

Factors Affecting Non-Performing Loans of Conventional Banking in Indonesia Stock Exchange

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Abstract

This study aims to analyze the factors influencing credit risk in banks. The sample used was 36 conventional banks listed on the Indonesia Stock Exchange for the 2017-2021 period. The sampling technique used is purposive sampling and the analysis method used is panel data regression. The independent variables in this study consist of lending interest rates, return on assets, liquidity ratio, capital adequacy ratio, cost income ratio, inflation rate, and gross domestic product while the dependent variables are non-performing loans. The results showed that the rate of return on assets, capital adequacy ratio, and gross domestic product had a significant negative effect on the level of non-performing loans and the inflation rate had a significant positive effect on the level of non-performing loans. Lending interest rates and liquidity ratios have no effect on the level of non-performing loans. The findings of this study are expected to be a reference for conventional banks in minimizing credit risk by increasing their profitability and developing better credit management when economic growth and inflation rates are getting higher.

Keywords: *Capital adequacy ratio, cost income ratio, gross domestic product, inflation rate, lending interest rate, non-performing loans, and return on assets.*

Abstrak

Penelitian ini bertujuan untuk menganalisis faktor-faktor yang mempengaruhi risiko kredit pada bank. Sampel yang digunakan adalah 36 bank konvensional yang terdaftar di Bursa Efek Indonesia periode 2017-2021. Teknik pengambilan sampel yang digunakan adalah purposive sampling dan metode analisis yang digunakan adalah regresi data panel. Variabel independen dalam penelitian ini terdiri dari suku bunga kredit, return on asset, rasio likuiditas, rasio kecukupan modal, rasio pendapatan biaya, tingkat inflasi, dan produk domestik bruto sedangkan variabel dependennya adalah kredit bermasalah. Hasil penelitian menunjukkan bahwa tingkat pengembalian aset, rasio kecukupan modal, dan produk domestik bruto berpengaruh negatif signifikan terhadap tingkat kredit bermasalah dan tingkat inflasi berpengaruh positif signifikan terhadap tingkat kredit bermasalah. Suku bunga kredit dan rasio likuiditas tidak berpengaruh terhadap tingkat kredit bermasalah. Temuan penelitian ini diharapkan dapat menjadi acuan bagi bank konvensional dalam meminimalkan risiko kredit dengan meningkatkan profitabilitasnya dan mengembangkan manajemen kredit yang lebih baik ketika pertumbuhan ekonomi dan tingkat inflasi semakin tinggi.

Kata kunci: Rasio kecukupan modal, rasio pendapatan biaya, produk domestik bruto, tingkat inflasi, suku bunga pinjaman, pinjaman bermasalah, dan pengembalian aset.

I. INTRODUCTION

According to Msomi (2022), in many countries, rapidly rising Non-Performing Loans (NPL) rates continue to face strong pressures on bank balance sheets to a large extent, with a decent detrimental impact on bank lending operations. Non-Performing Loans (NPLs) are being considered as the main limiting factor for the efficacy of the banking sector in driving economic growth (Msomi, 2022).

Non-Performing Loans (NPLs) are a global issue affecting the overall stability of financial markets as well as the viability of the banking sector. Non-Performing Loans (NPLs) according to Ghosh (2017) are loans that cannot be recovered for a duration prescribed by the laws of a country or as agreed upon by the borrower and lender at the time of provision. The possibility of receiving income from such loans is unclear. Loans with a repayment duration of more than 90 days are considered NPLs. Non-Performing Loans (NPLs) are known to be a significant cause of bank failure and can lead to banking crises (Msomi, 2022). Gabriel, Victor, and Innocent (2019) observed that Nigerian banks have one of the largest and highest NPLs among African countries.

There are several explanations for the improvement of NPLs in conventional banks Macro-economic factors one of the comprehensive statements covering not only economic development, national economic policies and economic systems, but also other factors that are not directly related to conventional banks and businesses (Om'mbongo, 2020). For example, the effect of macroeconomic developments on NPLs, economic slowdowns, declining revenues and company profitability will cause problems in the company's capital turnover, accompanied by a credit deficit and NPL intensification of conventional banks. The creation of NPLs is clearly related to commercial and bank businesses.

Weak bank loans are an important factor for generating bad debts. There are three important points here. First, the risk tolerance of commercial banks is low. Secondly, there are institutional vulnerabilities, since commercial banks have not yet developed a set of ideal support mechanisms when expanding their reach. Third, loan risk monitoring is poor. Regarding the corporate aspect, there are many explanations for corporate loan defaults, some of which are unpleasant business administration, wasteful loans and the company's bad credit history. Thus, the investigation of NPLs in the region is very important because the threat cannot be left alone.

Msoni (2022) with his research entitled "Factors Affecting Non-Performing Loans in Commercial Banks of Selected West African Countries" revealed that there are 7 variables that affect the NPL rate, namely the Lending Interest Rate (LIR) which has a negative influence on NPLs and these results are in line with the findings of Tanaskovi & Jandri (2016) which revealed that the higher the interest rate on loans, the lower the NPL. Liquidity Ratio which has a positive influence on NPLs, in line with the findings produced by Kjosevski, Petkovski, and Naumovska, (2019) and Wood and Sinner, (2018) that LIQ has a positive effect on NPLs. Return on Assets (ROA) which has a negative influence on NPLs, in line with the findings produced by Singh et al., (2021), Dao, Nguyen, Hussain, and Nguyen (2020). Capital Adequacy Ratio (CAR) which has a positive influence on NPLs and these results are in line with research conducted by Amuakwa and Boakye (2016). Cost Income Ratio (CIR) which has a positive influence on NPL and this finding is in line with the results of research by Pradhan and Parajuli (2017) and Trung (2019). The Inflation Rate has a positive influence on NPLs and these findings are in line with previous research made by Hada, B rbut -Misu, Luga, and Wainberg (2020), Radivojevic & Jovovic (2017), Ghosh (2016) and Kjosevski et al., (2019). Gross Domestic Product (GDP) which negatively affects NPLs and the results of this study are consistent with previous studies conducted by Ikram, Su, Ijaz, and Fiaz (2016), Mazreku, Morina, Misiri, Spiteri, and Grima (2018), Khaliq and Thaker (2017), and Apan and Islamoglu (2019).

Conventional Bank

Banks can be defined as referred to in the definition of a bank in Article 1 Paragraph 3 of Law No. 10 of 1998 which perfects Law No. 7 of 1992, by eliminating the phrase "and or based on sharia principles", that is, a bank that carries out business activities that in its activities provide services in payment traffic. Conventional banks are banks that in their operations apply the interest method, because the interest method has existed before, it has become customary and has been widely used compared to the profit-sharing method.

Non-Performing Loans

The main risk faced by the financial system is credit risk that arises a lot due to non-payment of loans by debtors. It was identified that the rising trend of NPLs is one of the main threats of the banking system and this creates a devastating impact on the bank's

ability to repay its deposits. Based on research conducted by Msomi (2022), credit risk refers to the ratio of the number of non-performing loans (NPLs) in a loan portfolio to the total outstanding amount of loans disbursed by banks as creditors to debtors. A loan is considered non-performing if there is an indication that the borrower will not repay the loan due to financial difficulties or is more than 90 days late. From a bank's point of view, these loans are classified as "non-performing" or "bad debt". A higher ratio indicates that if the debtor does not repay the amount of the loan owed, the bank is at greater risk of incurring losses, while the lower ratio means that the unpaid loan presents minimal risk to the bank. As a way to measure the level of bank credit risk and the quality of outstanding credit, banks are expected to disclose their NPL ratio to total loans (Ciukaj & Kil, 2020).

Lending Interest Rate

Lending Interest Rate (LIR) plays an important role in the daily economic life of the country, as they impact as well as influence the ability of individuals and investors to borrow. According to Msomi (2022), the Lending Interest Rate (LIR) is a price that must be paid by the debtor to the bank for the loan that has been given. For banks, LIR is the selling price that will be charged to debtors. The benefit of LIR for banks is to make a profit because LIR is one of the main sources of income for banks. In order to make a profit, usually the LIR or loan interest rate will have a higher figure compared to the deposit rate. The Lending Interest Rate (LIR) is determined based on interest income against the amount of funds lent to customers. In determining the interest rate on loans, there are several components, including operating costs, bad debt risk reserves, targeted profits, taxes, and financing costs.

Liquidity Ratio

Msomi (2022) stated that the liquidity ratio is a measurement of the ability of a company's assets to finance its liabilities or liabilities. The purpose of the liquidity ratio is to measure the company's ability to pay obligations that are due immediately or at the time of billing. The level of liquidity of a bank can be assessed by comparing the total loans of a bank with its total deposits for the same period. The liquidity of the bank reflects the policy of utilization of bank funds and is set past the calculation of the ratio of total loans to total deposits. The increase in LIQ suggests banks are deploying more funds for loans. Such a situation reflects a less liquid position for the bank. The very high liquidity

ratio (LIQ) indicates that the bank's liquidity is not enough to cover unforeseen financial requirements (Hawaldar, Lokesha, Kumar, Pinto, and Sison, 2017).

Return on Assets

Msomi (2022) states that to determine a bank's profitability, it is also important to know how efficiently a bank uses its assets to make a profit. For that reason, the main profitability ratio to look at is Return on Assets (ROA). Good financial performance and a stable financial system are indicated by a higher ROA for each bank. Return on Assets (ROA) is obtained by calculating the ratio of net profit to total assets owned by banks.

Msomi (2022) reveals the negative influence of ROA on NPLs. These results were supported by Singh et al., (2021), Dao & Nguyen (2020), and Ekanayake & Azeez (2016) who found a significant negative influence of ROA on NPLs. This indicates that the bank is able to make a profit by managing its assets optimally. If a bank has high profitability then it reveals the bank's good financial performance and stable bank financial system resulting in less pressure to generate more income to invest in risky loans.

Capital Adequacy Ratio

According to Msomi (2022), CAR is a capital adequacy ratio that reflects the bank's ability to maintain the adequacy of capital management and bank ability to identify and also analyze, measure, monitor, and control risks that can have an impact and influence on capital size. The representation of the CAR calculation is tier 1 summed by tier 2 against Risk-Weighted Assets (ATMR), where tier 1 (core capital) is composed of paid-up capital, share agio, general reserves, destination reserves, retained earnings, last year's profit and current year's profit. Meanwhile, tier 2 (complementary capital) is composed of asset revaluation reserves, classified asset write-off reserves, quasi-capital and subordinated loans. Kadek, Swandewi, & Purnawati (2018) define CAR as a capital ratio that expresses the bank's ability to provide reserve funds if the bank experiences difficulties and the ability of banking management to carry out identification and also analysis, measure, supervise and control risks that arise that can have an impact and influence on the size of capital.

Cost to Income Ratio

According to Msomi (2020), the Cost Income Ratio (CIR) reveals operational efficiency where the company's operating costs are a proportion of its revenue. The CIR calculation is taken from the bank's operating expenses such as administrative and fixed

expenses, such as salaries and property costs, but not bad debts that have been written off, which then divides this figure by the company's operating income which is only turnover minus operating costs. The resulting ratio gives investors a clear view of how efficiently the bank is run. As a result, this ratio reveals how much it costs a bank to make a dollar from profits.

Inflation Rate

Msoni (2022) defines the inflation rate as referring to the increase in tariffs on service products and goods products in general sustainable in certain times, there are various kinds of indicators that are many in order to be used in order to be able to measure related to the level of inflation, namely the Consumer Price Index (CPI). Changes in CPI reveal dynamics related to the value of the price of a service and goods that are indeed consumed by various levels of society. The determination of goods and services is carried out based on a survey of the cost of living conducted by statistical institutions. Then, the statistical agency will monitor the development of prices for these goods and services on a monthly basis in various cities, in traditional markets, and in modern markets for various types of goods or services in each city.

II. METHOD, DATA, AND ANALYSIS

The research design is a comprehensive research plan that will be carried out by the researcher. The research design begins by making hypotheses and implications for the final analysis and then providing conclusions and suggestions based on existing data. This study uses secondary data where data collection is carried out using conventional banking financial statements listed on the Indonesia Stock Exchange and then tested empirically.

The research design that the author used in the implementation of the study was hypothesis testing which had the aim of testing the influence of independent variables, namely LIR, ROA, CAR, CIR, LIQ, INF, and GDP on the dependent variables, namely Non-Performing Loans. The unit of analysis in the implementation of the study is conventional banking listed on the Indonesia Stock Exchange for five years (2017-2021 period). The analysis method in the implementation of the study utilizes a regression data panel with its analysis tool, namely the Eviews 12.0 software.

Conceptual Framework

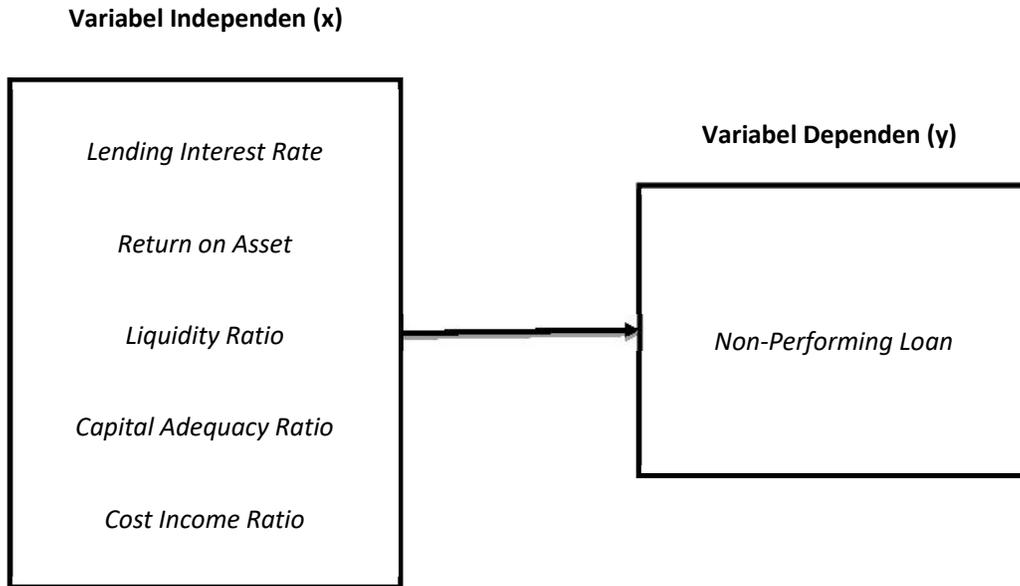
Banks disbursing credit have the expectation that the loan has minimal risk or that it will be fully refunded in a timely manner and not with the status of non-performing loans. However, in reality, if banks fail to manage these risks in relation to bank loans, what will arise are non-performing loans (NPLs). Based on research conducted by Msomi (2022), a credit is considered problematic if there is an indication that the borrower will not repay the loan due to financial difficulties or is more than 90 days late. From a bank's point of view, these loans are classified as "non-performing" or "bad debt".

High NPL levels limit credit and economic activity, and increase banks' vulnerability to risk. High Non-Performing Loans (NPLs) have a negative influence on bank profitability, given that they require banks to increase provisions and not usually generate revenue. High Non-Performing Loans (NPLs) also increase banks' vulnerability to risk by reducing their profitability, tying up their capital, and increasing funding costs. Thus, banks with high NPLs present potential risks to financial stability (Canetti et al., 2017).

Based on research conducted by Msomi (2022) as the author's main article, it was found that the factors that have a positive influence on NPL include the Lending Interest Rate, Liquidity Ratio, Cost Income Ratio, and Inflation Rate. Meanwhile, the factors that have a negative influence on NPL according to the results of Msomi's research (2022) are Return on Assets, Capital Adequacy Rati, and Gross Domestic Product.

Msomi (2022) argues that NPL is considered a dependent variable and is measured as an NPL ratio, while Lending Interest Rate, Return on Assets, Liquidity Ratio, Capital Adequacy Ratio, Cost Income Ratio, Inflation Rate, and Gross Domestic Product are considered independent variables.

Picture 1
Conceptual Framework



Sampling Methods

This research is based on data from conventional bank panels in Indonesia by utilizing purposive sampling, which is a data collection method by determining certain criteria. The banking population listed on the Indonesia Stock Exchange is 46 banks in 2021. Based on the large number of banking populations used as research analysis units from 2017 to 2021, namely 36 banks. Banking companies sampled by the study must meet the following criteria:

1. Conventional banking sector companies listed on the Indonesia Stock Exchange and publish financial statements and annual reports for 2017-2021
2. The company has the data needed for the variables to be studied
3. The company did not experience delisting in 2017-2021
4. The Company does not utilize currencies other than Rupiah in its financial statements and annual reports.

Tabel 1
Penarikan Sampel dengan *Purposive Sampling*

Remarks	Total
Banking population listed on the Indonesia Stock Exchange for five years (period 2017 – 2021)	46
Islamic banking listed on the Indonesia Stock Exchange for five years (period 2017 – 2021)	4
Regional development banking listed on the Indonesia Stock Exchange for five years (period 2017 – 2021)	3
Banks that IPO in the middle of the 2017-2021 period	3
Jumlah sampel penelitian	36
Jumlah data observasi (36 x 5)	180

Data Panel Regression Model

Panel data regression analysis aims to test the effect of independent variables (Lending Interest Rate, Return on Assets, Liquidity Ratio, Capital Adequacy Ratio, Cost Income Ratio, Inflation Rate, and Gross Domestic Product) on dependent variables (Non-Performing Loans). The regression model in the implementation of the study can be described systematically as follows:

$$NPL_{it} = \beta_0 + \beta_1 LIR_{it} + \beta_2 ROA_{it} + \beta_3 LIQ_{it} + \beta_4 CAR_{it} + \beta_5 CIR_{it} + \beta_6 INF_{it} + \beta_7 GDP_{it} + \mu_{it}$$

Where :

NPL_it (Y) : Non-Performing Loans

LIR_it (X1) : Lending Interest Rate

ROA_it (X2) : Return on Assets

LIQ_it (X3) : Liquidity Ratio

CAR_it (X4) : Capital Adequacy Ratio

CIR_it (X5) : Cost Income Ratio

INF_it (X6) : Inflation Rate

GDP_it (X7) : Gross Domestic Product

e_it : Error Team

Chow Test

The Chow test was carried out to determine a more precise model between common effect and fixed effect. The Chow test is based on the null hypothesis where there is no individual heterogeneity and an alternative hypothesis where there is heterogeneity on the cross-section data.

Based on the results of the Chow Test, a cross-section probability value of $0.0000 < 0.05$ and with a chi-square of 108.730853 was obtained. This reveals that if the probability value is less than the significant level, the H_0 for this model is rejected and H_a accepted, as a result of which the better estimate is the fixed effect model. So because of this, the Hausman Test continued.

Hausman Test

The Hausman test aims to determine a more precise model between fixed effects and random effects. Based on the results of the Hausman Test, a probability value of $1.0000 > 0.05$ and with a chi-square of 0.000000 was obtained. This can be interpreted as a decision obtained, namely H_0 accepted as a result of which the model used is a random effect.

Lagrange Multiplier Test

Lagrange Multiplier test utilized to determine a more precise model between common effect and random effect. Based on the Lagrange Multiplier Test, it can be seen that the cross-section probability value is $0.0000 < 0.05$ and with a chi-square of 37.46448. This can be interpreted to mean that the decision obtained is H_0 rejected as a result of which the model used is a random effect.

III. RESULT AND DISCUSSION

Result

Descriptive Statistics Analysis

Descriptive statistics describe the characteristics of the data in a shortened form, that is, looking at the results of the minimum, maximum, mean, and standard deviation values of each variable. The minimum value indicates the lowest value of the variable, while the maximum value indicates the highest value of each variable. The mean value describes the average value of each research variable. Standard deviation is the distribution of research data that shows that the data is heterogeneous or homogeneous

which is volatile. The following are the descriptive statistical results of the research variables used:

Table 2
Descriptive Statistics

<i>Variabel</i>	<i>Observation</i>	<i>Max</i>	<i>Min</i>	<i>Mean</i>	<i>Std. Dev</i>
<i>NPL</i>	180	0,158	0,001	0,033	0,022
<i>LIR</i>	180	0,232	-0,224	0,111	0,045
<i>ROA</i>	180	1,887	-0,089	0,057	0,660
<i>LIQ</i>	180	1,600	0,119	0,823	0,199
<i>CAR</i>	180	0,981	0,085	0,249	0,123
<i>CIR</i>	180	2,879	0,108	0,796	0,358
<i>INF</i>	180	0,036	0,017	0,026	0,007
<i>GDP</i>	180	0,052	0,021	0,042	0,012

Description

1. Non-Performing Loans have an average value of 0.033 with a standard deviation value of 0.022. The maximum value of Non-Performing Loans is owned by PT Bank Neo Commerce Tbk., with a value of 0.158 in 2018, while the one with a minimum value of Non-Performing Loans is PT Bank QNB Indonesia Tbk., with a value of 0.001 in 2021. Return on Assets has an average value of 0.057 with a standard deviation value of 0.660. The maximum value of Return on Assets is owned by PT Bank Artos Indonesia, Tbk., with a value of 1.887 in 2019, while the one with a minimum return on assets by PT Bank MNC International, Tbk., with a value of -0.0747 in 2017.
2. Lending Interest Rate has an average value of 0.111 with a standard deviation value of 0.045. The maximum value of the Lending Interest Rate is owned by PT Bank Tabungan Pensiunan Nasional Tbk., with a value of 0.232 in 2018, while the one with the minimum value of Lending Interest Rate is PT Bank Capital Indonesia Tbk., with

a value of -0.224 in 2021. Income Diversification has an average value of 0.2178 with a standard deviation value of 0.1420. The maximum value of Income Diversification is owned by PT QNB Indonesia, Tbk., with a value of 0.8608 in 2018, while the minimum income diversification value by PT Bank Mayapada Internasional, Tbk., with a value of 0.0169 in 2016.

3. Return on Assets has an average value of 0.057 with a standard deviation value of 0.660. The maximum value of Return on Assets is owned by PT Bank Pan Indonesia Tbk., with a value of 1,887 in 2021, while the one with a minimum value of Return on Assets is PT Bank QNB Indonesia Tbk., with a value of -0.089 in 2021.
4. Liquidity Ratio has an average value of 0.823 with a standard deviation value of 0.199. The maximum value of the Liquidity Ratio is owned by PT Bank Woori Saudara Indonesia 1906 Tbk., with a value of 1,600 in 2020, while the one with a minimum Liquidity Ratio value is PT Bank Capital Indonesia Tbk., with a value of 0.119 in 2021.
5. Capital Adequacy Ratio has an average value of 0.249 with a standard deviation value of 0.123. The maximum value of the Capital Adequacy Ratio is owned by PT Bank of India Indonesia Tbk., with a value of 0.981 in 2021, while the one with a minimum value of Capital Adequacy Ratio is PT Bank Tabungan Pensiunan Nasional Tbk., with a value of 0.085 in 2019.
6. Cost Income Ratio has an average value of 0.796 with a standard deviation value of 0.358. The maximum value of the Cost Income Ratio is owned by PT Bank Raya Indonesia Tbk., with a value of 2,879 in 2021, while the one with the minimum value of the Cost Income Ratio is PT Bank Mestika Dharma Tbk., with a value of 0.108 in 2020.
7. Inflation Rate has an average value of 0.026 with a standard deviation value of 0.007. The maximum value of the Inflation Rate is owned by all banks with a value of 0.036 in 2017, while the minimum value of the Inflation Rate is 0.017 in 2020.
8. Gross Domestic Product has an average value of 0.042 with a standard deviation value of 0.012. The maximum value of Gross Domestic Product is owned by all banks with a value of 0.052 in 2018, while those with a minimum value of Gross Domestic Product are 0.021 in 2020.

Panel Data Regression Analysis Results

This study used panel data regression analysis to test the influence of independent variables, including LIR, ROA, LIQ, CAR, CIR, INF, and GDP on dependent variables, namely credit risk as measured by Non-Performing Loans. The results of the regression equation in this study can be described as follows:

$$NPL_{it} = -0.707602 + 0.000596LIR - 0.752467ROA + 0.000569LIQ - 0.009726CAR + 3.017793CIR + 0.983921INF - 0.554992GDP$$

T Test Result

The T test is used to test how each independent variable, namely LIR, ROA, LIQ, CAR, CIR, INF, and GDP, affects the dependent variable, namely NPL. This test can be done by comparing t count with t table or by looking at the significance column on each t count, the t test process is identical to the Stepwise method test.

Table 3

T test

Variabel Independen	Variabel Dependen		
	<i>Non-Performing Loans</i>		
	Koefisien	Probabilitas	Kesimpulan
Konstanta	-0.707602	-	-
<i>LIR</i>	0.000596	3.1285	Tidak Berpengaruh
<i>ROA</i>	-0.752467	0.0000	Negatif Signifikan
<i>LIQ</i>	0.000569	0.7484	Tidak Berpengaruh
<i>CAR</i>	-0.009726	0.0050	Negatif Signifikan
<i>CIR</i>	3.017793	0.0001	Positif Signifikan
<i>INF</i>	0.983921	0.0035	Positif Signifikan
<i>GDP</i>	-0.554992	0.0107	Negatif Signifikan

Based on the T Test in the table above, the results can be spelled out as follows:

1. Lending Interest Rate shows the probability value for the effect of LIR on NPL is $3.1285 > 0.05$ with a coefficient of 0.000596 this means that LIR has no effect on NPL.
2. Return on Assets shows the probability value for the effect of ROA on NPL is $0.0000 < 0.05$ with a coefficient of -0.752467 this means that ROA negatively affects NPL.
3. Liquidity Ratio shows that the probability value for the effect of LIQ on NPL is $0.7484 > 0.05$ with a coefficient of 0.009791 this means that LIQ has no effect on NPL.
4. Capital Adequacy Ratio shows that the probability value for the effect of LIR on NPL is $0.0050 < 0.05$ with a coefficient of -0.009726 this means that LIR has a significant negative effect on NPL.
5. Cost Income Ratio shows that the probability value for the influence of CIR on NPL is $0.0001 < 0.05$ with a coefficient of 3.017793 this means that CIR has a positive effect on NPL.
6. Inflation Rate shows that the probability value for the effect of INF on NPL is $0.0035 < 0.05$ with a coefficient of 0.983921 this means that INF has a positive effect on NPL.
7. Gross Domestic Product shows that the probability value for the influence of LIR on NPL is $0.0107 < 0.05$ with a coefficient of -0.554992 this means that GDP negatively affects NPL.

Discussion

Based on hypothesis testing with the T Test, the influence of each independent variable on the dependent variable can be interpreted as follows:

Lending Interest Rate

The regression test in this study gave the result that LIR had no effect on NPL. This shows that the size of the credit interest rate charged does not affect the debtor's ability to pay off his loan so that it does not affect the bank's credit risk. The results of this study contradict the research conducted by Msomi (2022) which states that LIR has a significant positive influence on NPLs. The results of this study are in accordance with research conducted by Mada & Arfinto (2016), Kalista & Margaretha (2016), Rajha (2017), and Vatansever & Hepsen (2013), which resulted in that LIR had no influence on NPL. This indicates that the debtor does not pay much attention to the credit interest rate as a consideration before applying for a loan to the bank. Debtors tend to focus on the principal of the loan to be received so that they can immediately meet their needs.

Moreover, the average LIR in conventional banks in Indonesia is 11.1%. This percentage shows that the credit interest charged to the debtor is still within reasonable limits so that the debtor does not worry too much about the debt burden and focuses more on the principal of the loan. This shows that bank lending rates have no effect on the level of non-performing loans.

Return on Assets

The regression test in this study gave the result that ROA had a negative and significant effect on NPL. This negative and significant influence suggests that the greater the profit a bank makes for each asset utilized, the smaller the credit level is problematic. This result is in accordance with research conducted by Msomi (2022) which states that ROA negatively affects NPL. The results of this study are supported by the findings of Singh et al., (2021), Dao & Nguyen (2020), Sunday et al., (2020), Makri et al., (2014), and Ekanayake & Azeez (2016) who found a significant negative influence of ROA on NPL. This indicates that the bank is able to make a profit by managing its assets optimally. If a bank has high profitability, it results in good bank financial performance and a stable bank financial system resulting in less pressure to generate more income to invest in risky loans. The reason is that the increasingly high profitability has proven that banking financial managers are able to monitor the quality of loans disbursed and manage non-performing loans. Banks that have higher profitability imply better credit management so that the bank is able to minimize its credit risk.

Liquidity Ratio

The regression test in this study gave the result that LIQ had no effect on NPL which means that the high low LIQ did not affect NPL fluctuations. The results of this study are not in line with the results obtained in Msomi's research (2022) which revealed a positive influence of LIQ on NPL. However, these results are in line with research conducted by Afriyanto, et al., (2021), Rezina et al. (2020), Bhattarai (2018), and Makri et al. (2014) which state that LIQ has no effect on NPLs. This insignificant effect is because the average loan disbursement obtained from the receipt of conventional bank deposits in Indonesia is still within a reasonable limit, which is 82.3%. This percentage is still in the range of 78%-92% as stipulated by Bank Indonesia Regulation No. 19 of 2017 that the ratio of bank deposit receipts to lending is still safe so that it does not indicate the

level of non-performing loans. Therefore, the size of the loan disbursed from the receipt of customer deposits will not affect the credit risk of the banking industry.

Capital Adequacy Ratio

The regression test in this study gave the result that CAR had a significant negative effect on NPL which means that the higher the CAR, the lower the NPL and vice versa. The results of this study are in line with the results obtained in Msomi's research (2022) which revealed the negative influence of CAR on NPL. These results are supported by the findings of Kumar, et al., (2020), Koju, et al., (2018) and Sun (2021) which reveal the negative influence of CAR on NPLs. This can be interpreted to mean that the high capital adequacy ratio is used to maintain and reduce financial risks, one of which is the risk of debtor default. The reason is that sufficient funds can be interpreted as a percentage of capital that can effectively protect banking operations from failure through the absorption of losses. In addition, the amount of capital should be adjusted when it is likely that the total costs and operating requirements will increase. Thus, CAR tends to cover and minimize unexpected losses from banks, increase the credibility of the banking system, reduce the impact of risks including default risks, and create a competitive environment for the banking sector.

Cost Income Ratio

The regression test in this study gave the result that CIR had a significant positive effect on NPL, the higher the CIR the higher the NPL. The results of this study are in line with the results obtained in Msomi's research (2022) which revealed a positive influence of CIR on NPL. These results are supported by the findings of Pradhan & Parajuli (2017) and Trung (2020) who say that CIR has a positive influence on NPLs. This can be interpreted as if the CIR increases, the NPL will increase. Meanwhile, the lower CIR indicates the more profitable the banking is. The reason is that banking management is able to manage operational activities such as lending to debtors properly so that debtors can pay loans on time so that NPLs will decrease. Fluctuations in the CIR can highlight the potential problem that if the ratio increases in each period, then costs increase at a higher rate than revenue, suggesting that the bank has shifted its sights in a bid to attract more business.

Inflation Ratio

The regression test in this study gave the result that INF had a positive and significant effect on NPL. This positive and significant influence indicates that a high rate of inflation can increase the risk of debtor default on bank loans. The results of this study are in line with Msomi's research (2021) which states that INF has a positive and significant effect on NPLs. These results supported by Kjosevski et al., (2019), Hada, B rbut -Misu, Iuga, and Wainberg (2020), Radivojevi , Cvijanovi , Sekulic, Pavlovic, Jovic, & Maksimovi (2019), and Ghosh (2017) revealed a significant positive effect of inflation on NPLs. This can be interpreted to mean that a high inflation rate causes the price of raw materials to increase so that it will have an impact on the selling price which increases, but the purchasing power of the people decreases so that this causes the company's revenue to decrease and the company's ability to pay credit will also decrease.

Gross Domestic Product

The regression test in this study gave the result that GDP has a negative and significant effect on NPL which means that the higher the GDP the lower the NPL. This result is in line with Msomi's findings (2022) which states that GDP negatively affects NPLs. These results are supported by the findings of Su, et al., (2016), Mazreku et al., (2018), slamo lu, et al., (2016) and Khaliq (2017) which state that GDP has a negative influence on NPLs. A negative and significant influence means that in general, an increase in GDP or Gross Domestic Product promotes economic development and increases the income level of borrowers to some extent. The increasing amount of people's income leads to an increase in the ability to meet daily needs including repaying bank loans. The more credit repaid can cause the risk of debtor default to be lower, resulting in economic growth being able to reduce the level of non-performing loans in the banking industry.

IV. CONCLUSIONS

This study aims to test whether independent variables, such as LIR, LIQ, ROA, CAR, CIR, INF, and GDP have a significant effect on dependent variables, namely credit risk as measured by Non-Performing Loans at 36 conventional banks on the Indonesia Stock Exchange for five years (2017-2021 period). Based on the analysis and discussion that has been carried out, the conclusions of the results of this study include:

1. Lending Interest Rate has no effect on Non-Performing Loans.
2. Return on Assets has a significant negative effect on Non-Performing Loans.
3. Liquidity Ratio has no effect on Non-Performing Loans.
4. Capital Adequacy Ratio has a significant negative effect on Non-Performing Loans.
5. Cost Income Ratio has a significant positive effect on Non-Performing Loans.
6. Inflation Rate has a significant positive effect on Non-Performing Loans.
7. Gross Domestic Product has a significant negative effect on Non-Performing Loans.

Implications

Based on the analysis and discussion that has been carried out, it is concluded that the independent variables ROA, CAR, and GDP have a significant negative effect on the dependent variables of NPL. CIR and INF have a significant positive effect on NPL dependent variables. Meanwhile, LIR and LIQ do not affect the NPL dependent variable in 36 conventional banks listed on the Indonesia Stock Exchange for five years (2017-2021 period). Therefore, the managerial implications of this study can be described as follows:

1. For Companies:

Financial managers in banks can consider internal and external factors affecting credit risk. For that from an internal point of view:

- Bank financial managers must increase Return on Assets (ROA) by making a profit through maximum asset management because a bank that has high profitability implies good credit management so that the bank is able to minimize its credit risk.
- Bank managers should increase their Capital Adequacy Ratio (CAR) to protect banking operations from failure through risk absorption as CAR tends to cover and minimize the impact of risks including default risks, such as credit risk.
- Banks should improve their ability to manage operational activities such as lending properly and with a rigorous selection process so that the risk of default is smaller.

While from an external point of view:

- High inflation that is not followed by an increase in income can reduce the ability of debtors to pay debts so that the risk of default can increase. Then banks should make strategies in dealing with inflation rates, for example attracting people to save by providing competitive interest rates so that people are still willing to borrow with a strict selection process so that even though the inflation rate is high, people still apply for bank

loans. And the risk of non-performing loans can be maintained because banks have made a strict selection.

- The government should increase the GDP level so that banks can avoid the risk of non-performing loans because the ability of debtors to repay loans will increase.

2. For Investors:

Before deciding to invest or apply for a loan, investors need to pay attention to information related to the financial position of the bank that the investor will choose, such as:

- Pay attention to information related to low bad debt ratios
- Pay attention to the bank's profitability which increases every year
- Pay attention to loan terms to avoid the risk of bad debts.

This is important to be used as a material for consideration and investor readiness whether the bank to be invested can provide benefits to investors so that the investment opportunity is higher.

Limitations

Based on the results of the research conducted, this research still has limitations of research, namely:

1. The sample in this study was only 36 conventional banks listed on the Indonesia Stock Exchange within a period of five years (2017-2021 period).
2. Independent variables in this study are relatively limited, while there are many other variables that can be used as independent variables that can affect Non-Performing Loans.

Advices

Based on the conclusions and limitations of the research results that have been put forward, the advice that can be given to subsequent researchers is as follows:

1. Increase the period of research in conventional banking because the wider the observation time interval, the greater the opportunity to obtain reliable information about variables to conduct more accurate research.
2. The independent variables used in this study were only able to explain the dependent variables as much as 57.1%. This means that there are still 42.9% of factors other than the variables used in this study that can explain Non-Performing Loans. Therefore, for subsequent researchers, it is recommended to add other independent variables that can affect credit distribution such as financing quality & management efficiency (Misman &

Bhatti, 2020); net interest margin & growth rate (Yüksel, 2017); exchange rate fluctuation (Poudel, 2013).

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