Effect of Credit and Credit Risk on Profitability of Central Asia Bank

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Abstract: One of the bank's products is credit, which until now is still a productive asset that provides primary income. But it can also be a failure in a bank if the bank contains a high risk that can affect the survival rate of a bank. This study aims to analyze the effect of lending and credit risk on profitability at Central Asia Bank. The study was conducted by taking data for 5 years, namely from the period 2013-2017 using a quantitative approach. Data collection techniques in this study by means of documentation and testing analysis using multiple linear regression analysis with SPSS 16.0 software. The results of the study in testing the hypothesis obtained LDR variable regression coefficient of 0.027 and the NPL variable of 0.176, and the results of the F statistic test amounted to 64.931 with a significance of 0.015. Significance value F <0.05 indicates that the LDR and NPL variables significantly influence ROA at Central Asia Bank.

Keywords: Giving Credit, Credit Risk, Profitability

1. Introduction

With the sign of the era of globalization, the demands for an increase in the standard of living for each person are increasingly high. This encourages everyone to compete to improve their standard of living. Thus, the bank becomes an option that can overcome this through the services offered by the bank.

One of the bank's products is credit, which until now is still a productive asset that provides primary income. But it can also be a failure in a bank if the bank contains a high risk that can affect the survival rate of a bank.

Credit risk can occur due to the inability of customers to pay their obligations within a predetermined period of time in a bank loan agreement to customers. Such as repayment of loan principal, interest payments and others that are not in accordance with a predetermined period of time, if it is not managed properly, it will result in increasingly problematic loans (Non Performing Loans) that will have an impact on banking conditions.

The success of the bank in achieving profit or profitability requires an increase in credit services as the main service product, in accordance with the targets and plans set by the board of directors, as well as increasing profits based on company principles and need to be supported by integrated and adequate policies, so as to optimize service levels to the community.

Based on the background above, the researcher formulated the problem as follows: (1) Does the provision of credit and credit risk simultaneously affect the profitability of Central Asia Bank ?. (2) Does giving credit and credit risk partially influence the profitability of Central Asia Bank ?. (3) Between giving credit and credit risk, which one has the most dominant influence on the profitability of Central Asia Bank?

The objectives of this study are: (1) To test and analyze the effect of giving credit and credit risk simultaneously to the profitability of Central Asia Bank. (2) To test and analyze the effect of giving credit and credit risk partially on the profitability of Central Asia Bank. (3) To find out the dominant influence between giving credit and credit risk to the profitability of Central Asia Bank.

2. Theoretical

Understanding of the Bank

According to Faud (2015: 7) In general, banks are places where people with excessive funds save money and places where people who lack loans. The bank comes from Italian: banco, which means "bench or chair." This is because at that time people who worked at the bank were always behind the desk or sitting in chairs. The type of bank according to Faud (2015: 8) there are two types of banks in Indonesia, namely: (1) Commercial banks, and (2) Rural Banks. According to Article 1 Paragraph 11 of the Banking Law Number 10 of 1998 concerning Amendment to Law Number 7 of 1992 concerning Banking, credit is the provision of money or claims that can be equated with it based on an agreement or agreement between banks and other parties that require the borrower to pay off the debt after a certain period of time and after the interest is given.

Understanding of Credit

Credit Elements according to Karmila (2013: 5) Loans channeled by banking institutions contain the following elements: (1) Trust, (2) Agreement, (3) Duration, (4) Reward, (5) Risk. While the function of Credit in the economy are: (1) Increasing the use of money, (2) Increasing the circulation of money, (3) Increasing the usability and circulation of goods, (4) Tools of economic stability, (5) Increasing business activities, (6) Increasing income distribution, (7) Increasing relations between countries. While detailed credit benefits can be distinguished as follows: (1) Benefits of credit for borrowers, (2) Benefits of credit for banks, (3) Benefits of credit for the government, (4) Benefits of credit for the community.

The terms of lending to the public are known as the 6C Principle, namely: (1) Character (2) Capacity, (3) Capital,
(4) Collateral, (5) Condition of economy, (6) Constraints. In addition to Principle 6C, financial institutions also consider the principles of lending. This principle is known as the term 7P which includes, (1) Personality, (2) Purpose, (3) Prospect, (4) Payment, (5) Party, (6) Profitability, (7) Protection. And for the stages of credit requests that must be passed by a debtor, namely the approach stage, official submission, identification, legalization and commitment, and the realization stage. Besides that not all proposed loans are approved by the bank. It is possible that a credit application was rejected.

The credit interest system can be distinguished according to the nature of fixed credit interest and floating credit interest. While based on the method of payment of credit interest is divided into a flat interest system and a sliding interest system.

Definition of Credit Risk
According to Rustam (2018: 153) Credit risk is a risk due to the failure of other parties to fulfill obligations to financial institutions that provide credit in accordance with the agreed agreement.

Indicators of credit risk are:

\[
\text{Credit Risk} = \frac{\text{Non Performing Loan}}{\text{Total Earning Assets}} \times 100\%
\]

The types of credit risk according to Rustam (2018: 155) are distinguished as follows: (1) Risk of credit concentration, (2) Risk due to failure of the opposing party, (3) Risk due to settlement failure, (4) Country risk.

For non-performing loans, loans are generally those with installment payments or interest over 90 days after maturity, or loans with timely payments are very doubtful. Non-performing loans can also be interpreted as loans that experience difficulty repayment due to intentional factors or because external factors beyond the ability of the debtor can be measured by credit collectibility.

Definition of Profitability
Profitability or ability to earn profits is a measure in the percentage used to assess the extent to which a company is able to generate profits at an acceptable level. Profitability figures are stated among others in the numbers before or after tax profit, investment profit, income per share, and sales profit. The value of profitability is a measure norm for the health of the company. Profitability Ratio is a ratio or comparison to find out the ability of a company to earn profit from earnings related to sales, assets, and equity based on certain measurement bases.

For the benefit of the Profitability Ratio include: (1) To measure or calculate the profits obtained by the company in a given period, (2) To assess the position of corporate profits the previous year with the current year, (3) To assess the development of profits over time, (4) To assess the amount of net income after tax with own capital, (5) To measure the productivity of all company funds used both loan capital and own capital.

### Type of Profitability Ratio

1. **Gross Profit Margin**
   Gross profit margin is calculated as follows:
   \[
   \text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Total Income}} \times 100\%
   \]

2. **Net Profit Margin**
   Net Profit Margin is calculated as follows:
   \[
   \text{Net Profit Margin} = \frac{\text{Net Profit after tax}}{\text{Total Sales}} \times 100\%
   \]

3. **Return On Total Assets (ROA)**
   Return On Total Assets are calculated using the following formula:
   \[
   \text{ROA} = \frac{\text{Profit before tax}}{\text{Total Assets}} \times 100\%
   \]

4. **Return On Equity Ratio**
   Return On Equity Ratio is calculated by the following formula:
   \[
   \text{ROE} = \frac{\text{Net Profit after tax}}{\text{Shareholders Equity}} \times 100\%
   \]

5. **Return On Sales Ratio**
   Return On Sales Ratio is calculated by the formula as follows:
   \[
   \text{ROS} = \frac{\text{Profit before tax and interest}}{\text{Total Sales}} \times 100\%
   \]

6. **Return on Capital Used (Return on Capital Employed)**
   Here are two commonly used ROCE formulas:
   \[
   \text{ROCE} = \frac{\text{Profit before tax and interest}}{\text{Working Capital}} \times 100\%
   \]
   or \[
   \text{ROCE} = \frac{\text{Profit before tax and interest}}{(\text{Total Assets} - \text{Liabilities})} \times 100\%
   \]

7. **Return On Investment (ROI)**
   Return On Investment is calculated by the formula as follows:
   \[
   \text{ROI} = \frac{(\text{Return on Investment} - \text{Initial Investment})}{\text{Investment}} \times 100\%
   \]

8. **Earning Per Share (EPS)**
   Earning per share is calculated using the following formula:
   \[
   \text{EPS} = \frac{\text{Profit after tax} - \text{Preferred stock dividend}}{\text{Number of ordinary shares outstanding}} \times 100\%
   \]

### 3. Conceptual Framework

![Conceptual Framework Image](image_url)

**Figure 2.3:** Conceptual Framework

**Information**

X1: Credit
X2: Credit Risk
Y: Profitability

**Hypothesis**

From the background and conceptual framework above, the hypothesis can be determined in this study that: (1) Credit and credit risk simultaneously have a significant effect on
the profitability of Central Asia Bank. (2) Giving credit and credit risk partially has a significant effect on the profitability of Central Asia Bank. (3) Giving credit has the most dominant influence on the profitability of Central Asia Bank.

4. Research Methods

The type of research used in this study is quantitative. The population in this study is the financial statements of Central Asia Bank. And the sample in this study is the financial statements of Central Asia Bank for the period 2013-2017. The variables studied can be divided into 2, namely:

1) Independent variable (X)
   a) Credit (X1), using the indicator of Loan Deposit Ratio (LDR)
   b) Credit Risk (X2), using the Non Performing Loan (NPL) indicator

2) Dependent variable (Y)
   The dependent variable (Y) used by the author in this study is Profitability, using the indicator Return on Total Assets (ROA).

The measurement scale used in this study is the ratio. The indicator used to measure the level of lending in this study uses indicators:

\[
LDR = \frac{Credit}{Total\ Third\ Party\ Funds} \times 100\
\]

The indicator for measuring the level of credit risk in this study uses indicators:

\[
NPL = \frac{Non\ Performing\ Loan}{Total\ Credit} \times 100\
\]

Indicators for measuring the level of profitability in this study use indicators:

\[
ROA = \frac{Profit\ before\ tax}{Total\ Assets} \times 100\
\]

The data collection technique in this study is by means of documentation and data sources used in this study are secondary data.

In this study, the data needed are financial statements of Central Asia Bank for 5 years, namely in the period 2013-2017 taken from the Gallery of Investment in the Indonesia Stock Exchange. Data analysis in this study by using quantitative data with ratio data.

In this study researchers used statistical data analysis. The model used in analyzing data is multiple linear regression models. Data analysis using SPSS 16.0 statistical computer program (Statistical Package for the Social Sciences Version 16.00).

Hypothesis tests conducted in this study are: (1) Classical Assumption Test consisting of: a) Normality Test, b) Multicollinearity Test, c) Autocorrelation Test, d) Heteroscedasticity Test. (2) Multiple Linear Regression Analysis, namely hypothesis testing carried out in this study by using: a) Test t, b) Test F, and Test R²

5. Analysis of Discussion

5.1 Research data

Based on input data from Bank Indonesia Financial Statements for 2013-2017, bank financial ratios used in this study can be calculated which include Loan Deposit Ratio (LDR), Non Performing Loans (NPL), and Return On Total Assets (ROA). The calculation results are like the table below:

### Table 4.1: LDR Calculation for 2013-2017

<table>
<thead>
<tr>
<th>No</th>
<th>Year</th>
<th>Credit</th>
<th>Third Party Fund</th>
<th>LDR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2013</td>
<td>306,679</td>
<td>409,486</td>
<td>74.9</td>
</tr>
<tr>
<td>2</td>
<td>2014</td>
<td>339,859</td>
<td>447,906</td>
<td>75.9</td>
</tr>
<tr>
<td>3</td>
<td>2015</td>
<td>378,616</td>
<td>473,666</td>
<td>79.9</td>
</tr>
<tr>
<td>4</td>
<td>2016</td>
<td>403,391</td>
<td>530,134</td>
<td>76.1</td>
</tr>
<tr>
<td>5</td>
<td>2017</td>
<td>454,265</td>
<td>581,115</td>
<td>78.2</td>
</tr>
</tbody>
</table>


### Table 4.2: Calculation of NPL for 2013-2017

<table>
<thead>
<tr>
<th>No</th>
<th>Year</th>
<th>Problem Loan</th>
<th>Total Credit</th>
<th>NPL (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2013</td>
<td>1,373</td>
<td>306,679</td>
<td>0.4</td>
</tr>
<tr>
<td>2</td>
<td>2014</td>
<td>2,067</td>
<td>339,859</td>
<td>0.6</td>
</tr>
<tr>
<td>3</td>
<td>2015</td>
<td>2,801</td>
<td>378,616</td>
<td>0.7</td>
</tr>
<tr>
<td>4</td>
<td>2016</td>
<td>5,452</td>
<td>403,391</td>
<td>1.3</td>
</tr>
<tr>
<td>5</td>
<td>2017</td>
<td>6,945</td>
<td>454,265</td>
<td>1.5</td>
</tr>
</tbody>
</table>


### Table 4.3: Calculation of ROA for 2013-2017

<table>
<thead>
<tr>
<th>No</th>
<th>Year</th>
<th>Profit before Tax</th>
<th>Total Assets</th>
<th>ROA (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2013</td>
<td>17,816</td>
<td>496,305</td>
<td>3.6</td>
</tr>
<tr>
<td>2</td>
<td>2014</td>
<td>20,741</td>
<td>552,424</td>
<td>3.7</td>
</tr>
<tr>
<td>3</td>
<td>2015</td>
<td>22,657</td>
<td>594,373</td>
<td>3.8</td>
</tr>
<tr>
<td>4</td>
<td>2016</td>
<td>25,839</td>
<td>676,739</td>
<td>3.8</td>
</tr>
<tr>
<td>5</td>
<td>2017</td>
<td>29,159</td>
<td>750,320</td>
<td>3.9</td>
</tr>
</tbody>
</table>


Based on the recapitulation of data from LDR, NPL, and ROA, the minimum, maximum, average and standard deviation values of each research variable are obtained as in table 4.4 below:

### Table 4.4: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDR</td>
<td>5</td>
<td>74.9</td>
<td>79.9</td>
<td>77,000</td>
<td>20,174</td>
</tr>
<tr>
<td>NPL</td>
<td>5</td>
<td>3.6</td>
<td>3.9</td>
<td>3,760</td>
<td>.1140</td>
</tr>
<tr>
<td>ROA</td>
<td>5</td>
<td>3.6</td>
<td>3.9</td>
<td>3,760</td>
<td>.1140</td>
</tr>
</tbody>
</table>

Source: SPSS 16 Calculation Results (Data processed)

Based on the results of calculations in table 4.4 above, it can be seen that the average LDR is 77,000%, the magnitude of the LDR shows a good value because in accordance with BI rules, the LDR is of a magnitude between 75% and 105%. The average NPL is 0.900%, the magnitude of the NPL is in accordance with BI rules, namely a good NPL must be below 5%. The average ROA is 3.760%, the amount of ROA in accordance with BI rules is that a good ROA must be above 1.5%.
5.2 Research result

Based on the results of calculations in table 4.5 above, significant value> alpha (0.905> 0.05). This means that Ho is accepted which concludes that the residual data is normally distributed.

| Table 4.5: Normality Test Results One-Sample Kolmogorov-Smirnov Test |
|---------------------------------|-----------------|
| N                               | 5               |
| Normal Parameters               |                |
| Mean                            | .0000000        |
| Std. Deviation                  | .01404193       |
| Most Extreme Differences        |                |
| Positive                        | .253            |
| Negative                        | -.150           |
| Kolmogorov-Smirnov Z            | .567            |
| Asymp. Sig. (2-tailed)          | .905            |

Source: SPSS 16 Calculation Results (Data processed)

Based on the calculation results in table 4.6 above, the VIF value of all variables <10, and Tolerance> 0.1. Then it can be concluded that in each variable there is no multicollinearity.

<table>
<thead>
<tr>
<th>Table 4.6: Multicollinearity Test Results Coefficientsa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>LDR</td>
</tr>
<tr>
<td>NPL</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROA

Source: SPSS 16 Calculation Results (Data processed)

Based on the results of calculations in table 4.7 above, it can be seen that the results of Durbin-Watson 2.784, while in the DW table k = 2 and n = 5, the magnitude of the DW table: dL = 0.4672, dU = 1.8964, 4 - d = 4 - 2.784 = 1.216, then the calculation can be interpreted as 4-dU ≤ DW ≤ 4-dL, there is no conclusion. From these results, the authors use the run test to get more definite results. Run test can be seen in table 4.8

| Table 4.7: Autocorrelation Test Results Summary.a |
|---------------------------------|-----------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1     | .992a | .985 | .970 | .0199 | 2,784 |

a. Predictors: (Constant), NPL, LDR
b. Dependent Variable: ROA

Source: SPSS 16 Calculation Results (Data processed)

Based on the results of calculations in table 4.8 above, it can be written the multiple linear regression equation for this study are as follows:

Y = 1,492 + 0.027X_1 + 0.176X_2

Analysis of Multiple Linear Regression

| Table 4.9: Results of Multiple Linear Regression Analysis Coefficientsa |
|---------------------------------|-----------------|
| Model | Unstandardized Coefficients | Standardized Coefficients | T | Sig. |
|       | B | Std. Error | Beta |       |       |
| 1     | (Constant)  | 1.492 | .392 |      |      | 3.804 | .063 |
| LDR   | .027 | .005 | .485 | 5.305 | .034 | .908 | 1.101 |
| NPL   | .176 | .022 | .731 | 8.003 | .015 | .908 | 1.101 |

a. Dependent Variable: ROA

Source: SPSS 16 Calculation Results (Data processed)

Based on the results of calculations in table 4.9 above, it can be written the multiple linear regression equation for this study are as follows:

Y = 1,492 + 0.027X_1 + 0.176X_2
6. Discussion

The Influence of Simultaneous Lending and LDR (Credit Risk) (NPL) on Profitability (ROA)

The LDR provides an indication of the amount of third party funds channeled in the form of credit. A high ratio illustrates the lack of good bank liquidity position. As a result, the amount of funds needed to finance credit is getting bigger. Generally the ratio of up to 100% gives a pretty good picture of the state of bank liquidity.

The NPL provides an indication of the ability of banks to manage problem loans. So that the higher the ratio, the worse the quality of bank credit that causes the number of problem loans to be greater and the possibility of a bank in a problematic condition getting bigger as well. So if the NPL gets bigger, it will cause a decrease in ROA, or it means the bank's performance will decline.

The results of the F test in table 4.11 above show that the F value of statistics is 64.931 with a significance of 0.015. The significance value of F <0.05 indicates that the LDR and NPL variables simultaneously have a significant effect on the ROA of Central Asia Bank in the 2013-2017 period.

This significant influence shows that the provision of credit (LDR) and credit risk (NPL) contribute to generating bank profitability (ROA). From the results of the F test above it can be explained that credit (LDR) and credit risk (NPL) simultaneously affect the profitability (ROA).

The Effect of Partial Lending and Credit Risk (NPL) on Profitability (ROA)

The effect of being given LDR on ROA at a coefficient value of 0.027. ROA will increase by 0.027 units, if there is an increase in LDR of one unit assuming other variables remain. LDR has a positive and significant influence. This can be seen in Table 4.10, which is the significance level of the LDR of 0.034. This value is smaller than the acceptable error rate of 0.05 (α = 5%).

The LDR shows how far the bank is able to repay funds withdrawals made by depositors by relying on loans given as a source of liquidity, or in other words, how far crediting to customers can offset the bank's obligation to immediately meet the demand of depositors who want to withdraw their money used by banks to provide credit. When viewed from the results of this study, the LDR shows a positive influence on increasing bank profits. That is, an increase in the number of loans successfully channeled by banks will have an impact on increasing bank profits.

The significance value of LDR to ROA is 0.034 indicating the effect of the LDR variable on ROA has a direct effect.

Influence given NPL on ROA at the coefficient value of 0.176. ROA will increase by 0.176 units, if there is an increase in NPL of one unit assuming other variables remain. NPL has a positive and significant effect. This can be seen in Table 4.10, namely the level of significance of the NPL of 0.015. This value is smaller than the acceptable error rate of 0.05 (α = 5%).
The NPL significance value of ROA of 0.015 shows the effect of the NPL variable on ROA has a direct effect.

The most dominant effect on profitability (ROA) is lending (LDR), because the significance value of the LDR variable is greater than the significance value of the NPL variable, which is 0.034 > 0.015.

8. Suggestion

The suggestions that the authors can convey about this research are as follows:
1) For banks, banks must conduct an evaluation of lending activities to customers, this is intended so that credit risk can be minimized, namely by way of more stringent in conducting credit supervision, making improvements in the analysis of lending by conducting trainings, choosing customer industry sector more thoroughly. This is intended so that the return process from granting credit can be seen so that the company's profitability has increased.
2) For investors or potential investors, investment decisions should need to be considered when viewed from the credit factor offered by a bank, because it affects the level of profitability of a bank.
3) For further researchers, this study has many limitations, including this study using only internal factors to determine the factors that influence the dependent variable, so it is expected that further research can complement the limitations that exist in this study.

References


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