The Impact of Restructuritation Strategies and Financial Instruments for Loan Loss Provision at Commercial Banking

Hanifah Putri Kusumah* and Taufik Faturohman

ABSTRACT

When the COVID-19 pandemic started in April 2020, there was a swift change for portfolio banks in the lending sector. Loan at risk still dominated all of the lending portfolio banks. As a result, the quality of the portfolio and bank assets is getting worse. Furthermore, the banking industry is advised to continue paying attention to the adequacy of loan loss provisioning for impairment losses in anticipating the potential for deteriorating credit quality. The condition of the banking business portfolio, especially in the lending sector, is experiencing worsening conditions due to the COVID-19 pandemic. Loan loss provisioning as the bank’s anticipation of the risk of losing productive assets could contribute in a significant way to the financial crisis in the banking sector. This study analyzes the restructuritation, bank size, capital, inflation, operating expenses management, and productivity growth on loan loss provision. Data collection is done by recording every data needed from The Financial Services Authority (OJK) in the audited financial report. The data were collected for five years quarterly from Q2 2017–Q4 2022, with the object of research being ten banks of group BUKU IV. In total, there are 220 data observations. The dependent variable in this study is loan loss provision. Moreover, the independent variables in this study are restructuritation, bank size, capital, inflation, operating expenses management, and productivity growth. This study uses a quantitative approach with an explanatory or causal design. The data analysis used in this study is panel data regression with the help of the EViews 13 program. The results show that restructuritation policy, inflation rate, and bank size during the COVID-19 pandemic have a significant positive impact on loan loss provision. However, capital bank productivity growth before the COVID-19 pandemic occurred. Also, the operating expense management during the restructuring policy implementation period significantly negatively affects loan loss provision.

Keywords: Bank size, loan loss provision, operating expenses management, restructuritation.

1. INTRODUCTION

The condition of the business banking portfolio at financial industries in Indonesia, especially in the lending sector, is experiencing worsening conditions due to the COVID-19 pandemic. This causes an increase in provisioning expenses, which has an impact on net income on the financial statements of banking institutions, the majority of which have decreased. This, of course, has an influence on the bank’s financial performance. Loan loss provisioning as the bank’s anticipation of the risk of losing productive assets could contribute in a significant way to the financial crisis in the banking sector. Therefore, the formation of CKPN is very important to maintain financial stability. With uncertain economic conditions and the need for quick response and forward-looking policies, banks need strategies so that financial-based performance can improve. Based on the phenomenon of the problem above, there are six questions to be answered in this research as follows:

1. What is the relationship between restructuritation and loan loss provision?
2. What is the relationship between bank size and loan loss provision?
3. What is the relationship between capital and loan loss provision?
4. What is the relationship between inflation and loan loss provision?
5. What is the relationship between operating expense management and loan loss provision?
6. What is the relationship between productivity growth and loan loss provision?

2. Literature Review

The literature review chapter contains various theories and concepts used as a reference for thinking and analysis. Broadly speaking, the literature review section describes the theories and concepts regarding loan loss provision, restructuritation, bank size, capital, inflation, operating expenses management, and productivity growth, and the conceptual framework section explains the relationship between variables and research hypotheses.

2.1. Loan Loss Provision

Loan Loss Provision is an allowance for losses on impaired loans. The allowance for losses is made so that the bank’s financial statements reflect the actual situation (representation faithfulness). To absorb credit risk, banks are required to change their loan loss reserves to reflect anticipated future losses on their lending portfolios (Ahmed et al., 1999). In Indonesian banking, it is better known as the Allowance for Impairment Losses or CKPN.

2.2. Restructuritation Policy

Restructuritation policy serves as a banking strategy that provides debtors who are having difficulties accomplishing their repayment commitments with a repair and rescue effort in credit lending operations to ensure financial institutions can avoid impairments due to non-performing loans (Disemadi & Salih, 2020). Restructuring of loans includes 1) lowering the rates of lending, 2) extending loan periods of time, 3) reducing loan interest outstanding payments, and 4) stopping credit principal arrears.

2.3. Bank Size

A bank’s size is determined by its total assets and average total assets. As a result, a company with a high total asset value also has a high capitalization. Total assets describe a firm’s capitalization and then the size of the company. Banks with considerable assets will constantly endeavor to maintain the stability of their operations since the broader community values the company’s growth (Fitriana & Arfianto, 2015).

2.4. Capital

Capital is defined as the amount of funds that a bank can turn to in periods of difficult circumstances. As a result, banks with greater capitalization can earn more throughout difficult economic periods. Banks with higher equity-to-asset ratios also demand lower financing from outside sources (Sunny & Tang, 2022).

2.5. Inflation

Inflation is defined as the loss of money’s purchasing power. The main driver of inflation is often an economy’s expansion of its money supply, which also contributes to an overall rise in the cost of goods and services. Each amount of money loses value as the price of products and services rises because fewer individuals can afford to spend money on an equal worth of goods and services as they did previously (Sunny & Tang, 2022).

2.6. Operating Expenses Management

Operating Expense Management represents the bank’s operating cost to total asset ratio. It is also determined by the size of the bank. Operating expenses may be considered the most impacted result of bank management; it is typically quantified by the ratio of operational costs to assets or income (Athanasoglou et al., 2008).

2.7. Productivity Growth

Productivity growth is represented by a ratio of the gross total revenue to the number of employees in banking industries. Every bank attempts to improve profits while maintaining steady expenses. Furthermore, banks that spread their operations sooner can increase their operations more quickly by increasing income. As a result, bank productivity is projected to be positively related to profit (Sunny & Tang, 2022).

3. Methodology

This study uses the historical data and information from financial statements of commercial banks in BUKU IV from the period of 2017 until 2022. The research focuses on comparing the financial statement data before and after the implementation of the restructuritation policy pandemic COVID-19. The period before the implementation of the restructuritation policy is from Q1 2017–Q1 2022, with the object of research being 10 banks of BUKU IV. The period after the restructuritation policy implementation is from Q2 2021–Q4 2022, also with the object of research being 10 banks of BUKU IV. The financial data being analyzed is quarterly, which is secondary data derived from the Financial Services Authority (OJK).

3.1. Variable Operationalization

The variables in this research were carried out by collecting research data in the form of secondary data originating from the processed reports of financial statements for all the banks of group BUKU IV. The selected reports for the period Q2 2017–Q4 2022. The dependent variable in this study is loan loss provision. Restructuritation (X1), bank size (X2), capital (X3), inflation rate (X4), operating expense management (OEM) (X5), and Productivity growth (X6) are the independent variables considered in this study. Furthermore, there is an estimation of a dummy variable as well for the restructuritation policy, which is differentiated based on time series. The period of structured implementation is a dummy variable that takes value equal to one (from Q2 2020–Q1 2022), otherwise zero for the period from Q2 2017–Q1 2020 right before the...
The implementation of restructuritation stimulus COVID-19 regulation. The operationalization of the independent and dependent variables in this study is explained in more detail in Table I.

### 3.2. Data Analysis Method

The research data were analyzed using both descriptive and classical assumption statistics. In this research, panel data regression can be used to address regression-related issues by including additional dependent, independent, and dummy variables. The descriptive statistical test aims to describe the distribution of data seen from the maximum, minimum, and average values, while the inferential statistical test, especially multiple linear regression, aims to test the research hypotheses. Fig. 1 shows the workflow of analysis process should be done by following the step which for the operational variable that being stated on Table I.

The classical assumption test is a statistical data test used to ensure that the regression equation obtained is accurate, unbiased, and consistent. The testing methods used include normality, multicollinearity, heteroscedasticity, and autocorrelation. Furthermore, the steps for conducting the panel data regression and the testing which must be done to make the analysis are estimation model of panel data regression, selection method of panel data regression, and panel data regression analysis, which included adjusted R-squared, partial test (t-test), and simultaneous test (F-test).

### 3.3. Equations

There are two models that are being tested by statistical methods for this research in order to determine the relationship between each independent factor on loan provisioning (dependent variable). The first statistical test aims to find out which of the independent variables affects loan provisioning and leads to allowance for impairment losses.

The second statistical test is to determine the relationship between each independent variable on loan provisioning but from the perspective of two different time periods. The time difference looks at the implementation of the COVID-19 pandemic restructuring policy scheme by all of the groups of Bank BUKU IV. Since the restructuring from the previous statistical test is being treated as a dummy variable, the second statistical test that will be carried out is to see the relationship between each independent variable on loan provisioning in two different conditions, where the first condition is before the implementation of the COVID-19 stimulus restructuring policy, while the second condition is when the restructuring policy has been implemented.

Model 1 is the following:

\[
Y_{it} = \alpha_0 + \beta_1 (Restructuritation)_{it} + \beta_2 (BankSize)_{it} + \beta_3 (Capital)_{it} + \beta_4 (Inflation)_{it} + \beta_5 (OEM)_{it} + \beta_6 (Productivity Growth)_{it} + \varepsilon_{it} \ldots
\]  

Model 2 is the following:

\[
Y_{it} = \alpha_0 + \beta_1 (BankSize)_{it} \times (Restructuritation)_{it} + \beta_3 (Capital)_{it} + \beta_4 (Capital)_{it} \times (Restructuritation)_{it} + \beta_5 (Inflation)_{it} + \beta_6 (Inflation)_{it} \times (Restructuritation)_{it} + \beta_7 (OEM)_{it} + \beta_8 (OEM)_{it} \times (Restructuritation)_{it} + \beta_9 (Productivity Growth)_{it} + \beta_{10} (Productivity Growth)_{it} \times (Restructuritation)_{it} + \varepsilon_{it} \ldots
\]

In the models, \(\alpha\) refers to the constant, \(\beta_1\) to \(\beta_{10}\) refers to the regression coefficients of each independent variable, and \(\varepsilon\) refers to the error term.

### 4. Results and Discussion

#### 4.1. Panel Data Regression: Model 1

The purpose of this research of panel regression test is to identify the impact of restructuritation policy, bank size, capital, operating expense management, and productivity growth on loan loss provision. The results of several linear regression tests are shown in Tables II and III.

#### 4.1.1. Restructuritiation

The independent variable of restructuritation has a significant probability value of less than 0.01. The coefficient for this variable is positive with the value 0.027546. These findings suggest that restructuritation has a positive relationship with loan loss provision at banks of group BUKU IV.

There is a significant positive relationship between restructuring and loan loss provisioning since the larger the restructured loan portfolio, the greater the provision for losses by all banks. This happens because the restructuritation policy of stimulus COVID-19 is being implemented for all banks of group BUKU IV because many creditors are unable to pay their obligations, which has led to an increase in bad debts. Also, from the composition of

### Table I: Variable Operationalization

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement</th>
<th>Range</th>
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<tbody>
<tr>
<td>Y: Loan loss provision</td>
<td>Bad debt provisions/Total loans</td>
<td>Ratio</td>
</tr>
<tr>
<td>X1: Restructuritation</td>
<td>Dummy variable</td>
<td>Ratio</td>
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<tr>
<td></td>
<td>Restructuring bad loans</td>
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<td></td>
<td>and repairing reserves</td>
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<td></td>
<td>from restructuring</td>
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<tr>
<td></td>
<td>Rescheduling</td>
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<tr>
<td></td>
<td>Discount of interest rate</td>
<td></td>
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<tr>
<td></td>
<td>and fee</td>
<td></td>
</tr>
<tr>
<td>X2: Bank size</td>
<td>Log (Assets)</td>
<td>Ratio</td>
</tr>
<tr>
<td>X3: Capital</td>
<td>Equity/Assets</td>
<td>Ratio</td>
</tr>
<tr>
<td>X4: Inflation</td>
<td>Inflation in a particular year</td>
<td>Rate</td>
</tr>
<tr>
<td>X5: Operating expense</td>
<td>Operating expense/Assets</td>
<td>Ratio</td>
</tr>
<tr>
<td>management (OEM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X6: Productivity growth</td>
<td>Gross total profit/Number of employees</td>
<td>Ratio</td>
</tr>
</tbody>
</table>

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4.1.2. Bank Capital

Based on the statistical test result in Table II, the independent variable of bank capital (CAPITAL) has a significant probability value of less than 0.01. The coefficient for this variable is negative with the value −0.178680. These findings suggest that bank capital has a negative impact on loan loss provision at banks of group BUKU IV. This result is consistent with Packer and Zhu (2012), who reported that higher provisioning when capital is low is similar to the idea of efforts to increase the reserve cushion. In preparing this larger LLP it can certainly affect capital in the banking industry as well as a significant decline in performance.

The influence of the strengthening of the applicable financial accounting standards (PSAK) 71 can also be observed in the estimation and categorization of accounting assets, along with the shift of LLP from a calculation that relies on historical data to a determination based on forward-looking data. The implementation of PSAK 71 has an impact on increasing the amount of LLP, which will affect the company’s capital. The amount of credit on LLP uses the expected credit loss method to determine expected losses.

The results of the study show that the higher the capital value, the lower the loan loss provision, which means that the more the allowance for impairment losses, the poorer the bank’s capital. The asset growth tendency for all BUKU IV banks is continually increasing in contrast to equity growth, which dropped on average during the COVID-19 epidemic period. Since the value of capital for all the banks BUKU IV has a smaller value when compared to the period before the COVID-19 pandemic, this situation can impact all banks to form higher loan loss provisioning during the COVID-19 pandemic to balance significant asset growth, which is the growth of financing to third parties in the form of credit/loan facilities. Research results have proven that a high value of capital can reduce the level of loan loss provisioning.

4.1.3. Inflation

Based on statistical test results in Table II, the independent variable of the inflation rate has a significant probability value of less than 0.01. The coefficient for this variable is positive with the value 0.181517. These findings suggest that the inflation rate has a positive impact on loan loss provision at banks of group BUKU IV. Inflation has a positive effect on LLP. If inflation increases, the reserve for impairment losses will be higher. If inflation is lower, the allowance for impairment losses will also be lower. This indicates that inflation has a positive effect on LLP (Aviliani et al., 2015). Inflation is also caused by monetary expansion or more expansion of the amount of money in circulation. The amount of money in circulation provisioning based on PSAK 71, all restructured debtor loans with good collectability have higher loss provisions compared to debtors who are not restructured at all, even though both portfolios have good collectability performance (Kurniadi et al., 2022).

Research results have proven that a high loan portfolio, which is being implemented by a restructuritization policy, can increase the provision of allowance for impairment losses as well. As a result, all the banks in the BUKU IV group must provide inventive and significant perspectives to the debate about the effectiveness of the restructuritization program in improving bank performance. Since the restructuritization policy will come to an end, the normalization of the COVID-19 policy should be implemented from now on by all the financial sectors in Indonesia. It is important as well for The Financial Services Authority (OJK) to maintain banking resilience if the COVID-19 Stimulus Policy ends. All the banking sectors of group BUKU IV should conduct a proper restructuring mechanism which is more suitable for their type of business, so this will affect the loan loss provisioning.
is not only cash but also credit and loans. Inflation is caused by several factors, namely demand-pull inflation, cost-pull inflation and imported inflation. Low inflation rates during the COVID-19 pandemic are having an impact on credit expansion is being stopped. Banks cannot give a loan facility, and the money supply outside decreased significantly. The decline in money circulation was also carried out by banks because they could not carry out business activities for credit expansion. As a result, the establishment of loss reserves by banks decreased significantly due to the no expansion process of the lending business. Consequently, the value of loss reserves also decreased when there was a decrease in the inflation rate. During a pandemic, people also tend to hold back their money to maintain liquidation. During the pandemic of COVID-19, there was a significant decrease in the inflation rate in the period of Q2 2020–Q4 2022.

4.2. Panel Data Regression–Model 2
There is a statistical test as well to see the relationship between each independent variable on loan provisioning in two different conditions, where the first condition is before the implementation of the COVID-19 stimulus restructuring policy, while the second condition is when the restructuring policy has been implemented. The result of this panel regression test is shown in Table III.

4.2.1. Bank Size During Restructuritation
Based on the statistical test results in Table III, the independent variable of bank size during the restructuring policy implementation period (Bank Size∗Restruct.) has a
significant probability value of less than 0.01. The coefficient for this variable is positive with the value 0.004127. These findings suggest that bank size during the period of implementing the policy of restructuritaton, which is from Q2 2020–Q4 2022, has a positive impact on loan loss provision at banks of group BUKU IV.

Research results have proven that the high growth of assets for all banks in group BUKU IV during the period of the COVID-19 pandemic will also have an impact on increasing loan loss provisioning. The main reason for the massive growth of assets while the pandemic still occurred is that the total loan portfolio for all banks of group BUKU IV continued to increase for each quarter. Therefore, all the banks of group BUKU IV need to strengthen the value of allowance for impairment losses related to the regulation of PSAK 71. As a result, the quality of assets for all banks of group BUKU IV will remain the stability and prudential position for the financial business. It also could support the process business to make better profitability in the next period after the restructurization implemented period will come to an end and start for new normalization. The size has a significant positive effect on loan loss provision or allowance for impairment losses. The bigger the size of a company, the more likely it is to maintain its business stability (Rinanti, 2017).

4.2.2. Bank Capital

Based on the statistical test result in Table III, the independent variable of bank capital has a significant probability value of less than 0.05. The coefficient for this variable is negative with the value −0.134449. These findings suggest that bank capital has a negative impact on loan loss provision at banks of group BUKU IV. Since there was a multicollinearity problem test for the variable of Bank Capital+Restruct. With the result value above 0.8, it was removed from the calculation of panel data regression. Capital is a separate independent variable, unlike other variables conditioned on different periods, before and after the implementation of the restructuring policy. Therefore, the effect of capital in this regression model can be the same as in the first model. The panel data regression test results also show the same output, for this capital variable has a significant influence by giving a negative effect.

4.2.3. Operating Expenses Management (OEM) During Restructurization

Based on the statistical test result in Table III, the independent variable of operating expenses management during the restructuring policy implementation period (OEM+Restruct.) has a significant probability value of less than 0.1. The coefficient for this variable is negative with the value −0.220314. These findings suggest that operating expenses management during the period of implementing the policy of restructuring, which is from Q2 2020–Q4 2022, has a negative relationship with loan loss provision at banks of group BUKU IV.

The formulation of operating expenses management is operating expenses divided by the value of bank assets Sunny and Tang (2022). It is important to further examine the growth trend of each of these financial components in the formation of operating expenses management. The condition of expenses in the COVID-19 pandemic period is low when compared to the Q2 2017–Q1 2020 period. The trend every quarter in the period Q2 2020–Q4 2022 is always decreasing. Contrary to the condition of banking assets, during the COVID-19 pandemic period, it was of high value, with the trend of each trend for all BUKU IV group banks always increasing. When the condition of banks whose assets continue to increase, it will make the bank increase the formation of loss reserves (LLP). The increasing value of assets is evidenced by the total loan portfolio of all BUKU IV group banks, which continues to grow, and the trend of total loans, which continues to grow during the COVID-19 pandemic. It is in line with the research by Le et al. (2021) that operating expenses have a negative association with LLPs, indicating that banks that are more effective at managing risk when analyzing loan applications have fewer LLPs. The findings revealed that OEM has a negative and significant correlation with LLP.

4.2.4. Productivity Growth

Based on statistical test results in Table III, the independent variable of productivity growth (PrGrowth) has a significant probability value of less than 0.05. The coefficient for this variable is negative, with the value of −1.92E-05. These findings suggest that productivity growth has a negative impact on loan loss provision at banks of group BUKU IV. Also, the independent variable of productivity growth during the period of implementation of restructuring policy (PrGrowth+Restruct.) also showed a significant result (p < 0.10). The coefficient for this variable is negative, with the value of −1.24E-05.

The productivity growth of banking industries at BUKU IV significantly negatively affects loan loss provisioning before implementing the restructuring policy. This is in accordance with the results of the Sunny and Tang (2022) study, which proved that LLP has a negative and significant effect on the profitability of banking companies. In the period before the implementation of the restructuring policy, increasing banking productivity growth indicates that the value of LLP loss reserves formed by banks will be smaller. This is because LLP is a form of cost in the form of reserves that need to be incurred by banks to anticipate potential losses that will arise in the future period. The greater the formation of loss reserves (LLP), the lower the total profit value that the bank will obtain. With a high value of Productivity Growth in a bank, it shows that the loss reserves formed by the bank are small in value, so there is no large deduction related to the cost of loss reserves, and as a result, the profit earned will also be high.

On the contrary, the result of the period during the COVID-19 pandemic is consistent with the findings of the Kustina and Putra (2022) study, which demonstrated that LLP has a positive and considerable impact on the profitability of the banking business. As we know, in March 2020, Indonesia was hit by the COVID-19 pandemic, which greatly affected the community’s economy. Of course, this also has an impact on banks, which are the largest financial institutions in lending in Indonesia. Because it is used to compensate for losses from uncollectible loans, LLP is considered an expense and is in the
income statement in the financial report. Because it is calculated as an expense, LLP greatly affects profitability because the greater the expense, the smaller the profit the banks earn. The rise of LLP itself is also because of the implementation of the applicable financial accounting standards (PSAK) 71 for the formulation of loan loss provisioning, which is the higher establishment of loss reserves, even for a good quality lending portfolio.

These results explain that the variable of productivity growth had an influence on the positioning of loan loss provision. There is a large positive growth on the asset for all banks, especially for the total loans portfolio, and it gives the result that the bank companies have interest income that grows year after year, implying that market share increases year after year; this circumstance boosts gross total profits that being earned by all the banks group of BUKU IV. On the contrary, while the growth of assets is on track to support the massive development of the banking business, the loss reserves that need to be made by the company also need to be formed with a large nominal. The wider the business and market expansion, the greater the risk that needs to be anticipated. The larger a company’s assets, the greater the anticipatory steps to provide loss reserves.

5. Conclusion

Based on the results of data analysis that has been done in the previous chapter, as well as to answer the problems of this research, the conclusions made in this research are as follows:

1. Restructuritation policy for all banks of group BUKU IV significantly has a positive relation with loan loss provision from 2017 until 2022. The findings of this analysis corroborate those of the Kurniadi et al. (2022) study, which found a substantial positive association between the implementation of restructuritation and the loan loss provision formation of Allowance for Impairment Losses (LLP).
2. Bank Size has a positive significant relation with loan loss provisioning (LLP) for banking industries. All the banks of group BUKU IV had a significant size increase between 2020 and 2022, which is in the period during the pandemic of COVID-19. According to Rinanti (2017), the size has a significant positive effect on loan loss provision or allowance for impairment losses. The bigger the size of a company, the more likely it is to maintain its business stability.
3. Capital banks are negatively given the significant relation LLP for banking industries. The results of the study show that the higher the capital value, the lower the loan loss provision, which means that the more the allowance for impairment losses, the poorer the bank’s capital. According to research by Packer and Zhu (2012), there will be higher provisioning when the value of bank capital is low.
4. The inflation rate significantly had a relation to loan loss provisioning of banking industries for all BUKU IV in positive ways. These findings support previous research by Aviliani et al. (2015). The results show that if inflation increases, the reserve for impairment losses will be higher, and it applies while vise versa situation. This indicates that inflation has a positive effect on LLP.
5. Loan loss provisions for banks of BUKU IV significantly had a negative relation with operating expenses management during the period of the COVID-19 pandemic. According to Le et al. (2021), operating expenses have a negative relationship with LLPs, indicating that banks that are more effective for risk management while reviewing loan applications have fewer LLPs.
6. The productivity growth of banking industries at BUKU IV had a significant effect on loan loss provisioning negatively before the implementation of the restructuring policy. This is in accordance with the results of the Sunny and Tang (2022) study, which succeeded in proving that LLP has a negative and significant effect on the profitability of banking companies. On the contrary, the result of the period during the COVID-19 pandemic is consistent with the findings of the Kustina and Putra (2022) study, which demonstrated that LLP has a positive and considerable impact on the profitability of banking business.

References