 p-ISSN 2827-8585
e-ISSN 2827-8062

International Journal of Multidisciplinary Research and Literature
IJOMRAL
Vol. 1, No. 4, July 2022 pp. 361-480
Journal Page is available at http://ijomral.esc-id.org/index.php/home

THE RELATIONSHIP OF NON PERFORMING LOAN (NPL) AND *LOAN TO DEPOSIT RATIO* (LDR) TO THE ESTABLISHMENT OF RESERVES FOR INCREASED LOSS IN CONVENTIONAL COMMERCIAL BANKS LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE 2016-2020 PERIOD

Andi Hasryningsih Asfar[1*], Alvi Inayati[2]
[1.2]Bina Bangsa University, Indonesia
Email: *andihasryningsih @gmail.com[1*] ,alviinayati @gmail.com[2]*

Abstract

Banks as intermediary institutions whose operational activities are to collect and distribute funds. In maintaining financial stability in order to remain liquid, banks establish reserves for impairment losses as an effort to anticipate the risk of loss. This study aims to determine the relationship *between Non-Performing Loans* and *Loan to Deposit Ratios* to the Establishment of Allowance for Impairment Losses in Conventional Commercial Banks listed on the Stock Exchange. Indonesia for the 2016-2020 period. The method used in this research is the associative method with a quantitative approach. The population in this study are 46 Conventional Commercial Banks. Sampling using *purposive sampling technique* and selected as many as 6 banking companies. The results of this study indicate that the results of the t-test on *Non-Performing Loans* on the Establishment of Allowance for Impairment Losses obtained the value of t_{count} (2.860) > t_{table} (2.084). The results of the t-test on the *Loan to Deposit Ratio* variable on the Formation of Allowance for Impairment Losses obtained the value of t_{count} (-1.284) < t_{table} (2.084). The results of the F test of *Non-Performing Loans* and *Loan to Deposit Ratio* on the Formation of Allowance for Impairment Losses are obtained by the $_{calculated}$ F_{value} (5,224) > F_{table} (*3,35*). and the *Loan to Deposit Ratio* has no relation to the Establishment of Allowance for Impairment Losses. Meanwhile, the *Non-Performing Loan* and the *Loan to Deposit Ratio* simultaneously have a relationship with the Establishment of Allowance for Impairment Losses.

Keywords: Non-Performing Loan, Loan to Deposit Ratio, and Establishment of Allowance for Impairment Losses.

INTRODUCTION

Banks make an important contribution to financial stability and encourage increased economic growth of a country. As it is known that the bank is one of the financial services sector whose main task is to collect funds from the public in the form of savings and channel them back in the form of credit or other forms in order to improve the standard of living of the people at large. The activity of collecting and distributing funds is the main activity of the bank, while providing other bank services is only a supporting activity. Banks are also called intermediary institutions as liaisons between parties who have excess funds and those who need funds.

Conventional Commercial Bank is a type of banking that carries out its operational activities to save money and lend money. The concept of conventional banks is profit-oriented in the form of interest on funds distributed to the public in the form of loans. Therefore, it is

easier for people to get loan capital provided in the form of credit. Credit is a form of productive assets and a bank's business in channeling funds that have been collected from the public as the main source of income. For the bank, credit is a receivable to increase income in the form of interest from its customers. The amount of credit disbursed will determine the bank's profit.

The Covid-19 pandemic that has hit the country is one of the factors causing the economic slowdown, including the banking sector. Along with the economic slowdown, lending extended to the public also poses a risk when the debtor cannot repay all and part of his debt to the bank at maturity, which in turn causes losses for the bank. Losses on credit will reduce the bank's capital, if the bank's losses are large enough then the bank's capital is not enough to cover losses, so that public funds have the potential to not be returned by the bank. To anticipate the risk of loss, banks are required to establish general reserves and special reserves, better known as Allowances for Impairment Losses (CKPN) to maintain financial stability in order to remain liquid.

Allowance for Impairment Losses (CKPN) is a number of funds established to anticipate the risk of losses arising from the non-receipt of funds for lending. By setting aside funds as an allowance for credit losses, the bank's financial statements will reflect the actual situation and the adverse events have an impact on the estimated future cash flows. CKPN has an important role in banks, because it is able to provide information about the financial condition of a bank in each period.

Factors that can affect CKPN are *Non-Performing Loans* (NPL) and *Loan to Deposit Ratio* (LDR). *Non-Performing Loan* (NPL) is a ratio used to measure the risk of non-performing loans in a bank. The greater the provision of credit to the debtor, the higher the probability of non-performing loans, which causes the bank to provide funds or capital reserves. To anticipate the risk of non-performing loans, banks are required to establish and set aside funds to cover the risk of losses on loans extended to customers. The rise and fall of bank CKPN is also influenced by the value of the ratio of non-performing loans. The term non-performing *loans* (NPL) is a loan that has difficulty in settling its obligations. Credit collectability levels include current, special mention, substandard, doubtful and loss. This NPL ratio has a big influence on the value of CKPN. This is because the amount of CKPN that banks must strive for also comes from the measurement of the percentage of credit collectability. Thus, the greater the value of the NPL ratio will also have an impact on the increase in the CKPN value and vice versa.

Credit quality that affects the formation of CKPN lies in addition to the NPL, but also in the LDR. *The Loan to Deposit Ratio* (LDR) is a comparison of the ratio of the amount of credit

to third party funds to measure a composition in the amount of credit given compared to own capital or funds from the public used and describes the ability of banks to repay withdrawals made by depositors by relying on credit. provided as a source of liquidity.

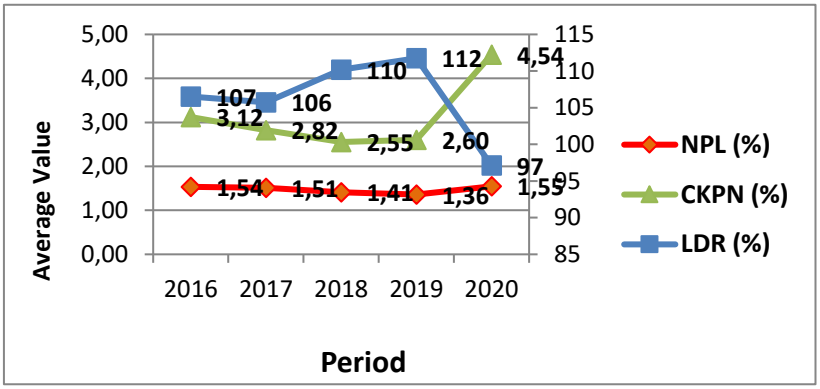

Figure 1 Graph of NPL, LDR and CKPN Development

NPL is in a position of fluctuation every year. In 2020 there was a significant increase of 1.55% due to the funds disbursed by the bank experiencing problems because customers failed to pay their obligations to the bank. Thus, the increase in non-performing loans has an impact on the rise and fall of CKPN from year to year which in 2020 experienced a significant increase of 4.54%, a movement in line with the NPL. This shows that banks with high NPLs tend to form high CKPN as a form of anticipation of possible credit risk that will occur.

The development of LDR in 2016-2020 also fluctuated, in 2019 there was a significant increase of 112%. Bank Indonesia regulations stipulate the size of the ratio with a safe LDR limit of around 80% and a maximum of 110%. The standardization of the LDR ratio, namely 90% of the bank is said to be good, but if 90% then the bank is said to be not good, but if you look at the trendline, it can be concluded that the LDR value from year to year tends to exceed and some even exceed the standardized ratio. The high LDR ratio indicates that the bank can channel all the funds raised. On the one hand, the bank will gain greater profits, but it causes a bank to be relatively illiquid so that the bank has difficulty returning funds if at any time depositors withdraw their funds and the consequence is an increased risk of non-performing loans due to the debtor being unable to return the funds he borrowed. On the other hand, the low LDR ratio, even though it indicates a high level of liquidity, causes banks to have idle funds, if not utilized, it can eliminate the opportunity to earn income.

LITERATURE REVIEW

Definition of Allowance for Impairment Losses (CKPN)

The Indonesian Banking Accounting Guidelines state that Allowance for Impairment Losses (CKPN) is a reserve that must be established by a bank if there is objective evidence of

impairment of a financial asset as a result of one or more events that occurred after the initial recognition of the asset (a loss event) and on the estimated future cash flows.

Firdaus and Aryani (2003) explain that allowance for credit losses is used to assess changes in credit quality, namely if there is a problem with the good faith and ability of the debtor to repay the credit. Meanwhile, according to Atika in Maulidiyah (2015) states that reserves are created by banks with the aim of dealing with the risk of loss caused by investing funds in productive assets.

With the establishment of Allowance for Impairment Losses (CKPN), at least the bank can reduce the occurrence of credit risk to maintain financial stability so that it remains liquid, so that it will improve the health of the bank.

The formation or provision of funds is assessed from the results of the debtor credit evaluation conducted by the bank. If according to a bank there is objective evidence that the credit of the debtor has decreased *(impairment)* , then the bank must establish funds or reserves for the credit. Because the results of the debtor's credit evaluation are based on the decisions of each bank, each bank has its own policy in establishing a reserve fund for its credit. Even so, the bank's policy should not deviate from some of the criteria contained in the PAPI (Indonesian Banking Accounting Guidelines).

***Non-Performing Loans* (NPL)**

According to Ismail in Tuti Setiatin and Dita (2020), *Non-Performing Loan (* NPL) is a condition where the customer is no longer able to pay part or all of his obligations to the bank as agreed. Non-performing loans are loans that are classified as substandard loans, doubtful loans, and bad loans.

Credit risk is defined as the risk associated with the possibility of the client's failure to pay its obligations or the risk that the debtor cannot pay off his debts (Hasibuan, 2010). Furthermore, Taswan (2010) states that the comparison between non-performing loans to the total loans granted. This ratio indicates that the higher the NPL ratio, the worse the credit quality.

Based on the above understanding, it can be concluded that the *Non-Performing Loan* (NPL) is a ratio to measure the risk of non-performing loans in a bank resulting from the debtor's inability to return part or all of his obligations to the bank as previously agreed.

***Loan to Deposit Ratio* (LDR)**

The definition of LDR according to Kasmir (2008) is a ratio to measure the composition of the amount of credit given compared to the amount of public funds and own capital used.

Meanwhile, according to Pandia (2012) that the ratio is to measure how far the bank has used the money of the depositors (deposits) to provide loans to its customers.

Fitria and Lidia (2017) state that the ratio between the total volume of loans disbursed by banks and the amount of funds received from various sources. As stated by Sudirman (2020) that the comparison between the credit provided and the funds received by the bank.

Kasmir (2018) explains that the *Loan to Deposit Ratio* (LDR) is a ratio that compares credit distribution with funds entering the bank, where the LDR must be considered so that the bank does not exceed the standard value that has been set. Bank Indonesia regulations stipulate the amount of the ratio with a safe LDR limit of around 80%, but the maximum is 110%.

Table 1 *Loan to Deposit Ratio* (LDR) Assessment Criteria

Criteria	**LDR**
Healthy	80%
Healthy enough	> 80 - ≤ 90%
Unwell	> 90% - 100%
Not healthy	> 110%

If the LDR is below 80% it is not good for the bank, this is because if too many funds are deposited, it can cause the bank to lose money. Meanwhile, if the LDR exceeds the maximum limit, which is above 110%, it can lead to lower bank liquidity capabilities, this is because the amount of funds needed to finance loans is very high while the funds needed to finance loans are very high while the available funds are insufficient.

Based on the above understanding, it can be concluded that the *Loan to Deposit Ratio* (LDR) is used to assess the liquidity of a bank by comparing the amount of credit extended to customers with the amount of third party funds. In other words, this ratio is a measure of a bank's ability to repay withdrawals made by customers or depositors who have invested funds by relying on loans as a source of liquidity.

Framework of thinking

This study formulates a framework of thought that was developed into a research hypothesis. *Non-Performing Loans* (NPL) and *Loan to Deposit Ratio* (LDR) as independent variables are related to the Establishment of Allowance for Impairment Losses (CKPN) in the company.

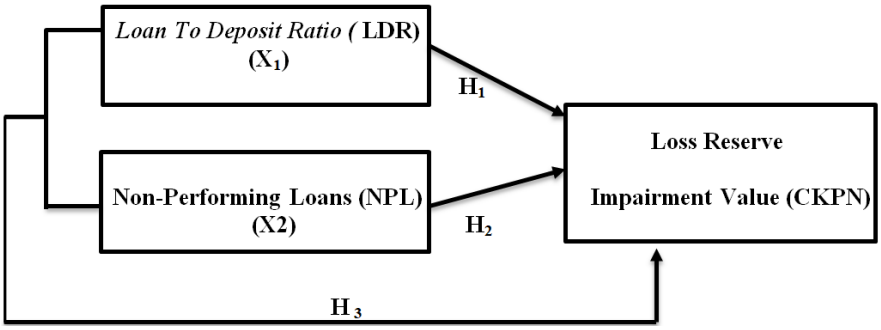

Figure 2 Thinking Framework

METHOD

This research is quantitative associative which aims to determine the effect or relationship between variables. The variables used in this study include *Non-Performing Loans* (NPL) and *Loan to Deposit Ratio* (LDR) as independent variables and the Establishment of Allowance for Impairment Losses (CKPN) as the dependent variable.

The population used in this study is the Conventional Commercial Banks listed on the IDX for the 2016–2020 period, totaling 46 banks. Sampling using *purposive sampling technique* , where *purposive sampling* is a sampling technique with certain considerations or selection (Siyoto and Sodik, 2015). Based on the selection, there are 6 Conventional Commercial Banks that are used as research samples.

RESULTS AND DISCUSSION

Establishment of Allowance for Impairment Losses (CKPN)

Table 2 Descriptive Statistics on Allowance for Impairment Losses (CKPN)

Descriptive Statistics					
	N	Minimum	Maximum	mean	Std. Deviation
CKPN	30	.60	6.30	2.6063	1.52628
Valid N (listwise)	30				

Source: SPSS version 26 (Data processed, 2021)

Based on the results of the descriptive statistical output above, the value of N shows the number of observational data as many as 30 samples. From these data, the minimum value is 0.60, the maximum value is 6.30, with a mean (average) value of 2.6063, and a standard deviation of 1.52628.

***Non-Performing Loans* (NPL)**

Table 3 Descriptive Statistics of *Non-Performing Loans* (NPL)

Descriptive Statistics					
	N	Minimum	Maximum	mean	Std. Deviation
NPL	30	.30	2.49	1.2280	.66562
Valid N (listwise)	30				

Source: SPSS version 26 (Data processed, 2021)

Based on the results of the descriptive statistical output above, the value of N shows the number of observational data as many as 30 samples. From these data, the minimum value is 0.30, the maximum value is 2.49, with a mean (average) value of 1.2280, and a standard deviation of 0.66562

***Loan to Deposit Ratio* (LDR)**

Table 4 Descriptive Statistics of *Loan to Deposit Ratio* (LDR)

Descriptive Statistics					
	N	Minimum	Maximum	mean	Std. Deviation
LDR	30	65.80	98.90	88.5493	7.63900
Valid N (listwise)	30				

Source: SPSS version 26 (Data processed, 2021)

Based on the results of the descriptive statistical output above, the value of N shows the number of observational data as many as 30 samples. From these data, the minimum value is 65.80, the maximum value is 98.90, with a mean (average) value of 88.5493, and a standard deviation of 7.63900.

Normality test

Normality test is intended to determine whether the residuals studied are normally distributed or not. The methods that can be used in the normality test are the *One-Sample Kolmogorov-Smirnov test* , histogram graphs and normal P-Plot graphs. In the *Kolmogorov-Smirnov test, the* data is said to be normal if the significance value is more than 0.05 (Purnomo, 2017).

Table 5 *Kolmogorov-Smirnov* . Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		30
Normal Parameters [a,b]	mean	.0000000
	Std. Deviation	1.42885033
Most Extreme Differences	Absolute	.119
	Positive	.119
	negative	-.089
Test Statistics		.119
asymp. Sig. (2-tailed)		.200 [c,d]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

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

Source: SPSS version 26 (Data processed, 2021)

Asymp value. Sig. (2-tailed) is 0.200. Referring to the normality test criteria, these results indicate that the data are normally distributed with a value of 0.200 greater than a significance of 0.05, so it can be concluded that the residual data is normally distributed so that the assumption of data normality is met. The residual value with normal distribution is a *bell-shaped curve* with both sides widening to infinity.

Multicollinearity Test

The multicollinearity test was conducted to determine whether in the regression model there was a correlation between the independent variables. To detect multicollinearity problems, it can be seen from the *tolerance* value and VIF (*Variance Inflation Factor*). The basis for making multicollinearity test decisions is if *tolerance* > 0.1 and VIF < 10, it is said that there is no multicollinearity (Ende, 2019).

Table 6 Test *Tolerance* and VIF

Coefficients [a]	
Model	Collinearity Statistics

		Tolerance	VIF
1	(Constant)		
	NPL	.808	1.238
	LDR	.808	1.238
a. Dependent Variable: CKPN			

Source: SPSS version 26 (Data processed, 2021)

It is known that the *tolerance* value for the *Non-Performing Loan* (NPL) and *Loan to Deposit Ratio* (LDR) variables both have a value of 0.808 0.10. Furthermore, the VIF value also shows the same results for the *Non-Performing Loan* (NPL) and *Loan to Deposit Ratio* (LDR) variables of 1,238 < 10. Based on the decision-making basis for the multicollinearity test, the results show that there is no correlation between the independent variables.

Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another observation. If the variance of the residual from one observation to another observation remains, it is called homoscedasticity and if it is different it is called heteroscedasticity. A good regression model is one with homoscedasticity or no heteroscedasticity. If the data points do not form a certain pattern and the data points spread above and below the number 0 on the Y axis, then there is no heteroscedasticity (Ende, 2019).

Autocorrelation Test

Table 7 Durbin-Watson Test

Model Summary [b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.352 [a]	.124	.059	1.48083	1.341
a. Predictors: (Constant), LDR, NPL b. Dependent Variable: CKPN					

Source: SPSS version 26 (Data processed, 2021)

It is known that the Durbin Watson (DW) value obtained is 1.341, which means the DW value lies between the numbers -2 to +2, it can be concluded that the data used in this study is free from autocorrelation. Thus the linear regression model can be continued because it does not violate the classical assumption test.

Multiple Linear Regression Analysis

Multiple linear regression analysis was used to determine the magnitude of the influence of the independent variable on the dependent variable. Regression analysis is a technique for building equations and using these equations to make *predictions*.

Table 8 Multiple Linear Regression Test Results

Coefficients [a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.564	3.349		.766	.450
	NPL	.855	.460	.373	2.860	.004
	LDR	-.011	.040	-.057	-1.284	.778
a. Dependent Variable: CKPN						

Source: SPSS version 26 (Data processed, 2021)

$$\mathbf{Y = a + {}_1 X_1 + {}_2 X_2 +}$$

$$Y = 2.564 + 0.855X_1\ 0.011 +$$

In accordance with the obtained regression equation, the regression model can be interpreted as follows:

1. The value of 2,564 is a constant value, which means that without the influence of the two independent variables such as *Non-Performing Loans* (X_1) and *Loans to Deposit Ratios* (X_2), the dependent variable, namely the Establishment of Allowance for Impairment Losses (Y) will have a value of 2,564.
2. The regression coefficient of 0.855 states that each increase in the *Non-Performing Loan* variable (X_1) will increase the value of the Formation of Allowance for Impairment Losses (Y) by 0.0855 with the assumption that other variables are constant.

3. The regression coefficient -0.011 states that every one-unit increase in the *Loan to Deposit Ratio* (X_2) variable will reduce the value of the Formation of Allowance for Impairment Losses (Y) by -0.011 assuming other variables are constant.

Multiple Correlation Coefficient

Multiple correlation coefficients are used to determine the magnitude or strength of the relationship between all independent variables and the dependent variable simultaneously.

Table 9 Interpretation of R . Value

Coefficient Interval	Relationship Level
0,00 – 0,199	Very low
0,20 – 0,399	Low
0,40 – 0,599	Currently
0,60 – 0,799	Strong
0,80 – 1,000	Very strong

Table 10 Correlation Coefficient Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.352 [a]	.124	.059	1.48083
a. Predictors: (Constant), LDR, NPL				

Source: SPSS version 26 (Data processed, 2021)

The value of the correlation coefficient (R) is 0.352. In accordance with the interpretation of the R value described previously, it can be interpreted that there is a low level relationship between the independent variable *Non-Performing Loan* (X1) and *Loan to Deposit Ratio* (X2) on the dependent variable for the Formation of Allowance for Impairment Losses, because the value (R)) is in the interval 0.20 – 0.399.

Coefficient of Determination

The coefficient of determination ($R2^{)}$ is used to determine how much the independent variable (X) affects the dependent variable (Y) which is expressed as a percentage. The following results from the coefficient of determination can be seen in the R2 value below :

Table 11 Results of the Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.352 [a]	.124	.059	1.48083
a. Predictors: (Constant), LDR, NPL				

Source: SPSS version 26 (Data processed, 2021)

$KD = R^2 \times 100\%$

$KD = (0.352)^2 \times 100\%$

$KD = 12.4\%$

The value of *R square* is 0.124. These results indicate that the *Non-Performing Loan* (X_1) and *Loan to Deposit Ratio* (X_2) simultaneously (together) contributed 12.4% to the Establishment of Allowance for Impairment Losses (Y), while the remaining 87.6% (100% 12.4%) is influenced by other variables outside this regression or variables that are not included in this research model.

t test (Partial)

Table 12 T-Test Results (Partial)

Coefficients [a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.564	3.349		.766	.450
	NPL	.855	.460	.373	2.860	.004
	LDR	-.011	.040	-.057	-1.284	.778
a. Dependent Variable: CKPN						

Source: SPSS version 26 (Data processed, 2021)

The t_{count} value of *Non-Performing Loans* (X_1) is 2.860 and the t-value of *Loan to Deposit Ratio* (X_2) is -1.284. Then to calculate the t_{table} by using a two-way test and a significance level of 0.05 with degrees of freedom df = n – k = 30 – 2 = 28, then the t_{table} value is 2.084.

The results of the t test in the table above can be seen as follows:

1. The relationship of *Non-Performing Loans* (NPL) to the Establishment of Allowance for Impairment Losses (CKPN), is formulated with the following hypothesis:

   $H_0 : 1 = 0$: It is suspected that there is no correlation between the *Non-Performing Loan* (NPL) variable and the Establishment of Allowance for Impairment Losses (CKPN).

   Ha : 1 = 0 : It is suspected that there is a relationship between the *Non-Performing Loan* (NPL) variable and the Establishment of Allowance for Impairment Losses (CKPN).

   Based on the results of the t-test (partial) the $t\text{-}_{count}$ value is 2.860 and the $t\text{-}_{table}$ is 2.084, it can be said that the $t\text{-}_{count} > t\text{-}_{table}$ (2.860 > 2.084) with a significant value (0.004 <0.05), it can be concluded that $_{H0}$ is rejected. and Ha accepted. This proves that there is a significant relationship between *Non-Performing Loans* (NPL) and the Establishment of Allowance for Impairment Losses (CKPN).
2. The relationship of the *Loan to Deposit Ratio* (LDR) to the Formation of Allowance for Impairment Losses (CKPN), is formulated with a statistical hypothesis:

   $H_0 : 2 = 0$: It is suspected that there is no relationship between the *Loan to Deposit Ratio* (LDR) variable on the Establishment of Allowance for Impairment Losses (CKPN).

   Ha : 2 = 0 : It is suspected that there is a relationship between the *Loan to Deposit Ratio* (LDR) variable on the Establishment of Allowance for Impairment Losses (CKPN). Value (CKPN).

   Based on the results of the t_{-test} (partial) obtained t_{-count} value of -1.284 and t_{-table} of 2.084, it can be said that the value of $t_{-count} < t_{-table}$ (-1.284 < 2.084) with a significance value (0.778> 0.05), it can be concluded that H_0 accepted Ha rejected. This proves that there is no significant relationship between the *Loan to Deposit Ratio* (LDR) and the Establishment of Allowance for Impairment Losses (CKPN).

F Test (Simultaneous)

Table 13 F Test (Simultaneous)

ANOVA [a]					
Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	8.350	2	4.175	5.224	.029 [b]
	Residual	59.207	27	.293		
	Total	67.556	29			

a. Dependent Variable: CKPN

b. Predictors: (Constant), LDR, NPL

Source: SPSS version 26 (Data processed, 2021)

The results of the calculation of the output in table 13 using a two-way test and a significance level of 0.05 with degrees of freedom df1 = 2 and df2 = 27, the F_{table} value is 3.35. Based on the results of calculations using SPSS 26, the calculated F_{value} is 5,224. Referring to the decision-making criteria, namely $F_{arithmetic}$ (5.224) > F_{table} (3.35) with a significance value (0.029 < 0.05), it can be concluded that H_0 is rejected and Ha is accepted. This proves that simultaneously the independent variables of *Non-Performing Loan* (NPL) and *Loan to Deposit Ratio* (LDR) are related to the dependent variable of Formation of Allowance for Impairment Losses (CKPN).

CONCLUSION

Based on data analysis, *Non-Performing Loans* (NPL) have a relationship with the Establishment of Allowance for Impairment Losses (CKPN). Referring to this research, it is hoped that Conventional Commercial Banks can keep credit risk from being too high because it will cause a large reserve of funds and will reduce the company's profit. Therefore, banks must apply the principle of prudence in the flow of funds because credit is one of the main sources of income for banks. In addition, from the results of data analysis, the *Loan to Deposit Ratio* (LDR) has no relationship to the Formation of Allowance for Impairment Losses (CKPN). By looking at the LDR value, it is expected that Conventional Commercial Banks can maintain the LDR value at a safe limit in accordance with the provisions of standardized ratios set by Bank Indonesia.

REFERENCES

Antika dan Maulidiyah. 2017.*Pengaruh NPL, CAR, dan LDR terhadap CKPN pada Bank Konvensional yang tercatat di Bursa Efek Indonesia periode 2011-2015*. Surabaya: STIE Perbanas.

Ende., dkk. 2019. *Praktikum Aplikasi Statistik Komputer.* Serang: Universitas Bina Bangsa.

Firdaus dan Aryani. 2003 *Manajemen Perkreditan Bank Umum*. Bandung: Alfabeta

Frianto Pandia. 2012. *Manajemen Dana dan Kesehatan Bank*. Jakarta: Rineka Cipta

Hasibuan. 2010. *Dasar-Dasar Perbankan*. Bandung: Bumi Aksara

Ikatan Bankir Indonesia. 2014. *Mengelola Bank Syariah*. Jakarta: PT. Gramedia Pustaka Utama

Kasmir. 2008. *Pengantar Manajemen Keuangan*. Jakarta: Kencana

Kasmir. 2018. *Analisis Laporan Keuangan.* Jakarta: PT. Rajagrafindo Persada.

Siyoto, Sandu., dan M. Ali Sodik. 2015. *Dasar Metodologi Penelitian.* Yogyakarta: Literasi Media Publishing.

Sudirman. 2000. *Manajemen Perbankan*. Denpasar: Balai Pustaka

Taswan. 2010. *Manajemen Perbankan, Konsep, Teknik, dan Aplikasi*. Yogyakarta: UPP STIM YKPN.

Tuti Setiatin dan Dita. 2020. *Pengaruh LDR dan NPL terhadap CKPN*. STIE PGRI Sukabumi: Jurnal Ekonomak.