The Effect of Credit Risk Management on Financial Performance in Indonesian Banking

Nissa Nurfitria[1], Agissa Ardania Putri[2], Henny Setyo Lestari[3], Farah Margaretha Leon[4]

[1,2]Universitas Trisakti students

[3,4]Universitas Trisakti Lecturer

ABSTRACT: The research has done on purpose to help determining the influence of credit risk management toward financial presentation in Indonesian banking from 2017 to 2021. CAR, NPLR, LDR, NIM, and Bank Size ratios are used to measure credit risk, while ROA and also ROE ratios tend to be applied in order to help assess financial performance. The research technique and data used in this research are quantitative descriptive, including secondary data contained in the financial reports of 33 Indonesian banks registered on the Indonesia Stock Exchange from 2017 to 2021 that satisfied the sampling criteria. This rstudy findings are shown that credit risk management (as measured by CAR) has no intermediate impact on ROA and ROE, NPLR gives such a negative and also significant influence toward financial performance as assesed by ROA and ROE, LDR has no impact on financial presentation as assesed by ROA and ROE, NIM gives no influence toward financial performance as calculated by ROA and ROE, and also Bank Size (BS) gives such a positive and also significant unfluence toward financial presentation as assesed by ROA and ROE.

KEYWORDS: Credit Risk Management, Financial Performance

I. PRELIMINARY

Financial institutions play a role as the main pillar in a nation's economic growth and development (J. al Zaidanin, 2020). The banking sector has a role as an intermediary for surplus units to deficit units for economic growth and development, which becomes such an essential financing source for the company majority in maximizing shareholder prosperity (Tassew, A. W., & Hailu, 2019). Poor economic performance makes people mired in loans and defaults, which results in bank failures because credit is a significant component of financial health of a bank' (Munangi & Sibindi, 2020)

The component of success in analyzing a banks' financial presentation could be done by assessing the level of Return On Assets (ROA) and also Return On Capital (ROC) (ROE). ROA, or the ratio of net income to whole properties, represents a company's efficient utilization of its total assets (Koroleva et al., 2021). The increasing value of ROA indicates the bank's effectiveness in earning profits.

Because deposits from depositors account is bigger than 85% of a bank's liabilities, the banking business is exceedingly complex. Credit activity, as one of the primary sources of revenue for banks, enables them to distribute available financial resources to deficit units while also allowing them to resist economic shocks. At the same time, credit activities involve multiple risks that are faced not only by lenders but also by debtors (loan recipients), such as liquidity risk, market risk, credit risk, interest rate risk, capital risk, political risk, currency rate risk, and so on (Zaidanin et al., 2021).

Credit risk can be claimed as the risk of borrower default or the potential loss to the bank if the borrower fails for fulfilling debt obligations on the loan maturity date (Saleh, I. & Abu Afifa, 2020). The credit risk ratio explains the potential for bad credit to arise from any funds provided in the form of a loan or credit. The credit risk ratio is used in assessing the risk of disbursed credit through a comparison between bad loans and disbursed loans (Yanuardi, A., Hadiwidjojo, D., 2014). Serwadda (2018) states that Credit risk management is a technique for reducing losses by continuously assessing bank capital sufficiency and loan loss provisions. This process remains a fundamental difficulty in the modern world. Evaluation of credit risk is crucial because it supports for putting steps in area to avoid, anticipate, and prevent failure ((Bruni, ME, Beraldi, P., & Iazzolino, 2014)

Financial ratios allow company management to compare banks of different sizes. Therefore, banks which able to increase their lending policies and use credit ratings to whole loan applications and loan facilities will increase bank financial presentation and vice versa.

Numerous empirical research found in explaining abot the the influence of credit risk toward bank presentation have been conducted, and the most of the results confirm that credit risk gives such a positive influence toward bank presentation. Credit risk becomes proxied in this research by the capital capability ratio, non-performing loan ratio,loan deposit ratio, and also net interest

margin. Credit risk fluctuations can indicate the changes of the loan portfolio's health of a bank, that can harm a bank's performance. When the exposure of the company is higher to high-risk loans, it will improve the amount of cumulative unpaid loans, limiting bank profitability. Chhetri (2021) research results reveal a connection between the independent and dependent variables, allowing them to anticipate the impact of credit risk on the profitability of commercial banks in Nepal. The stdy tries to help control the impact of credit risk management on financial presentation in Indonesian banking. The addition of return toward assets that is used to be variable to financial performance measurement is innovative in this study.

THEORETICAL BASIS
2.1. Library Review
Banking Performance
The general assumption that underlies much research and discussion of financial performance is that improving financial performance will increase organizational functions and activities (Al-Khatib, Hazeem B dan Al-Horani, 2012). Performance is the result of the goals measured in a some period.

Financial institutions are the main pillars of a country's economic development and growth (A. Zaidanin et al., 2021). The banking segment has a role as an intermediary for surplus units to deficit units for economic growth and development, which is an essential financing source for majority of companies in trying to maximize the shareholder prosperity (Worku & Asmare, 2019). Poor economic performance makes people mired in loans and default, which results in bank failures because credit is a significant component of a bank's financial health (Munangi & Sibindi, 2020). The rate of return on assets, or ROA, can be used to analyze a bank's financial performance (ROA). ROA, or the ratio of net revenue to whole properties, represents the efficient use of a company's complete property portfolio (Koroleva et al., 2021). The increasing value of ROA thus demonstrates the bank's effectiveness in earning profits. Banks typically use two ratios to measure their profitability ratios: ROE (Return On Equity), which reflects the quantity of profit on capital used to produce resturns, and ROA, which measures the ability of whole existing properties to make returns.

Capital Adequacy Ratio
To calculate the capital employed ratio Ratio of CAR. CAR can be known as a performance bank's rasio to assess the competence of capital to sustain possessions that include or make risk, such as bank loans. Meantime, based on Bank Indonesia Regulations, CAR is the ratio that demonstrates how much of the all bank properties that involve risk are paid from their own capital to funds obtained from other sources. The minimal value that banks must meet according to PBI No.15/12/PBI/2013 about minimum Capital Adequacy Requirements for banks is 8%.

Non-Performing Loan Ratio (NPLR)
The NPLR is the ratio of non-performing loans in a bank to the entire loans. This situation, banks lend credit to third parties who are personal or corporate customers, but not to other banks. These kind of loans are mediocre, questionable, or bad. The Non-Performing Loan Ratio is a proxy for credit risk. Credit risk fluctuations can represent changes of soundness of a loan portfolio of the bank, causing a bank's performance to suffer. The more a exposure of financial institution to high-risk loans, it will increase the amount of the cumulative free loans, restricting bank profitability. Non-performing loan (NPL) or credit risk, according to (Kasmir, 2010), is the risk of a prospective bank loss owing to non-payment of credit granted by the bank to the debtor. Non-Performing Loan becomes the ratio of non-performing loans (defined as substandard, dubious, or loss) to total loans granted by the bank.

Loan Deposit Ratio (LDR)
According to Dendawijaya (2003), The Loan to Deposit Ratio (LDR) can be claimed as the ratio of the entire amount of credit provided by the bank to the total amount of cash accepted by the bank. LDR is the metrics used to assess bank liquidity. The company's liquidity refers to having a source of funds that can meet all of its obligations. LDR is commonly used to assess a bank's ability to pay its debts, refund depositors, and fulfill credit requests made by its customers. A bank's liquidity is deemed good if its LDR is between 85% and 110%, according to Bank Indonesia standards. According to Dendawijaya (2003), the upper this percentage, the lower the bank's liquidity capacity as the cash required to support loans grow.

Net Interest Margin (NIM)
Based on Bank Indonesia Regulation No.5/2003, interest rates are market risks. Thus, market risk can be quantified using financing interest rates (funding) at the loan rate provided (lending) or in its entirety. The difference between whole financing interest expenses and whole loan interest charges, known as the Net Interest Margin in banking (NIM). NIM is critical in assessing capacity to use interest rate risk of the bank. When there is a change of interest rates, the interest revenue of bank and also interest costs will fluctuate. The upper the NIM value, the greater the quantity of income from credit and the lower the proportion of bad loans, indicating that third-party fund management is effective. The NIM ratio assesses the ability of management in a way to manage productive assets in order to make net interest revenue. Net interest income is measured by subtracting interest revenue

from interest expense. The greater the NIM ratio, the better for the bank, according to the Bank Indonesia Circular Letter No.15/7/DPNP issued 8 March 2013. The bigger the value of the NIM ratio, the more effectively a bank manages its productive assets in the form of loans.
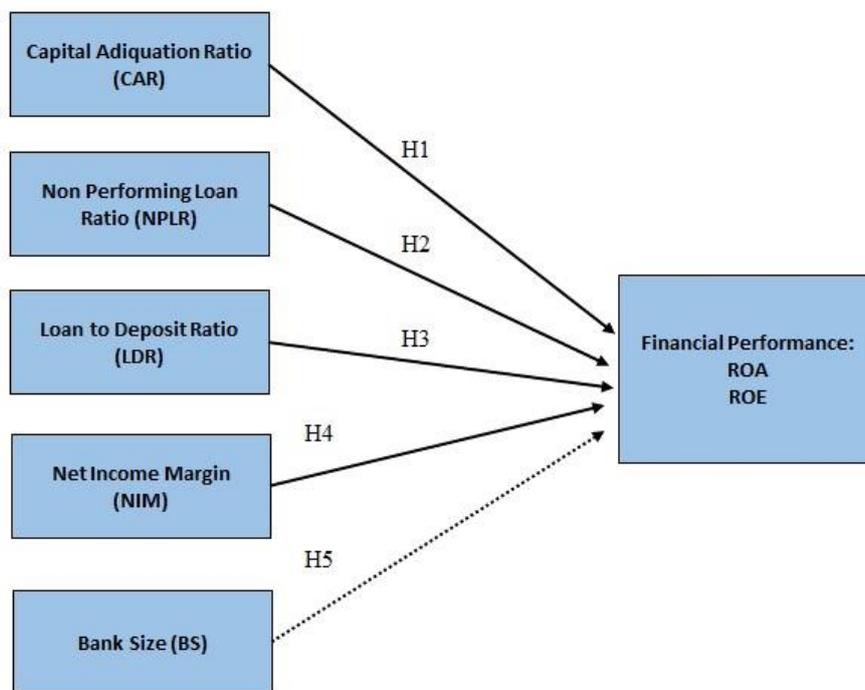
2.2. CONCEPTUAL FRAMEWORK

Figure 1. Conceptual Framework Chart

2.3. Hypothesis Development

The Effect of CAR on Bank Financial Performance

(Hamza, 2017) previously explored the connection between CAR and ROA as another element besides credit risk, and found that CAR gives such a considerable positive impact toward ROA. It shows that rise in CAR would growth bank ROA and supports the view of previous researchers that in addition to credit risk having a vital position, capital risk also has an important role where high capital makes banks more able to overcome losses incurred due to credit risk. However, research conducted by Zaidanin et al., (2021) showed unlike outcomes where CAR had no impact on ROA in their research. This may depend on the quality, utilization of assets, and how much the bank can manage its credit risk. So the researchers formed the first hypothesis that CAR affects ROA. With this, the first hypothesis can be stated such as::

H1: CAR has a significant and positive effect on the Bank's Financial performance

The effect of NPLR on bank financial performance

Research (A. Zaidanin et al., 2021) shows that With ROA metrics, NPLR has no meaningful impact on financial presentation. This demonstrates that a 1% increase in non-performing loans decreases the (ROA) by 0.145%. That is, the higher the NPLR, the worse cost-effectiveness of banks in the UAE. However, the UAE's commercial banks' strong financial policies and good management performance should be reflected positively on their financial performance through managing credit risk.

This result study demonstrate that NPLR and LLR have a negative impact on ROA. Tests were carried out using the panel data regression method with a random effect model at banks in Jordan from 2008 – 2017 (Eitan, G. N. & Bani-Khalid, 2019). The results of research conducted by Hamza (2017) display that NPLR and LLR have a negative influence toward bank financial performance (ROA). It indicates that the rises in problem assets and a higher amount of credit loss reserves formed can lead to a decrease in bank presentation (ROA). This can lead to arrears in managing credit quality, which can disrupt bank performance. This makes researchers

H2: NPLR significant and negative effect on the bank's financial performance

The effect of Loan to Deposit Ratio on the Bank's Financial Performance

The study done by Zaidanin et al., (2021) which examines one other factor, namely bank liquidity with an LDR proxy in its leading research on credit management, shows that the larger the LDR, the greater the credit risk faced by banks but increases opportunity costs high on profitability (ROA). In the research conducted, measurements using multivariate analysis of panel data regression exposed that LDR had no impact on ROA, where each increase of 1% would increase by 0.014%. Several previous studies have

also used LDR as a ratio in measuring bank liquidity risk management, such as (Abbas et al., 2019), which shows that LDR gives such a positive impact toward ROA.

H₃: Loan to Deposit Ratio significant and negative effect on the Bank's Financial performance

The effect of NIM as a measure of management quality ratio on the Bank's Financial performance

Test findings demonstrated that a partially variable Net Interest Margin gives a favorable and also important impact toward financial presentation. It findings are supportded by study undertaken from Ali, M. & Roosaleh (2017)). This indicates that any rise in NIM will outcome in an rise in ROA. A net interest obtained from the difference between interest revenue and interest costs is one of the components in creating profit. If a result, as net interest income rises, so will profits. The increase in income suggests that financial performance is improving. As a result, it is possible to conclude that the second hypothesis can be adopted.

H₄: NIM as a measure of management quality ratio has a significant and positive effect on performance Finance

The effect of bank size has a significant and positive effect on a bank's financial performance.

For starters, greater banks can make benefits from economies of scale and more diversification, that lowers risks and costs while increasing bank profitability (Sinha, P., & Shrama, 2016). According to (Dietrich & Wanzenried, 2014), larger banks have scale economies (improved efficiency of operational) and economic scope over smaller banks (higher levels of product diversification and also lending). As a result, expectations give such a favorable impact on the magnitude of the profitability of bank. The empirical findings of Sinha, P., & Shrama (2016) reveal that larger banks run more efficiently than smaller banks and take advantage of the entire economic scale to produce more profits (Sinha, P., & Shrama, 2016). Larger banks may have superior income diversification opportunities since they are able to get new markets and lower volatility of income (Ahmad, 2017). This is consistent with research (Fang, J. et al., 2019). Greater bank size increases bank assets and capital money, which may aid in geographical expansion and the development of new service items. Banks benefit from economies of scale and scope as well.

H₅: Bank size has a significant and positive effect on the Bank's Financial performance

III. RESEARCH METHODS

3.1. Method of collecting data

Methods of data collection using secondary data collection techniques. Secondary data is information gathered in an indirect manner. Data for this study were collected from the website Indonesian Stock Exchange's (www.idx.co.id) and the websites of all companies that were the subject of research. The data for this study come from banks sector registered in IDX between 2017 and 2021.

3.2. Sampling Method

The method of sampling utilized is probability sampling, it gives every element (member) of the population same opportunity of being selected as a member. This study's sample covers banking firms that have been registered on the IDX for about 5 years (2017-2021). There are 33 firms in the banking industry that are eligible to be sampled in this research.

3.3. Data Analysis Methods

In this work, the E-views 12 software is utilized to help calculate statistical models. In this study, the panel data regression methodology was used to test and analyze the influence of credit risk management, as assesed by the Capital Adiquation Ratio, Non Performing Loan Ratio, Loan Deposit Ratio, N et Icome Margin, and Net Income Margin, on financial performance, as scored by ROA, and ROE in the banking companies registered in IDX. The model test was performed in this work to find the appropriate model in panel data regression chow analysis, hausman test, and Long Range Multiplier (LM) test such that the model chosen to be used in this study was a random effect model.

This study also used a test to demonstrate that the dependent variable explained by the independent factors together is real and not random. This test displays the findings of the F statistical test in percent of the dependent variable defined by the whole independent variables combined (Ghozali, 2019). Goodness of Fit test determines how well the model explains the connection of the dependent and also independent variables. The goodness of fit (Adj R2) is used to quantify the model's capacity to explain the independent variables (Ghozali, 2019).

3.4. Variables and Measurements

The variables and measurements used in the study intend to control the correlation of the independent variables and also the control variables on the dependent variable, each of which is described as follows:

The Effect of Credit Risk Management on Financial Performance in Indonesian Banking

Table 1. Identification and Measurement of Variables

Variable Type	Variable Name	Proxy	Symbol	Definition of Operational Variables	Reference
Variabel Dependent	*Financial Performance*	*Return on Asset*	ROA	$\dfrac{Net\ Income}{Total\ Assets}$	(Saadaoui & Ben Salah, 2022)
		Return on Equity	ROE	$\dfrac{Net\ Income}{Equity}$	(Saadaoui & Ben Salah, 2022)
Variabel Independent	*Credit Risk Management*	*Capital Adiquation Ratio*	CAR	$\dfrac{Total\ Capital}{Total\ Assets}$	(A. Zaidanin et al., 2021)
		Non Performing Loan Ratio	NPLR	$\dfrac{Non\ Performing\ Loan}{Total\ Loan}$	(A. Zaidanin et al., 2021)
		Loan to Deposit Ratio	LDR	$\dfrac{Total\ Loans\ \&\ Advance}{Total\ Deposits}$	(A. Zaidanin et al., 2021)
		Net Interest Margin	NIM	$NIM = \dfrac{pendapatan\ bunga\ bersih}{rata-rata\ aktiva\ produktif} \times 100\%$	(A. Zaidanin et al., 2021)
Variabel Control	*Bank Size*	*Ukuran Bank*	BS	Natural Logaritma Total Asset	(Chhetri, 2021)

IV. RESULTS AND DISCUSSION

4.1. Research result

4.1.1. Model Suitability Test Results

After testing the panel data regression model selection, the chosen model is the random effect model, and with the chow test's result, it can be known that the probability of chi-square is 0.0000 0.05, it can be summed up that the fixed effect model is claimed to be better than it. As a result, the Hausman test is used as a follow-up exam. Because the chi-square probability in model 1 (ROA) is 0.2725 > 0.05 and the chi-square probability in model 2 (ROE) is 0.6115 > 0.05, it may be deduced that the random effect model would be chosen rather than the fixed effect model. The final model selection test is the lagrange multiplier test, which shows a value of Breusch-Pagan cross-section is shown 0.0348 0.05 in model 1 (ROA) and 0.0359 0.05 in model 2 (ROE), indicating that the random effect model is proper to utilize.

The data processing findings show that the Prob (F-Statistic) in model 1 has a value of 0.0000 0.05. It is known that the whole independent variables give such a imiportant impact toward dependent variable ROA at the same time, and the value of the Prob (F-Statistic) in model 2 is 0.0001 0.05, it is claimed that the whole independent variables give such a imiportant effect on the dependent variable ROE at the same time. The Adjusted R-Squared value calculated in model 1 is 0.1295 or 12.95%, indicating that the effect of CAR, LDR, NPLR, NIM, and BS on ROA is 12.95%, Other variables outside the model account for the remaining 87.05%, and the Adjusted R-Squared value in model 2 is 0.1170, or 11.70%. Shows that CAR, NPLR, LDR, NIM, and BS have an 11.70% effect on ROE, whereas other variables outside the model described the lasting 88.30%.

4.1.2. Results of Descriptive Statistical Analysis

The findings of the descriptive analysis are provided in the table below based on the panel data regression test using the random effect model:

Table 2. Results of Descriptive Statistical Analysis

Variable	Obs	Mean	Max	Min	Std. Dev
LONG	160	0.005062	0.041398	-0.180363	0.023213
ROE	160	0.025952	0.209358	-1.229.264	0.146517
CAR	160	0.168939	0.385543	0.063498	0.052712
NPLR	160	0.031538	0.157500	0.000000	0.021397
LDR	160	1.199.133	2.784.152	1.009.636	0.221169
NIM	160	0.048235	0.274825	-0.039229	0.031159

BS	160	1.800.351	2.126.885	-0.039229	1.645.258

Source: Output E-views 12

According to the results of the descriptive statistical data table above, displays like:

- ROA variable in banking sector companies in Indonesia gives a middle value of 0.005062, a largest value of 0.041398, a smallest value of -0.180363, and value of a Standard Deviation 0.023213.
- The ROE variable in banking sector companies in Indonesia has a middle value of 0.025952, a largest value of 0.209358, a smallest value of -1,229,264, and a value of Standard Deviation 0.146517.
- The CAR variable in banking sector companies in Indonesia has a middle value of 0.168939, a largest value of 0.385543, a smallest value of 0.063498, and a Standard Deviation value of 0.052712.
- The NPLR variable in banking sector companies in Indonesia has a middle value of 0.031538, a largest value of 0.157500, a smallest value of 0.000000, and a Standard Deviation value of 0.021397.
- The LDR variable in banking sector companies in Indonesia has a middle value of 1,199,133, a largest value of 2,784,152, a smallest value of 1,009,636, and a value of Standard Deviation 0.221169.
- The NIM variable in banking sector companies in Indonesia has a middle value of 2,126,885, a largest value of 0.274825, a smallest value of -0.039229, and a Standard Deviation value of 0.031159.
- The BS variable in banking sector companies in Indonesia has a middle value of 1,800,351, a largest value of 0.274825, while a smallest value of -0.039229, and a value of Standard Deviation 1,645,258

4.1.3. Results of Multiple Regression Analysis

According to the variables used and the random effect model selected in this research, the multiple regression equation model is obtained such as:

Regression Equation for Model 1:

ROA_{it} = -0.081655 + 0.044790 CAR_{it} – 0.162718 $NPLR_{it}$ + 0.000912 LDR_{it} +0.054095 NIM_{it} + 0.004476 BS_{it}

Regression Equation for Model 2:

ROE_{it} = -0.481924 + 0.217737 CAR_{it} -1.171911 $NPLR_{it}$ -0.025463 LDR_{it} + 0.109356 NIM_{it} + 0.029623 BS_{it}.

The T test results based on the equation mentioned previously are as follows:

Table 3. **Results of Regression Analysis Model 1**

Variables	Coefficient	Prob.	Prob(One-Tailed)	Hypothesis	Conclusion
C	-0.081655	0.0043	0.0022		
CAR	0.044790	0.2324	0.1162	Ha Rejected	No effect
NPLR	-0.162718	0.0283	0.0142	Ha Accepted	Significant Negative
LDR	0.000912	0.8775	0.4388	Ha Rejected	No effect
NIM	0.054095	0.2656	0.1328	Ha Rejected	No effect
BS	0.004476	0.0013	0.0007	Ha Accepted	Significant Positive

Source: Output E-views 12

Table 4. **Results of Regression Analysis Model 2**

Variables	Coefficient	Prob.	Prob (One-Tailed)	Hypothesis	Conclusion
C	-0.481924	0.0099	0.0050		
CAR	0.217737	0.3356	0.1678	Ha Rejected	No effect
NPLR	-1.171911	0.0011	0.0006	Ha Accepted	Significant Negative
LDR	-0.025463	0.5470	0.2735	Ha Rejected	No effect
NIM	0.109356	0.7461	0.3731	Ha Rejected	No effect
BS	0.029623	0.0010	0.0005	Ha Accepted	Significant Positive

Source: Output E-views 12

4.2. Discussion

4.2.1. The Effect of CAR on Financial Performance as measured by ROA and ROE

According to the analysis results in Table 2, there is no influence of the Credit Risk Management variable as assessed by CAR on Financial Performance as evaluated by ROA, through a probability value of 0.2324 and value of a coefficient is 0.044790. This finding indicates that a 1% improve in CAR yields a 0.044% rise in ROA, although it is not statistically significant. This is similar with the findings of Zaidanin et al., (2021).'s study, which revealed that the CAR ratio did not give any significant influence toward financial performance of UAE Commercial Banks as evaluated by ROA. The current CAR ratio may not have a significant influence toward bank's financial performance; however, if the ratio continues to rise, there is a possibility of a negative or positive influence

toward bank's financial performance over time; this depends on the quality and use of assets, as well as the bank's ability to optimize credit risk.

4.2.2. **The Effect of NPLR on Financial Performance as measured by ROA and ROE**
According to the result of the above-mentioned analysis, credit risk management factors as evaluated by NPLR have a negative and also significant inflluence toward financial performance as measured by ROA, that has probability value of 0.0283 and a coefficient of -0.162718. it can be known that lowering the NPLR raises the return on investment and also vice versa. It also demonstrates that a 1% rise in non-performing loans reduces (ROA) by 0.0142%, implying that the higher the NPLR, the lower the bank's profitability. This is congruent with the findings of Zaidanin et al., (2021)) .'s study, which found that the NPLR ratio did not give any negative and also significant influence toward financial performance of UAE Commercial Banks as evaluated by ROA.

4.2.3. **The Effect of LDR on Financial Performance as measured by ROA and ROE**
According to the result shown in the table 3, there is no shown any influence of the Credit Risk Management as evaluated by LDR and Financial Performance as measured by ROA, with a probability value of 0.8775 and also a coefficient of 0.000912. The findings of this study are suppored by Zaidanin et al., (2021)), who found that the loan-to-deposit ratio had no statistical influence on financial performance (ROA). However, the result becomes contradict with the findings of (Olugboyega et al., 2019) and (Widyastuti et al., 2021), who found that LDR has a negative and significant connection with ROA. This is reinforced by the findings of a descriptive analysis on banks, which, as shown by the bigger financial gap value, tend to lose reliable and inexpensive funds, forcing them to rely on liquid assets to compensate and meet funding needs. This is demonstrated by Indonesia's relatively high mean LDR and its minor impact on bank profitability

4.2.4. **The Effect of NIM on Financial Performance as measured by ROA and ROE**
According to the results in table 3, there is no connection between the CRM variable as assessed by NIM and Financial Performance as defined by ROA, then value of probability shown is 0.2656 and also coefficient of 0.054095. This demonstrates that a 1% rise in NIM results in a 0.054% increase in ROA, however this is not statistically significant. This contradicts the result of the results. According to the results of Ali, M. & Roosaleh (2017), the Net Interest Margin gives partially favorable and also considerable influence toward financial presentation. One component of profit generation is net interest, which is calculated as the difference of interest revenue and interest costs. If a result, as net interest income rises, so will profits. The increase in income suggests that financial presentation is improved.

4.2.5. **The Effect of Bank Size on Financial Performance as measured by ROA and ROE**
According to the results of the analysis, there is a positive and imposrtant impact of the control variable Bank Size on Financial Performance as assessed by ROA, it has value of probability 0.0013 and also a coefficient of 0.004476. The result support the findings of Prem (Olugboyega et al., 2019), who found that a larger bank size had a beneficial influence on ROA, ROE, and NIM.

V. CONCLUSION AND IMPLICATIONS
V.1. Conclusion
The research's purpose is to look at the influence of credit risk management toward financial performance in Indonesian banks between 2017 and 2021, as measured by financial ratios such as credit ratios, liquidity ratios, operational expense ratios, capital adequacy ratios, and bank size ratios. Based on the findings, it is possible to conclude that credit risk management as measured by CAR did not give any influence toward financial presentation as assesed by ROA and ROE, whereas credit risk management as measured by Non-Performing Loans (NPLR) has a negative and significant effect on financial performance as assesed by ROA and ROE. Credit Risk Management as scored by Loan to Deposit Ratio (LDR) has no effect on financial presentation as measured by ROA and ROE, Net Interest Margin (NIM) did not give any influence toward financial presentation as assesed by ROA and ROE, and Bank Size (BS) gives such a positive and also important influence toward financial presentation as measured by ROA and ROE.
V.2. Implications
1. For Managers
This research is able to provide implications for banking institutions, including for risk management actors in the banking world, this research can provide knowledge about matters that need to be considered in managing bank management. With this research, bank managers can control banking risk activities in accordance with current market conditions and maximize banking financial performance by controlling the value of financial ratios that can affect financial performance.

2. For Investors
The investors can also use this research to monitor bank financial performance, particularly those connected to profitability. Investors are hope to see banking management to invest capital to yield a high rate of return by selecting a bank with a high NPLR ratio, which has a negative effect on ROA and ROE.

The Effect of Credit Risk Management on Financial Performance in Indonesian Banking

REFRENCES

1) Abbas, F., Iqbal, S., & Aziz, B. (2019). The impact of bank capital, bank liquidity and credit risk on profitability in postcrisis period: A comparative study of US and Asia. *Cogent Economics and Finance*, *7*(1). https://doi.org/https://doi.org/10.1080/23322039.2019.1605683

2) Ahmad, M. (2017). Kualitas aset, pendapatan non-bunga, dan profitabilitas bank: Bukti dari bank India. *Pemodelan Ekonomi*, *63*, 1–14. https://doi.org/http://dx.doi.org/10.1016/j.ecommod.2017.01.016

3) Al-Khatib, Hazeem B dan Al-Horani, A. (2012). Predicting Financial Distress of Public Companie Listed in Amman Stock Exchange. *European Sciencitific Jurnal*, *8*(15).

4) al Zaidanin, J. (2020). A Study on Financial Performance of the Jordanian Commercial Banks using the CAMEL Model and Panel Data Approach. *International Journal of Finance & Banking Studies*, *9*(4), 111–130. https://doi.org/https://doi.org/10.20525/ijfbs.v9i4.978

5) Ali, M., & Roosaleh, L. (2017). Pengaruh Net Interest Margin (NIM), Biaya Operasional terhadap Pendapatan Operasional (BOPO), Loan to Deposit Ratio (LDR) dan Non Performing Loan (NPL) terhadap Return On Assets (ROA). *Jurnal Riset Akuntansi Dan Keuangan*, *5*(2), 77–92.

6) Bruni, ME, Beraldi, P., & Iazzolino, G. (2014). Keputusan pinjaman di bawah ketidakpastian: Pendekatan DEA. *Jurnal Riset Produksi Internasional*, *52*(3), 766–775.

7) Chhetri, G. R. (2021). Effect of Credit Risk Management on Financial Performance of Nepalese Commercial Banks. *Journal of Balkumari College*.

8) Dendawijaya, L. (2003). *Manajemen Perbankan* (2nd ed.). Ghalia Indonesia.

9) Dietrich, A., & Wanzenried, G. (2014). Faktor penentu profitabilitas perbankan komersial di menengah ke bawah dan negara berpenghasilan tinggi. *Tinjauan Triwulan Ekonomi Dan Keuangan*, *54*, 337–354. https://doi.org/http://dx.doi.org/10.1016/j.qref.2014.03.001

10) Eitan, G. N., & Bani-Khalid, T. O. (2019). Credit Risk And Financial Performance Of The Jordanian Commercial Banks: A Panel Data Analysis. *Academy of Accounting and Financial Studies Journal*, *23*(5).

11) Fang, J., Lau, CM, Lu, Z., Tan, Y., & Zhang, H. (2019). Kinerja bank di Cina: Perspektif dari bank efisiensi, pengambilan risiko, dan persaingan pasar. *Jurnal Keuangan Pasifik-Basin*, *56*, 290–309. https://doi.org/http://dx.doi.org/10.1016/j.pacfin.2019.06.011

12) Ghozali, I. (2019). *Aplikasi Analisis Multivariete denngan Program IBM SPSS 23* (8th ed.). Badan Penerbit UNDIP.

13) Hamza, S. M. (2017). Impact of Credit Risk Management on Banks Performance: A Case Study in Pakistan Banks. *European Journal of Business and Management*, *9*(1), 57–64.

14) Kasmir. (2010). *Dasar-dasar Perbankan*. PT. Raja Grafindo Persada.

15) Koroleva, E., Jigeer, S., & Skhvediani, A. (2021). *Determinants Affecting Profitability of State-Owned Commercial Banks : Case Study of China.* https://doi.org/https://doi.org/10.3390/risks9080150

16) Munangi, E., & Sibindi, A. (2020). *AN EMPIRICAL ANALYSIS OF THE IMPACT OF CREDIT RISK ON THE FINANCIAL PERFORMANCE.*

17) Olugboyega, K. S., Babatunji, A. S., Jayeola, O., & Tobi, B. A. (2019). Effect of Credit Risk Management on Financial Performance of Nigerian Listed Deposit Money Banks. *Scholedge International Journal of Business Policy & Governance*, *5*(6), 53–62. https://doi.org/https://doi.org/10.19085/journal.sijbpg050601

18) Saadaoui, A., & Ben Salah, O. (2022). The moderating effect of financial stability on the CSR and bank performance. *UroMed Journal of Business*. https://doi.org/https://doi.org/10.1108/EMJB-10-2021-0163

19) Saleh, I., & Abu Afifa, M. (2020). The effect of credit risk, liquidity risk and bank capital on bank profitability: Evidence from an emerging market. *Cogent Economics and Finance*, *8*(1). https://doi.org/https://doi.org/10.1080/23322039.2020.1814509

20) Sinha, P., & Shrama, S. (2016). Penentu keuntungan bank dan persistensinya di bank-bank India: Sebuah studi di a kerangka data panel dinamis. *Jurnal Internasional Rekayasa Dan Manajemen Jaminan Sistem*, *7*, 35–46. https://doi.org/10.1007/s13198-015-0388-9

21) Tassew, A. W., & Hailu, A. A. (2019). The Effect of Risk Management on Financial Performance of Commercial Banks in Ethiopia. *Financial Studies*, 25–38.

22) Widyastuti, H., Andriyani, K. A., & Leon, F. M. (2021). Dampak Manajemen Risiko Pada Kinerja Keuangan Bank Umum Konvensional Di Indonesia. *Jurnal Magister Akuntansi Trisakti*, *8*(1), 29. https://doi.org/https://doi.org/10.25105/jmat.v8i1.8148

23) Worku, A., & Asmare, A. (2019). *The effect of risk management on financial performance of commercial banks in Ethiopia*.

24) Yanuardi, A., Hadiwidjojo, D., & S. (2014). Faktor Determinan atas Profitabilitas Perbankan yang Terdaftar di Bursa Efek Indonesia. Jurnal Akuntansi Multiparadigma, 5(2), 170–34.

25) Zaidanin, A., Zaidanin, A., Salem, J., & Jamil, O. (2021). *Research in Business & Social Science The impact of credit risk management on the financial performance of United Arab Emirates commercial banks*. *10*(3), 303–319.

Appendix 1. List Of Companies and Financial Reports Listed On The Indonesian Stock Exchange

Banking Sector		
No	**Issuer Code**	**Company Name**
1	BBCA	PT Bank Central Asia Tbk
2	BBRI	PT Bank Rakyat Indonesia Tbk
3	BBNI	PT. Bank Negara Indonesia Tbk
4	BMRI	PT Bank Mandiri Tbk
5	BRIS	PT Bank Syariah Indonesia Tbk
6	BBTN	PT Bank Tabungan Negara Tbk
7	AGRO	PT Bank Raya Indonesia Tbk
8	ARTO	PT Bank Jago Tbk
9	BABP	PT Bank MNC Internasional Tbk
10	BNGA	PT Bank CIMB Niaga Tbk
11	BDMN	PT Bank Danamon Tbk
12	BNLI	PT Bank Permata Tbk
13	BNBA	PT Bank Bumi Arta Tbk
14	BNII	PT Bank Maybank Indonesia Tbk
15	BTPN	PT Bank BTPN Tbk
16	BVIC	PT Bank Victoria Intl. Tbk
17	INPC	PT Bank Artha Graha Internasional Tbk
18	AMAR	PT Bank Amar Indonesia Tbk
19	MEGA	PT Bank Mega Tbk
20	NISP	PT Bank OCBC NISP Tbk
21	AGRS	PT Bank IBK Indonesia Tbk
22	BSIM	PT Bank Sinarmas Tbk
23	DNAR	PT Bank Oke Indonesia Tbk
24	BINA	PT Bank Ina Perdana Tbk
25	NOBU	PT Bank Nationalnobu Tbk
26	MAYA	PT Bank Mayapada Tbk
27	BMAS	PT Bank Maspion Indonesia Tbk
28	MASB	PT bank Multiarta Sentosa Tbk
29	BCIC	PT Bank JTrust Indonesia Tbk
30	BBSI	PT Bank Bisnis Internasional Tbk
31	SDRA	PT Bank Woori Saudara Indonesia 1906 Tbk
32	BBMD	T Bank Mestika Dharma Tbk
33	BSWD	PT Bank of India Indonesia Tbk