INTERNATIONAL JOURNAL OF FINANCIAL ECONOMICS (IJEFE) e-ISSN: 3063-3648
Vol. 2 No. 2 August 2025, page 547-563

THE EFFECT OF CAPITAL ADEQUACY RATIO AND NON-PERFORMING LOANS ON LENDING, MODERATED BY INTEREST RATE

(An Empirical Study on Commercial Banks Listed on the Indonesia Stock Exchange in 2018–2023)

Kadek Yoni Adristi[1], I Nyoman Wijana Asmara Putra[2]
[1] Faculty of Economics and Business, Udayana University; e-mail : adristiyoni@gmail.com
[2] Faculty of Economics and Business, Udayana University
* Corresponding Author: Kadek Yoni Adristi

Abstract: This study aims to analyze the effect of the Capital Adequacy Ratio (CAR) and Non-Performing Loans (NPL) on loan disbursement, with the interest rate as a moderating variable. The study utilizes data from 29 commercial banks listed on the Indonesia Stock Exchange (IDX) during the 2018–2023 period, with a total of 174 firm-year observations selected using purposive sampling. The analytical method employed is Moderated Regression Analysis (MRA). The results indicate that CAR has a significant negative effect on loan disbursement. Meanwhile, NPL does not have a significant effect on loan disbursement. Furthermore, the interest rate weakens the negative effect of CAR on loan disbursement, and it neither strengthens nor weakens the effect of NPL on loan disbursement.
Keywords: Capital Adequacy Ratio, Non-Performing Loan, Loan Disbursement, Interest Rate, Moderated Regression Analysis

INTRODUCTION

Indonesia is one of the developing countries actively pursuing national development. This development aims to establish a just, prosperous, and equitable society—both materially and spiritually—based on Pancasila and existing legal frameworks. The implementation of national development requires substantial financing; hence, support from third parties such as the banking sector is crucial as a source of funding (Yudhistira & Sugiastuti, 2023). Banks serve as financial institutions that play a strategic role in driving the economic growth of a nation, including Indonesia. According to Law of the Republic of Indonesia No. 4 of 2023, a bank is defined as a business entity that collects funds from the public in the form of deposits and redistributes them in the form of credit or other forms to improve the living standards of the general population.

Banks continuously strive to increase fund mobilization in order to enhance their capacity to extend credit to those in need. This need is fulfilled through credit distribution activities (Fadli & Nafany, 2022). Credit represents the transfer of funds from parties with surplus funds to those in need. The word "credit" originates from the Greek term credere, meaning "to trust." Thus, trust becomes the fundamental basis of the relationship between fund owners and users (Abdullah & Wahjusaputri, 2018:112). Competition among banks to attract deposits is intense, prompting each

bank to maximize its credit distribution. Banks typically impose administrative fees, provisions, and commissions when issuing loans (Wisaputri & Ramantha, 2021). The amount of credit disbursed by a bank may be greater or lesser than the funds it has collected. Generally, around 80–90% of a bank's managed funds are redistributed as loans, which comprise 70–80% of the bank's total assets (Parasthiwi & Budiasih, 2019).

In developing countries like Indonesia, bank credit plays a vital role in supporting business activities that rely heavily on financial institutions. The greater the funds distributed through lending, the higher the potential profit earned by banks through interest income. Therefore, banks aim to optimize the utilization of public deposits by redistributing them as credit (Kusumawati & Manda, 2021).

The COVID-19 pandemic significantly impacted various sectors, including businesses and banking, leading to a decline in both credit distribution and credit demand. The implementation of the Emergency Public Activity Restrictions (PPKM) by the government further intensified the strain on bank lending. Under such conditions, banks became more cautious in issuing credit due to increased perceived risk, often reducing or even halting loan disbursements. Low industrial production capacity, declining consumer spending, and underutilized manufacturing sectors also contributed to weakened credit demand (Malimpo et al., 2023). This phenomenon is exemplified by the decline in Bank BCA's loan disbursements during the pandemic. BCA's Director, Jahja Setiaatmaja, reported that corporate loans disbursed in September 2020 amounted to IDR 45 trillion, but repayments only reached IDR 30 trillion. Similarly, mortgage loans, which typically amounted to IDR 2.5 trillion per month, dropped to IDR 1 trillion per month due to the pandemic (Tempo.co).

Although lending generates substantial income, it also entails high risk due to potential irregularities either from borrowers or internal bank operations (Odanga et al., 2024). For instance, PT Bank Mandiri extended a non-performing loan worth USD 450 million (approximately IDR 6.7 trillion) to Titan Energy. The company ceased repayment and was officially designated as a non-performing debtor, failing to fulfill its obligations to this day (Tempo.co, 2022). Such incidents highlight the importance of rigorous credit risk analysis and the implementation of sound risk management practices (Malimpo et al., 2023).

Credit distribution requires strong capital support to sustain bank operations and maintain loan liquidity, especially given the inherent risks of lending. Capital adequacy is essential in determining a bank's resilience to potential credit risks. Therefore, banks are required to maintain sufficient capital levels to ensure business continuity (Stefanus et al., 2023).

Bank Indonesia mandates a minimum Capital Adequacy Ratio (CAR) of 8%. CAR reflects a bank's ability to manage credit risk that could potentially lead to losses (Eko Sudarmanto, 2021). Banks maintaining a CAR of at least 8% are considered capable of safeguarding their assets against risky exposures. The higher the CAR, the stronger the bank's capital position (Chen, 2024). Conversely, poor

credit management and inadequate capital increase credit risk and the likelihood of loss (Patiu & Eleazar, 2024). A high CAR also indicates a bank's enhanced capacity to support lending activities (Sudaryanti et al., 2021).

Lending activities have both positive and negative implications for banks. On the one hand, they can boost income from interest and expand banking operations. On the other, they expose banks to credit risk, which may affect financial stability. When loans become non-performing, the resulting credit risk can jeopardize the bank's business sustainability (Andrianto, 2019:183).

As financial intermediaries, banks play a vital role in channeling funds from surplus units to deficit units, thereby facilitating financial transactions and economic growth. In recent years, banks globally have faced significant challenges in maintaining financial performance due to macroeconomic factors such as fluctuating interest rates, rising non-performing loans (NPLs), and evolving regulations (Husni & Randi, 2024). NPLs represent one of the main credit risks faced by banks and serve as key indicators in evaluating a bank's financial health. The NPL ratio is calculated by dividing the total non-performing loans by total loans. A high NPL ratio signifies increased credit risk (Eko Sudarmanto, 2021).

Bank Indonesia has set a maximum NPL threshold of 5%. Banks maintaining NPLs below this level are more likely to increase profitability, as they require fewer reserves to cover potential losses. Failure to manage credit risk effectively can lead to other operational risks. High NPL ratios reduce a bank's lending capacity and reflect elevated risks in credit distribution (Mesrawati et al., 2020).

The Financial Services Authority (OJK) noted that the COVID-19 pandemic could raise NPLs to 16%. In response, OJK initiated loan restructuring programs, including interest rate reductions, extended loan terms, additional credit facilities, and other measures. Based on bank reports submitted to OJK, total restructured loans reached IDR 932.6 trillion across 7.53 million borrowers (Nida, 2020). This situation caused reduced income for several business sectors, making it difficult for individuals and businesses to meet their loan obligations, leading to a rise in NPLs.

Several studies have examined the impact of Capital Adequacy Ratio and Non-Performing Loans on lending, yielding mixed results. For example, studies by Amsiah et al. (2022), Alfaini & Amin (2023), and Simatupang (2023) concluded that CAR significantly influences lending. Higher CAR values reflect stronger bank capacity in risk mitigation and loan disbursement. Conversely, studies by Wijaya et al. (2023), Stefanus et al. (2023), and Syahwildan & Parulian (2022) found no significant relationship between CAR and credit distribution. Additionally, Ulfatus Solicha (2019) reported that while CAR affects lending, the influence is statistically insignificant.

Research on the effect of NPL on lending has also shown varying results. Simatupang (2023) and Kartini (2023) found a positive relationship, while Wiriya et al. (2023) and Syahwildan & Parulian (2022) reported a negative influence of NPL on credit distribution.

Apart from internal factors such as CAR and NPL, lending in Indonesia is also influenced by banks' benchmark interest rate policies. Lower interest rates tend to boost credit demand (Malimpo et al., 2023). In contrast, Yudhistira & Sugiastuti (2023) noted that higher interest rates encourage savers to deposit more, thereby strengthening bank capital. A CAR above the minimum threshold increases a bank's capacity to extend credit (Malimpo et al., 2023).

Based on the background described above, this study aims to re-examine the "Effect of Capital Adequacy Ratio and Non-Performing Loans on Lending, Moderated by Interest Rate." This research replicates the study by Ismawanto et al. (2020) with the addition of a moderating variable, namely interest rate, and utilizes the most recent data from commercial banks listed on the Indonesia Stock Exchange during the 2018–2023 period.

METHOD

This study employs a quantitative approach using an associative method to analyze the relationships among variables. The purpose of this approach is to examine the influence of Capital Adequacy Ratio (CAR) and Non-Performing Loans (NPL) on credit distribution, with the interest rate serving as a moderating variable. The object of the study consists of all commercial banks listed on the Indonesia Stock Exchange (IDX) during the 2018–2023 period. The selection of publicly listed banks aims to ensure that the data obtained are accurate, transparent, and accountable.

The research utilizes secondary data derived from annual financial statements and the Indonesian Banking Statistics (SPI), accessible through the official websites of the IDX and each respective bank (Sugiyono, 2019).

The population in this study includes all commercial banks listed on the IDX from 2018 to 2023. A purposive sampling technique was applied based on specific criteria, such as banks that did not undergo mergers or acquisitions and consistently reported CAR, NPL, and interest rate data during the observation period. Out of 47 listed banks, only 29 met the selection criteria, resulting in a total of 174 observational data points. The variables in this study consist of credit distribution as the dependent variable, CAR and NPL as independent variables, and the interest rate as a moderating variable that may strengthen or weaken the relationship between the independent and dependent variables (Keneni, 2024; Kusumawati et al., 2021).

The analytical technique used is Moderated Regression Analysis (MRA), beginning with descriptive statistics to provide an overview of the data. This is followed by classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, to ensure the validity of the regression model. Hypothesis testing is conducted using the coefficient of determination (R^2), F-test for model fit, and t-test for partial significance of individual variables. The MRA model is employed to test the interaction effect of CAR and NPL on credit distribution with the interest rate as a moderating variable, formulated through a multiple regression equation (Ghozali, 2018).

RESULTS AND DISCUSSION

General Overview of the Research Location or Scope

This study was conducted on commercial banks listed on the Indonesia Stock Exchange (IDX) during the 2018–2023 period. According to the Law of the Republic of Indonesia Number 4 of 2023 concerning the Development and Strengthening of the Financial Sector (PPSK Law), the Indonesia Stock Exchange is an institution that organizes and provides facilities to connect parties wishing to sell and purchase shares of publicly listed companies, as well as other tradable securities. This aligns with the main objective of the capital market, which is to build an orderly, fair, efficient, and transparent infrastructure for all stakeholders through innovative products and services (IDX, 2024).

The Indonesia Stock Exchange (IDX) officially implemented the IDX Industrial Classification (IDX-IC) system on January 25, 2021. Under this system, the IDX classifies listed companies into 12 sectors based on comprehensive evaluation and assessment. These sectors include energy, basic materials, industrials, consumer non-cyclicals, consumer cyclicals, healthcare, financials, properties and real estate, technology, infrastructure, transportation and logistics, and listed investment products. This study uses the financial sector as the basis for determining the research population and sample, utilizing audited annual financial statements from companies within that sector.

The financial sector is one of the major groups of companies that actively contribute to the capital market due to its critical role in supporting the real sector of the national economy. On the IDX, the financial sector is divided into five subsectors: banking, financing institutions, securities companies, insurance companies, and other financial institutions. The banking subsector is one of the most favored by investors because it offers attractive returns. Banks are widely known for their role as financial intermediaries that collect funds from the public in the form of demand deposits, savings, and time deposits, and subsequently channel these funds back to the public in the form of credit.

Sample selection for this study was conducted using a purposive sampling method based on predetermined criteria, resulting in a final sample of 29 commercial banks listed on the IDX during the 2018–2023 period, with a total of 174 firm-year observations. The list of research samples is presented in Appendix 1.

Descriptive Statistics

Descriptive statistics serve as the initial stage of data analysis by providing a preliminary overview of each research variable. According to Sugiyono (2019), descriptive statistical analysis is used to analyze data by describing the collected data and drawing conclusions that offer an overview of the dataset, which can be observed from minimum, maximum, mean, and standard deviation values for each variable. The descriptive statistics for this study are shown in Table 4.1.

Table 1. Descriptive Statistics Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
CAR Ratio (%)	174	10,80	106,10	30,14	16,91
NPL Ratio (%)	174	0,00	15,75	2,97	1,92
Loan Disbursement (in billion IDR)	174	1.276	1.197.753	133.387	254.883
Interest Rate (%)	174	7,25	25,99	11,50	2,82
Valid N (listwise)	174				

Based on Table 1, the descriptive statistics for each variable can be explained as follows:

1. Capital Adequacy Ratio (CAR)

   The minimum CAR value was recorded by the company with stock code MAYA (PT Bank Mayapada Internasional Tbk) in 2023 at 10.80%, while the maximum CAR value was recorded by BGTG (PT Bank Ganesha Tbk) in 2022 at 106.10%. The CAR variable had a mean value of 30.14% and a standard deviation of 16.91%.
2. Non-Performing Loan (NPL)

   The minimum NPL value was recorded by BACA (Bank Capital Indonesia Tbk) in 2020 at 0.00%, while the maximum was recorded by BBTN (PT Bank Tabungan Negara Tbk) in 2018 at 15.75%. The NPL variable had a mean of 2.97% and a standard deviation of 1.92%.
3. Loan Disbursement

   The minimum loan disbursement was recorded by BBHI (PT Allo Bank Indonesia Tbk) in 2020 at IDR 1,276 billion, while the maximum was recorded by BBRI (PT Bank Rakyat Indonesia Tbk) in 2023 at IDR 1,197,753 billion. The average loan disbursement was IDR 133,387 billion with a standard deviation of IDR 254,883 billion.
4. Interest Rate

   The minimum interest rate was recorded by NISP (PT Bank OCBC NISP Tbk) in 2023 at 7.25%, while the maximum was recorded by BBYB (PT Bank Neo Commerce Tbk) in 2023 at 25.99%. The average interest rate was 11.50% with a standard deviation of 2.82%.

Classical Assumption Test

1) Normality Test

Table 2. Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		174
Normal Parametersa,b	Mean	0,000
	Std. Deviation	1,513
Most Extreme Differences	Absolute	0,046
	Positive	0,046
	Negative	-0,042
Test Statistics		0,046
Asymp. Sig. (2-tailed)		0,200[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.

Based on table 2, it can be seen that the Asymp. Sig. (2-tailed) value is 0.200. These results indicate that the regression equation model is normally distributed because the Asymp. Sig. (2-tailed) value of 0.200 is greater than the alpha value of 0.05.

2) Multicollinearity Test

Table 3. Multicollinearity Test Results

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	CAR ratio (%)	0,983	1,018
	NPL Ratio (%)	0,993	1,007
	Interest Rate (%)	0,977	1,024

Based on table 3, the tolerance value of all variables is above 0.10 and all values of the research variables have VIF values below 10. This means that there is no correlation between the independent variables in the study or the regression model is free from multicollinearity symptoms.

3) **Heteroscedasticity Test**

Table 4. Heteroscedasticity Test Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,269[a]	0,072	0,021	2,81014

Table 5. Results of Heteroscedasticity Test

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	100,838	9	11,204	1,419	0,184[b]
	Residual	1295,085	164	7,897		
	Total	1395,923	173			

``Based on tables 4 and 5, the following is an explanation of the decision making for the White test:

Chi Square count < Chi Square table, then there are no symptoms of heteroscedasticity.

Chi Square calculation > Chi Square table then there are symptoms of heteroscedasticity

Chi Square calculation: N*R Square = 174*0.072 = 12.528

Chi Square table (df = 9, α = 0.05) = 16.919

Based on the results above, the calculated chi square value = 12.528 < 16.919 which can be concluded that there are no symptoms of heteroscedasticity.

Moderated Regression Analysis(MRA)

Table 6. Results of Moderation Regression Analysis Test

Coefficientsa

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	30,869	1,513		20,405	0,000
	CAR ratio (%)	-0,116	0,027	-1,012	-4,329	0,000
	NPL Ratio (%)	-0,227	0,297	-0,237	-0,763	0,447
	Interest Rate (%)	-0,436	0,128	-0,670	-3,396	0,001
	CAR*SUKU	.006	.002	.814	2,806	.006
	NPL*SUKU	.007	.022	.113	.332	.741

Based on table 6, the regression equation can be seen as follows.

$\hat{Y}$ = 30,869 - 0.116X1 - 0.227X2 - 0.436Z + 0.006X1Z + 0.007X2Z

Based on the regression model formed, the results can be interpreted as follows.

1) Constant Value

The constant value (α) of 30.869 indicates that if the CAR (X1), NPL (X2), interest rate (Z), and interaction between CAR and interest rate (X1Z), and interaction between NPL and interest rate (X2Z) variables are equal to zero, then the credit distribution variable (Y) has a value of 30.869.

2) Capital Adequacy Ratio

The CAR regression coefficient value of -0.116 indicates that every 1 unit increase in CAR will decrease credit distribution by 0.116 units, assuming other variables are constant.

3) Non Performing Loan

The NPL regression coefficient value of -0.227 indicates that every 1 unit increase in NPL will decrease credit distribution by 0.227 units, assuming other variables are constant.

4) Interest Rate Level

The value of the interest rate regression coefficient of -0.436 indicates that every 1 unit increase in the interest rate will reduce credit distribution by 0.436 units, assuming other variables are constant.

5) Interaction between Capital Adequacy Ratio and Interest Rate Level

The interaction coefficient value between CAR and interest rates of 0.006 indicates that every 1 unit increase in this interaction will increase credit distribution by 0.006 units, assuming other variables remain constant.

6) Interaction between Non Performing Loans and Interest Rates

The regression coefficient value of the interaction between NPL and interest rates of 0.007 indicates that if the interaction between NPL and interest rates increases by 1 unit, the credit distribution value (Y) will increase by 0.007 assuming other variables are constant.

After conducting data analysis using the Moderated Regression Analysis (MRA) technique through SPSS, the results of the determination coefficient (R2), model feasibility test (F test), and hypothesis test (t test) were obtained.

1) Coefficient of Determination (R2)

Table 7. Results of the Determination Coefficient Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,565[a]	0,319	0,299	1,53522

Based on table 7, the magnitude of the influence of the independent variables on the dependent variables indicated by the total determination value (Adjusted R Square) of 0.299 means that 29.9% of the variation in credit distribution (Y) is influenced by the Capital Adequacy Ratio (X1), Non Performing Loan (X2), interest rate (Z) and the interaction variable between the Capital Adequacy Ratio and interest rate (X1Z), and the interaction between Non Performing Loan and interest rate (X2Z), while the remaining 70.1% is explained by other factors not included in the model.

2) Model Feasibility Test (F Test)

Table 8. Results of Model Feasibility Test (F Test)

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	185,848	5	37,170	15,771	0,000[b]
	Residual	395,957	168	2,357		
	Total	581,805	173			

Based on table 8, the results of the F test show that the calculated F value is 15.771 with a significance of P value 0.000 which is smaller than α = 0.005. This indicates that the model used in this study is feasible. These results provide meaning that the variables CAR (X1), NPL (X2), interest rates (Z) and the interaction between CAR, NPL and interest rates simultaneously affect credit distribution (Y).

3) Hypothesis Test (t-Test)

The test criteria to explain the interpretation of the influence between each variable is if the significance value is less than or equal to 0.05 then H0 is rejected and H1 is accepted. Conversely, if the significance value is greater than 0.05 then H0 is accepted and H1 is rejected. The explanation for the influence between variables in this study is explained as follows.

The Influence of CAR on Credit Distribution

H0: CAR has no effect on credit distribution

H1: CAR has an influence on credit distribution

Based on the results of the moderation regression analysis, it was obtained that the CAR variable has a significant effect on credit distribution (significance value 0.000 < 0.05). However, the regression coefficient value of -0.116 indicates a negative direction of influence. Because the initial hypothesis states that CAR has a positive effect on credit distribution, then The hypothesis is not supported by the analysis results, so H0 is accepted and H1 is rejected.

The Impact of NPL on Credit Distribution

H0: NPL has no effect on credit distribution

H2: NPL has an influence on credit distribution

Based on the results of the moderation regression analysis, the effect of NPL on credit distribution, the regression coefficient value is -0.227 with a negative t-value of 0.763 and a significance value of 0.447> 0.05 indicating that H0 is accepted and H2 is rejected. This result means that NPL has no effect on credit distribution.

The Role of Interest Rate Levels in Moderating the Effect of CAR on Credit Distribution

H0: The interest rate level is unable to moderate the influence of CAR on credit distribution.

H3: The interest rate level is able to moderate the influence of CAR on credit distribution.

Based on the results of the moderation regression analysis, it was obtained that the interaction variable between CAR and the interest rate has a significance value of 0.006 <0.05, and the significance value of the interest rate moderation variable itself is 0.001 <0.05. This shows that both variables are significant, so H0 is rejected and H3 is accepted. The CAR regression coefficient shows a significant negative effect on credit distribution, while the interaction between CAR and the interest rate shows a significant positive effect. This means that the direction of the influence of CAR and the CAR × interest rate interaction is not in the same direction, which shows that the interest rate acts as a quasi moderator variable. In other words, the interest rate weakens the negative effect of CAR on credit distribution.

The Role of Interest Rate Levels in Moderating the Effect of NPLs on Credit Distribution

H0: The interest rate level is unable to moderate the influence of NPL on credit distribution.

H4: The interest rate level is able to moderate the influence of NPL on credit distribution.

Based on the results of the moderation regression analysis, the interest rate variable has a significance value of 0.001 <0.05, which indicates that interest rates have a direct effect on credit distribution. However, the significance value of the interaction between NPL and interest rates is 0.741> 0.05, which means it is not significant. It can be concluded that the interest rate does not moderate the effect of NPL on credit distribution, but rather acts as an independent variable (predictor), so that H0 is accepted and H4 is rejected.

Discussion of Research Findings

Effect of Capital Adequacy Ratio on Credit Distribution

Based on the hypothesis testing results, the significance value is 0.000 < 0.05 with a regression coefficient of -0.116. This indicates that CAR has a statistically significant effect on credit distribution, but the direction of the relationship is negative. Consequently, H1 is rejected, as it contradicts the initial hypothesis, which assumed a positive effect. The negative direction implies that higher CAR tends to reduce credit distribution. This suggests that even when banks have a strong capital base, they may not necessarily increase lending aggressively. Instead, they may adopt a more cautious approach to safeguard asset quality and minimize risks, particularly during periods of economic uncertainty.

From the perspective of financial intermediation theory, these results are not fully aligned. According to the theory, banks, as financial intermediaries, are

expected to utilize their capital to optimally extend credit. However, this study reveals that high capital adequacy does not always lead to increased lending, possibly due to heightened prudence, strict risk management policies, or uncertainties in credit demand. These findings are consistent with Komaria & Diansyah (2019), who argued that CAR negatively affects credit distribution as many banks have not effectively utilized their capital to support intermediation functions. This highlights the importance of enhancing credit assessment systems, particularly in evaluating borrowers' repayment capacities, so that capital adequacy can be translated into productive lending.

Effect of Non-Performing Loans on Credit Distribution

The test results show a significance value of 0.447 > 0.05 with a regression coefficient of -0.227. This means that H2 is rejected, indicating that NPL does not have a significant effect on credit distribution. Although the negative coefficient suggests that higher NPL levels tend to reduce credit distribution, the relationship is not statistically significant.

This phenomenon may be attributed to the relatively stable NPL levels across banks in the sample, resulting in no substantial differences in lending behavior. It may also indicate that banks have implemented effective credit risk management practices, allowing them to lend prudently despite fluctuations in NPL. From the standpoint of intermediation theory, this result is somewhat inconsistent, as the theory posits that asset quality, including NPL levels, should impact a bank's ability to intermediate. However, in this study, NPL did not prove to be a significant constraint, likely due to effective risk mitigation strategies.

These findings are consistent with previous research conducted by Ismawanto et al. (2020), Sari et al. (2021), and I. Nasedum et al. (2020), which also found that NPL does not significantly affect credit distribution. This reinforces the notion that the magnitude of NPL may not always be a dominant barrier to the intermediation function of banks.

The Moderating Effect of Interest Rate on the Relationship Between Capital Adequacy Ratio and Credit Distribution

The test results reveal a significance value of 0.006 < 0.05 for the interaction between CAR and interest rate, indicating that H3 is accepted. This suggests that the interest rate significantly moderates the relationship between CAR and credit distribution. The interaction term CAR × interest rate has a positive coefficient, while the CAR coefficient is negative. As the directions of the coefficients differ, this relationship is classified as a quasi moderation—meaning the interest rate not only moderates the relationship but also has a direct effect on the dependent variable (credit distribution).

The positive interaction implies that higher interest rates weaken the negative impact of CAR on credit distribution. In other words, when interest rates rise, the negative effect of CAR on credit becomes less pronounced. In such

circumstances, even though banks may have a high CAR indicating ample capital to support credit expansion public demand for credit may decline due to the burden of higher borrowing costs. As a result, the influence of CAR on credit distribution is limited.

This finding is consistent with financial intermediation theory, which underscores the need for a balance between prudence in maintaining capital adequacy and proactive lending. The theory also acknowledges that external factors such as interest rates can influence a bank's intermediation function. Accordingly, this study demonstrates that while banks may be internally prepared to lend, external macroeconomic conditions—such as high interest rates—can act as constraints. These results align with Nurjanah & Arida (2021), who found that even when CAR increases, higher interest rates lead to reduced credit demand as potential borrowers defer or avoid loans.

The Moderating Effect of Interest Rate on the Relationship Between Non-Performing Loans and Credit Distribution

The test results show a significance value of 0.741 > 0.05 for the interaction between NPL and interest rate, which leads to the rejection of H4. This means that the interest rate does not significantly moderate the relationship between NPL and credit distribution. Furthermore, NPL itself does not have a significant direct effect on credit distribution, despite the negative coefficient. Thus, interest rate in this context functions only as an independent variable and not as a moderator, as it neither strengthens nor weakens the influence of NPL on credit distribution.

This suggests that the credit risk perception reflected in NPL does not have a substantial impact on banks' lending decisions, and interest rate fluctuations are not strong enough to alter this relationship. One possible explanation is that banks have developed effective risk management systems and credit policies, allowing them to lend responsibly regardless of variations in NPL or interest rates.

This result diverges from the financial intermediation theory, which posits that asset quality, such as NPL, should influence a bank's ability to lend, and that macroeconomic variables like interest rates should also play a role. Nevertheless, the findings support the results of Sucipto & Firdausy (2021), who stated that interest rates do not significantly affect the relationship between NPL and credit distribution, as internal bank factors are more influential in managing risk and making lending decisions.

CONCLUSION

1. The Capital Adequacy Ratio (CAR) has a significant negative effect on loan disbursement. This indicates that the higher the CAR, the more cautious banks tend to be in distributing loans. It suggests that a high capital adequacy does not necessarily encourage credit expansion if it is not supported by an appropriate strategy.

2. The Non-Performing Loan (NPL) has no significant effect on loan disbursement. This implies that although NPL reflects the credit risk borne by banks, in this study, the magnitude of NPL has not been sufficient to significantly influence bank credit policies.
3. The interest rate weakens the negative effect of CAR on loan disbursement. The type of moderation observed is quasi-moderation, as interest rates have a direct influence on credit and also mitigate the effect of CAR. When interest rates are high, the impact of CAR on loan disbursement becomes weaker.
4. The interest rate does not strengthen or weaken the effect of NPL on loan disbursement. This shows that interest rate fluctuations are not strong enough to affect the relationship between credit risk (NPL) and loan disbursement. Banks remain focused on prudential principles regardless of interest rate conditions.

REFERENCES

Abdullah, T., & Wahjusaputri, S. (2018). Bank & Lembaga Keuangan. In Mitra Wacana Media.

Agung, I. G., & Ngurah, A. (2024). Pengaruh Capital Adequacy Ratio dan Non Performing Loan terhadap Jumlah Penyaluran Kredit di Kota Denpasar. 4(9), 1729–1740.

Alfaini, N., & Amin, M. A. N. (2023). Pengaruh Dana Pihak Ketiga, Efisiensi, Loan To Deposit Ratio (LDR), dan Capital Adequacy Ratio (CAR) Terhadap Penyaluran Kredit Pada Bank Umum Konvensional. Konsentrasi: Jurnal Manajemen Dan Bisnis, 3(2), 68–83. https://doi.org/10.24905/konsentrasi.v3i2.36

Amsiah, E. S., Suparno, S., & Nawawi, H. A. (2022). Pengaruh Capital Adequacy Ratio Dan Return On Asset Terhadap Penyaluran Kredit Pada Bank Umum Yang Terdaftar Dibursa Efek Indonesia Tahun 2013-2019. Journal of Economic, Bussines and Accounting (COSTING), 5(2), 962–968. https://doi.org/10.31539/costing.v5i2.3223

Andrianto. (2019). Manajemen Kredit: Teori dan Konsep Bagi Bank Umum. In Sustainability (Switzerland) (Vol. 11, Issue 1). http://scioteca.caf.com/bitstream/handle/123456789/1091/RED2017-Eng-8ene.pdf?sequence=12&isAllowed=y%0Ahttp://dx.doi.org/10.1016/j.regsciurbeco.2008.06.005%0Ahttps://www.researchgate.net/publication/305320484_SISTEM_PEMBETUNGAN_TERPUSAT_STRATEGI_MELESTARI

Apriliani, W., Azizah, S. N., Santoso, S. B., & Hapsari, I. (2021). Analysis of the effect of TPF , CAR , NPL ,Inflation and Bi Rate on Loan Distribution (empirical study on Commercial Banks listed on the Indonesia stock exchange for the period 2017-2019). International Journal of Accounting, Taxation, and Business, 2(2), 26–34. https://journal.unsika.ac.id/index.php/IJATB%0AANALYSIS

Aulia, A. (2023). Analysis of the Influence of Non-Performing Credit Policies on Conventional Bank Financial Stability in Indonesia. Indonesian Journal of Multidisciplinary Sciences (IJoMS), 2(1), 45–55. https://doi.org/10.59066/ijoms.v2i1.300

Azwari, D. R., Bambang, & Waskito, I. (2021). PENGARUH RASIO INTERMEDIASI MAKROPRUDENSIAL (RIM) TERHADAP PENYALURAN KREDIT DENGAN SUKU BUNGA KREDIT SEBAGAI VARIABEL MODERASI (Studi Pada Bank Umum Konvensional yang Terdaftar Di Bursa Efek Indonesia). Jurnal Riset Mahasiswa Akuntansi, 1(4), 97–110. https://doi.org/10.29303/risma.v1i4.109

Bui, H. N. (2024). Unveiling the effect of non-performing loans on lending behaviour : E vidence from Vietnam ' s banking system. 21(1), 17–27. https://doi.org/10.33094/ijaefa.v21i1.2034

Chen, S. (2024). Research on the Coordination of Bank Capital Adequacy Ratio and Monetary Policy. Frontiers in Business, Economics and Management, 13(1), 168–173. https://doi.org/10.54097/vgzt0x63

Dutahatmaja, A. (2022). Analysis Of The Influence Of Third-Party Funds (DPK), Capital Adequacy Ratio (CAR), Return On Asset (ROA), Loan To Deposit Ratio (LDR) And Non Performing Loan (NPL) On The Distribution Of Banking Credit. Die, 13(1), 57–69. https://doi.org/10.30996/die.v13i1.6370

Eko Sudarmanto. (2021). Manajemen Risiko Perbankan.

Fadli, A. A. Y., & Nafany, D. A. (2022). Pengaruh Capital Adequacy Ratio (CAR), Non Performing Loan (NPL) Dan Return On Asset (ROA) Terdahap Penyaluran Kredit Pada PT Bank Negara Indonesia Persero Tbk. JIMF (Jurnal Ilmiah Manajemen Forkamma), 6(1), 1. https://doi.org/10.32493/frkm.v6i1.24560

Gayo, A. A., Prihatni, R., & Armeliza, D. (2022). Faktor – Faktor yang Mempengaruhi Penyaluran Kredit pada Bank Umum di Indonesia. Jurnal Akuntansi Dan Keuangan, 10(1), 25. https://doi.org/10.29103/jak.v10i1.6099

Gini, K. B. (2024). CAPITAL ADEQUACY AND DEPOSIT MONEY BANKS. November.

Husni, A dan Randi, M. (2024). Pengaruh NPL, Pertumbuhan Dana Pihak Ketiga dan LDR terhadap NIM Bank BUMN di Indonesia. Jurnal Inovasi Global, 2(3), 543–551.

I. Nasedum, M., Murni, S., & N. Untu, V. (2020). Analisis Pengaruh Non Perfoming Loan (NPL) Loan to Deposit Rasio (LDR) Dana Pihak Ketiga (DPK) DAN Tingkat Suku Bunga Terhadap Penyaluran Kredit Pada Bank Sulutgo Psat Manado Peride 2011-2018. Jurnal EMBA, 8(1), 606–616.

Ismawanto, T., Setianegara, R. G., & Effendi, M. R. (2020). Pengaruh dana pihak ketiga, non performing loan, dan capital adequacy ratio terhadap jumlah penyaluran kredit. Akuntabel, 17(1), 29–37.

Kartini, A. (2023). PENGARUH CAR, NPL, ROA, LDR DAN BOPO TERHADAP PERTUMBUHAN KREDIT UMKM PADA PT BANK RAKYAT INDONESIA (Persero), Tbk UNIT …. Journal Riset Akuntansi Tridinanti, 4(2), 124–136. http://repository.univ-tridinanti.ac.id/6334/%0Ahttp://repository.univ-tridinanti.ac.id/6334/1/Tesis Afri to respository bab 1.pdf

Keneni, K. T. (2024). Factors Affecting the Capital Adequacy Ratio of Private Banks in Ethiopia. June. http://publishingindia.com/ijbri/

Ketaren, E. V., & Haryanto, A. M. (2020). PENGARUH KINERJA KEUANGAN TERHADAP STABILITAS PERBANKAN YANG TERDAFTAR DI BURSA EFEK INDONESIA (Studi Kasus pada Bank yang Terdaftar di BEI Tahun 2014-2018). Diponegoro Journal of Management, 9(2), 1–13. http://ejournal-s1.undip.ac.id/index.php/dbr

Komaria, & Diansyah. (2019). Pengaruh Kinerja Keuangan Bank terhadap Penyaluran Kredit Pada Bank Umum Konvensional yang terdaftar di Bursa Efek Indonesia. Jurnal Transaksi, 11(1), 31–43.

Kusumawati, R., & Manda, G. S. (2021). Pengaruh Faktor Internal Terhadap Penyaluran Kredit Dengan Suku Bunga Sebagai Variabel Moderating. Buletin Studi Ekonomi, 26(2), 193. https://doi.org/10.24843/bse.2021.v26.i02.p04

Malimpo, C. F., Murni, S., & Tulung, J. E. (2023). Pengaruh Dana Pihak Ketiga, Rasio Kecukupan Modal dan Tingkat Suku Bunga Terhadap Penyaluran Kredit pada Bank Umum Swasta Nasional yang tercatat di OJK Indonesia Periode 2018-2021. Jurnal LPPM Bidang EkoSosBudKum (Ekonomi, Sosial, Budaya, Dan Hukum), 07(04), 373–386.

Mesrawati, M., Hitajulu, W., Siregar, S., Venny, V., Panggabean, S. R., & Halawa, F. (2020). Analisis Pengaruh Dana Pihak Ketiga (DPK), Capital Adequacy Ratio (CAR), Non Performing Loan (NPL) dan Loan To Deposit Ratio (LDR) terhadap Penyaluran Kredit Perbankan. Journal of Economic, Bussines and Accounting (COSTING), 4(1), 109–116. https://doi.org/10.31539/costing.v4i1.1442

Mustafa, M., Nurjaya, M., & Fachmi, M. (2022). Causality of Credit Distribution in Indonesian Banking. Atestasi : Jurnal Ilmiah Akuntansi, 5(1), 212–224. https://doi.org/10.57178/atestasi.v5i1.192

Nida, A. (2020). Analisis Kredit Macet Dan Penanganannya: Prespektif Hukum Ekonomi Syariah. Ilmu Hukum & Ekonomi Syariah, 6(2), 1–11. https://doi.org/10.32505/muamalat.v6i2.2847

Nurjanah, R., & Arida, N. (2021). Analisis pengaruh tingkat suku bunga, kredit macet dan capital adequacy ratio (CAR) terhadap penyaluran kredit modal kerja Bank Umum di Indonesia. Jurnal Paradigma Ekonomika, 16(3), 437–450. https://doi.org/10.22437/jpe.v16i3.14190

Odanga, W. A., Ndegwa, J. N., & Okello, G. (2024). Relationship between Financial Risk Exposure and Non-Performing Loans of Commercial Banks in Kenya. African Journal of Empirical Research, 5(3), 47–57. https://doi.org/10.51867/ajernet.5.3.5

Olawale, A. (2024). Capital adequacy and financial stability : A study of Nigerian banks ' resilience in a volatile economy Capital adequacy and financial stability : A study of Nigerian banks ' resilience in a volatile economy. August. https://doi.org/10.30574/gscarr.2024.21.1.0346

Patiu, L. S., & Eleazar, V. (2024). Macroeconomic Determinants of Credit Risk : Empirical Evidence from the ASEAN5 Banking Sector. Review of Integrative Business and Economics Research, 13(4), 436–455.

Rominingtyas. (2023). Analisis Pengaruh CAR NPL Dan Tingkat Suku Bunga Terhadap Penyaluran Kredit Mikro Pada Perbankan Di Indonesia Yang Terdaftar Di Bursa Efek Periode 2017-2020. Publikasi Universitas Putra Bangsa, 1–10.

Sari, L., Nurfazira, N., & Septiano, R. (2021). Pengaruh Non Performing Loan, Suku Bunga Kredit, Dan Modal Bank Terhadap Penyaluran Kredit Pada Perusahaan Perbankan Lq 45. Jurnal Ekonomi Manajemen Sistem Informasi, 2(6), 702–713. https://doi.org/10.31933/jemsi.v2i6.611

Simatupang, B. M. (2023). Pengaruh Variabel Internal Bank Terhadap Penyaluran Kredit Emiten Bank Umum Konvensional BUKU 4. Jurnal Ekonomi, Manajemen

Dan Perbankan (Journal of Economics, Management and Banking), 9(2), 113–130. https://doi.org/10.35384/jemp.v9i2.398

Sinaga, J. S., Muda, I., & Silalahi, A. S. (2020). The effect of BI rate, exchange rate, inflation and third party fund (DPK) on credit distribution and its impact on non performing loan (NPL) on XYZ commercial segment bank. Universal Journal of Accounting and Finance, 8(3), 55–64. https://doi.org/10.13189/ujaf.2020.080301

Stefanus, D., Irena Lawita, F., Eka Putri, S., dan Komunikasi, B., Institute, K., & Selatan, P. (2023). Pengaruh Car, Roa, Dan Npl Terhadap Penyaluran Kredit Modal Kerja Pada Bank Umum. Konferensi Ilmiah Akuntansi, 22, 1–18.

Sucipto, A., & Firdausy, C. M. (2021). Pengaruh Suku Bunga Acuan BI, Nilai Tukar Rupiah dan Inflasi terhadap Non-Performing Loan Sektor Usaha yang Dibiayai Bank Umum Konvensional di Indonesia. In Jurnal Manajemen Bisnis dan Kewirausahaan (Vol. 5, Issue 6, p. 588). https://doi.org/10.24912/jmbk.v5i6.15025

Sudaryanti, D. S., Sahroni, N., & Kurniawati, A. (2021). Analisa Kinerja Keuangan Dan Pengaruhnya Terhadap Kemampuan Penyaluran Kredit Pada Bank Persero Di Indonesia. BanKu: Jurnal Perbankan Dan Keuangan, 2(1), 1–13. https://doi.org/10.37058/banku.v2i1.2768

Syahwildan, M., & Parulian, P. (2022). Faktor Yang Berpengaruh Penentuan Penyaluran Kredit Perbankan Pada Bank umum Di Indonesia Pada Masa Pandemi Covid 19. Ikraith-Ekonomika, 6(1), 65–75. https://doi.org/10.37817/ikraith-ekonomika.v6i1.2469

Trisha Dewi Parasthiwi, A. A., & Budiasih, I. G. A. N. (2019). Pengaruh Kecukupan Modal, Penyaluran Kredit dan Ukuran Perusahaan Pada Profitabilitas Dengan Risiko Kredit Sebagai Pemoderasi. E-Jurnal Akuntansi, 26, 791. https://doi.org/10.24843/eja.2019.v26.i01.p29

Ulfatus Solicha, S. R. F. (2019). PENGARUH DANA PIHAK KETIGA, NPL, DAN CAR TERHADAP JUMLAH PENYALURAN KREDIT PERBANKAN (Studi Kasus Pada Bank Persero di Indonesia Periode 2015-2019). 1–15.

Wijaya, H., Harahab, S., Elidawati, & Sumarson Goh, T. (2023). Pengaruh Dana Pihak Ketiga, Capital Adequacy Ratio, NonPerforming Loan, Suku Bunga, Bopo Dan Roa Terhadap Penyaluran Kredit Bank Umum Yang Terdaftar Di Bursa Efek Indonesia. Bongaya Journal of Research in Accounting (BJRA), 6(1), 1–15. https://doi.org/10.37888/bjra.v6i1.370

Wiriya, M., Suarmanayasa, I. N., & Sinarwati, N. K. (2023). Pengaruh DPK, CAR, NPL dan LDR terhadap Penyaluran Kredit Lembaga Perkreditan Desa di Kabupaten Buleleng. Jurnal Penelitian Dan Pengembangan Sains Dan Humaniora, 6(3), 35–366. https://doi.org/10.23887/jppsh.v6i3.52386

Wisaputri, A. A. I. V., & Ramantha, I. W. (2021). Kecukupan Modal, Risiko Kredit, Rasio BOPO, dan Likuiditas pada Profitabilitas Bank. E-Jurnal Akuntansi, 31(7), 1692. https://doi.org/10.24843/eja.2021.v31.i07.p07

Yudhistira, A. W., & Sugiastuti, R. H. (2023). Analisis Pengaruh Inflasi, Suku Bunga BI-7DRR, Dana Pihak Ketiga (DPK) dan Non Performing Loan (NPL) Terhadap Penyaluran Kredit (Studi Pada Bank Umum KBMI 3 dan 4 yang Terdaftar di BEI Periode 2019-2022). JEMBA: Jurnal Ekonomi, Manajemen, Bisnis Dan Akuntansi, 2(4), 417–430.

Zuhri, S. (2024). PENGARUH DANA PIHAK KETIGA (DPK) DAN TINGKAT SUKU BUNGA KREDIT TERHADAP PENYALURAN KREDIT PADA PERUSAHAAN

SUBSEKTOR PERBANKAN YANG TERDAFTAR DI OTORITAS JASA KEUANGAN (OJK) TAHUN 2018 – 2022. 4(3), 10–19.