

# THE EFFECT OF NPL ON PROFITABILITY IN CONVENTIONAL COMMERCIAL BANKS LISTED ON THE INDONESIAN STOCK EXCHANGE IN 2021-2022

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**Abstract:** This research aims to examine the influence of Non-Performing Loans (NPL) on Profitability in Conventional Commercial Banks listed on the Indonesia Stock Exchange in 2021-2022. The population in this research is all conventional commercial banks listed on the Indonesian Stock Exchange. Sampling was taken using the purpose sampling method and 33 companies were selected. Hypothesis testing was carried out using a simple linear regression model using SPSS 25.00. Based on partial test results, the NPL variable shows a significant influence on profitability. The contribution of the independent variable to the dependent variable is 60.3% and the remaining 39.7% is explained by other variables not included in this research model.

**Keywords:** Non Performing Loan (NPL) ; Profitability

## 1. Introduction

Banks are financial institutions whose main function is to attract funds from the public and collect them in the form of deposits. Banks then distribute these funds in the form of credit or loans to the public in order to boost the development of their businesses. As financial institutions, banks play a very dominant role in the economy, with almost all economic activities requiring banks and their credit facilities.

In recent years, the banking industry has undergone significant changes and development. Government deregulation and debureaucratization policies have provided greater flexibility in the services offered, places of operation, locations, and deposit interest rates, making the banking sector a competitive industry. The objectives of deregulation and debureaucratization policies are to build an efficient, resilient, and healthy banking system and to modernize banking in line with the needs of the community. To that end, the banking industry can maintain its existing position by deciding to become a public company listed on the Indonesia Stock Exchange (IDX). The IDX is Indonesia's capital market, which plays an important role in raising funds from shareholders who wish to invest their money in the capital market.

The Financial Services Authority (OJK) recorded that bank lending reached 4.82% year-on-year (YoY) by the end of November 2021. This credit growth was driven by an increase in MSME and retail credit. In terms of industry, the majority of major credit sectors recorded increases, particularly in the manufacturing and household sectors, amounting to Rp 24.9 trillion and Rp 9.1 trillion, respectively. Meanwhile, gross non-performing loans (NPLs) were recorded at 3.19%. The value of third-party funds (DPK) collected increased by 10.48% YoY. ([www.cnbcindonesia.com](http://www.cnbcindonesia.com)).

Loans disbursed by banks to customers need to be managed optimally because the primary function of loans for banks is, of course, as a source of profit. Non-performing loans are caused by the failure to make principal and interest payments, which can directly reduce the bank's performance and cause its activities to become less efficient. The ratio of non-performing loans is called the Non-Performing Loan (NPL) ratio. Banks with higher NPLs indicate that their credit management is becoming less effective. The existence of non-performing loans (NPLs) is contrary to the main purpose of establishing a business entity.

According to Hendrawan and Lestari (2016), the main objective of a bank is to achieve maximum profitability. Profitability is a bank's ability to generate or obtain profits and is used to assess how effectively and efficiently a bank can generate profits. Profitability is also a measure of a bank's health. The ratio commonly used as a measure of financial performance is Return On Assets (ROA).

This study refers to research conducted by Pidela Natalia Salli (2022) entitled The Effect of Non-Performing Loans on the Profitability of PT. Bank Sulselbar, which found that non-performing loans have a significant effect on profitability. However, research conducted by Adam Husaini (2022) entitled The Effect of Non-Performing Loans on the Profitability of PT. Bank Rakyat Indonesia Tbk. found that non-performing loans do not have a significant effect on the profitability of PT. Bank Rakyat Indonesia Tbk.

## 2. 2. Literature Review

### 2.1 Financial Statements

Financial statements are a structured presentation of the financial position and financial performance of an entity. The purpose of financial statements is to provide information about the financial position, financial performance, and cash flows of an entity that is useful to most users of financial statements in making economic decisions. (Anastasia & Lilis, 2017).

### 2.2 Return On Assets (ROA)

This ratio is used to measure the ability of bank management to generate overall profits. The higher a bank's ROA, the greater the level of profit achieved by the bank and the better the bank's position in terms of asset utilization. ROA shows the ability of bank management to generate income from the management of assets owned. A positive ROA indicates that the total assets used by the company are able to generate profits. (Hanafi, 2013).

### 2.2. Non-Performing Loang (NPL)

A non-performing loan is the risk of failure or inability of a customer (debtor) to repay the loan amount received from the bank (creditor) according to the scheduled time period. (Sigid, 2014).

## 3. Research Methods

The type of data used in this study is secondary data in the form of financial reports from conventional commercial banks listed on the Indonesia Stock Exchange (IDX). The research data sources were obtained indirectly by the researcher through books and official websites at [www.idx.co.id](http://www.idx.co.id). The data collection technique used in this study is the documentation method. Documentation is a data collection technique carried out by searching through documents and looking for data on matters or variables in the form of data from the websites [www.idx.co.id](http://www.idx.co.id) and [www.ojk.co.id](http://www.ojk.co.id) that are related to this study.

The population in this study was 43 conventional commercial banks listed on the Indonesia Stock Exchange (IDX) in 2021-2022. The sample in this study consists of all companies in the Containers & Packaging Sub-sector listed on the Indonesia Stock Exchange in 2020-2022, selected using purposive sampling with the following criteria:

- a. Conventional Commercial Banks listed on the Indonesia Stock Exchange (IDX) in 2021-2022.
- b. Conventional Commercial Banks that suffered losses in 2021-2022.

**Table 1.** Sample Company Name

| No | Kode Bank | Nama Perusahaan                     |
|----|-----------|-------------------------------------|
| 1  | BABP      | Bank MNC Internasional Tbk          |
| 2  | BACA      | Bank Capital Indonesia Tbk          |
| 3  | BBCA      | Bank Central Asia Tbk               |
| 4  | BBMD      | Bank Mestika Dharma Tbk             |
| 5  | BBNI      | Bank Negara Indonesia (Persero) Tbk |
| 6  | BBRI      | Bank Rakyat Indonesia (Persero) Tbk |
| 7  | BBTN      | Bank Tabungan Negara (Persero) Tbk  |
| 8  | BMRI      | Bank Mandiri (Persero) Tbk          |
| 9  | BDMN      | Bank Danamon Indonesia              |
| 10 | BNBA      | Bank Bumi Arta Tbk                  |

|    |      |                                                   |
|----|------|---------------------------------------------------|
| 11 | BGTG | Bank Ganesha Tbk                                  |
| 12 | BINA | Bank Ina Perdana Tbk                              |
| 13 | BJBR | Bank Pembangunan Daerah Jawa Barat dan Banten Tbk |
| 14 | BJTM | Bank Pembangunan Daerah Jawa Timur Tbk            |
| 15 | BMAS | Bank Maspion Indonesia Tbk                        |
| 16 | BNGA | Bank CIMB Niaga Tbk                               |
| 17 | BNII | Bank Maybank Indonesia                            |
| 18 | BNLI | Bank Permata Tbk                                  |
| 19 | BSIM | Bank Sinarmas Tbk                                 |
| 20 | MAYA | Bank Mayapada Internasional Tbk                   |
| 21 | MEGA | Bank Mega Tbk                                     |
| 22 | NISP | Bank OCBC NISP Tbk                                |
| 23 | NOBU | Bank Nationalnobu Tbk                             |
| 24 | PNBN | Bank Pan Indonesia Tbk                            |
| 25 | SDRA | Bank Woori Saudara Indonesia 1906 Tbk             |
| 26 | BTPN | Bank BTPN Tbk                                     |
| 27 | MCOR | Bank China Construction Bank Indonesia Tbk        |
| 28 | AGRS | Bank IBK Indonesia Tbk                            |
| 29 | ARTO | Bank Artos Indonesia Tbk                          |
| 30 | BBHI | Allo Bank Indonesia Tbk                           |
| 31 | DNAR | Bank Oke Indonesia Tbk                            |
| 32 | BBSI | Krom bank Indonesia Tbk                           |
| 33 | MASB | Bank Multiarta Sentosa Tbk                        |

Source: [www.idx.co.id](http://www.idx.co.id)

The data analysis used was simple linear regression statistical analysis using SPSS software version 25.0. Simple regression is an analytical tool used to measure the effect between independent variables (X) and dependent variables (Y). In this case, the analysis technique was used to determine the effect of NPL on ROA.

The simple linear regression formula is as follows:

$$Y = \alpha + \beta X + e$$

Description:

|           |             |
|-----------|-------------|
| Y         | = ROA       |
| $\alpha$  | = Konstanta |
| $\beta X$ | = NPL       |

## 4. Result

### 4.1 Normality Test Results

To test the normality of the data in this study, we examined the probability plots of regression standardized residuals.

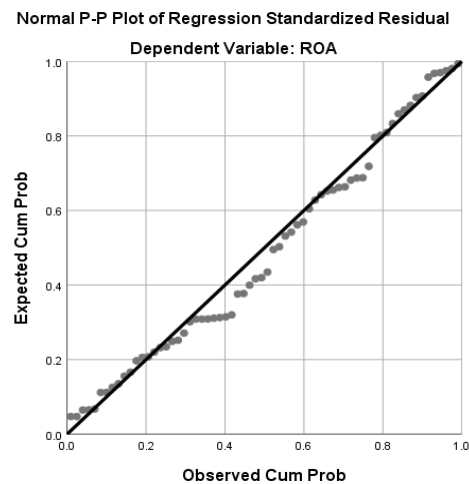


**Figure 1.** Normality Test Results

In Figure 1, it can be seen that the points follow the diagonal line and their distribution follows the direction of the diagonal line. From the processed image above, it can be concluded that the regression model meets the normality assumption.

#### 4.2 Results of Classical Assumption Tests

Testing of classical assumptions in this study includes multicollinearity testing, heteroscedasticity testing, and autocorrelation testing.

##### 4.2.1 Multicollinearity Test Results

Multicollinearity testing aims to determine whether there is a perfect relationship between independent variables, because good data in classical assumptions is data that is free of multicollinearity. The test results can be seen in Table 2 below:

**Table 2.** Multicollinearity Test Results

|       |            | Coefficients <sup>a</sup> |           |       |
|-------|------------|---------------------------|-----------|-------|
|       |            | Collinearity Statistics   |           |       |
| Model |            | B                         | Tolerance | VIF   |
| 1     | (Constant) | 2.133                     |           |       |
|       | NPL        | -.251                     | 1.000     | 1.000 |

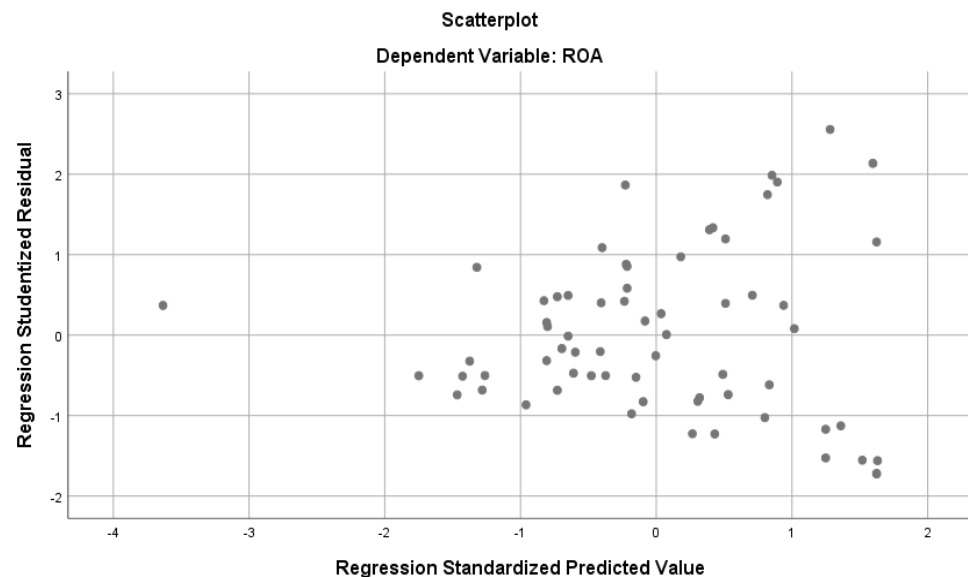
a. Dependent Variable: ROA

Source: Data processed with SPSS V.25

Based on Table 2 above, it is known that the VIF value is less than 10 and the tolerance value is greater than 0.1. Therefore, it can be concluded that the data is free from multicollinearity.

##### 4.2.2 Heteroscedasticity Test Results

The heteroscedasticity test was conducted to determine whether there was variance in the regression model from one observation to another or whether the data formed a specific pattern. The results of the heteroscedasticity test can be seen in the image below:

**Figure 2.** Heteroscedasticity Test Results

From the image above, it can be seen that the data is scattered randomly without forming a specific pattern, so it can be concluded that the data does not have a problem with heteroscedasticity.

#### 4.2.3 Autocorrelation Test Results

The autocorrelation test is a prerequisite for testing time series data. The autocorrelation test proves that the observation period data is not influenced by the previous period data. The autocorrelation test results can be seen in the table below:

**Table 3.** Autocorrelation Test Results

| Model Summary <sup>b</sup>     |                   |          |                   |                            |               |
|--------------------------------|-------------------|----------|-------------------|----------------------------|---------------|
| Model                          | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1                              | .543 <sup>a</sup> | .603     | .621              | 1.26163                    | 1.439         |
| a. Predictors: (Constant), NPL |                   |          |                   |                            |               |
| b. Dependent Variable: ROA     |                   |          |                   |                            |               |

Source: Data processed with SPSS V.25

Based on the table above, the Durbin Watson value is 1.439, where the DW number is between -2 and +2. Therefore, based on the Durbin Watson test criteria according to Santos (2014:241), it can be concluded that there are no problems or symptoms of autocorrelation.

#### 4.3 Simple Linear Regression Test Results

A simple linear regression test is used to determine whether there is an effect between the variables of sales volume and cost of goods sold on net profit. The results of the simple linear regression test can be seen in the following table:

**Table 4.** Simple Linear Regression Test Results

| Coefficients <sup>a</sup> |                             |            |                           |   |      |
|---------------------------|-----------------------------|------------|---------------------------|---|------|
| Model                     | Unstandardized Coefficients |            | Standardized Coefficients | t | Sig. |
|                           | B                           | Std. Error | Beta                      |   |      |

|   |            |       |      |       |        |      |
|---|------------|-------|------|-------|--------|------|
| 1 | (Constant) | 2.133 | .299 |       | 7.144  | .000 |
|   | NPL        | -.251 | .103 | -.291 | -2.434 | .018 |

a. Dependent Variable: ROA

Source: Data processed with SPSS V.25

From the table above, we know that the constant value is 2.133 and the coefficient value of the NPL variable is -0.251. Therefore, the simple linear regression model for this study is as follows:

$$Y = \alpha + \beta_1 X_1$$

$$Y = 2.133 + (-0.251)X$$

The explanation of this equation is as follows:

- The constant value is 2.133, meaning that if the NPL value is 0, then the ROA value is 2.133.
- The regression coefficient value of the NPL variable is negative -0.251, which indicates an inverse relationship between the ROA variable and NPL, meaning that if NPL increases by 1 unit, it will decrease ROA by 0.251, assuming that other variables remain constant.

#### 4.4 Hypothesis Test Results

##### 4.4.1 t Test Results (Partial)

A partial test was conducted to examine the effect of independent variables on dependent variables. The partial test results can be seen below.

**Table 5.** t Test Results (Partial)

| Coefficients <sup>a</sup> |            |                             |            |                           |        |      |
|---------------------------|------------|-----------------------------|------------|---------------------------|--------|------|
| Model                     |            | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|                           |            | B                           | Std. Error | Beta                      |        |      |
| 1                         | (Constant) | 2.133                       | .299       |                           | 7.144  | .000 |
|                           | NPL        | -.251                       | .103       | -.291                     | -2.434 | .018 |

a. Dependent Variable: ROA

Source: Data processed with SPSS V.25

From Table IV.6 above, the significance of the NPL variable is 0.018, while  $\alpha = 0.05$ , so it can be observed that sig ( $0.018 < \alpha (0.05)$ ), which means that the NPL variable affects ROA in conventional commercial banks listed on the Indonesia Stock Exchange in 2021-2022.

#### 4.5 Coefficient of Determination

##### 4.5.1 Coefficient of Determination (R<sup>2</sup>)

The Coefficient of Determination is used to measure the contribution of independent variables to dependent variables, which can be seen from the value of R Squared x 100%.

**Table 6.** Coefficient of Determination (R<sup>2</sup>)

| Model Summary <sup>b</sup> |                   |          |                   |                            |               |
|----------------------------|-------------------|----------|-------------------|----------------------------|---------------|
| Model                      | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1                          | .543 <sup>a</sup> | .603     | .621              | 1.26163                    | 1.439         |

a. Predictors: (Constant), NPL

b. Dependent Variable: ROA

Source: Data processed with SPSS V.25

Based on the results of data processing in Table IV.7, it can be seen that the coefficient of determination obtained is  $R^2 = 0.603 \times 100\% = 60.3\%$ . This means that the effect of NPL on ROA is 60.3%. The rest is explained by other variables.

## 5. Discussion

From the results of research that found the effect of NPL on ROA in Conventional Commercial Banks Listed on the IDX in 2021-2022 from the results of data analysis conducted using SPSS version 25.

The results of the NPL test in regression showed that it had a significant partial effect on ROA. This confirms the theoretical study that the higher the NPL, the lower the ROA. An increase in NPL will affect ROA because the higher the NPL, the worse the quality of the bank's credit, which causes the number of non-performing loans to increase. Therefore, banks must bear losses in their operational activities, which affects the decline in profit (ROA). Thus, it can be concluded that NPL has a significant effect on ROA. Thus, the hypothesis stating that NPL has a significant effect on ROA is accepted, because the data is in line with the expectations in the study.

According to I Made Sudana (2013:22), ROA shows a company's ability to use all of its assets to generate after-tax profits. The higher a company's ROA, the greater the level of profit achieved by the company.

According to (Kasmir, 2018), Non-Performing Loans are "problematic or bad loans, which are loans that face obstacles caused by two factors, namely the bank's analysis and the customer's intentional or unintentional failure to make payments. Non-Performing Loans are the ratio of problem loans to total loans (Ismail, 2018). The lower the NPL ratio, the lower the level of problem loans, and vice versa, the higher the NPL ratio, the greater the credit risk that the bank will bear (Vanni, 2017). The level of NPL can indicate the quality of the bank's management in managing credit. A higher NPL ratio reflects a significant level of non-performing loans held by the bank, causing the bank to suffer losses, while a low NPL ratio indicates a low level of non-performing loans, which leads to increased bank profitability and performance. The results of this study are in line with previous research conducted by Fani Anggraini (2021), which examined the effect of non-performing loans on banking profitability. It is also in line with research conducted by Bambang Wahyudi and Sarah Debora (2020), which examined the analysis of the effect of NPL, NIM, LDR, and CAR on ROA in banking companies listed on the IDX for the period 2016-2018, which showed that NPL has a significant effect on ROA.

## 6. Conclusion

Based on the results of research on Conventional Commercial Banks Listed on the IDX in 2021-2022, it can be concluded that Based on the results of the T-test (hypothesis), it is known that Net Performing Loan affects Return On Asset in Conventional Commercial Banks listed on the Indonesia Stock Exchange in 2021-2022 and the contribution of independent variables to dependent variables is 60.3%. Meanwhile, the remaining 39.7% is influenced by other variables outside the scope of this study.

Berdasarkan hasil penelitian pada Bank Umum Konvensional yang Terdaftar di BEI Tahun 2021-2022, maka penulis memberikan saran-saran sebagai berikut yaitu : Bagi Peneliti disarankan agar dapat menambah variabel lain atau faktor yang akan mempengaruhi ROA dan sebaiknya menggunakan tempat penelitian yang berbeda. Bagi Perusahaan, dari aspek risiko kredit sebaiknya pihak manajemen bank lebih selektif dan hati-hati dalam pemberian kredit terhadap nasabah dan mengikuti peraturan-peraturan perkreditan yang telah ditetapkan oleh Bank Indonesia untuk menghindari terjadinya kredit macet khususnya kepada bank yang memiliki rasio NPL lebih tinggi.

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