

## EFFECT OF LDR, CAR, BOPO AND INFLATION ON NPL

<sup>1</sup>Rizal Abidi, <sup>2</sup>Usman Sastradipraja

<sup>1,2</sup>Fakultas Ekonomi Dan Bisnis Universitas Jenderal Achmad Yani Cimahi, Indonesia

### ARTICLE INFO

#### Keywords:

Company Value,  
Airport Manager,  
Optimal capital structure.

#### E-mail:

rizalabidi@gmail.com,  
usman.sastradipraja@gmail.com

### ABSTRACT

This study aims to determine the effect of LDR, CAR, BOPO and inflation on NPLs. In this study, the author used quantitative research methods with descriptive and associative approaches. The population used in this study is all companies in conventional commercial banks listed on the Indonesia Stock Exchange (IDX) which presents complete and consistent data in the 2017-2021 period and has been listed on the Indonesia Stock Exchange (IDX). The sampling technique used in this study is the Non Probability Sampling method. The results of this study state that the Loan to Deposit Ratio (LDR) has a significant effect on Non Performing Loans (NPL). Capital Adequacy Ratio (CAR) has a significant effect on Non-Performing Loans (NPLs). Operating Income Operating Costs (BOPO) have a significant effect on Non-Performing Loans (NPLs). Inflation shows insignificant against Non-Performing Loans (NPLs). And simultaneously that Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Operating Cost of Operating Income (BOPO) and Inflation have a significant effect on Non-Performing Loans (NPLs).

Copyright © 2023 Economic Journal. All rights reserved.

is Licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License \(CC BY-NC 4.0\)](https://creativecommons.org/licenses/by-nc/4.0/)

### 1. INTRODUCTION

The *Covid-19* pandemic has caused the collapse of all sectors, especially in the economic sector and the health sector as well as economic needs that must be met. With the enactment of several policies to minimize the impact of the *Covid-19* pandemic, such as social *distancing* in the form of PSBB (Large-scale social restrictions) or *Lockdown*, even PPKM (Enforcement of Community Activity Restrictions) imposed in Indonesia is very influential on the country's economy. Such as the country's economy which has experienced a slowdown in the business world which causes economic losses nationally, one of which is losses caused by declining business income and many workers who have to be laid off because companies cannot pay their employees' salaries. With the current condition of the *Covid-19* pandemic, one of the sectors that has been affected is the banking sector. According to the Law of the UUD Republik Indonesia No. 10 Tahun 1998 about banking, bank is a financial intermediary institution, where the bank is tasked with collecting funds from the public in the form of current accounts, savings, deposits and then channeling the funds to the community in the form of credit or other forms in order to improve the standard of living of many people.

Then the bank in carrying out its operations must follow its functions. Therefore, banks will be required to obtain as many funds as possible but at a reasonable or normal cost of money. If the bank is able to raise as much funds as possible, the higher the bank will be in achieving its goals and targets.

The problem that must always exist and be experienced by banks is the problem of the performance of the bank itself. The bank's performance problems will affect the level of public trust in the bank itself and the level of health of the bank. Bank health is the ability of a bank to carry out banking operations normally and be able to fulfill all its obligations properly and in accordance with applicable banking regulations. By having good corporate health, it can increase public trust in banks in disbursing their credit.

The role of banks as financial institutions has never escaped credit problems. The main source of income for banks is lending activities. The greater the amount of credit disbursed, the greater the risk, the greater the risk that must be handled by the bank concerned (Yuliani et al., 2020).

Bad debts will not be a problem if only one debtor or two debtors do not comply or are disciplined in returning bank debts or paying credit loan installments. However, if the amount is large and within a predetermined time cannot pay the credit, it can have an impact on increasing the NPL ratio of the bank concerned.

Non Performing Loan (NPL) is a measure of credit risk that is a parameter of a bank's health level. Banks are considered to have potential difficulties that endanger their business continuity if the net ratio

of non-performing loans (NPLs) is more than 5% of total loans (PBI/15/2/PBI/2013). The greater the bank's NPL level, the bank is unprofessional in its credit management, as well as providing an indication that the level of risk for lending to the bank is quite high in line with the high NPL (Marsono & Edy, 2021).

The ratio of non-performing loans (NPL) in the banking industry is still increasing. Where, the Financial Services Authority or OJK recorded that banking NPLs as of February 2021 on a gross basis were at the level of 3.21% and 1.04% nett (Rachmahyanti, 2021). So the higher the bank's Non Performing Loan rate, the higher the credit arrears which have an impact on decreasing interest income. Conversely, the smaller the bank's NPL, the better the bank's performance in managing the risk of bad debts.

The phenomenon that is happening in Indonesia today about NPL rising which is contained in various articles and news online. That is about the slowdown in the acceleration of bank lending due to mobility restrictions. This can be seen from the shrinking position of non-performing loans (NPLs) in the banking industry. Simply put, an NPL is a ratio that is often used as an indicator to measure the level of health of a bank's assets. Through NPLs the condition of bank assets and the adequacy of credit risk management of a bank can be assessed.

Reporting from Fortune Indonesia, the Financial Services Authority (OJK) recorded that Non-Performing Loans (NPL) of commercial banks until July 2021 reached 3.35 percent. This figure was recorded higher than July 2020 which was only 3.22 percent and NPL in December 2020 which reached 3.06 percent. Bank Permata economist Josua Pardede said that the increase in NPL ratio was due to a decrease in the value of monthly lending. "Loans in June amounted to IDR 5,563.7 trillion while July loans amounted to IDR 5,438.9 trillion. Meanwhile, the increase in the amount of NPL value in Rupiah was IDR 180.7 trillion in June and IDR 186.2 trillion in July, or an increase of IDR 5.4 trillion," Josua told Fortune Indonesia (12/10). On July 3, 2021, President Joko Widodo issued a policy of Implementing Community Activity Restrictions (PPKM) in the Java-Bali region which experienced an increase in Covid-19 cases. This PPKM policy is expected to increase the NPL ratio of the banking industry in line with the reduction in economic activity until July 20, 2021 (Suheriadi, 2021).

The level of Non-Performing Loans that rose from several commercial banks during the research period (2017-2021) can be seen in table 1.1 as follows:

Table 1 *Non-Performing Loan Ratio* at Conventional Commercial Banks listed on the IDX for the 2017-2021 period

Company Name	2017	2018	2019	2020	2021
Bank IBK Indonesia Tbk.	5,45%	6,44%	11,68%	5,14%	2,07%
Bank Bukopin Tbk.	8,54%	6,67%	5,99%	10,16%	10,66%
Bank Neo Commerce Tbk.	4,98%	15,75%	4,32%	4,05%	1,75%
Bank Banten Tbk	5,37%	5,90%	5,01%	22,27%	14,09%
Bank Sinarmas Tbk.	3,79%	4,74%	7,83%	4,75%	4,64%
Bank Of India Indonesia Tbk.	4,88%	4,90%	4,22%	4,95%	9,08%
Bank Victoria International Tbk	3,05%	3,48%	6,77%	7,58%	7,27%
Bank Artha Graha International	6,11%	5,99%	5,71%	4,58%	3,39%

Source: Financial Statements 2017-2021 [www.idx.co.id](http://www.idx.co.id) and [www.idnfinancials.com](http://www.idnfinancials.com) (Data Processed)

Based on the data from table 1.1 above, it can be illustrated that some banks record NPL ratios above 5%, which means that these banks exceed the maximum limit set by the OJK. Reporting from databoks, the maximum NPL limit that has been set by the OJK is 5% (Pusparisa, 2021). The higher the *bank's Non-Performing Loan*, the higher the loan arrears which have an impact on decreasing interest income. Conversely, the smaller the bank's NPL, the better the bank's performance in managing the risk of bad debts. Therefore, banks are required to keep their NPLs low. The increase in bank NPLs can be due to several factors, such as the condition of the country's economy, the willingness of debtors, or also due to government policies. Therefore, it is necessary to further analyze the factors that cause the NPL rate in each bank to have different figures.

Table 1 to NPL Average Ratio of LDR, CAR, BOPO and Inflation to NPL

Year	LDR	CAR	BOPO	Inflation	NPL
2017	90,04%	23,18%	78,64%	3,81%	2,59%
2018	94,78%	22,97%	77,86%	2,51%	2,33%

Year	LDR	CAR	BOPO	Inflation	NPL
2019	93,64%	23,31%	79,58%	3,03%	2,53%
2020	82,24%	23,81%	86,55%	2,51%	3,06%
2021	77,49%	25,66%	83,55%	1,56%	3,00%

Source: Inflation Data (bi.go.id) and Indonesian Banking Statistics (data processed)

From table 2 above, it can be seen that the banking industry experienced fluctuations during the 2017-2021 period in its financial ratios consisting of LDR, CAR, BOPO and in the NPL ratio. And inflation also fluctuates from year to year.

Loan to Deposit Ratio (LDR) is a ratio that shows how a bank's ability to provide funds and distribute them to customers who need a loan. The Loan to Deposit Ratio has a considerable influence on the NPL ratio. In table 1.2 it is known that the LDR ratio in 2017-2019 was quite healthy and in 2020-2021 it was on healthy criteria. The higher the LDR level, the more illiquid a bank is, meaning that it will have difficulty in fulfilling its short-term obligations, such as sudden withdrawals from customers. Conversely, the lower the LDR rate, the more liquid a bank is. Then the higher the LDR ratio, the higher the NPL ratio.

Capital Adequacy Ratio (CAR) is a capital adequacy ratio that is useful for accommodating the risk of loss that banks may face (Sinaga & Masdjodjo, 2022). In table 1.2 it is known that the CAR ratio in 2017-2021 was very healthy. The higher the CAR ratio, the greater the bank's ability to minimize or cover credit risk.

Operating Costs and Operating Income (BOPO) is the ratio between operating expenses to operating income. In table 1.2 it is known that the BOPO ratio in 2017-2021 was very healthy. The higher the BOPO ratio, the smaller the operational costs incurred by the bank, the more efficient the operating income obtained is greater than the operational costs incurred, which means that the bank gets a greater profit (Marsono & Edy, 2021).

High inflation will cause a decrease in people's real income so that people's standard of living also decreases, before inflation occurs a debtor is considered still able to pay his loan installments, but after inflation occurs prices have increased quite high while the debtor's income has not increased, then the debtor's ability to pay his installments becomes weakened because most or even all of his income has used to meet household needs as a result of rising prices (Hernawati et al., 2018).

Seeing the Non Performing Loan ratio that is increasing from year to year shows the need to analyze the factors that can affect the non-performing loan ratio to increase. However, when viewed from 2020 to 2021, the bank's NPL has decreased from 3.06% to 3.00%. This shows that overall commercial banks recorded a positive performance in 2021. This is reflected in the realization of higher-than-projected bank credit growth. Reporting from the Kompas.com the Financial Services Authority (OJK) noted that in 2021 banking sector loans grew 5.2 percent on an annual basis (year on year / yoy). This is higher than the FSA's projection at the end of last year in the range of 4 percent to 5 percent. This growth was also followed by an improvement in the gross non-performing loan (NPL) ratio of 3 percent in December 2021, better than 3.06 percent in December 2020 (Rully R. Ramli, 2022).

Despite the downward trend, banks are expected to remain vigilant by continuing to increase reserves to avoid capital eroding due to bad debts. When the debtor defaults, the potential that will occur is the erosion of bank capital and disruption of the bank's performance and health.

There are many possible factors that influence the high NPL. Several studies related to the factors that affect NPLs have been carried out by previous researchers such as (Liviawati et al., 2022) entitled Analysis of the Influence of Internal and External Factors on Non-Performing Loans in Regional Development Banks where the results of the study stated that CAR, BOPO, company size, purchasing power and inflation affect NPLs while LDR and interest rates do not affect NPLs.

Through research conducted by Leni Titania Cahyono Putri and Fanny Suzuda Pohan (2022), it was stated that the CAR, BOPO, and NIM variables partially affect NPL and LDR do not affect NPL. Meanwhile, simultaneously the LDR, CAR, BOPO and NIM variables affect the NPL. In the research of Iklimatus Suryani and Laely Aghe Africa (2021) regarding the Effect of CAR, LDR, ROA and BOPO on NPLs in National Private Commercial Banks, it shows that LDR and BOPO have a positive effect on NPLs, while CAR and ROA have a negative effect and do not affect NPLs.

Research conducted by (Refo Putraseto and Imam Mukhlis, 2021) entitled The Influence of CAR, LDR, BOPO and KAP on Conventional BPR Non-Performing Loans in Batu City Before and After Covid-19. The results of this study show that CAR, LDR and BOPO have a significant impact on NPLs on regional banks. Meanwhile, in conventional methods in Batu City, KAP does not have a significant impact on its NPL.

While in the research conducted by (Abd. Rizal, T. Zulham, Asmawati, 2019) entitled Analysis of the Effect of Economic Growth, Inflation, and Interest Rates on Bad Loans in Indonesia. The results showed that in the short term Inflation had a negative effect on Non-Performing Loans (NPL) and Inflation in the previous year (Lag-1) had a significant positive effect while in the long term Inflation had a negative effect, inflation was maintained at a reasonable limit to foster a good climate for entrepreneurs to become a stimulus so as to be able to fulfill their obligations, in the long term economic growth has a significant negative effect and the tribe Flowers have a significant positive effect.

Therefore, in order to prevent an increase in non-performing loans in the future, a solution that can be applied by banks to keep the NPL ratio value below the criteria is to apply non-performing loan rescues that can be done using rescheduling, reconditioning, restructuring), combinations as well as confiscation of goods. So with this effort, it is hoped that the debtor will be able to pay off the credit arrears from the bank, because the bank has provided relief for customers and extended the payment period. Another settlement that banks can afford is to use the method of exemption of interest to debtors. Settlement by means of this interest exemption, the customer is only required to pay the principal loan. But this method must go through a long process and must be ensured that the customer is not financially viable.

Research conducted by (Refo Putraseto and Imam Mukhlis, 2021) entitled The Influence of CAR, LDR, BOPO and KAP on Conventional BPR Non-Performing Loans in Batu City Before and After Covid-19. The results of this study show that CAR, LDR and BOPO have a significant impact on NPLs on regional banks. Meanwhile, in conventional methods in Batu City, KAP does not have a significant impact on its NPL.

While in the research conducted by (Abd. Rizal, T. Zulham, Asmawati, 2019) entitled Analysis of the Effect of Economic Growth, Inflation, and Interest Rates on Bad Loans in Indonesia. The results showed that in the short term Inflation had a negative effect on Non-Performing Loans (NPL) and Inflation in the previous year (Lag-1) had a significant positive effect while in the long term Inflation had a negative effect, inflation was maintained at a reasonable limit to foster a good climate for entrepreneurs to become a stimulus so as to be able to fulfill their obligations, in the long term economic growth has a significant negative effect and the tribe Flowers have a significant positive effect.

Therefore, in order to prevent an increase in non-performing loans in the future, a solution that can be applied by banks to keep the NPL ratio value below the criteria is to apply non-performing loan rescues that can be done using rescheduling, reconditioning, restructuring. ), combinations as well as confiscation of goods. So with this effort, it is hoped that the debtor will be able to pay off the credit arrears from the bank, because the bank has provided relief for customers and extended the payment period. Another settlement that banks can afford is to use the method of exemption of interest to debtors. Settlement by means of this interest exemption, the customer is only required to pay the principal loan. But this method must go through a long process and must be ensured that the customer is not financially viable.H

Table 3. *Sample selection with Purposive Sampling*

No	Criterion	Sum
1	Conventional Commercial Banks in Indonesia listed on the IDX for the 2017-2021 Period	47
2	Sharia Conventional Commercial Banks and listed above in 2017-2021	-8
3	Selected Conventional Commercial Banks as a sample during the 2017-2021 period	39
	Length of research	5
	Total sample of the study period	195

The number of samples that met the criteria in this study was 39 commercial banks listed on the IDX. A sample of the study can be seen in Table 3.2 below:

Tabel 4 Sampel Penelitian

No	No Code	Company Name
1	AGRO	Bank Raya Indonesia Tbk
2	AGRS	Bank IBK Indonesia Tbk.
3	ARTO	Bank Jago Tbk.
4	BACA	Bank Capital Indonesia Tbk.
5	BBCA	Bank Central Asia Tbk.

No	No Code	Company Name
6	BBHI	Allo Bank Indonesia Tbk.
7	BBKP	Bank Bukopin Tbk.
8	BBMD	Bank Mestika Dharma Tbk.
9	BBNI	Bank Negara Indonesia Tbk
10	BBRI	Bank Rakyat Indonesia Tbk
11	BBTN	Bank Tabungan Negara Tbk
12	BBYB	Bank Neo Commerce Tbk.
13	BCIC	Bank JTrust Indonesia Tbk.
14	BDMN	Bank Danamon Indonesia Tbk.
15	BEKS	Bank Banten Tbk
16	BGTG	Bank Ganesha Tbk.
17	BINA	Bank Ina Perdana Tbk.
18	BJBR	Bank Pembangunan Daerah Jawa Barat Tbk
19	BJTM	Bank Pembangunan Daerah Jawa Timur Tbk
20	BKSW	Bank QNB Indonesia Tbk.
21	BMAS	Bank Maspion Indonesia Tbk.
22	BMRI	Bank Mandiri Tbk.
23	BNBA	Bank Bumi Arta Tbk.
24	BNGA	Bank CIMB Niaga Tbk.
25	BNII	Bank Maybank Indonesia Tbk.
26	BNLI	Bank Permata Tbk.
27	BSIM	Bank Sinarmas Tbk.
28	BSWD	Bank Of India Indonesia Tbk.
29	BTPN	Bank BTPN Tbk.
30	BVIC	Bank Victoria International Tbk
31	DNAR	Bank Oke Indonesia Tbk.
32	INPC	Bank Artha Graha Internasional
33	MAYA	Bank Mayapada Internasional Tb
34	MCOR	Bank China Construction Bank I
35	MEGA	Bank Mega Tbk.
36	NISP	Bank OCBC NISP Tbk.
37	NOBU	Bank Nationalnobu Tbk.
38	PNBN	Bank Pan Indonesia Tbk
39	SDRA	Bank Woori Saudara Indonesia Tbk

Data collection techniques are one of the most strategic steps in research. In this study, the data collection techniques used were studi kepustakaan, and metode doccupimentation. And the data analysis used is multiple linear regression analysis using a computer (*Software*) SPSS 24. The following is the method used in this study, namely (Ghozali, 2021, pp. 148-149) analMultiple regression isis, classical assumption test, correlation analysis, determinant coefficient () and  $R^2$  hypothesis test.

## 2. METHODS

### Descriptive Statistical Results

Descriptive statistical analysis is used to provide an overview or description of research variables, namely *Loan to Deposit Ratio*, *Capital Adequacy Ratio*, *Operating Cost of Operating Income* and *Inflation to Non-Performing Loans*. The Descriptive Test results of this study are outlined in the following table:

Table 5 *Descriptive Statistics Before Outlier Data Elimination*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
LDR	195	,1235	1,6300	,843965	,2164986
CAR	195	,0901	1,6992	,266024	,1834646
BOPO	195	,0933	2,8766	,950415	,3537803
Inflasi	195	,0168	,0361	,026020	,0073601
NPL	195	,0000	,2227	,035548	,0270713
Valid N (listwise)	195				

From the table above, it can be seen from the value of N that the number of samples in this study was 39 companies, but when the normality test was carried out, the data was distributed abnormally so that the detection of outlier boxplot data was carried out and then the outlier data was eliminated. The results after the elimination of outlier data are as follows:

Table 6 *Descriptive Statistics After Elimination of Outlier Data*

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
LDR	140	,4001	1,6300	,856336	,2076689
CAR	140	,1159	,9807	,246594	,1084814
BOPO	140	,0933	1,4666	,837971	,1747156
Inflation	140	,0168	,0361	,026020	,0073676
NPL	140	,0005	,0908	,029258	,0146095
Valid N (listwise)	140				

This study used data totaling 140 data samples. The initial data of this study used data of 195 data samples, as many as 55 data samples were eliminated because they did not pass the classical assumption test. A description of each of these research variables can be seen in table 4.12 below:

The Loan to Deposit Ratio (LDR) has the highest value of 1.6300, namely Bank BTPN in the 2019 period and the lowest at 0.4001, namely Bank Ganesha for the 2021 Mean period or the average Loan to Deposit Ratio (LDR) of 0.856336 with a standard deviation of 0.2076689. The average value is greater than the standard deviation of  $0.856336 > 0.2076689$ . This shows that the variation in Loan to Deposit Ratio (LDR) data is relatively small. With these small data variables, it shows that the Loan to Deposit Ratio (LDR) data is quite good. This illustrates the low deviation in the level of the bank's ability to repay withdrawals that have been disbursed through credit.

The Capital Adequacy Ratio (CAR) was obtained on average of 0.246594, with the lowest data of 0.1159 and the highest of 0.9807. This shows that in the sample of companies studied, there are companies that have a capital adequacy of 0.9807 used in the company's operations. The lowest CAR was at Bank Jtrust Indonesia, while the highest was at Bank Of India Indonesia. The average value is greater than the standard deviation, which is  $0.246594 > 0.1069249$ . This illustrates the low deviation of capital adequacy to support risky assets.

Operating Income Operating Expenses (BOPO) were obtained on average of 0.837971, with the lowest data of 0.0933 and the highest of 1.4666. The average value is greater than the standard deviation of  $0.837971 > 0.1735428$ . This shows that the sample of conventional commercial bank companies in this study has been efficient in carrying out their operational activities.

Inflation was obtained on average of 0.026020, with the lowest data of 0.026020 and the highest of 0.0361. The average value is greater than the standard deviation of  $0.026020 > 0.0073676$ . This shows a fairly good data spread.

Non Performing Loan (NPL) is known to be the smallest (minimum) value in the banking company that is the object of study is 0.005 and the largest value (maximum) is 0.0908. The average value (mean) is 0.029258, this value shows the average number of non-performing loans against the total loans disbursed by the bank, the high NPL indicates that the collectibility of bank assets is getting lower. The size of the standard deviation of 0.0146095, which is smaller than the average value, illustrates the low ability of banks to cover the risk of default credit.

### 3. RESULTS AND DISCUSSION

#### Normality Test

The normality test is intended to test whether the distribution of all five variables is normal or not. The normality test used in this study used histogram chart analysis, normal probability plot test (normal p-plot) and *Kolmogorov-Smirnov* test. The following are the normality test results:

#### Histogram Chart Analysis

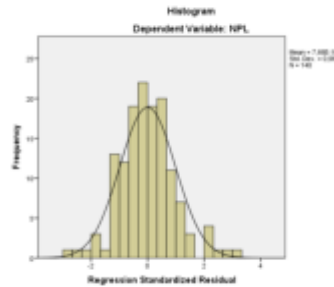


Figure 1 Histogram Chart

Based on figure 1 of the residual *regression* histogram graph that has been processed from the research data variables to form a curve that looks like a bell, it can be concluded that the residual value is declared normal or the data is normally distributed.

#### Chart Analysis with Normal *Probability* Plot (Normal P-P Plot)

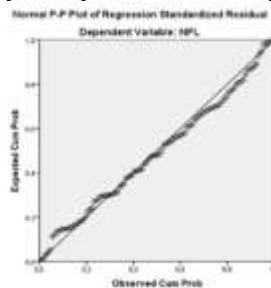


Figure 2 Normal P-P Plot Chart

Based on figure 2 of the normal graph *P-P Plot of Regression Standardized Residual*, the points follow or dock to the diagonal line then the data in this study is normal or normally distributed even though there are some points that deviate from the diagonal line. To strengthen the normality test, testing was carried out with the *Kolmogorov-Smirnov Test*.

#### *Kolmogorov-Smirnov* test

Table 7 *Kolmogorov-Smirnov Test Results*  
**One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		140
Normal Parameters <sup>a,b</sup>	Mean	,0000000
	Std. Deviation	,01253984
Most Extreme Differences	Absolute	,063
	Positive	,061
	Negative	-,063
Test Statistic		,063
Asymp. Sig. (2-tailed)		,200 <sup>c,d</sup>

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Based on table 7 it can be seen that the test results of the *Kolmogorov-Smirnov* test show normal distributed data. This is indicated by a significant (2-tailed) Asymp value of  $0.200 > 0.05$ . Therefore  $H_0$  is accepted. So it can be concluded that the data from these five research variables are normally distributed, so that this study can continue further testing.

### Multicholnearity Test

That is, the emergence of opportunities between several free variables to correlate with each other, in practice multicollinearity is inevitable. Measuring multicollinearity can be seen from the *Tolerance and Variance Inflation Factor* (VIF) values. *Tolerance* measures the variability of other independent variables. So a low tolerance value is equal to a high VIF value because  $VIF = 1/\text{tolerance}$ . A commonly used cut off value to indicate the absence of multicollinearity is a tolerance value  $> 0.10$  or equal to a  $VIF < 10$ . Here are the results of the Multicollinearity test in table 8:

Table 8 *Multicholnearity Test*  
**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Toleran ce	VIF
1 (Constant)	,003	,009		,317	,752		
LDR	-,011	,005	-,157	-2,066	,041	,950	1,053
CAR	,024	,010	,181	2,377	,019	,940	1,064
BOPO	,035	,006	,415	5,523	,000	,966	1,035
Inflasi	,032	,153	,016	,211	,833	,913	1,096

a. Dependent Variable: NPL

Based on table 4.14 above, the *Tolerance* value of the free variable *Loan to Deposit Ratio* (LDR) = 0.950; *Capital Adequacy Ratio* (CAR) = 0.940; Operating Expenses Operating Income = 0.966 and Inflation = 0.913. while the VIF value of the free variable amount of *Loan to Deposit Ratio* (LDR) = 1.053; *Capital Adequacy Ratio* (CAR) = 1,064; Operating Income Operating Expenses = 1,035; and Inflation = 1.096. It can be concluded that the regression model is declared free of multicholnearity because the tolerance value  $> 0.1$  and the VIF value  $< 10$ .

### Autocorrelation Test

The Autocorrelation Test aims to find out whether there is a correlation between members of a series of observational data decomposed according to time (*time-series*) or space (*cross section*). Autocorrelation arises due to the presence of sequential observations over time related to each other, autocorrelation can be tested by looking at the values of Durbin-Watson (DW), Durbin-Lower (DL) and *Durbin-Up* (DU). So in this study to detect the presence of autocorrelation will use Durbin-Watson testing, here are the results of testing using *Durbin-Watson*:

Table 9 *Durbin-Watson Test Table*  
**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,626 <sup>a</sup>	,391	,369	,0116112	1,913

a. Predictors: (Constant), Lag\_Y, Inflasi, CAR, LDR, BOPO

b. Dependent Variable: NPL

Based on table 9, it shows that the results of the Durbin-Watson test with a DW value of 1.913 in this study showed a *level of significance* of 0.05 ( $\alpha = 0.5$ ) with a free variable of 4 ( $K = 4$ ) and many data of 140 ( $n = 140$ ), it can be seen from the *Durbin-Watson* table of DU values of 1.7830 and values of 4- DU= 2,217. So it can be concluded based on the DW value located between  $DU < DW < 4 - DU$  ( $1.7830 < 1.913 < 2.217$ ) which means there is no autocorrelation. So it can be concluded that in this research there are no positive or negative autocorrelation symptoms.

### Heteroskedasticity Test

Heteroskedasticity means that there are *variable* variants in the regression model that are not the same (constant). Conversely, if the variable variants in the regression model have the same value (constant) then it is called homoskedasticity. What is expected on the regression model is the homoskedasticity. The problem of heteroskedasticity often occurs in studies that use *cross-section* data. In this study, heteroskedasticity testing using the *Scatterplot* chart analysis method and the *glejser test* method. The following are the results of the method carried out:

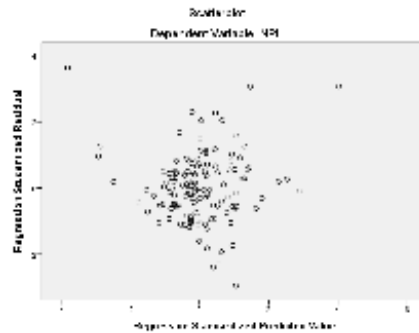


Figure 3 Scatterplot

Based on the *Scatterplot* display in figure 3, it can be concluded that the plot spreads randomly above and below zero on the *Regression Standardized Residual* axis. Therefore, in the regression model formed, it is stated that there are no symptoms of heteroskedasticity.

Table 10 *Glejser Test*  
**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1(Constant)	,011	,006			1,945	,054
LDR	-,007	,003	-,170		-1,956	,052
CAR	,002	,007	,025		,290	,773
BOPO	,002	,004	,035		,409	,683
Inflasi	,097	,098	,087		,987	,325

a. Dependent Variable: Abs\_RES

### Results of Multiple Linear Regression Analysis

Multiple regression analysis aims to test the influence of two or more independent variables on the dependent variable whether each of the independent variables is positively or negatively related. Here are the results of multiple linear regression testing as follows:

Table 11 *Multiple Regression Test Results*  
**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1(Constant)	,003	,009			,317	,752
LDR	-,011	,005	-,157		-2,066	,041
CAR	,024	,010	,181		2,377	,019
BOPO	,035	,006	,415		5,523	,000
Inflasi	,032	,153	,016		,211	,833

a. Dependent Variable: NPL

From table 4.17 can be compiled the regression equation as follows:

$$NPL = 0.003 + -0.011 LDR + 0.024 CAR + 0.035 BOPO + 0.32 Inflation + e$$

Based on the regression model and the table above, the results of multiple regression can be explained as follows:

1. The multiple linear regression equation above, is known to have a constant of 0.003 with a positive sign. So the magnitude of the constant indicates that if the independent variables (LDR, CAR, BOPO and Inflation) are assumed to be constant, then the dependent variable i.e. NPL will increase by 0.003.
2. The variable coefficient of LDR is -0.011 which means that if the LDR increases every 1% then the NPL will decrease by 0.011.
3. The variable coefficient of CAR is 0.024 which means that if CAR increases every 1% then the NPL will increase by 0.024.
4. The coefficient of the BOPO variable is 0.035 which means that if the BOPO increases every 1%, the NPL will increase by 0.03%.
5. The variable coefficient of Inflation is 0.032 which means that if inflation increases every 1% then the NPL will increase by 0.032.

### Correlation Analysis Results

Correlation analysis aims to measure the weak linear relationship that occurs between free variables and bound variables, in this case to see the relationship that occurs between *Loan to Deposit Ratio* (X1), *Capital Adequacy Ratio* (X2), *Operating Costs of Operating Income* (X3) and *Inflation* (X4) with *Non Performing Loans* (Y) either simultaneously or partially. The correlation analysis technique used in this study used *pearson product moment* correlation analysis.

1. Relationship between *Loan to Deposit Ratio* and *Non Performing Loan*

Table 12 oan (Y) Relationship between *Loan to Deposit Ratio* (X1) and *Non Performing Loan* (Y)

		LDR	NPL
LDR	Pearson Correlation	1	-,218**
	Sig. (2-tailed)		,010
	N	140	140
NPL	Pearson Correlation	-,218**	1
	Sig. (2-tailed)	,010	
	N	140	140

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on table 4.18 above, it is known that the sig value is smaller than the  $\alpha$  (0.05) namely:  $0.010 < 0.05$ . This means that there is a meaningful relationship between the LDR variable and the NPL, with a relationship strength of -0.218, found in the low coefficient. Then a negative value means that if there is an increase in LDR (X1) then the NPL (Y) decreases.

2. Relationship between *Capital Adequacy Ratio* and *Non Performing Loan*

Table 13 (Y) Relationship between *Capital Adequacy Ratio* (X2) and *Non Performing Loan* (Y)

		CAR	NPL
CAR	Pearson Correlation	1	,231**
	Sig. (2-tailed)		,006
	N	140	140
NPL	Pearson Correlation	,231**	1
	Sig. (2-tailed)	,006	
	N	140	140

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on table 4.19 above, it is known that the sig value is smaller than the  $\alpha$  (0.05) namely:  $0.006 < 0.05$ . This means that there is a meaningful relationship between the variable CAR and NPL, with a relationship strength of 0.231, found in the low coefficient. So a positive value means that if there is an increase in CAR (X2) then the NPL (Y) increases.

3. Relationship between *Operating Income Operating Costs* and *Non-Performing Loans*

Table 14 Relationship between *Operating Expenses Operating Income* (X3) and *Non Performing Loan* (Y)

		Correlations	
--	--	--------------	--

		BOPO	NPL
BOPO	Pearson Correlation	1	,455**
	Sig. (2-tailed)		,000
	N	140	140
NPL	Pearson Correlation	,455**	1
	Sig. (2-tailed)	,000	
	N	140	140

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on table 4.20 above, it is known that the sig value is smaller than the  $\alpha$  (0.05) namely:  $0.000 < 0.05$ . This means that there is a meaningful relationship between the BOPO variable and the NPL, with a relationship strength of 0.455, found in the medium coefficient. So a positive value means that if there is an increase in BOPO (X3) then NPL (Y) increases.

1. Relationship between *Inflation and Non-Performing Loans*

Table 15 Relationship between Inflation (X4) and Non-Performing Loans (Y) *Relationship between Inflation (X4) and Non-Performing Loans (Y)*

		Inflasi	NPL
Inflasi	Pearson Correlation	1	-,098
	Sig. (2-tailed)		,248
	N	140	140
NPL	Pearson Correlation	-,098	1
	Sig. (2-tailed)	,248	
	N	140	140

Based on table 15 above, it is known that the sig value is greater than the  $\alpha$  (0.05) namely:  $0.248 > 0.05$ . This means that there is no meaningful relationship between the variables Inflation and NPL, with a relationship strength of -0.98, found in the low coefficient. So a negative value means that if there is an increase in Inflation (X4) then the NPL (Y) decreases.

**Coefficient of Determination Analysis Results**

The coefficient of determination (KD) is the square of the correlation coefficient (R) or also known as *R-Square*. The coefficient of determination serves to find out how much influence each free variable exerts on bound variables in the form of percentages. Using SPSS, a coefficient of determination is obtained which can be seen in the following output table:

Table 16 Determination Keofisient Test Results *Determination Deficiency Test Results*

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,513 <sup>a</sup>	,263	,241	,0127243

a. Predictors: (Constant), Inflasi, BOPO, LDR, CAR

Based on the table above, information is obtained that the value of the correlation coefficient or (R) obtained is 0.513. Thus the coefficient of determination can be calculated as follows:

$$Kd = (r)^2 \times 100 \%$$

$$Kd = (0.513)^2 \times 100 \%$$

$$Kd = 26.32\%$$

Based on the results of the calculations above, it can be seen that the value of the coefficient of determination obtained is 26.32%. This shows that the four free variables consisting of LDR, CAR, BOPO and Inflation contributed to NPL of 26.32%, while the remaining 73.68% were contributions from other variables that were not studied outside the study.

### Hypothesis Testing Results

To find out whether the proposed hypothesis is accepted or rejected, the presence or absence of the influence of LDR, CAR, BOPO and Inflation on NPLs can be done using the t test for partial testing and the F test for simultaneous testing. As for the hypotheses used as follows:

1. Partially

a. Variable *Loan to Deposit Ratio* (X1)

Ho1:  $\beta_1 \leq 0$  : *Loan to Deposit Ratio* (X1) has no positive effect on *Non Performing Loan* (Y)

Ha1:  $\beta_1 > 0$  : *Loan to Deposit Ratio* (X1) positively affects *Non Performing Loan* (Y)

b. Variable *Capital Adequacy Ratio* (X2)

Ho2:  $\beta_2 \leq 0$  : *Capital Adequacy Ratio* (X2) does not negatively affect *Non Performing Loan* (Y)

Ha2:  $\beta_2 > 0$  : *Capital Adequacy Ratio* (X2) negatively affects *Non Performing Loan* (Y)

c. Variable *Operating Costs Operating Income* (X3)

Ho3:  $\beta_3 \leq 0$  : *Operating Expenses Operating Income* (X3) has no positive effect on *Non-Performing Loans* (Y)

Ha3:  $\beta_3 > 0$  : *Operating Expenses Operating Income* (X3) positively affects *Non-Performing Loans* (Y)

d. Variable *Inflation* (X4)

Ho4:  $\beta_4 \leq 0$  : *Inflation* (X4) has no positive effect on *Non-Performing Loans* (Y)

Ha4:  $\beta_4 > 0$  : *Inflation* (X4) positively affects *Non-Performing Loans* (Y)

e. Simultaneously

Ho5 :  $\beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$ , *Loan to Deposit Ratio*, *Capital Adequacy Ratio*, *Operating Expenses Operating Income* and *Inflation* simultaneously have no positive effect on *Non-Performing Loans*.

Ha5 :  $\beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq 0$ , *Loan to Deposit Ratio*, *Capital Adequacy Ratio*, *Operating Expenses Operating Income* and *Inflation* simultaneously positively affect *Non-Performing Loans*.

### Partial Hypothesis Test (t-test)

The t test aims to test the effect of each independent variable (LDR, CAR, BOPO and Inflation) on the dependent variable (NPL). To test such partial influences can be done in a way based on probability values. The conclusions to be used are as follows:

1. When t counts > t table as well as Sig number <  $\alpha$  (0.05), an alternative hypothesis is accepted. So free variables have a partial effect on bound variables. So it can be interpreted partially the influence of LDR, CAR, BOPO and Inflation as free variables (X) on NPLs as bound variables (Y) is acceptable.
2. When t count < t table as well as the Sig number >  $\alpha$  (0.05), the null hypothesis is accepted. So free variables have no partial effect on bound variables. So it can be interpreted partially that the influence of LDR, CAR, BOPO and Inflation as free variables (X) on NPLs as bound variables (Y) cannot be accepted or rejected.

The following are the results of the partial analysis (t-test) as follows:

Table 17 t Test Results *t Test Results*

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1(Constant)	,003	,009			,317	,752
LDR	-,011	,005	-,157		-2,066	,041
CAR	,024	,010	,181		2,377	,019
BOPO	,035	,006	,415		5,523	,000
Inflasi	,032	,153	,016		,211	,833

a. Dependent Variable: NPL

Based on table 17 above, the influence of LDR, CAR, BOPO and Inflation variables on NPLs can be seen from the signification value. Therefore, the partial test results can be analyzed as follows :

1. t-test against *Loan to Deposit Ratio* (X1)

The calculation results obtained in table 4.23 of the *Loan to Deposit Ratio* (LDR) variable statistically show significant results at values smaller than  $\alpha$  ( $0.041 < 0.05$ ). While the value of t count X1 = -2.066 and t table is 1.97705 (df (n-k-1) 140-4-1 = 135.  $\alpha = 0.05$ ), so t calculate > t table (-2.066 > -1.97705 ). So Ho was rejected so that it can be concluded that the *loan to deposit ratio* (LDR) variable has a significant negative effect on the *Non Performing Loan* variable in conventional commercial banks.

2. Test t against *Capital Adequacy Ratio* (X2)

The calculation results obtained in table 4.23 of the *Capital Adequacy Ratio* (CAR) variables statistically show significant results at values smaller than  $\alpha$  ( $0.019 < 0.05$ ). While the value of t count X2 = 2.377 and t table is 1.97705 (df (n-k-1)  $140-4-1 = 135$ ,  $\alpha = 0.05$ ), so t calculate  $>$  t table ( $2.377 > 1.97705$ ). So  $H_0$  was rejected so that it can be concluded that the *Capital Adequacy Ratio* (CAR) variable has a significant positive effect on the *Non Performing Loan* variable in conventional commercial banks.

3. t test of Operating Costs of Operating Income (X3)

The calculation results obtained in table 4.23 of the variable Operating Cost of Operating Income (BOPO) statistically show significant results at values smaller than  $\alpha$  ( $0.000 < 0.05$ ). While the value of t count X3 = 5.523 and t table is 1.97705 (df (n-k-1)  $140-4-1 = 135$ ,  $\alpha = 0.05$ ), so t calculate  $>$  t table ( $5.523 > 1.97705$ ). So  $H_0$  was rejected so that it can be concluded that the variable Operating Costs of Operating Income (BOPO) has a significant positive effect on the *variable of Non-Performing Loans* in conventional commercial banks.

4. t Test against Inflation (X4)

The calculation results obtained in table 4.23 of the inflation variable statistically show significant results with values greater than  $\alpha$  ( $0.833 > 0.05$ ). While the value of t count X4 = 0.211 and t table is 1.97705 (df (n-k-1)  $140-4-1 = 135$ ,  $\alpha = 0.05$ ), so t calculate  $<$  t table ( $0.211 < 1.97705$ ). Therefore,  $H_a$  was rejected so that it can be concluded that the Inflation variable does not have a significant positive effect on the *Non Performing Loan* variable in conventional commercial banks.

### Simultaneous Hypothesis Test (F Test)

The F test is used to simultaneously test the effect of free varia on its bound variables or to test the accuracy of the model (*goodness of fit*). If the free variables have a simultaneous (together) influence on the bound variables then the regression equation model falls within the fit or fit criteria. On the other hand, if there is no simultaneous influence, it falls into the category of not suitable or not *fit*.

The steps in simultaneous testing are:

1. If F counts  $>$  F table or sig value.  $< 0.05$  then it can be interpreted that independent variables simultaneously affect the dependent variables significantly, then the hypothesis is accepted.
2. If F calculates  $<$  F table or sig value.  $> 0.05$  then it can be interpreted that independent variables simultaneously do not significantly affect the dependent variables, then the hypothesis is rejected.

The following are the results of simultaneous analysis (F test) as follows:

Table 18 F Test Results

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,008	4	,002	12,060	,000 <sup>b</sup>
	Residual	,022135		,000		
	Total	,030139				

a. Dependent Variable: NPL

b. Predictors: (Constant), Inflasi, BOPO, LDR, CAR

Based on table 18 above the calculated F value obtained 12,060 with a significant rate of 0.000, since the signification rate is less than 0.05 then  $H_0$  is rejected or  $H_1$  is accepted and F value counts  $>$  F table ( $12.060 > 2.4387$ ) with table F values df:  $\alpha$ , (k-1), (n-k) or 0.05, (5-1), (140-5) = 2.4387. It can be concluded that the *Loan to Deposit Ratio*, *Capital Adequacy Ratio*, Operating Costs of Operating Income and Inflation affect the variables of *Non-Performing Loans*.

### Discussion

Based on the results of hypothesis testing that has been carried out previously, it can be concluded that there are hypotheses that are accepted and there are hypotheses that are rejected. Therefore, the description of the above hypothesis test is as follows :

#### Effect of Loan to Deposit Ratio (LDR) on Non Performing Loan (NPL)

Based on the results of partial hypothesis testing (t-test) in table 4.23 *Loan to Deposit Ratio* (LDR) has a significant negative effect on the *Non Performing Loan* (NPL) rate ratio. The Loan to Deposit Ratio (LDR) rate coefficient is -2,066, which means that when the Loan to *Deposit Ratio* or the bank's ability to meet liquidity needs increases by 1%, it will cause a decrease in the *Non Performing Loan* rate or non-

performing loan ratio at conventional commercial banks by 2,066 . On the other hand, if there is a decrease in the number of Loan to Deposit Ratio (LDR) ratios by 1%, it will increase the Non Performing Loan (NPL) rate ratio by 2,066.

This test is in accordance with research conducted by (Arniati et al., 2018) and (Kinanti & Department, 2017) which states that LDR has a negative and significant effect on NPL. This can happen because the third-party funds raised in the form of current accounts, savings, and deposit funds increase. The high LDR also has an impact on the decline in NPLs, this is due to fairly good market conditions where a high level of lending is followed by a good customer attitude in paying credit. The large amount of third party funds collected, the bank will also disburse a lot of credit, so in addition to the possibility that there will be a decrease in NPLs with the increasing number of loans provided, it is also possible that bad / non-performing loans will also increase.

The results of this study are not in accordance with the research conducted by Wulandari et al. (2021), where the more credit allocations, the more NPLs and the credit provision procedure must meet 5 criteria including character, capacity, capital, collateral, condition. However, the results of this study are in line with (Putraseto & Mukhlis, 2021) which states that if the LDR is in an increasing condition, then the NPL also decreases, so that the higher the LDR makes the NPL ratio decrease, and vice versa if the LDR ratio decreases, the NPL value will increase. Therefore, in banking LDR has a negative and significant effect on NPLs. while in the research of Mahendra & Mahardika (2019), the credit given is many, so the possibility of bad debts is high.

#### **Effect of Capital Adequacy Ratio (CAR) on Non Performing Loan (NPL)**

Based on the results of partial hypothesis testing (t-test) in table 4.23 of the Capital Adequacy Ratio (CAR) has a significant positive effect on the Non Performing Loan (NPL) rate ratio. The Capital Adequacy Ratio (CAR) level coefficient is 2,377, which means that if the Capital Adequacy Ratio (CAR) level is in an increasing condition, the Non-Performing Loan (NPL) will also increase, so that if it increases by 1%, it will cause an increase in the Non-Performing Loan rate or non-performing loan ratio at conventional commercial banks by 2,377 . And vice versa, if there is a decrease in the amount of Capital Adequacy Ratio (CAR) ratio by 1%, it will experience a decrease in the Non-Performing Loan (NPL) rate ratio of 2,377. This research is in line with previous research conducted by Anthony & Nakita (2018) and (Liviawati et al., 2022) which stated that CAR has a positive and significant effect on NPL.

The high value of CAR may indicate that the bank's capital or financial resources are ideal. The increase in the value of CAR is likely to occur because it is based on the bank's own capital that increases or increases funds from the public, the increase in loans, etc. However, the higher the CAR ratio, the bank can increase its business development such as expansion for lending, because when the bank has a large capital, it makes the bank confident in disbursing its credit, but the risk of increasing its NPL will also be greater.

The results of this study are not in accordance with the research conducted by Wulandari et al. (2021), CAR increases with an increase in own capital and outside capital such as public funds and loans so that with high capital, NPLs can decrease. The results of this study are in line with (Putraseto & Mukhlis, 2021) which states that if the CAR is in an increasing condition, the NPL also increases, so that the higher the CAR, the higher the NPL ratio, and vice versa if there is a decrease in the CAR ratio, it can cause a decrease in the NPL ratio. Therefore, in CAR banking, it has a positive and significant effect on NPLs.

#### **Effect of Operating Income Operating Costs (BOPO) on Non-Performing Loans (NPL)**

Based on the results of partial hypothesis testing (t-test) in table 4.23 Operating Income Operating Costs (BOPO) have a significant positive effect on the Non Performing Loan (NPL) rate ratio. The coefficient of Operating Expenses of Operating Income (BOPO) is 5.523, which means that when the level of Operating Expenses (BOPO) or the more inefficient the bank, the higher the credit costs, so that when it experiences an increase of 1%, it will cause an increase in the level of Non-Performing Loans or the ratio of non-performing loans in conventional commercial banks by 5,523. On the other hand, if there is a decrease in the total Operating Cost of Operating Income (BOPO) ratio by 1%, it will reduce the Non-Performing Loan (NPL) rate ratio by 5,523. This research is in line with previous research conducted by (Liviawati et al., 2022) and (Putraseto & Mukhlis, 2021) which stated that BOPO has a positive and significant effect on NPL.

The smaller the BOPO ratio, the more efficient the bank's operational activities, the lower the NPL. This is because the efficiency of a bank's operational activities will allow a bank to get optimal profits, increase the amount of funds disbursed, improve services to customers and increase banking health so that the possibility of problematic conditions is smaller.

The results of this study are not in accordance with the research conducted by Wulandari et al. (2021), where if the high BOPO comes from funds raised by the high community so that it does not have an impact on the bank's NPL. However, the results of this study are in line with (Kinanti & Department, 2017) which states that if BOPO is in an increasing condition, then NPLs also increase, this is because banks are inefficient in making profits. Therefore, BOPO has a positive and significant effect on NPL.

#### **Effect of Inflation on Non-Performing Loans (NPLs)**

Based on the results of partial hypothesis testing (t-test) in table 4.23, inflation partially has no effect on NPLs. This means that the increase in inflation has no real effect on the increase in NPLs of conventional commercial banks during the 2017-2021 period. In concept, when inflation occurs, banks will increase the deposit rate, which will be followed by an increase in lending rates. This will reduce the debtor's ability to pay their credit. In other words, inflation has no significant effect on the NPLs of conventional commercial bank companies. The insignificance of inflation against NPLs of conventional commercial banks shows a mismatch between theory and reality.

The discrepancy between the theory and the results of the analysis can be caused by several things. The first is caused because inflation in Indonesia is still offset by an increase in people's income. GDP is an indicator of the increasing welfare or income of people who are trying to do in banking. Meanwhile, the CPI describes inflation, or the increase in the price of goods in general. If both increase simultaneously, then the increase in the price of goods in general will also be followed by an increase in people's income, so this causes the debtor's ability to pay credit uninterrupted. Thus NPLs are not affected by inflation.

The results of this study are not in accordance with the research conducted by Naibaho & Rahayu (2018), where if inflation is high continuously, it will have an impact on high NPLs. However, the results of this study are in line with Setya Wijaya (2019) and Hernawati & Puspasari (2018) who stated that the Inflation Rate has no real (insignificant) effect on Non-Performing Loans (NPL). Therefore, Inflation has no significant effect on NPLs.

#### **4. CONCLUSION**

Loan to Deposit Ratio (LDR) has a significant effect on Non Performing Loans (NPL). The results of this study concluded that the negative influence shown by LDR indicates that if the LDR increases, the NPL will decrease, and vice versa. LDR cannot be separated from deposits, because an increase in deposits will make banks use these funds to channel credit. High lending will make banks earn high profits assuming banks are able to provide loans efficiently and effectively, so that total bad loans are relatively small and NPL ratios decrease.

Capital Adequacy Ratio (CAR) has a significant effect on Non-Performing Loans (NPLs). The results of this study concluded that the positive influence shown by CAR indicates that if CAR increases, NPL will increase, and vice versa. The amount of CAR can increase the bank's business, for example for large credit distribution, by having large reserves, the bank is able to cover losses arising from lending. This makes banks more confident to disburse credit, but the risk of increasing NPLs will be greater.

Operating Income Operating Costs (BOPO) have a significant effect on Non-Performing Loans (NPLs). The results of this study concluded that the positive influence shown by BOPO indicates that if BOPO increases, NPL will increase, and vice versa. The high BOPO signals that banks are inefficient when managing their financing, bank operating costs are high and revenues are low, thus having an impact on reducing the resulting rate of return.

Inflation shows insignificant against Non-Performing Loans (NPLs). These results indicate that the debtor has a commitment to settle his obligations (credit). So that inflation will not increase Non-Performing Loans (NPLs).

Simultaneously, the Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Operating Cost of Operating Income (BOPO) and Inflation have a significant effect on Non-Performing Loans (NPLs) indicated by an F value of 12,060 with a sig of 0.000. This shows that LDR, CAR, BOPO and Inflation are significant to NPLs, as their significance value is less than 0.05 which is 0.000. Thus the fifth hypothesis states that LDR, CAR, BOPO and Inflation have a simultaneous influence on NPLs.

#### **REFERENCE**

- [1] Arniati, Rohana, T., & Sinuhaji, E. (2018). Pengaruh Loan to Deposit Ratio terhadap Non Performing Loan. *Jurnal Ilmiah : Jurnal Ilmu Manajemen*, 6(1), 77-82.
- [2] Ghozali, I. (2021). *Aplikasi Analisis Multivariate Dengan Pogram IBM SPSS 26* (Edisi 10). Badan Penerbit Universitas Diponegoro.

- [3] Hernawati, H., Puspasari, O. R., & Kuningan, U. (2018). Pengaruh Faktor Makroekonomi terhadap Pembiayaan Bermasalah Herni. *Journal of Islamic Finance and Accounting*, 1(1), 29–44.
- [4] Kinanti, S. A., & Jurusan. (2017). Pengaruh BOPO, LDR, dan ROA terhadap NPL pada Bank PERSERO yang terdaftar di Bursa Efek Indonesia (BEI) Periode 2006-2012. 5(1), 1–9.
- [5] Liviawati, L., Putri, G. E., & Siregar, I. F. (2022). Analisis Pengaruh Faktor Internal Dan Eksternal Terhadap Non Performing Loan Pada Bank Pembangunan Daerah. *Jurnal Daya Saing*, 8(1), 39–46. <https://doi.org/10.35446/dayasaing.v8i1.741>
- [6] Marsono, S., & Edy, I. C. (2021). Rasio-rasio Keuangan yang berpengaruh terhadap Non Performing Loan (NPL) (Studi Bank Umum Konvensional Periode 2016-2018 di BEI). *EKOBIS: Jurnal Ilmu Manajemen Dan Akuntansi*, 9(1), 30–37. <https://doi.org/10.36596/ekobis.v9i1.541>
- [7] Putraseto, R., & Mukhlis, I. (2021). Pengaruh CAR, LDR, BOPO, dan KAP terhadap non performing loan BPR konvensional di Kota Batu sebelum dan setelah COVID-19. *Jurnal Ekonomi, Bisnis Dan Pendidikan*, 1(9), 806–823. <https://doi.org/10.17977/um066v1i92021p806-823>
- [8] Rachmahyanti, S. (2021). Alami Peningkatan, OJK Catat NPL Perbankan 3,21 Persen per Februari 2021. IDX Channel.
- [9] Rully R. Ramli. (2022). Kredit Perbankan Tumbuh 5,2 Persen pada 2021, Lebih Tinggi dari Proyeksi OJK. Kompas.Com.
- [10] Setya Wijaya, R. (2019). Pengaruh Faktor Makro Ekonomi terhadap Kredit Bermasalah pada Bank Umum di Indonesia. *OECONOMICUS Journal of Economics*, 4(1), 36–48. <https://doi.org/10.15642/oje.2019.4.1.36-48>
- [11] Sinaga, N. S. A., & Masdjodjo, G. N. (2022). Faktor Internal Bank Terhadap Penyaluran Kredit Perbankan yang Terdaftar di Otoritas Jasa Keuangan Tahun 2016-2020. *Jurnal Ilmiah Komputersasi Akuntansi*, 15(1), 146–158.
- [12] Sugiyono. (2021). Metode Penelitian Kuantitatif, Kualitatif Dan R&D. In *Koleksi Buku UPT Perpustakaan Universitas Negeri Malang* (Cetakan ke, Vol. 0, Issue 0). ALFABETA,CV.
- [13] Suheriadi. (2021). Ini Faktor Penyebab NPL Bank Umum Naik capai 3,35%. Fortune.
- [14] Undang-Undang RI. No. 10 Tahun 1998. (n.d.).
- [15] Wulandari, B., Khetrin, & Seviyani, K. (2021). Pengaruh Loan to deposit ratio (LDR), biaya operasional, pendapatan operasional (BOPO), kurs, capital adequacy ratio, ukuran bank dan inflasi terhadap non performing loan (NPL) di Perusahaan Perbankan terdaftar di BEI. *COSTING:Journal of Economic, Business and Accounting*, 5(1), 8.
- [16] Yuliani, N. W. E., Purnami, A. A. S., & Wulandari, I. G. A. A. (2020). Pengaruh Capital Adequacy Ratio, Net Interest Margin, Biaya Operasional Pendapatan Operasional Dan Loan Deposit Ratio Terhadap Non Performing Loan Di Pt. Bank Pembangunan Daerah Bali Tahun 2009 – 2017. *Warmadewa Economic Development Journal (WEDJ)*, 3(1), 10–20. <https://doi.org/10.22225/wedj.3.1.1590.10-20>