# The Effect of Credit Risk and Board Diversity on the Performance of Banks Listed on the Indonesian Stock Exchange

# Adhyatma Ndaru Suhardono<sup>1</sup>, Asnita Simamora<sup>2\*</sup>, JR. Dwi Mas Sukma Agung <sup>3</sup> Henny Setyo Lestari<sup>4</sup>, Farah Margaretha Leon<sup>5</sup>

1,2,3,4,5 Universitas Trisakti, Jakarta, Indonesia

Corresponding Author E-mail: asnitasimamora@gmail.com

Received Revised Accepted Published

September 12, 2023 October 18, 2023 November 24, 2023 December 10, 2023

Abstract: This research aims to analyze the influence of several factors on banking performance in Indonesia, with a focus on Return on Assets (ROA). The factors studied include the Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL) ratio, Expected Credit Loss Provision (CKPN) ratio, Earning Ability (BOPO), Loan to Deposit Ratio (LDR), and Board Diversity (BD). Data was taken from banking companies listed on the Indonesia Stock Exchange in the period 2018 to 2022. The analysis method uses a linear regression test with a Fixed Effect Model. The research results show that the NPL ratio, CKPN ratio, BOPO, LDR, and BD have a significant influence on banking performance, while CAR does not have a significant influence. These results provide important information for investors and managers in managing banks, as well as being the basis for further research in identifying other factors that influence banking performance in Indonesia.

**Keywords:** Banking Performance, Return on Assets, Capital Adequacy Ratio, Non-Performing Loans, Earning Ability, Loan to Deposit Ratio.

To cite this Suhardono, A. N., Simamora, A., & Agung JR., D., M., S. (2023). The article Effect of Credit Risk and Board Diversity on the Performance of Banks (APA Listed on the Indonesian Stock Exchange. *IJIBE (International Journal of* 

Style): Islamic Business Ethics), 8 (2), 144-159.

http://dx.doi.org/10.30659/ijibe.8.2.144-159

# INTRODUCTION

The banking sector is considered the backbone of the financial system and plays a critical role in achieving economic growth and expansion (Kurniasari et al., 2021). An important function of banking is collecting, mobilizing, allocating, and controlling other non-financial companies (Martínez-Malvar & Baselga-Pascual, 2020). Banks have an important role as catalysts for stimulating financial system stability, productivity, and overall economic growth by channeling loans to fund investments made (Rahman & Haron, 2019; Hunjra et al., 2020; Mutamimah & Saputri, 2023). This must be done with full supervision and responsibility from banking business actors because errors in managing assets and loans from the banking sector can cause shocks to a country's economic and political situation and can even lead to a crisis if it occurs systematically. Risk in banking in achieving goals involves uncertainty and opportunities for profit from existing threats (Al-Husainy & Jadah, 2021). An increase



in non-performing loans in the banking sector characterized the monetary crisis. This can be seen from the ratio of non-performing loans compared to assets and capital owned by banks. Indonesian banking statistical data according to the Financial Services Authority (*Otoritas Jasa Keuangan*/OJK) shows an increase in non-performing loans for the 2020–2022 period, which reached more than 3% of the total value of loans disbursed; however, this condition has started to decline in 2023 to 2.52% in May 2023. Loan to Deposit Ratio figures also show improvement after the pandemic, where the 2020–2022 period is below 70% and continues to show improvement. Based on OJK data, as of February 2023, the Loan to Deposit ratio has reached 79.8%.

Banks that have large and medium capital tend to tighten the level of lending compared to banks that have a smaller capital structure (Salami et al., 2022). This is influenced by the bank's need to make interest payments to customers. Banks with high levels of funding liquidity will increase risk-taking behavior (Martínez-Malvar & Baselga-Pascual, 2020). This will certainly affect banks' ability to increase income, which has implications for their level of performance (ROA). In accordance with the aim of running a business, banks are required to be able to provide added value to shareholders by providing returns on capital in accordance with business profits. To be able to do this, banks are required to make a profit from the business activities carried out. In the process of carrying out business activities, risks arise in banking. Banks must ensure that customer funds are protected, avoid bank financial crises and increase bank profitability (Fadun & Silwimba, 2023). A loan becomes non-performing credit if the principal amount and interest have not been paid on the due date and cannot be anticipated in the future. Non-performing loans are one of the main indicators for measuring credit risk that affects the banking system in a country. Things that can cause a high number of non-performing loans are weak credit granting procedures, lack of competence on the part of credit risk assessors, financial statement fraud committed by prospective debtors and lack of supervision of debtors. The amount of nonperforming loans in the banking industry is also influenced by local and global economic situations. Because non-performing loans were seen as a failure and crisis of the banking sector following the global financial crisis, they were primarily overseen by the government and banking management (Chalid & Bella, 2021, Khan et al., 2020).

The high number of non-performing loans can directly affect overall financial performance (Prativi et al., 2021; Mushafiq et al., 2023). Therefore, examining the risk of non-performing loans to the banking system can be done by observing profitability, comparing public fund savings and credit distribution, and capital adequacy to cover non-performing loans from the banking sector. Banking authorities must always maintain money market stability; one way this can be done is by controlling competitive interest rates (Leon, 2023). Banks should increase the number of deposits and investments made in order to maintain liquidity and increase banking income while still implementing the rules strictly regulated by the central bank (Arifian & Noor, 2022; Akther et al., 2023). This was done to prevent a financial crisis in the

country. Banks are obligated to create and set aside assets to offset the risk of losses on credit extended to third parties in order to prepare for the possibility of bankruptcy owing to non-performing loans. The bank must calculate the Allowance for Impairment Losses (*Cadangan Kecukupan Penurunan Nilai*/CKPN) in order to mitigate the risk of credit losses resulting from the counterparty's potential failure to fulfill its maturing obligations or from the borrower's inability to repay all or part of his debt. These regulations are governed by PSAK 50 and 55 in Indonesian banking regulations. The findings of each bank's debtor credit evaluations are used to determine the amount of CKPN. A bank must establish a fund that will be utilized as a reserve for the credit if it determines that there is objective evidence that the debtor's credit is impaired. Accounting information covering user groups, including choices about the use of capital and profits, is prepared and presented in banking financial reports (Salami & Uthman, 2023).

The number of board of directors and board diversity will influence the company's risk style and business innovation, which will influence banking revenues (Makkonen, 2022). However, there are also those who state that there is no significant influence between the number of female members of the board of directors and the company's cost of debt (Muhammad et al., 2021; Al Muniro et al., 2023). There has not been much research on the influence of the gender composition of the board of directors on company performance, but it is estimated that this will influence the company's style in taking business risks. Based on the background above and previous research, the author is interested in conducting research again in Indonesia because previous research conducted in Nigeria shows that banking risk management has an influence on non-performing loans and estimated losses on non-performing loans. Therefore, this research aims to examine the influence of credit risk and board diversity on the performance of banks listed on the Indonesian Stock Exchange. In accordance with research by Makkonen (2022), the novelty of this research is the addition of variables Capital Adequacy Ratio (CAR), the ratio of profit to total assets (earning ability), the ratio of debt to customer deposits (liquidity management) as well as the gender diversity of the board of directors (board diversity).

# LITERATURE REVIEW

A bank's ability to successfully perform its duties as a financial intermediary is what determines its overall performance. Consequently, banks need to enhance the caliber of their operations in addition to attempting to uphold public confidence (Nguyen, 2022). The foundation for determining whether a bank has conducted management operations in compliance with applicable legislation and sound banking principles is bank performance. Through the use of financial intermediaries, commercial banks can profitably and sustainably transfer money from the surplus to the deficit sectors. Any nation must prioritize financial stability. Hence, financial institutions need to be well-managed in terms of decision-making. The rate at which loans are created in an economy has a big impact on how productively a nation operates. Commercial banks' primary sources of revenue are advances and loan

interest (Birhanu et al., 2021). Credit requirements for borrowers are a direct cause of banks' financial issues. Reducing the impact of risk on commercial banks and other business organizations is the primary objective of credit risk management (Bouteille & Coogan-Pushner, 2021; Fadun & Silwimba, 2023). An efficient approach to managing credit risk is crucial for commercial banks. The significance of commercial banks in facilitating the mobilization of financial resources for investment through the provision of credit facilities, such as loans, to investors and enterprises serves as the driving force behind this study. Commercial banks get the majority of their revenue from interest on loans and advances. By offering lending facilities, banks expose themselves to a number of hazards, including credit and liquidity concerns (Bolarinwa et al., 2019). Better returns on investment are the shareholders' primary concern when it comes to controlling a corporation. The company's shareholders elect a board of directors, and each member appoints managers capable of overseeing the profitable operation of the business while maintaining ethical standards. Women are still underrepresented on corporate boards of directors, as has been seen thus far.

The effect of credit risk management on commercial money or deposit banks' financial performance in Nigeria has been the subject of numerous studies, however, the results of these studies differ. Numerous research conclusions demonstrate that credit risk management improves deposit money banks' financial performance in Nigeria (Nwude & Okeke, 2018). According to Echobu & Philomena (2019), nonperforming loans and falling credit costs hurt banks' bottom lines. Credit risk management does not significantly impact the financial performance of money savings banks in Nigeria (Syah, 2018; Adamu, 2022). The influence of credit risk management, thus, has a favorable and negligible effect on the financial performance of commercial money or deposit banks in Nigeria (Daboh & Duramany-Lakkoh, 2023). An increasing number of studies also demonstrate the beneficial effects of gender diversity on a board and on an organization's financial and operational performance. According to research on board diversity conducted by Milojević et al. (2023), the presence of women on the board of directors did not significantly affect bank profitability. Board gender diversity, according to Bogdan et al. (2023), has shown the beneficial impact of female leader attributes on business development plans and, as a result, on firm success.

The Capital Adequacy Ratio (CAR) measures a bank's capacity to use its capital adequacy to offset the decrease in assets resulting from bank losses from risky assets. In particular, the borrowing community's faith is upheld by the usage of bank capital. Banks depend heavily on public trust in order to raise the capital they need for operating expenses. This indicates that the bank will continue to invest in fixed assets and maintain its liquidity position using the allowed capital. A bank's ability to safeguard its clients is better the greater its CAR achievement. This may boost consumer confidence in the bank, which in turn may boost earnings for the business. Bank management must raise capital because a bank that has enough capital may safely expand its operations. The greater the CAR, the higher the ROA since the bank will make more money. Daboh & Duramany-Lakkoh's (2023) research indicates that the Capital Adequacy Ratio or CAR positively and significantly impacts Return on Assets (ROA). Finding the same outcomes—that is, that the Capital Adequacy Ratio, or CAR,

has a positive and significant impact on Return on Assets (ROA)—as well as the conclusion that CAR has a positive and large impact on ROA (Budiarta et al., 2022; Budiman & Masytah, 2023).

H1: Capital Adequacy Ratio (CAR) has a significant effect on Return on Assets (ROA)

Healthy and ongoing profitability is essential to the financial system's stability. When the bank's solvency is high, low profitability makes it harder for it to resist adverse shocks. Thus, commercial banks need to reduce their credit risk, including non-performing loans. Non-performing loans serve as a barometer for the suitability and efficacy of bank credit risk management (Olalekan et al., 2018; Tho'in, 2019). Return on Assets (ROA) is negatively and significantly impacted by Non-Performing Loans (NPL) (Fadun & Silwimba, 2023). According to Echobu & Philomena (2019), performing loans (NPL) have a negative impact on a bank's financial performance. Return on Assets (ROA) is significantly impacted negatively by Non-Performing Loans (NPL) (Pujiati et al., 2020). Non-performing loans (NPL) have a major negative influence on Return on Assets (ROA) (Karamoy & Tulung, 2020; Hidayat et al., 2021; Setiawan, 2021). Thus, commercial banks need to reduce their credit risk, including non-performing loans. Non-performing loans serve as a barometer for the suitability and efficacy of bank credit risk management (Akbar, 2023; Uswah & Arif, 2024).

H2: Non-Performing Loans (NPL) has a significant effect on Return on Assets (ROA)

Expected Credit Loss Provision (ECL) is a reserve that must be established by banks in order to provide reserves for asset losses. It has a function as a reserve for losses for possible problem loans and must be sufficient so that asset values become more realistic so that income reports do not depict income that is greater than it should be (overstated). The higher or larger the ECL at a bank, the better it is for the bank because it already has reserves in case credit risk occurs. The customer is unable to pay part or all of the obligations owed to the bank based on a previously determined promise. The bank will create reserves to avoid losses if the receivables cannot be collected so as not to cause problematic loans or bad credit. There are several studies related to Expected Credit Loss Provision (ECL) on Return on Assets (ROA), including showing that Expected Credit Loss Provision (ECL) has a positive and significant effect on Return on Assets (ROA) (Fadun & Silwimba, 2023). Zalukhu (2023) asserts that Return on Assets (ROA) is significantly impacted negatively by Expected Credit Loss Provision (ECL). Expected Credit Loss Provision (ECL) likewise has a negative and considerable impact on Return on Assets (ROA) (Aryanti et al., 2023).

H3: Expected Credit Loss Provision (ECL) has a significant effect on Return on Assets (ROA)

Banks are more resilient to future shocks if they have a higher earning capacity. Better bank performance is correlated with a higher earning capacity. Foreign commercial banks operate well when their operational profit to total assets ratio and



Return on Assets (ROA) ratio are higher (Kassem & Sakr, 2018). Earning Ability (ERA) has a favorable and considerable impact on Return on Assets (ROA) (Daboh & Duramany-Lakkoh, 2023).

H4: Earning Ability (ERA) has a significant effect on Return on Assets (ROA)

The Loan to Deposit Ratio (LDR) is a ratio that is used to determine how much credit is extended relative to the amount of public and private capital that is utilized. LDR is the ratio of loans to money received by the bank in question from third parties. Profits will be impacted by the LDR's size through the creation of credit. Deni Sunaryo (2020) demonstrates that there is a substantial and adverse relationship between the Loan to Deposit Ratio (LDR) and Return on Assets (ROA). Subur & Anwar's (2021) and Setiarini & Yudiana, 2023) research indicates that return on assets (ROA) is negatively impacted significantly by loan deposit ratio (LDR). Loan Deposit Ratio (LDR) has a positive and considerable impact on Return on Assets (ROA) (Budiarta et al., 2022).

H5: Loan to Deposit Ratio (LDR) has a significant effect on Return on Assets (ROA)

Gender disparities on corporate boards are one aspect of board diversity. The idea that gender-diverse corporate boards can increase their efficacy is becoming more and more popular. According to research by Zhu et al. (2022), the primary component of agency theory that supports the inclusion of a board of directors in monitoring and control is a gender-diversified board. Due to various cultural factors, gender diversity on the board lessens agency issues. Return on Assets (ROA) is negatively and significantly impacted by board diversity. Return on Assets (ROA) is negatively and significantly impacted by board diversity.

H6: Board Diversity has a significant effect on Return on Assets (ROA)

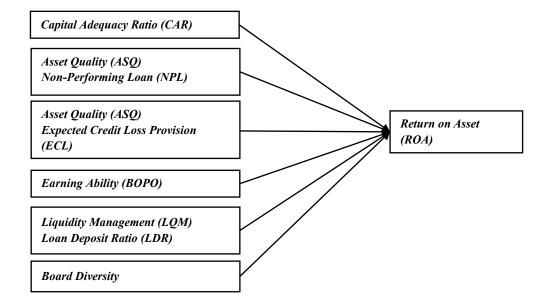


Figure 1: Conceptual Framework

# **METHOD**

Hypothesis testing was used in the investigation. The dependent variable and the independent variable are the variables under study, and the purpose of this test is to determine their cause-and-effect relationship. The capital adequacy ratio (CAR), nonperforming loans (NPL), adequate reserve for impairment value (CKPN), earning ability, loan to deposit ratio (LDR), and board diversity are the independent variables (X) that are employed. The dependent variable (Y) in this analysis is ROA. The type of data used in this research is secondary data, which can be obtained from the Indonesian Stock Exchange or the website of the Financial Services Authority (Otoritas Jasa Keuangan/OJK) regulator as the supervisor of the banking industry sector. The data method used in this research is panel data, a combination of crosssectional and time series data on banks in Indonesia listed on the Indonesia Stock Exchange in the period 2018 to 2022. Indirect data collection, or secondary data collection, is the method used in this study. Annual financial reports, annual reports, and reports on banks registered on the Indonesia Stock Exchange's official website (www.idx.co.id), bank websites that are the subject of the study for the years 2018 to 2022, and the Financial Services Authority website, which is the regulator that oversees the banking industry, are all downloaded.

A purposive sample strategy is used in this study's sampling technique. This approach was chosen after careful examination of a number of goals. The banking sector companies that are listed on the Indonesia Stock Exchange between 2018 and 2022 and do not experience delisting during a specific period comprise the population used as research samples. The financial reports are presented in Rupiah, and Table 1 contains specifics about sampling.

Table 1: Sampling Criteria

Information	Amount
Banks listed on the Indonesia Stock Exchange in the period 2018 to 2022	47
Islamic Bank	(4)
Incomplete Financial Report Sampling Criteria	(9)
Number of banks to be sampled	34

This study employs the panel data regression method for data analysis. The goal is to investigate the relationship between bank performance as measured by ROA achievements in the Indonesian banking sector that are listed on the Indonesia Stock Exchange from 2018 to 2022, and the following factors: Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Adequate Reserve for Impairment Value (CKPN), Earning Ability, Loan to Deposit Ratio (LDR), and Board Diversity. E-views 12 software is then used to process and test the supplied data.

## **RESULTS**

Secondary data were employed in this study. This secondary data came from Indonesian financial reports and annual banking reports from 2018 to 2022 that were sourced from the bank's official website and the official IDX website, www.idx.co.id. Purposive sampling is used to choose samples from the research population, which is



Indonesian banks that are listed on the Indonesia Stock Exchange between 2018 and 2022. Publish yearly reports and financial reports every year from 2018 to 2022, and don't face delisting at any point in time. It is a bank that displays financial information in Rupiah and uses a traditional financial system. Following purposive sampling, 34 banks' worth of samples were collected. Subsequently, an analysis of the 34 banks' data will be conducted to determine whether ROA, CAR, NPL, CKPN, EA (BOPO), LM, and BD are related. Panel data regression analysis was used to conduct the measurements using the E-views 12 software.

Descriptive statistics provide an explanation for the attributes of the data, which are indicated by the values of the data's minimum, maximum, mean, and standard deviation. The mean value of all the variables in the study is the average value, while the lowest and maximum values for each variable are referred to as the minimum and maximum values, respectively. The standard deviation is the distribution of study data used to illustrate each variable's homogeneity. In this study, earning capacity, debt to deposit ratio, CAR, NPL, and credit loss provision reserve ratio are the independent factors, while bank performance (ROA) is the dependent variable. Descriptive statistical results were obtained from observations utilizing data from 34 banks spanning a five-year period from 2018 to 2022.

Table 2: Sampling Criteria

	1 &						
	ROA	CAR	ASQ1 (NPL)	ASQ2 (CKPN)	EA (BOPO)	LM	BD
Mean	0.005435	0.283100	0.031106	0.038118	0.695882	0.866241	0.136576
Median	0.007000	0.221000	0.028500	0.030000	0.557000	0.848500	0.125000
Maximum	0.041000	1.699000	0.117000	0.201000	2.879000	2.245000	0.700000
Minimum	-0.181	0.069000	0.000000	0.003000	0.055000	0.124000	0.000000
Std. Dev.	0.023053	0.224824	0.019333	0.030366	0.416637	0.277429	0.119082
Skewness	-4.24985	3.468980	1.092226	2.195350	2.524941	1.186153	1.024267
Kurtosis	29.99442	18.05208	5.307810	10.24846	11.73621	7.082736	5.099606
Jarque-Bera	5673.352	1945.795	71.52622	508.7135	721.2435	157.9340	60.95096
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	0.924000	48.12700	5.288000	6.480000	118.3000	147.2610	23.21800
Sum Sq. Dev.	0.089812	8.542257	0.063164	0.155830	29.33616	13.00743	2.396500
Observations	170	170	170	170	170	170	170
Cross sections	34	34	34	34	34	34	34

Table 2 presents the findings of the descriptive analysis, which indicate that ROA has an average of 0.005435 and a standard deviation of 0.023053. The ROA ranges from -0.181 to 0.041000, the highest value. The standard deviation of CAR is 0.224824, and its average value is 0.283100. 1.699000 is the highest, and 0.069000 is the lowest CAR. The standard deviation of the ASQ1/NPL ratio is 0.019333, and its average value is 0.038118. ASQ2/CKPN has the greatest NPL ratio of 0.117000 and the lowest ratio of 1.10E-6. With a standard deviation of 0.030366, the average ASQ2 value is 0.038118. The ASQ2 values range from 0.003000 to 0.201000, which are the greatest and lowest values. The average value of earning ability (BOPO) is 0.695882,

with a standard deviation of 0.416637. In the meantime, the values for earning ability range from 0.055000 to 2.879000, respectively. The average value of liquidity management is 0.866241, and the standard deviation is 0.277429. Liquidity Management's greatest and lowest values, meanwhile, are 2.245000 and 0.124000, respectively. Board Diversification has a standard deviation of 0.119082 and an average value of 0.36576. For board diversification, the greatest and lowest values are 0.0000000 and 0.700000, respectively.

The data analysis in this work uses panel data and multiple regression tests. The Common Effect Model, Fixed Effect Model, and Random Effect Model are the three models that can be used in panel data research. Before doing a regression test, the regression model that will be used is tested. The results of the regression model test in this study were analyzed using the Fixed Effect Model. The multiple regression test is used to ascertain whether the debt to deposit ratio, earning potential, non-performing loan (NPL) ratio, capital adequacy ratio, and board diversity has an impact on the dependent variable, ROA. A regression model equation is the outcome of statistical processing using multiple regression.

$$ROA_{it} = \beta_0 + \beta_1 CAR_{it} + \beta_2 NPL_{it} + \beta_3 CKPN_{it} + \beta_4 EAR_{it} + \beta_5 LDR_{it} + \beta_6 Bod_{it}e$$

To determine the influence of the CAR, NPL, credit loss provision reserve ratio, earning ability, debt to deposit ratio, and board diversity on ROA, one can use the T-test, which measures the regression coefficient of each independent variable on the dependent variable. According to the criteria for making decisions, Ho is accepted if the probability value of t is greater than 0.05, while Ha is acceptable if the probability value of t is less than 0.05. This test was carried out based on the results of the selected test, namely the Fixed Effect Model, with the results as shown in Table 3.

Table 3: Sampling Criteria

Variables	Coefficient	Prob.			
Constanta	0.065694	0.0011			
CAR	0.008513	0.0929			
ASQ1 (NPL)	-0.157275	0.0495			
ASQ2 (CKPN)	-0.050005	0.0174			
ВОРО	-0.067301	0.0020			
LM	-0.009128	0.0374			
BD	-0.00827	0.3049			

Table 3's T Test results, which support H1: CAR Score has no discernible impact on ROA, can be understood. Since the probability value of the CAR variable is 0.0929 > 0.05, CAR has no bearing on ROA. Ha, turned down. H2: Non-performing loans have a considerable impact on ROA, as indicated by ASQ1 / Non-Performing Loan, where the non-performing loan variable has a probability value of 0.0495 < 0.05. Ha agreed. H3: ROA is significantly impacted by ASQ2 and CKPN. The ASQ2 variable's probability value is 0.0174 < 0.05, indicating a substantial impact of Bank Size on ROA. H4: BOPO has a considerable impact on ROA; this is supported by the Bank Capital variable's probability value of 0.0020 < 0.05. H5: The impact of liquidity

management on ROA is noteworthy. Liquidity Management significantly affects ROA, as indicated by the probability value of 0.0374 < 0.05 for the Liquidity Management variable. H6: There is no significant relationship between board diversity and ROA; this is supported by the board diversity variable's probability value of 0.3490 > 0.05. Ha turned down.

## DISCUSSION

The research findings indicate that there is no relationship between ROA and the capital adequacy ratio (CAR). This study yields findings different from those of Daboh & Duramany-Lakkoh's (2023) study, which found that capital affects the financial performance of the bank. The lack of a capital impact on bank performance arises from the fact that bank owners only contribute capital in the form of new funds in order to go by authority requirements requiring banks to maintain capital ratios at specific ratios. The banking industry places a high value on trust; a bank's performance is unaffected by its capital structure as long as the general public regards it as credible. After conducting a hypothesis test, it is possible to determine that the hypothesis is accepted in cases where NPL significantly improves ROA. This is in line with earlier research results from Khan et al. (2020). Bank revenue declines when the debtor's capacity to pay principal and interest declines. If preventive measures are not taken, non-performing loans (NPLs) may exacerbate the economy. This is because bank failures, particularly those of systemic banks, can damage public confidence and have detrimental effects on the banking sector overall. As a result, regulations that ensure the survival of banking operations are necessary.

Therefore, it is well recognized that the ROA variable and the CKPN variable, or ratio, have a substantial impact on total loans. 0.0174 is the probability value that results, while -0.050005 is the coefficient value. The findings of this study go counter to those of Fadun & Silwimba's (2023) research, which claims that CKPN positively affects ROA. The amount of operating profit created will be more severely eroded by the Banking Industry Sector's higher CKPN. A decline in the profit margin may have an impact on the bank's return on assets (ROA). When there is a substantial relationship between the BOPO variable and ROA, it can be determined from hypothesis testing that the hypothesis is accepted, as opposed to Cahyani et al. (2022) andSasongko & Yusnita (2023), who found a strong correlation between BOPO and ROA. The bank's operational management is more successful in cutting expenses and raising revenue when the BOPO is lower. Ultimately, higher revenue and profits can be produced via efficient bank management.

Studies indicate that Return on Assets (ROA) is significantly impacted by the Loan Deposit Ratio (LDR). The findings of this study are consistent with those of Subur & Anwar's research from 2021, which indicates that Return on Assets (ROA) is significantly and negatively impacted by the Loan Deposit Ratio (LDR). This implies that the bank's profit or profitability (ROA) will decrease if it extends more loans than it receives in cash from client deposits. Similarly, research by Sunaryo (2020) demonstrates that return on assets (ROA) is negatively impacted significantly by the loan-to-deposit ratio (LDR). Suroso (2022) states that the Loan to Deposit Ratio (LDR)

is a ratio that assesses a bank's capacity to lend money to clients based on those clients' savings levels. The total loans made by the bank divided by the total deposits the bank has received during a specific period of time yield the LDR ratio. Because the bank will borrow money from other sources to make up for the shortfall, a higher LDR ratio increases the likelihood that the bank may face increased credit risk. On the other hand, there is a greater chance that the bank will be able to lend money to more consumers if the LDR ratio is lower. Because a high LDR suggests that a bank uses more customer funds to make loans, it may be a sign of higher credit risk.

After doing a hypothesis test, it can be said that the hypothesis that states that board diversity has no bearing on return on assets (ROA) is rejected. This aligns with earlier research by Milojević et al. (2023), which found that Return on Assets (ROA) is not significantly affected by Board Diversity. The study also found that women are underrepresented on bank management boards, making it challenging to evaluate and ascertain their contribution to financial effectiveness and performance. Gender diversity among CEOs on boards of directors generates a range of perspectives and ideas that can influence decision-making and result in enhanced financial performance. Research has shown that enterprises led by women tend to have lower debt levels, smaller capital expenditures, higher levels of sustainability, and higher cash reserves. Better financial performance can arise from the increased efficiency with which female CEOs coordinate and oversee the work of lower-level personnel. However, a lack of gender diversity among CEOs can impede communication within the group, which frequently results in conflict and underwhelming financial results. Furthermore, women find it more challenging to integrate completely into corporate management boards due to the prevalence of male dominance in these roles and the fact that their work often has less bearing on financial performance. The rationale behind the lack of a statistically significant effect posits that the presence of group conflicts on the board may offset the potential benefits of women's participation in terms of innovation and creativity in decision-making.

## CONCLUSION

Based on the findings of a study done to examine how independent factors (CAR ASQ 1, ASQ 2, BOPO, LM, and BD) affected Indonesian banking performance as measured by the ROA ratio, it can be said that CAR has no appreciable impact on bank performance. A positive regression coefficient suggests that CAR has a beneficial impact on bank performance. We reject the first hypothesis, which claims that CAR affects bank performance. The NPL Ratio (SQ 1) has a big impact on how well banks perform. The negative regression coefficient suggests that the non-performing loan (NPL) ratio has a negative impact on bank performance. Acceptance of the second hypothesis is possible, according to which bank performance is impacted by the NPL ratio. A major impact on bank performance is caused by ASQ2/CKPN. A negative correlation between the CKPN ratio and bank performance is indicated by the negative regression coefficient. We can accept the third hypothesis, which is that bank performance is impacted by the CKPN ratio. BOPO has a major impact on bank performance. The fourth hypothesis suggests a negative impact of the BOPO ratio on

bank performance, which demonstrates a negative regression coefficient. The impact of the CKPN ratio on bank performance, as stated in the fourth hypothesis, can be acknowledged. On bank performance, LM (LDR Ratio) has a major impact. A negative regression coefficient suggests that LDR has a detrimental impact on bank performance. It is agreed that LDR affects bank performance, which is the sixth theory. The performance of banks is not significantly impacted by board diversity. The negative regression coefficient suggests that there is a negative relationship between board diversity and bank performance. The sixth theory, according to which board diversity affects bank performance, is disproved.

Before making an investment to get the best returns, investors should use the information from the research to assess the six criteria that affect banking performance, particularly those that are quantified in Indonesia using the ROA Ratio. The study's findings can be used by managers to guide their management of banks, particularly with regard to the independent variables—CAR, ASQ 1, ASQ 2, BOPO, LM, and BD—that have an impact on bank performance. Additionally, managers can take the required steps to enhance their performance by consulting the relationship between these variables. Based on the research that was done, there are a few restrictions. Only the impact of independent factors (CAR, ASQ 1, ASQ 2, BOPO, LM, and BD) on the dependent variable (bank performance, expressed as ROA) is covered in this study. Aside from that, the sample is restricted to Indonesian banks, particularly those that were listed between 2018 and 2022 on the Indonesia Stock Exchange. Not every registered entity can serve as a research sample because their data is incomplete. Several recommendations for further research can be made based on the study's findings and the limitations that the researchers have discussed. Using more recent data periods and other independent variables, for example, can shed light on additional factors influencing Indonesian banks' performance.

## REFERENCES

- Adamu, E. D. (2022). Effect of Credit Risk Management on Profitability of Deposit Money Banks in Nigeria. *TSU-International Journal of Accounting and Finance*, 1(2), 12-24.
- Akbar, M. (2023). Analysis of the Effect of Capital Adequacy Ratio (Car), Non-Performing Loan (Npl), and Operating Cost Operating Income (Bopo), Net Interest Margin (Nim) to Loan to Deposit Ratio (Ldr) of State-Owned Banks in Indonesia. *Journal of Social Research*, 2(5), 1591-1607.
- Akther, T., Rahman, M., & Rahman, M. M. (2023). Factors influencing commercial bank profitability in Bangladesh: a panel data approach. *Future Business Journal*, *9*(1), 66.
- Al Muniro, T. M., Purwanto, P., & Wedaswari, M. (2023). Pengaruh Jumlah Anggota Dewan Direksi Perempuan, Jumlah Anggota Dewan Komisaris Independen Terhadap Underpricing Dengan Ukuran Perusahaan Sebagai Variabel Kontrol (Studi Empiris Pada Perusahaan Yang Melakukan IPO Di BEI Periode Tahun 2016-2020). Fiscal: Jurnal Akuntansi dan Perpajakan, 1(1), 55-69.



- Al-Husainy, N. H. M., & Jadah, H. M. (2021). The effect of liquidity risk and credit risk on the bank performance: Empirical Evidence from Iraq. *IRASD Journal of economics*, 3(1), 58-67.
- Aryanti, Y., Lestari, T., & Yulianto, A. S. (2023). PSAK-71 and Firm Value: Mediating Role of Allowance for Bad Debt and Profitability. *Akuntabilitas*, *17*(2), 219-238.
- Birhanu, T., Bosho Deressa, S., Azadi, H., Viira, A. H., Van Passel, S., & Witlox, F. (2021). Determinants of commercial bank loan and advance disbursement: the case of private Ethiopian commercial banks. *International Journal of Bank Marketing*, 39(7), 1227-1247.
- Bogdan, V., Popa, D. N., Beleneşi, M., Rus, L., & Scorțe, C. M. (2023). Gender Diversity and Business Performance Nexus: A Synoptic Panorama Based on Bibliometric Network Analysis. *Sustainability*, *15*(3), 1801.
- Bolarinwa, S. T., Obembe, O. B., & Olaniyi, C. (2019). Re-examining the determinants of bank profitability in Nigeria. *Journal of Economic Studies*, 46(3), 633-651.
- Bouteille, S., & Coogan-Pushner, D. (2021). *The handbook of credit risk management: originating, assessing, and managing credit exposures.* John Wiley & Sons.
- Budiarta, I. W. (2022). Pengaruh Capital Adequacy Ratio dan Loan to Deposit Ratio terhadap Return on Asset pada Sub Sektor Perbankan yang Terdaftar di Bursa Efek Indonesia. *Jurnal Akuntansi Profesi*, 13(1), 43-51.
- Budiman, A. P., & Masytah, E. (2023). Faktor-Faktor Yang Mempengaruhi Penghindaran Pajak Pada Perusaahan Sub Sektor Farmasi Yang Terdaftar Di BEI. *Management, Accounting, Islamic Banking and Islamic Economic Journal*, 1(2), 498-509.
- Cahyani, A. D. D., Oktaviana, U. K., & Azizuddin, I. (2022). Analisis pengaruh penyaluran pembiayaan syariah dan efisiensi operasional terhadap profitabilitas bank umum syariah di Indonesia dengan Non Performing Financing (NPF) sebagai intervening. *Jurnal Ilmiah Ekonomi Islam*, 8(3), 2785-2791.
- Chalid, F. I., & Bella, F. I. (2021). Determinant of Non-Performing Financing in Indonesian Islamic Commercial Banks in time of Covid-19 Pandemic. *Al-Amwal: Jurnal Ekonomi dan Perbankan Syari'ah*, 13(2), 239-250.
- Daboh, F., & Duramany-Lakkoh, E. K. (2023). Performance Evaluation of The Sierra Leone Banking Sector Using Camel Rating Framework. *Journal of Applied Finance & Banking*, 13(3), 1-18.
- Echobu, J., & Philomena, O. N. (2019). Credit risks and financial performance of Nigerian banking industry. *Amity Journal of Finance*, 4(1), 44-57.
- Fadun, O. S., & Silwimba, P. (2023). Does credit risk management impact the financial performance of commercial banks?. *International Journal of Business Ecosystem & Strategy* (2687-2293), 5(2), 55-66.
- Hidayat, S. E., Sakti, M. R. P., & Al-Balushi, R. A. A. (2021). Risk, efficiency and financial performance in the GCC banking industry: Islamic versus conventional banks. *Journal of Islamic Accounting and Business Research*, 12(4), 564-592.
- Hunjra, A. I., Hanif, M., Mehmood, R., & Nguyen, L. V. (2021). Diversification, corporate governance, regulation and bank risk-taking. *Journal of Financial Reporting and Accounting*, 19(1), 92-108.



- Karamoy, H., & Tulung, J. E. (2020). The impact of banking risk on regional development banks in Indonesia. *Banks and Bank Systems*, 15(2).
- Kassem, N. M., & Sakr, A. (2018). The impact of bank-specific characteristics on the profitability of commercial banks in Egypt. *Journal of Finance and Bank Management*, 6(2), 76-90.
- Khan, M. A., Siddique, A., & Sarwar, Z. (2020). Determinants of non-performing loans in the banking sector in developing state. *Asian Journal of Accounting Research*, 5(1), 135-145.
- Kurniasari, F., Gunardi, A., Putri, F., & Firmansyah, A. (2021). The role of financial technology to increase financial inclusion in Indonesia. *International Journal of Data and Network Science*, 5(3), 391-400.
- Lauria Arisandy Zalukhu, F. S. (2023). Effect of Credit Restructuring During the Covid-19 Pandemic on Financial Performance with Expected Credit Loss as an Intervening Variable. *Jurnal Office: Jurnal Pemikiran Ilmiah dan Pendidikan Administrasi Perkantoran*, 9(1), 57-68.
- Léon, F. (2023). Public bank lending in Africa in times of crisis. *Emerging Markets Review*, 55, 101032.
- Makkonen, T. (2022). Board diversity and firm innovation: a meta-analysis. *European Journal of Innovation Management*, 25(6), 941-960.
- Martínez-Malvar, M., & Baselga-Pascual, L. (2020). Bank risk determinants in Latin America. *Risks*, 8(3), 94.
- Martínez-Malvar, M., & Baselga-Pascual, L. (2020). Bank risk determinants in Latin America. *Risks*, 8(3), 94.
- Milojević, S., Milašinović, M., Mitrović, A., Ognjanović, J., Raičević, J., Zdravković, N., ... & Grivec, M. (2023). Board Gender Diversity and Banks Profitability for Business Viability: Evidence from Serbia. *Sustainability*, *15*(13), 10501.
- Muhammad, R., Mangawing, M. A., & Salsabilla, S. (2021). The influence of intellectual capital and corporate governance on financial performance of Islamic banks. *Jurnal Ekonomi & Keuangan Islam*, 77-91.
- Mushafiq, M., Sindhu, M. I., & Sohail, M. K. (2023). Financial performance under influence of credit risk in non-financial firms: evidence from Pakistan. *Journal of Economic and Administrative Sciences*, 39(1), 25-42.
- Mutamimah, M., & Saputri, P. L. (2023). Corporate governance and financing risk in Islamic banks in Indonesia. *Journal of Islamic Accounting and Business Research*, 14(3), 436-450.
- Nguyen, N. T. H., Kim-Duc, N., & Freiburghaus, T. L. (2022). Effect of digital banking-related customer experience on banks' financial performance during Covid-19: a perspective from Vietnam. *Journal of Asia Business Studies*, *16*(1), 200-222.
- Nwude, E. C., & Okeke, C. (2018). Impact of credit risk management on the performance of selected Nigerian banks. *International Journal of Economics and Financial Issues*, 8(2), 287.



- Olalekan, L. I., Olumide, M. L., & Irom, I. M. (2018). Financial risk management and the profitability: An empirical evidence from commercial banks in Nigeria. *Journal of Management Sciences*, 16(2), 117-137.
- Prativi, Y. P., Sukmadilaga, C., & Cupian, C. (2021). The Impact of Islamic Corporate Governance Disclosure, Islamic Intellectual Capital, Zakat, Financial Performance (SCnP Model) & Islamic Ethical Identity to Sustainable Business. *Jurnal Ekonomi Syariah Teori Dan Terapan*, 8(2), 171-182.
- Pujiati, P., Kisman, Z., & Bastaman, A. (2020). Analysis of capital adequacy ratio, prime lending rate, and third-party funds on profitability of commercial banks in Indonesia, with liquidity as intervening variable. *Journal of Economics and Business*, *3*(1), 172-188.
- Rahman, A. S. A., & Haron, R. (2019). The effect of corporate governance on islamic banking performance: a Maqasid shari'ah index approach on Indonesian islamic banks. *Journal of Islamic Finance*, 8, 001-018.
- Salami, A. A., & Uthman, A. B. (2023). Bank capital, earnings smoothing and provisioning practices in Nigeria: IFRS and risk evidence. *Asian Journal of Economics and Banking*.
- Salami, A. A., Uthman, A. B., Ibrahim, R. O., & Nageri, K. I. (2022). Bank Funding Strategy and Income Smoothing Practices in Nigeria: IFRS and Solvency Risk Analysis. *Global Journal of Accounting*, 8(1), 13-30.
- Sasongko, H., & Yusnita, N. (2023). The Influence of Productive Asset Quality, Loan to Deposit Ratio, Non Performing Loan, and Operating Expenses to Operating Income on Profit with Capital Adequacy Ratio as Moderating Variable in Indonesian Banking. *Jurnal Manajemen dan Keuangan*, 12(1), 141-163.
- Setiarini, D., & Yudiana, F. E. (2023). The Influence of Non-Performing Financing and Financing to Deposit Ratio on Profitability with Capital Adequacy Ratio as a Mediation Variable on Islamic Commercial Banks in Indonesia, 2020-2022. *Alkasb: Journal of Islamic Economics*, 2(1), 10-23.
- Setiawan, I. (2021). The impact of financing risk on Islamic banking performance in Indonesia. *Share: Jurnal Ekonomi Dan Keuangan Islam*, 10(2), 208-229.
- Subur, R., & Anwar, M. (2021). Pengaruh Loan To Deposit Ratio (LDR) Dan Capital Adequacy Ratio (CAR) Terhadap Return On Asset (ROA) Pada PT. Bank Tabungan Negara (Persero), TBK Periode 2010-2019. *Jurnal Ilmiah PERKUSI*, 1(3), 420-429.
- Sunaryo, D. (2020). The effect of capital adequacy ratio on return on assets with problem credit ratio moderation. *Ilomata International Journal of Tax and Accounting*, 1(3), 145-151.
- Suroso, S. (2022). Analysis of the Effect of Capital Adequacy Ratio (CAR) and Loan to Deposit Ratio (LDR) on the Profits of Go Public Banks in the Indonesia Stock Exchange (IDX) Period 2016–2021. *Economit Journal: Scientific Journal of Accountancy, Management and Finance*, 2(1), 45-53.
- Syah, T. A. (2018). Pengaruh Inflasi, BI Rate, NPF, Dan BOPO Terhadap Profitabilitas Bank Umum Syariah Di Indonesia. *El-Jizya: Jurnal Ekonomi Islam*, *6*(1), 133-153.



- Tho'in, M. (2019). Profitability of Islamic Commercial Banks in Indonesia. *IQTISHADIA Jurnal Ekonomi & Perbankan Syariah*, 6(2), 89-99.
- Uswah, R., & Arif, Y. (2024). Kinerja Keuangan Bank Mega dan Bank Mega Syariah Menggunakan Pendekatan Camel. *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 6(4), 3984-3999.
- Zhu, C., Husnain, M., Ullah, S., Khan, M. T., & Ali, W. (2022). Gender diversity and firms' sustainable performance: moderating role of CEO duality in emerging equity market. *Sustainability*, 14(12), 7177.