Province. This is because rural banks in Semarang City and Semarang Regency have better capital and liquidity aspects than rural banks that operating in other regions in Central Java Province.

When reviewed further, it turns out that rural banks in Semarang City and Semarang Regency generally have a relatively stable level of health. Research conducted at Weleri Makmur Bank found that this rural bank has a healthy predicate during 2015 to 2018 period [3]. Meanwhile, research conducted at Artha Tanah Mas Bank found that there was an increase in performance in the rural bank which is reflected in the increase in the category of health level [4]. The stability of the health level indicates that rural banks in those regions have a good ability to maintain their performance. Therefore, this study aims to find out the general description of the level of health and survival of

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rural banks as well as what internal and external factors that affect the survival of rural banks in Semarang City and Semarang Regency during the COVID-19 pandemic.

Several previous studies were conducted to determine the factors that influence the performance of rural banks. Research found that capital structure and income growth have a significant effect on the performance of banking companies [5]. Meanwhile, it was revealed that company size had a significant effect on rural bank's performance [6]. Meanwhile, the NPL ratio had a significant effect on rural bank's performance [7]. Meanwhile, credit distribution and third-party funding had a significant effect on profits which indicated the performance of a rural bank [8].

2. Literature Review

Rural bank is one of the financial service institutions in Indonesia that has several business activities such as collecting funds from the public and distributing credit. In carrying out its business activities, all banking units, including rural banks, will be fostered and supervised by the central bank (BI). This has implications for the rural bank's obligation to maintain its level of health in accordance with the provisions that have been set. According to [9], bank health is the ability of banks to carry out banking operations and be able to fulfill all their obligations in accordance with established rules. One method that is often used to assess the soundness of banks, especially rural banks, is the CAMEL method. This method covers five important aspects in rural bank's operational activities, namely capital, asset quality, management, earnings, and liquidity where rural banks will be categorized into four health levels according to specified intervals. A rural bank that has a healthy or quite healthy level of health indicates the success of its directors in carrying out its operational activities. In its development, the progress of a rural bank's health level can reflect the rural bank's ability to survive. A rural bank can be said to survive if it has a stable level of health between periods. Meanwhile, rural banks are said to be unable to survive if they have a declining level of health progress.

The business activities carried out by rural banks ultimately lead to its main goal as a company, namely maximizing the profits obtained. This is in accordance with the Company Theory which states that companies should as much as possible widen the distance between the income earned and the costs incurred [10]. To achieve this goal, of course, internal parties, namely the rural bank's directors, play a major role in determining and maintaining the performance of the company itself. With stable performance, of course, rural banks will be able to survive from time to time so that the profits obtained are maximized. The role of internal parties can be reflected in several factors such as firm size, capital structure, and income growth. In addition, of course, it is also necessary to consider other factors outside the institution of the rural bank in order to maintain the performance and existence of the rural bank. This is because in carrying out its operational activities, the board of directors does not only consider the interests of the shareholders but also the interests of the community as customers. These considerations are based on the rural banks' source of funds, most of which come from community participation. In relation to the banking context, customers will delegate their funds to be managed by the rural bank. This is in accordance with the Agency Theory by Jensen and Meckling which states that there is a relationship between one or more people (principals) who act in commanding other people (agents) [11]. Here, the board of directors is the party entrusted by the customer in managing the funds raised. The form of public participation can be reflected in several factors such as debtors' quality, credit demand, and public trust

3. Material and Methodology

3.1. Data

There are 36 rural banks in Semarang City and Semarang Regency from 2020 to 2021 that are included in this study. The period was chosen because this study aims to know the health level and survival status of rural banks in those two regions during the COVID-19 pandemic. To calculate rural bank's health score, there are some variables that have been used include Capital Adequacy Ratio (CAR), Earning Asset Quality (KAP), Allowance for Earning Assets (PPAP), Net Profit Margin (NPM), Return on Assets (ROA), Ratio of Cost-Operational (BOPO), Cash Ratio (CR) and Loan to Deposit Ratio (LDR). Meanwhile, the predictor variables used to make the model include firm size,

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Debt to Equity Ratio (DER) as proxy for capital structure, operational income growth, Non-Performing Loan (NPL) as proxy for debtors' quality, total lending as proxy for credit demand, and Third Party Funds (TPF) as proxy for public trust. All of these variables are sourced from the rural bank's financial statement that was obtained from the Otoritas Jasa Keuangan (OJK) official website. The response variable used in the model is the survival status of the rural bank which is based on the identification of the progress of the rural bank's health level from 2020 to 2021.

3.2. Method

In this study, the analytical methods used include descriptive analysis and inferential analysis. Descriptive analysis was used to find out the general description of the health level and progress of rural bank's performance in Semarang City and Semarang Regency using the CAMEL method during the COVID-19 pandemic. Data will be presented using graphs such as box plots, stacked column charts, and pie charts. Meanwhile, inferential analysis was used to identify and explain the predictor variables that affected the survival of rural banks in Semarang City and Semarang Regency during the COVID-19 pandemic using binary logistic regression.

The inferential analysis begins by identifying the development of the rural bank's health level. At this step, three categories will be obtained: constant, increase, and decrease. Next, we will identify the survival status of rural banks based on the previous categories. Rural banks are said to survive if their health level development is constant or increases. Meanwhile, rural banks are said to be unable to survive if their health level development decreases [12]. The analysis was continued by forming a rural bank survival status model using binary logistic regression. This model consists of one response variable (rural banks' survival status) and six predictor variables (firm size, DER, income growth, NPL, total lending, and TPF). The first step is to estimate the parameters contained in the model. Next, the goodness of fit test by Deviance Test will be carried out to determine whether the estimated model is appropriate to explain the relationship between the survival status of rural banks and its predictor variables [13]. If the model is appropriate, the next step is to conduct a simultaneous test by likelihood ratio test. If the decision rejects null hypothesis, then the analysis will proceed to partial test by Wald Test. The last stage is to interpret the odds ratio of the predictor variables that have a significant effect on the rural bank's survival status.

4. Results and Discussion

4.1. Overview of Rural Banks' Health Level during the COVID-19 Pandemic

In general, it is known that the majority health level of rural banks in Semarang City and Semarang Regency are in the healthy and quite healthy category. This can be seen based on the health score obtained by each rural bank from 2020 to 2021.

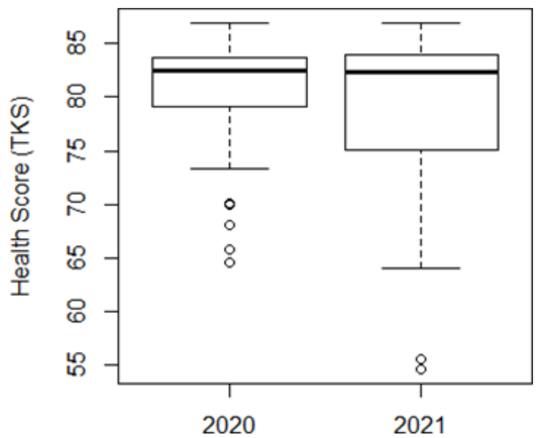

Fig. 5. Rural banks' health score box plot in Semarang 2020–2021

Based on Fig. 5, it can be seen that the majority of rural banks in Semarang City and Semarang Regency have a health score above 66 which is the minimum limit for the fairly healthy category that has been stated in BI regulation in 1997. This means that most of the rural banks in these regions have health levels in the healthy and quite healthy category during the COVID-19 pandemic. In 2020,

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it is known that the rural banks' health score range is 22.26 where there are some rural banks that have a health score less than 66. Then, in 2021, it is known that the health score range has widened and there was an increase in rural banks that have health score less than 66. This indicates that the existence of a pandemic has an impact on the decline in the performance of rural banks operating in Semarang City and Semarang Regency.

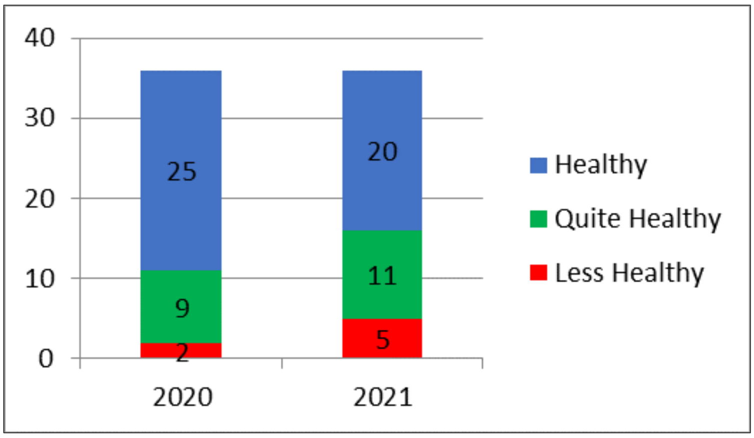

Fig. 6. Proportion of rural banks' health level in Semarang 2020–20211.

Nevertheless, it can be said that rural banks in Semarang City and Semarang Regency have relatively stable performance. This is reflected by the proportion of rural banks' health levels in these regions which tend to be stable every year. In Fig. 6, it can be seen that there is no significant change in the health level of rural banks in Semarang City and Semarang Regency from 2020 to 2021. There are at least 30 rural banks that have health levels at healthy and quite healthy categories each year. Thus, it can be said that rural banks in the two regions have relatively stable progress in health levels. In addition, it is known that the majority of rural banks in these two regions have health levels that have not changed during the pandemic.

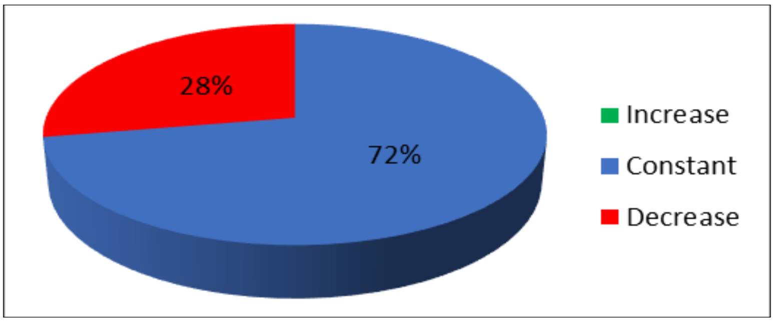

Fig. 7. Proportion of rural banks' health level progress in Semarang

Based on Fig. 7, it can be seen that around 72% or 26 rural banks in Semarang City and Semarang Regency have a fixed level of health from 2020 to 2021. This indicates that rural banks in the two regions have a good ability to maintain their performance during the pandemic.

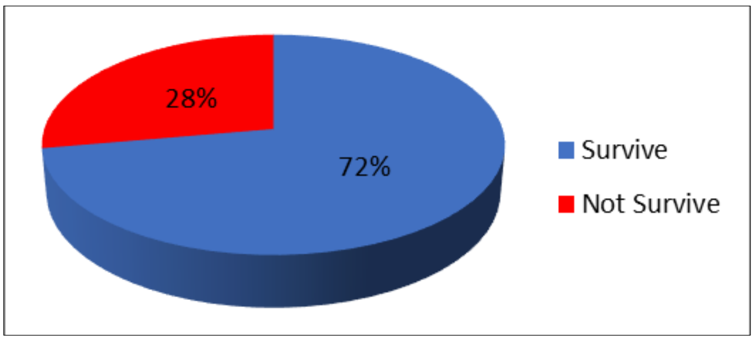

Fig. 8. Proportion of rural banks' survival status in Semarang

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This result is further strengthened by the fact that most of the rural banks in these regions have survive status. It is known that 26 rural banks in Semarang City and Semarang Regency have survive status. Thus, it can be said that in general the rural banks in the two regions are able to maintain their existence in the midst of global phenomena such as the COVID-19 pandemic.

Based on the area, it is known that rural banks in Semarang Regency have a relatively better performance than rural banks in Semarang City. This is reflected by the rural banks' health score in Semarang Regency which is higher than the rural banks' health score in Semarang City. It is known that rural banks in Semarang Regency almost always dominate the top three positions with the highest health score. On the other hand, it is known that rural banks in Semarang City dominate the top three positions with the lowest health score. This indicates that the performance of rural banks in that region is not as good as the performance of rural banks in Semarang Regency. In addition, it is also known that rural banks in Semarang Regency are relatively more capable of maintaining their performance than rural banks in Semarang City. This is also due to the role of the OJK in overseeing rural banks in Semarang Regency [14].

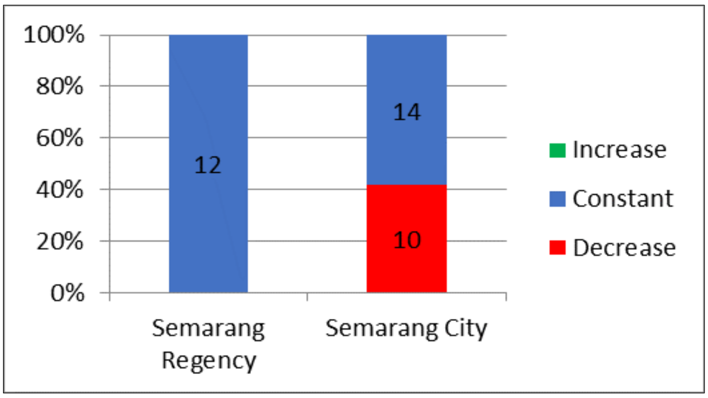

Fig. 9. Proportion of rural banks' health level progress by region

Based on Fig. 9, it is known that there are no rural banks in Semarang Regency that has decreased performance. It can be seen that all rural banks in this region were able to maintain their performance despite the COVID-19 pandemic. On the other hand, it is known that rural banks in Semarang City dominate rural banks with fixed health category. Nevertheless, there are ten rural banks in that region which actually experienced decreasing performance during the pandemic. This indicates that there is an inequality in the rural banks' performance in Semarang City.

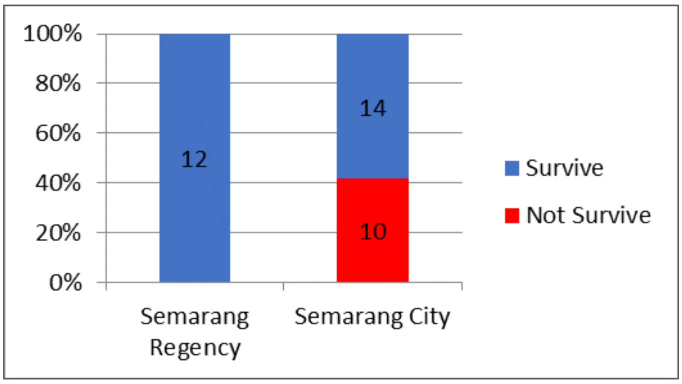

Fig. 10. Proportion of rural banks' survival status by region.

This finding is reinforced by the survival status of the rural banks. It is known that all rural banks in Semarang Regency are able to survive from the effects of the COVID-19 pandemic. On the other hand, almost half of all rural banks in Semarang City were unable to survive during the COVID-19 pandemic. Thus, it can be said that rural banks in Semarang Regency have better resilience to global phenomena such as the COVID-19 pandemic than rural banks in Semarang City.

4.2. Overview of Internal Factors that Affect Rural Banks' Survival

1. Firm Size

Firm size is the scale of the business activities carried out by a rural bank. In practice, the measure used is the natural logarithm of the total assets owned by a rural bank in a certain period. The larger company size of a rural bank, the more recognized that rural bank among the general public. This certainly makes it easier for rural banks to get investors which in turn has an impact on improving the performance of the rural bank.

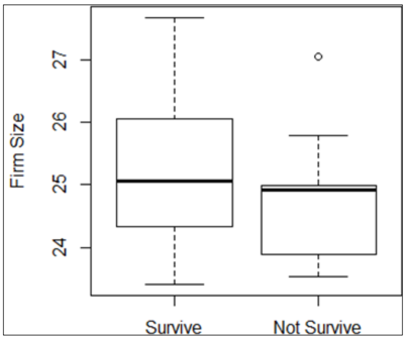

Fig. 11. Median of rural banks' firm size in Semarang 2018–2021

Based on Fig. 11, it is known that rural banks that are able to survive have a larger company size than rural banks that are not able to survive. This means that the total assets owned by rural banks that are able to survive are more than rural banks that are not able to survive. Thus, this finding indicates the influence of company size on the survival of rural banks in Semarang City and Semarang Regency during the COVID-19 pandemic.

2. Capital Structure

Capital structure is the proportion of long-term funding for a rural bank. In carrying out its operational activities, rural banks can use two sources of funds, namely liabilities and equity. In practice, capital structure is measured using the debt to equity ratio (DER), that is the ratio between the total liabilities and total equity of a rural bank in a certain period. As a source of funding, liabilities are able to save on taxes imposed on rural banks while equity cannot reduce these taxes. Therefore, it can be said that the greater the DER in a rural bank, the better the performance of that rural bank.

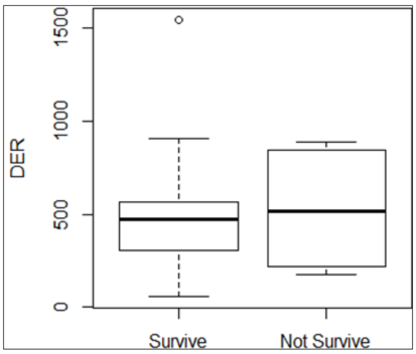

Fig. 12. Median of rural banks' DER in Semarang 2020–2021

Based on Fig. 12, it is known that DER distribution for rural banks that do not survive have a more spread distribution than rural banks that are able to survive. However, it turns out that there is no significant difference in the standard deviation of DER for both statuses. This indicates that there is no specific DER limit that affects the survival status of rural banks in Semarang City and Semarang Regency.

3. Income Growth

Income growth is the development level of operating income obtained by rural banks in a certain period compared to the previous period. High income growth indicates the success of rural bank

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directors in setting operational policies. The higher the income growth of a rural bank, the greater the profit generated so that it will make the rural bank more able to run its business activities steadily. This can ultimately lead to increased performance and enable rural banks to survive in the midst of global phenomena such as the COVID-19 pandemic.

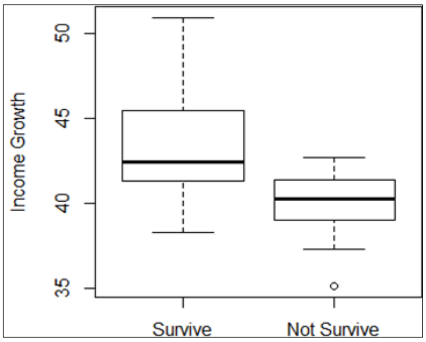

Fig. 13. Median of rural banks' income growth in Semarang 2020–2021

Based on Fig. 13, it is known that the income growth of the surviving rural banks is relatively larger than the income growth of the non-surviving rural banks. In addition, it is also known that there is an intersection between income growth rate of rural banks that survive and rural banks that do not survive. This indicates that there is a minimum limit for the income growth of a rural bank in order to be able to survive in the midst of a pandemic situation

4.3. Overview of External Factors that Affect Rural Banks' Survival

1. Debtors' Quality

Debtors' quality reflects the ability of debtors in repaying the loans that have been given by rural banks. The quality of the debtor will be better when the current installments are paid at the appointed time. The smoothness of these installments is useful for maintaining the flow of funds entering a rural bank so that the operations carried out can run as they should. In practice, debtor quality can be measured through the ratio of non-performing loans (NPL). Thus, it can be said that the lower the NPL ratio in a rural bank, the better its performance.

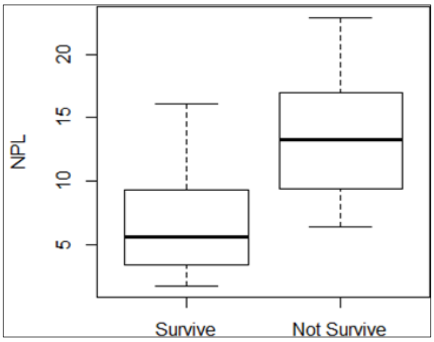

Fig. 14. Median of rural banks' NPL in Semarang 2020–2021

Based on Fig. 14, it is known that the NPL of rural banks that do not survive is higher than those rural banks that are able to survive. This means that rural banks that are able to survive tend to be able to control the number of non-performing loans compared to rural banks that are not able to survive.

2. Credit Demand

Credit demand is the nominal credit submitted by the general public to the rural bank. The higher the demand for credit by the public, the greater the nominal credit that will be distributed by the rural bank. On the other hand, competition between institutions providing financial services has forced rural banks to increase the amount of lending to the public. This is done in order to beat its competitors and maintain its existence. So, it can be said that the greater the nominal lending by a rural bank, the greater the chance for that rural bank to survive.

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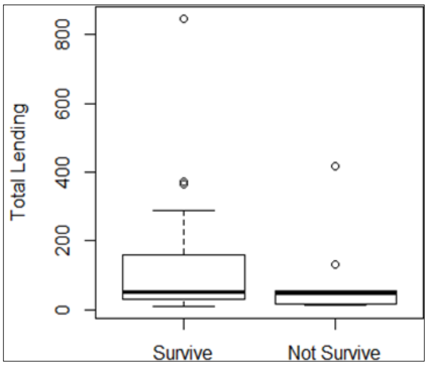

Fig. 15. Median of rural banks' total lending in Semarang 2020–2021

Based on Fig. 15, it is known that there is no significant difference in the data distribution of rural bank loans that can survive and not survive in general. Whereas total lending should play an important role in determining the sustainability status of a bank. This is because higher total lending will generate higher operational profits for the bank. Thus, the bank can maintain their service and make them survive.

3. Public Trust

The level of public trust is a measure of how much people entrust their funds to be placed in a rural bank. In practice, the level of public trust can be measured through the nominal third party funds (TPF) that consist of savings deposits and time deposits. The more deposits collected by a rural bank, the higher level of public trust in that rural bank. The existence of such TPF can be used to increase the nominal loan disbursement or be allocated to other business activities that can increase profits for the rural bank. Thus, it can be said that the higher the public trust, the more capable the rural bank will be to maintain its performance and existence.

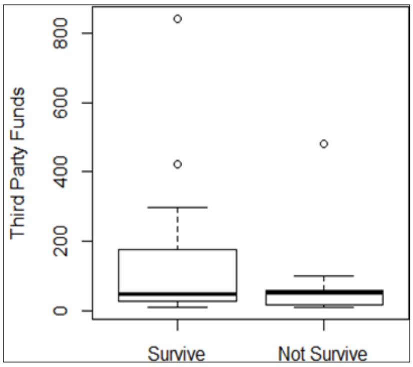

Fig. 16. Median of rural banks' TPF in Semarang 2020–2021

Based on Fig. 16, it is known that the level of public trust in rural banks that survive is greater than those that do not survive. This is reflected by the nominal upper limit of TPF for rural banks that survive, which is greater than rural banks that do not. Nonetheless, the difference in the nominal value of the TPF between those two categories was relatively small, so that it could be said that there was no difference in TPF nominal for both categories.

4.4. Rural Banks' Survival Model in Semarang City and Semarang Regency During the COVID-19 pandemic

1. Parameters Estimation of Rural Banks' Survival Model

Before testing the significance of the variables in the model, it is necessary to model the survival status of the rural bank to estimate the parameters of each variable used. Thus, the equation for the survival status of rural banks in Semarang City and Semarang Regency during the COVID-19 pandemic is as follows:

$$g(x)=-83.86+2.17FS-0.007DER+0.902IG-0.29NPL-0.009TL+0.002TP \qquad (1)$$

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where

FS : firm size
DER : debt to equity ratio
IG : income growth
NPL : non-performing loans ratio
TL : total lending
TPF : third party fund

2. Goodness of Fit

The goodness of fit test aims to determine whether the model built is appropriate in explaining the relationship between the survival status of the rural bank and its predictor variables. In this study, the Deviance test was used with a significance level of 5% to test the suitability of the model.

Table 1. Goodness of Fit Test Results

Deviance	df	*p-value*
19.149	29	0.917

Based on the test results shown in Table 1, it is known that the p-value is greater than the significance level of 5%. Thus, it can be said that the model built is appropriate in explaining the relationship between the survival status of rural banks and its predictor variables at a significance level of 5%.

3. Simultaneous Test

After obtaining the appropriate model, the next step is to test the significance of the variables which include simultaneous tests and partial tests. Simultaneous test aims to determine whether there are predictor variables that affect the survival status of rural banks or not. In this study, the likelihood ratio test was used with a significance level of 5% to perform the simultaneous test.

Table 2. Simultaneous Test Results

G^2	df	*p-value*
23.392	6	0.001

Based on the test results in Table 2, it is known that the p-value is less than 5%. Thus, it can be concluded that there is at least one predictor variable that affects the survival status of rural banks at a significance level of 5%.

4. Partial Test

After knowing that there is at least one predictor variable that affects the survival status of the rural bank, the next step is to do a partial test to find out which predictor variable that affects the survival status of the rural bank. In this study, the Wald test was used to perform a partial test.

Table 3. Partial Test Results

No.	Variable	Estimation	Std. Error	t-Statistic	p-value
1.	Firm Size	2.174	1.319	2.717	0.099
2.	Income Growth	0.902	0.430	4.397	0.036
3.	Debt to Equity Ratio (DER)	-0.007	0.004	2.664	0.103
4.	Non-Performing Loan (NPL)	-0.290	0.154	3.529	0.060
5.	Total Lending	-0.009	0.025	0.128	0.720
6.	Third Party Funds (TPF)	0.002	0.023	0.006	0.940

Based on the partial test results in Table 3, it is known that only the income growth variable has p-value less than 5%. This means that these variables have a significant effect on the survival status of rural banks at a significance level of 5%. Meanwhile, even though it has a p-value above 5%, it turns out that the p-value of the NPL and firm size is less than 10%. This indicates that the two variables have a significant effect on the survival status of rural banks at a significance level of 10%.

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These results are in accordance with the Company Theory and Risk Management Theory which underlies this research. In the theory of the company, it is stated that the main purpose of the company or in this case the rural bank is to maximize profit. As for one way that can be done is to increase the growth of operating income and total assets owned. On the other hand, Risk Management Theory states that companies must identify possible risks that can hinder the company's goals. One of the risks that must be prioritized in the banking world is the risk of non-performing credit. Meanwhile, the other three predictor variables have a p-value of more than 10%, which means that these variables have no significant effect on the survival status of rural banks.

In the partial test of the DER variable, it is known that this variable has no effect on the rural bank's survival status. This is not in accordance with the research conducted where DER has a positive and significant effect on the company's financial performance [15]. The difference in the results is because there is no significant difference in the amount of DER at rural banks in Semarang City and Semarang Regency during the COVID-19 pandemic. The variables of total lending and TPF are also known to have no significant effect on the survival status of rural banks. This is not in accordance with the research conducted where both total lending and TPF have a positive and significant effect on the performance of the rural bank which is reflected by the increase of the rural bank's profit [8]. The difference in the results is allegedly due to the fact that the nominal of total lending and TPF at rural banks in Semarang City and Semarang Regency is relatively same so that there is no certain nominal limit that can cause a rural bank's tendency to be able to survive the current COVID-19 pandemic.

5. Odds Ratio Interpretation

After knowing which predictor variables have a significant effect on the survival status of the rural banks, the next step is to interpret the odds ratios produced by each of these variables. This was done to find out how the tendency of these three variables towards the survival status of rural banks in Semarang City and Semarang Regency during the COVID-19 pandemic. The odds ratio for the variables of income growth, NPL, and firm size is shown in the following table.

Table 4. Odds Ratio of Variables that Affect Rural Bank's Survival Status

No.	Variable	Coefficient	Odds Ratio
1.	Income Growth	0.902	2.464
2.	Non-Performing Loan (NPL)	-0.290	0.748
3.	Firm Size	2.174	8.793

From Table 4, it is known that the odds ratio of the income growth variable is 2.464. This shows that an increase in income growth in a rural bank by 1% will make the rural banks tend to survive by 2.464 times. These results are in accordance with research conducted where income growth has a positive and significant impact on rural bank's performance [5]. Thus, it can be said that the higher the income growth of a rural bank, the greater the tendency of the rural bank to be able to survive during the COVID-19 pandemic.

Then, it is also known that the odds ratio of the NPL variable is 0.748. Because the Odds Ratio's value is less than 1, so the increasing NPL value will make rural banks have greater probability to not survive. In other words, an increase in NPL will actually make rural banks even more incapable of surviving in the current pandemic situation. These results are in accordance with the research conducted by Winarso et al. in 2020 where NPL has a negative and significant effect on rural bank's performance. This is in accordance with the concept of Risk Management Theory which states that rural bank's management must manage risks that have the possibility of hindering the rural bank's goal of making a profit. One of the risks that must be prioritized by rural bank's management is credit risk, which is the possibility of the debtor's failure to repay the loan. So, it can be said that an increase in NPL will make rural banks unable to survive in the current COVID-19 pandemic situation.

Meanwhile, it is known that the odds ratio of the firm size variable is 8.793. This shows that an increase in firm size by 1% will make rural banks tend to survive by 8.793 times compared to smaller firms. These results are in accordance with research conducted by Yana and Sari in 2019 which found

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that company size had a positive and significant effect on the performance of a rural bank which ultimately had implications for the ability of the rural bank to survive global phenomena such as the current pandemic.

5. Conclusion

The majority of rural banks in Semarang City and Semarang Regency have health levels in the healthy and quite healthy category during the COVID-19 pandemic when measured using the CAMEL method. More than half of the rural banks in these two regions were able to maintain their performance during the pandemic. Judging by region, it is known that rural banks in Semarang Regency have better resilience due to the COVID-19 pandemic than rural banks in Semarang City.

Internal factors represented by revenue growth and company size have a positive and significant influence on the survival status of rural banks while external factors represented by debtor quality have a negative and significant influence on the survival status of rural banks in Semarang City and Semarang Regency during the COVID-19 pandemic.

The achievement of the rural bank's performance in Semarang Regency which is able to survive in the midst of the COVID-19 pandemic must be maintained in the future. As for rural banks in Semarang City, which more than half experienced a decline in performance, it is suggested to pay more attention to aspects of income growth, debtors' quality, and firm size. To increase income growth, policies that can be carried out by rural banks' directors in Semarang City are in the form of channeling credit in a targeted manner and expanding the scope of business. Then, the policy that can be taken to minimize the risk due to debtors who fail to pay their installments is to carry out credit restructuring. While the policy that can be taken to increase the size of the company is to attract potential investors to invest in the rural bank.

OJK as the supervisory agency for the financial services industry can implement several policies to address the potential increase in the risk of non-performing loans. The policies referred to include implementing relaxation of credit restructuring, providing adequate liquidity space, establishing a reserve for non-performing debt losses in the form of Allowance for Earning Assets (PPAP), conducting supervisory resolutions on financial service providers that are more effective and efficient, as well as immediately investigating rural banks that received complaints from the public. Thus, it is hoped that the implementation of these policies will ease the burden on creditors and debtors and maintain investor confidence.

In further research, a deeper exploration can be carried out regarding variables that have a significant effect on the resilience of rural banks such as income smoothing aspects and the implementation of good corporate governance (GCG) policies. In addition, in further research, it is also possible to compare the resilience of rural banks and the factors that influence it between districts/cities at the provincial level of Central Java or other provinces.

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