

The Effect of the Capital Adequacy Ratio and Non-Performing Loans on Profitability, With Good Corporate Governance as a Moderator: A Study of Commercial Banks Listed on the Indonesia Stock Exchange, 2020-2024

Evi Christiani*, Sunarto

Universitas Stikubank, Indonesia

Email: evichristiani7017@mhs.unisbank.ac.id*, sunarto@edu.unisbank.ac.id

Keywords:

Capital Adequacy Ratio, Good Corporate Governance, Non-Performing Loan, Profitability

Abstract

This study aims to analyze the effect of Capital Adequacy Ratio (CAR) and Non-Performing Loan (NPL) on bank profitability with Good Corporate Governance (GCG) as a moderating variable. A quantitative approach was employed using secondary data from annual financial reports of commercial banks listed on the Indonesia Stock Exchange for the 2020–2024 period. The sample consisted of 14 banks selected through purposive sampling, yielding 70 observations. Data analysis was conducted using Moderated Regression Analysis (MRA) with SPSS version 25. The results show that CAR has a significant negative effect on profitability, indicating that high capital adequacy does not necessarily increase profitability without effective capital management, consistent with Signalling Theory. NPL does not have a significant effect on profitability, implying that banks have implemented adequate credit risk management, consistent with Stakeholder Theory. GCG strengthens the effect of CAR on profitability, indicating that good governance improves capital management effectiveness, supporting Agency Theory. However, GCG is unable to moderate the effect of NPL on profitability, suggesting that credit risk management is more influenced by credit analysis quality and macroeconomic conditions than by governance mechanisms. These findings provide empirical evidence on GCG's role in strengthening the relationship between capital adequacy and bank profitability, offering practical implications for banking management in optimizing capital management and implementing corporate governance to improve financial performance. For future research, it is recommended to expand the research period, add macroeconomic control variables, and use more comprehensive GCG proxies.

INTRODUCTION

The banking industry is one of the main pillars in maintaining financial system stability and supporting national economic growth through the intermediation function. After the pandemic COVID-19, Indonesia's banking industry showed a positive recovery trend. According to the Financial Services Authority (OJK, 2024), the national banking sector continues to have a strong level of capital with Capital Adequacy Ratio (CAR) is above the regulator's minimum requirements, while the ratio Non-Performing Loan (NPL) is still in the controlled category. However, banks' ability to generate profits still shows variations between banks. This condition indicates that capital adequacy and good credit quality are not necessarily followed by optimal profitability levels in each bank. This phenomenon is important to study

because profitability is the main indicator in assessing the effectiveness of bank management and the sustainability of the banking industry's performance (Hakim & Sugianto, 2018).

Profitability proxied using Return on Assets (ROA) describes the ability of banks to manage all assets owned to generate profits. The higher the ROA value indicates the more effective the bank is in utilizing its assets so that it can increase the trust of investors, the public, and regulators (Melvina & Ekadjaja, 2023; Obeid, 2023; Pratiwi et al., 2024). However, research on banking profitability shows that banks' performance is not only influenced by their ability to generate income, but also by capital conditions, credit quality, and the effectiveness of corporate governance (Bortoluzzo et al., 2024; Caparusso et al., 2023).

The phenomenon of declining profitability is increasingly visible in the pandemic period COVID-19 until the economic recovery period. Amrina et al. (2021) shows that Indonesia's banking industry has experienced a decline Return on Assets (ROA) then Net Interest Margin (NIM) due to the slowdown in economic activity during the pandemic. The findings are reinforced by Pramitasari (2023) stating that liquidity pressures, slowdown in credit disbursement, and rising reserve costs caused bank profitability to decline compared to the pre-pandemic period. In addition, Lubis et al. (2023) It found that the level of decline in profitability did not occur evenly across banks, indicating differences in banks' ability to manage capital, credit risk, and corporate governance.

One of the factors that is suspected to affect profitability is Capital Adequacy Ratio (CAR). CAR shows the bank's ability to provide minimum capital to absorb risks arising from operational activities and credit risks (OJK, 2016). Banks with high CAR rates have better capacity to maintain business stability and expand their business Nguyen (2020). However, the results of the study on the effect of CAR on profitability still show inconsistencies. Nguyen (2020) found that the influence of CAR on profitability is influenced by the characteristics and size of the bank. Instead, Darto et al. (2023) shows that CAR has a positive effect on the profitability of Islamic commercial banks in Indonesia. On the other hand, Al-Sharkas dan Al-Sharkas (2022) stated that the increase in CAR does not necessarily increase profitability because it is influenced by the operational efficiency and cost structure of the bank. These differences in results suggest that the relationship between CAR and profitability still needs further testing.

In addition to capital adequacy, the credit quality that is proxied uses Non-Performing Loan (NPL) is also a factor that affects the bank's profitability. NPLs reflect the proportion of non-performing loans to total loans disbursed, making it an important indicator in assessing the quality of a bank's productive assets (OJK, 2015). High NPLs will increase the cost of servicing credit losses and reduce interest income, potentially reducing profitability (Begum & Atiq, 2023; Lamothe et al., 2024; Maaji et al., 2023). Research results Begum dan Atiq (2023); Lamothe et al. (2024); serta Shkodra et al. (2024) indicates that NPLs have a negative effect on the bank's profitability. Instead, Ashari and Arifin (2020) found that NPLs had no significant effect on profitability in the Indonesian banking industry. The inconsistency of these results shows that there is still a research gap regarding the relationship between NPLs and profitability.

In addition to financial factors, the application of Good Corporate Governance (GCG) is believed to be able to improve the effectiveness of company management through the application of the principles of transparency, accountability, responsibility, independence, and

fairness (OECD, 2023). Based on Agency Theory, a good governance mechanism is able to reduce conflicts of interest between shareholders and management thereby improving the quality of the company's decision-making (Jensen & Meckling, 1976). Research Setiawati et al. (2024) shows that GCG is able to strengthen the relationship between financial performance and company value. Nevertheless, Kurniawati and Sunarto (2022) and Perdana et al. (2024) shows that GCG has no significant effect on profitability. Thus, the role of GCG as a moderation variable still requires empirical proof, especially in the banking sector.

Based on this description, this research is based on two main gaps. First, the research gap, which is the inconsistent research results on the influence of Capital Adequacy Ratio, Non-Performing Loan, and Good Corporate Governance on bank profitability. Second, the phenomenon gap, which is that there is still a difference in the level of profitability between banks during the pandemic period until economic recovery even though the capital condition and credit quality of the banking industry in general are in the healthy category. Both gaps suggest that the factors that affect the profitability of banks still require further research.

Based on the above description, this research is motivated by two main gaps. First, the research gap, which is the inconsistency of research findings regarding the influence of the Capital Adequacy Ratio, Non-Performing Loans, and Good Corporate Governance on bank profitability. Second, the phenomenon gap, which is the persistence of differences in profitability levels between banks during the pandemic and economic recovery, despite the banking industry's generally healthy capital and credit quality. Previous research by Aviliani et al. (2025) found that GCG, proxied by institutional ownership, had a significant positive effect on profitability, while NPLs had no effect on profitability in BUKU 3 banks. These two gaps indicate that the factors influencing bank profitability still require further research.

The novelty of this research lies in examining Good Corporate Governance (GCG) as a moderating variable in the relationship between the Capital Adequacy Ratio (CAR) and Non-Performing Loans (NPLs) on the profitability of commercial banks listed on the Indonesia Stock Exchange for the 2020–2024 period. This study not only tests the direct influence of capital factors and credit risk on profitability, but also analyzes the extent to which GCG implementation is able to strengthen or weaken this relationship through the Moderated Regression Analysis (MRA) approach.

The purpose of this study is to analyze the influence of CAR and NPL on bank profitability and examine the role of GCG in moderating this relationship. Therefore, this study is expected to provide empirical contributions to the development of literature on the determinants of banking profitability and provide input for bank management in improving the effectiveness of capital management, credit risk control, and the implementation of corporate governance. Practically, the results of this study are expected to be useful for regulators in formulating policies that support improved banking performance, for bank management in making strategic decisions related to capital and risk management, and for academics as an empirical reference in developing theories in the field of banking financial management.

METHOD

This study used a quantitative approach by utilizing secondary data obtained from the annual financial report *and* the Good Corporate Governance (*GCG*) *implementation report* of commercial banks listed on the Indonesia Stock Exchange (IDX) for the period 2020–2024.

Data was obtained through the official website of the Indonesia Stock Exchange (IDX) and the official website of each bank.

The research population includes all commercial banks listed on the Indonesia Stock Exchange during the period 2020–2024. The sample determination was carried out using a purposive sampling technique with the following criteria: (1) commercial banks that are listed consecutively on the IDX during the 2020–2024 period; (2) publish the annual financial statements and the complete GCG implementation report; and (3) have complete data on *Capital Adequacy Ratio* (CAR), *Non-Performing Loan* (NPL), *Return on Assets* (ROA), and *Good Corporate Governance* (GCG). Based on these criteria, 14 banks were obtained as research samples with a total of 70 observations.

The dependent variable in this study is profitability which is proxied using *Return on Assets* (ROA). The independent variables consist of *Capital Adequacy Ratio* (CAR) and *Non-Performing Loans* (NPL), while *Good Corporate Governance* (GCG) plays a role as a moderation variable. The measurements of each variable are presented in Table 1.

Table 1. Variable Operational Definition

Variable	Measurement	Scale	References
Profitability (ROA)	ROA = Net Profit / Total Assets × 100%	Ratio	Bortoluzzo et al. (2024), Caparusso et al. (2023), Obeid (2023).
<i>Capital Adequacy Ratio</i> (CAR)	CAR = Modal / ATMR × 100%	Ratio	Kumar Jha & Agrawal (2022), Marlina (2023), OJK (2016).
<i>Non-Performing Loan</i> (NPL)	NPL = Non-Performing Loans / Total Loans × 100%	Ratio	Maaji et al. (2023), Pradhan et al. (2024), Sutisnawati & Anggraeni (2023).
<i>Good Corporate Governance</i> (GCG)	GCG self-assessment score converted into percentage	Ratio	Ashshiddiqy & Maulana (2018), Tjatriani (2019), Yanti (2022).

Source: Extracted from various studies (2025)

Data analysis was conducted using *Moderated Regression Analysis* (MRA) to test the influence of *Capital Adequacy Ratio* (CAR) and *Non-Performing Loan* (NPL) on profitability with *Good Corporate Governance* (GCG) as the pure moderator. The regression model used is as follows:

$$ROA = \alpha + \beta_1 CAR + \beta_2 NPL + \beta_3 (CAR \times GCG) + \beta_4 (NPL \times GCG) + \varepsilon$$

Description:

LONG = Profitability

CAR = *Capital Adequacy Ratio*

NPL = *Non-Performing Loan*

GCG = *Good Corporate Governance*

CAR×GCG = CAR's interaction with GCG

NPL×GCG = NPL interaction with GCG

E = *Error term*

Before hypothesis testing, the model is tested using classical assumption tests which include normality tests, multicollinearity tests, heteroscedasticity tests, and autocorrelation tests to ensure that the regression model meets the required assumptions. Furthermore, the feasibility of the model was evaluated using the F test, while the model's ability to explain the

variation of dependent variables was measured using the determination coefficient (*Adjusted R²*). Hypothesis testing was carried out using a t-test at a significance level of 5%.

The basis for decision-making on the t-test is as follows.

- a. If the value of $\text{sig} < 0.05$ or $t \text{ calculate} > t \text{ of the table}$, then it has a significant effect
- b. If the value of $\text{sig} > 0.05$ or $t \text{ is calculated} < \text{table}$, then the variable has no significant effect.

RESULTS AND DISCUSSION

Results

Descriptive Statistics

Descriptive statistics are used to provide an overview of the characteristics of the research data which include the minimum, maximum, mean, and standard deviation values of each research variable. The variables analyzed consisted of *Capital Adequacy Ratio* (CAR), *Non-Performing Loan* (NPL), *Good Corporate Governance* (GCG), and *Return on Assets* (ROA) as profitability proxies. The results of descriptive statistical analysis are presented in Table 2.

Table 2. Descriptive Static Results of Variables

Descriptive Statistics					
	N	Min.	Max.	Mean	Std. Deviation
<i>Capital Adequacy Ratio</i> (CAR)	70	16.800	169.920	27.89471	19.575284
<i>Non-Performing Loan</i> (NPL)	70	.160	4.370	2.23957	1.003365
<i>Good Corporate Governance</i> (GCG)	70	.500	1.000	.80357	.111746
<i>Profitability</i> (ROA)	70	0.100	4.220	1.96057	1.020365
Valid N (listwise)	70				

Source: Financial statements and GCG reports of processed banking companies, 2025

Based on Table 2, the number of data analyzed was 70 observations from 14 commercial banks during the 2020–2024 period. The *Capital Adequacy Ratio* (CAR) variable has a minimum value of 16,800, a maximum value of 169,920, a mean value of 27.89471, and a standard deviation of 19.57528. The *Non-Performing Loan* (NPL) variable has a minimum value of 0.160, a maximum value of 4.370, an average value of 2.23957, and a standard deviation of 1.00337. The *Good Corporate Governance* (GCG) variable has a minimum value of 0.500, a maximum value of 1.000, an average value of 0.80357, and a standard deviation of 0.11175. Meanwhile, the *Return on Assets* (ROA) variable has a minimum value of 0.100, a maximum value of 4.220, an average value of 1.96057, and a standard deviation of 1.02037. The average value and standard deviation of each variable showed a variation in data that reflected differences in financial conditions between banks during the study period.

Normality Test

The normality test aims to find out whether the residual data in the regression model is normally distributed. In this study, normality testing was carried out using *Z-skewness* and *Z-kurtosis* values. A regression model is stated to meet the assumption of normality if *the Z-skewness* and *Z-kurtosis* values are in the range -1.96 to $+1.96$. The results of the normality test are presented in Table 3.

Table 3. Normality Test Results

	Descriptive Statistics				
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Unstandardized Residual	70	-.031	.287	.126	.566
Valid N (listwise)	70				

Source: Financial statements and GCG reports of processed banking companies, 2025

Based on Table 3, the *Z-skewness* value was -0.108 and *Z-kurtosis* was 0.223. Both values are in the range of -1.96 to $+1.96$, so it can be concluded that the residual data is normally distributed. Thus, the regression model meets the assumption of normality and can be used for further analysis.

Multicollinearity Test

The multicollinearity test was performed to find out if there was a high correlation between independent variables in the regression model. A good regression model shows no symptoms of multicollinearity. The test was carried out using *Tolerance* and *Variance Inflation Factor* (VIF) values. The test results are presented in Table 4.

Table 4. Multicollinearity Test Results

Model		Coefficients ^a					Collinearity Statistics	
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	LIVE
1	(Constant)	4.007	.309		12.957	.000		
	CAR	-.025	.005	-.478	-4.925	.000	.919	1.089
	NPL	-.603	.099	-.593	-6.105	.000	.919	1.089

a. Dependent Variable: Y

Source: Financial statements and GCG reports of processed banking companies, 2025

Based on Table 3, all variables have a *Tolerance value* greater than 0.10 and a VIF value of less than 10. These results show that there are no symptoms of multicollinearity in the regression model so that independent variables are suitable for use in hypothesis testing.

Heteroskedasticity Test

Heteroscedasticity tests were performed to find out whether there was a residual variance inequality in the regression model. The test was carried out using *the Glejser* test with a significance level of 5%. The regression model is declared free of heteroscedasticity if the significance value of each variable is greater than 0.05. The test results are presented in Table 5.

Table 5. Heteroskedasticity Test

Coefficients ^a					
		Unstandardized Coefficients		Standardized Coefficients	
Model		B	Std. Error	Beta	t
1	(Constant)	1.030	.168		6.144
	CAR	.053	.041	2.394	1.272
	NPL	-.815	.461	-1.899	-1.768
	CAR and GCG Moderation	-.071	.055	-2.407	-1.278
	NPL and GCG Moderation	.824	.606	1.430	1.361

a. Dependent Variable: AbsRes

Source: Financial statements and GCG reports of processed banking companies, 2025

Based on Table 5, all variables showed significance values above 0.05, namely CAR of 0.208, NPL of 0.082, CAR×GCG of 0.206, and NPL×GCG of 0.178. Thus, the regression model does not experience symptoms of heteroscedasticity.

Autocorrelation Test

An autocorrelation test is performed to find out if there is a correlation between the residual in one period and another. The test uses Durbin-Watson (DW) statistics. The test results are presented in Table 6.

Table 6. Autocorrelation Test

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.711 ^a	.505	.475	.739286	2.081

a. Predictors: (Constant), MODERASI NPL under GCG, CAR MODERASI under GCG, NPL, CAR
b. Dependent Variable: ROA

Source: Financial statements and GCG reports of processed banking companies, 2025

Table 7. Durbin-Watson (DW), $\alpha=5\%$

n	k=3		k=4		k=5	
	dL	dU	dL	dU	dL	dU
68	1,5164	1,7001	1,4853	1,7335	1,4537	1,7678
79	1,5205	1,7015	1,4899	1,7343	1,4588	1,7680
70	1,5245	1,7028	1,4943	1,7351	1,4637	1,7683

Source: Durbin-Watson Statistical Table ($\alpha = 0.05$)

Based on the test results, a Durbin-Watson score of 2.081 was obtained. The value is between dU (1.7351) and 4–dU (2.2649), so it can be concluded that the regression model does not experience autocorrelation.

Hypothesis Test (*Moderated Regression Analysis*)

Hypothesis testing was carried out using *Moderated Regression Analysis* (MRA) to determine the influence of *Capital Adequacy Ratio* (CAR) and *Non-Performing Loan* (NPL)

on profitability and test the role of *Good Corporate Governance* (GCG) as a moderation variable. The test results are presented in Table 8.

Table 8. Moderated Regression Analysis

		Coefficients a			t	Sig.
		Unstandardized Coefficients	Std. Error	Standardized Coefficients		
Model		B		Beta		
1	(Constant)	3.586	.316		11.360	.000
	CAR	-.186	.078	-.3575	-2.386	.020
	NPL	.463	.869	.456	.533	.596
	CAR and GCG Moderation	.219	.104	3.144	2.098	.040
	NPL and GCG Moderation	-1.303	1.141	-.955	-1.142	.258

a. Dependent Variable: ROA

Source: Financial statements and GCG reports of processed banking companies, 2025

Based on Table 8, the *Capital Adequacy Ratio* (CAR) variable has a significance value of 0.020, so it has a significant effect on profitability. The *Non-Performing Loan* (NPL) variable has a significance value of 0.596, so it does not have a significant effect on profitability. The CAR×GCG interaction variable has a significance value of 0.040, which shows that *Good Corporate Governance* is able to moderate the influence of CAR on profitability. On the other hand, the NPL×GCG variable has a significance value of 0.258, so *Good Corporate Governance* is unable to moderate the influence of NPLs on profitability.

Model Feasibility Test (F Test)

The F test was carried out to determine the feasibility of the regression model in explaining the relationship between independent variables and dependent variables. The test results are presented in Table 9.

Table 9. F Test Results

		ANOVA b				Sig.
Model		Sum of Squares	df	Mean Square	F	
1	Regression	36.314	4	9.078	16.611	.000a
	Residual	35.525	65	.547		
	Total	71.839	69			

a. Dependent Variable: ROA

b. Predictors: (Constant), NPL and GCG Moderation, CAR and GCG MODERATION, NPL, CAR

Source: Financial statements and GCG reports of processed banking companies, 2025

Based on Table 9, an F value of 16.611 was obtained with a significance value of 0.000. Significance values smaller than 0.05 indicate that the regression model is feasible to use to explain the influence of independent variables on profitability.

Determination Coefficient Test (*Adjusted R²*)

The determination coefficient is used to measure the ability of the regression model to explain the variation of dependent variables. The test results are presented in Table 8.

Table 10. Determination Coefficient Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.711a	.505	.475	.739286
a. Predictors: (Constant), NPL and GCG Moderation, CAR and GCG MODERATION, NPL, CAR				
b. Dependent Variable: ROA				

Source: Financial statements and GCG reports of processed banking companies, 2025

Based on Table 10, the *Adjusted R Square* value is 0.475. These results show that 47.5% of profitability variations can be explained by *the variables Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), and Good Corporate Governance (GCG) interaction* in the research model. Meanwhile, the remaining 52.5% were influenced by other factors outside the research model.

Discussion

The Effect of *Capital Adequacy Ratio (CAR)* on Profitability

The test results show that *the Capital Adequacy Ratio (CAR)* variable has a significant effect on profitability. This is shown by a significance value of $0.020 < 0.05$ with a regression coefficient value of -0.186 which indicates the direction of a negative relationship. This means that the higher the *Capital Adequacy Ratio (CAR)* value, the profitability proxied using *Return on Assets (ROA)* tends to decrease. Thus, the first hypothesis (H1) that states that *the Capital Adequacy Ratio (CAR)* has an effect on profitability is accepted.

The results of this study show that the high level of capital adequacy is not necessarily able to increase the bank's profitability. The amount of capital owned by banks can indicate that some of the funds have not been used optimally for productive activities, such as credit distribution and income-generating investments. This condition causes the efficiency of capital use to decrease so that an increase in CAR is not always followed by an increase in profit.

Based on *Signalling Theory*, the *Capital Adequacy Ratio* is a signal about the level of health and ability of banks to deal with various risks. The high CAR gives a positive signal to investors, regulators, and the public that banks have good capabilities in maintaining financial stability. However, the results of this study show that these signals are not fully able to increase profitability because the available capital is used more as a risk buffer than for income-generating activities.

The results of this study are in line with the research Al-Sharkas dan Al-Sharkas (2022) which states that a level of capital adequacy that is too high can reduce the efficiency of asset use so that it has an impact on profitability. However, the results of this study are different from Darto et al. (2023) dan Nguyen (2020) who found that *Capital Adequacy Ratio* has a positive effect on profitability. The difference in results is suspected to be influenced by the characteristics of the sample, the condition of the banking industry during the research period, and the capital management policies of each bank.

Thus, the results of this study show that the amount of capital is not a guarantee of increased profitability if it is not followed by effective and productive capital management.

The Effect of *Non-Performing Loans* (NPLs) on Profitability

The test results showed that the *Non-Performing Loan* (NPL) variable did not have a significant effect on profitability. This is shown by a significance value of $0.596 > 0.05$ with a regression coefficient value of 0.463 indicating the direction of a positive relationship. However, the relationship is not statistically significant. Thus, the second hypothesis (H2) which states that *Non-Performing Loans* (NPLs) have an effect on profitability is rejected.

The results of this study show that changes in the level of non-performing loans have not been able to affect the bank's profitability in real terms. This condition indicates that banks have implemented good enough credit risk management so that the impact of the increase in non-performing loans can still be controlled through the establishment of loss reserves, the application of prudential principles, and credit quality supervision.

Based on *Stakeholder Theory*, banks have a responsibility to maintain the trust of stakeholders, such as investors, customers, regulators, and the public. One of these responsibilities is realized through effective credit risk management so that financial performance stability is maintained. Therefore, an increase in NPLs does not necessarily directly affect profitability if banks are able to manage credit risk properly.

The results of this study are in line with Ashari and Arifin (2020) which states that *Non-Performing Loan* does not have a significant effect on the profitability of banks in Indonesia. On the contrary, the results of this study are different from Begum dan Atić (2023), Jolevski (2017) serta Shkodra et al. (2024) which found that an increase in non-performing loans had an impact on a decline in bank profitability. The difference is allegedly due to the ability of each bank to implement credit risk management as well as economic conditions during the study period.

Thus, the results of this study show that the level of non-performing loans is not the only factor that determines the bank's profitability, but is also influenced by the effectiveness of the bank's risk management and operational strategy.

The Role of *Good Corporate Governance* (GCG) in Moderating the Influence of *Capital Adequacy Ratio* (CAR) on Profitability

The test results showed that the $CAR \times GCG$ interaction variable had a significant effect on profitability. This is shown by a significance value of $0.040 < 0.05$ with a regression coefficient value of 0.219 which indicates the direction of a positive relationship. This means that the implementation of *Good Corporate Governance* (GCG) is able to strengthen the influence of the *Capital Adequacy Ratio* on profitability. Thus, the third hypothesis (H3) which states that *Good Corporate Governance* moderates the influence of *Capital Adequacy Ratio* on profitability is accepted.

The results of this study show that the implementation of good corporate governance is able to increase the effectiveness of capital management so that the capital owned by banks can be used more optimally to support increased profitability. Good governance also encourages more informed decision-making and increases accountability in the management of company resources.

Based on *Agency Theory*, *Good Corporate Governance* is a supervisory mechanism that is able to reduce conflicts of interest between management and shareholders. The application of the principles of transparency, accountability, responsibility, independence, and fairness can

improve the quality of capital management so that the capital owned by banks provides greater benefits to financial performance.

The results of this study are in line with Setiawati et al. (2024) which states that *Good Corporate Governance* able to strengthen the relationship between financial performance and company value. These results are also supported by Asiamah et al. (2024) dan Bhatt et al. (2024) which explains that effective corporate governance is able to improve the efficiency of company resource management.

Thus, the implementation of *Good Corporate Governance* is an important factor in optimizing capital utilization so that it can increase bank profitability.

The Role of Good Corporate Governance (GCG) in Moderating the Influence of Non-Performing Loans (NPLs) on Profitability

The test results showed that the $NPL \times GCG$ interaction variable had no significant effect on profitability. This is shown by a significance value of $0.258 > 0.05$ with a regression coefficient value of -1.303 indicating the direction of a negative relationship. Nevertheless, the relationship was not statistically significant. Thus, the fourth hypothesis (H4) that states that *Good Corporate Governance* moderates the influence of *Non-Performing Loans* on profitability is rejected.

The results of this study show that the implementation of *Good Corporate Governance* has not been able to strengthen or weaken the influence of non-performing loans on bank profitability. This indicates that credit risk management is more influenced by the quality of credit analysis, the effectiveness of risk management, economic conditions, and the ability of debtors to fulfill their obligations than by corporate governance mechanisms.

Based on *Agency Theory*, the implementation of *Good Corporate Governance* is expected to be able to increase the effectiveness of supervision of company activities, including in credit risk management. However, the results of this study show that the corporate governance mechanism is not strong enough to reduce the impact of non-performing loans on profitability because there are still other factors that are more dominant affecting credit quality.

The results of this study are in line with Perdana et al. (2024) which states that *Good Corporate Governance* does not have a significant effect on profitability. On the contrary, the results of this study are different from Yusnita et al. (2022) which found that corporate governance is able to increase the effectiveness of credit risk control so that it has a positive impact on the bank's financial performance.

Thus, the implementation of *Good Corporate Governance* needs to be supported by an effective credit risk management system in order to be able to make a greater contribution to increasing bank profitability.

Table 11. Summary of Hypothesis Testing Results

Hypothesis	Statement	Results	Remarks
H1	Capital Adequacy Ratio → Preferabilities	Accepted	Significant (-)
H2	Non-Performing Loans → Profitability	Rejected	Insignificant (+)
H3	Good Corporate Governance × Capital Adequacy Ratio → Preferabilities	Accepted	Significant (+)
H4	Good Corporate Governance × Non-Performing Loan → Preferabilities	Rejected	Insignificant (-)

Source: Processed data (2025)

CONCLUSION

Based on the results of the analysis and discussion conducted, it can be concluded that the Capital Adequacy Ratio (CAR) exerts a significant negative effect on profitability, indicating that a high level of capital adequacy does not necessarily enhance profitability unless accompanied by effective and productive capital management since idle funds not optimally channeled into productive activities such as credit disbursement and income-generating investments reduce capital-use efficiency, consistent with *Signaling Theory*, which holds that a high CAR signals financial stability but not necessarily profitability when capital functions primarily as a risk buffer rather than an income-generating resource whereas Non-Performing Loans (NPL) show no significant effect on profitability, suggesting that banks have implemented adequate credit risk management through loss reserves, prudential principles, and credit quality supervision, consistent with *Stakeholder Theory*, wherein effective credit risk management sustains stakeholder trust and financial performance stability. Good Corporate Governance (GCG) is found to strengthen the effect of CAR on profitability, indicating that sound governance enhances the effectiveness of capital management and enables more optimal use of bank capital to support profitability, in line with *Agency Theory*, which posits that strong governance mechanisms reduce conflicts of interest between management and shareholders and thereby improve the quality of corporate decision-making particularly through the principles of transparency, accountability, responsibility, independence, and fairness yet GCG does not moderate the effect of NPL on profitability, suggesting that credit risk outcomes are shaped more by the quality of credit analysis, the effectiveness of risk management systems, macroeconomic conditions, and debtor capacity than by governance mechanisms alone. These findings imply that bank management should strengthen GCG implementation on a consistent and sustainable basis while reinforcing a more comprehensive credit risk management system, and should balance maintaining healthy capital adequacy with optimizing capital use for productive, income-generating activities; for regulators, the results support policies that encourage banks to focus not only on meeting minimum capital adequacy requirements but also on the effective use of capital, while theoretically, this research contributes to the literature on GCG as a moderating variable in the relationship between financial factors (CAR and NPL) and banking profitability, extending the application of *Agency Theory* and *Stakeholder Theory* within the context of the Indonesian banking industry. For future research, it is recommended that the study period be extended (e.g., to ten years) to capture a fuller business cycle, that macroeconomic control variables such as inflation, interest rates, and economic growth be incorporated, that more comprehensive GCG proxies such as governance scores from independent rating agencies (e.g., OJK) be employed, that comparative analyses be conducted across BUKU bank categories (BUKU 1, 2, 3, and 4), and that alternative analytical methods such as *Dynamic Panel Data* be applied to address potential endogeneity and more accurately capture the dynamics among variables.

REFERENCE

- Al-Sharkas, A. A., & Al-Sharkas, T. A. (2022). the Impact on Bank Profitability: Testing for Capital Adequacy Ratio, Cost-Income Ratio and Non-Performing Loans in Emerging Markets. *Journal of Governance and Regulation*, 11(1 special issue), 231–243.

<https://doi.org/10.22495/jgrv11i1siart4>

- Ashari, M. A., & Arifin, J. (2020). *Pengaruh Non Performing Loan (NPL) Terhadap Profitabilitas Pada Bank yang Terdaftar di Indeks IDX30 Periode 2015-2020*. 7.
- Ashshiddiqy, A. F., & Maulana, H. (2018). *The Implementation of Corporate Governance in Islamic Banking in Indonesia Based on AAOIFI Satndard*. 1(1).
- Asiamah, S., Appiah, K. O., & Agyemang Badu, E. (2024). Do board characteristics moderate capital adequacy regulation and bank risk-taking nexus in Sub-Saharan Africa? *Asian Journal of Economics and Banking*, 8(1), 100–120. <https://doi.org/10.1108/ajeb-08-2022-0108>
- Begum, R., & Atiq, Z. (2023). *Non-Performing Loans and Banks' Profitability: A Review of Banking Industry in Pakistan*. May, 178–194.
- Bhatt, T. K., Wang, W., Dang, X., & Jan, S. Q. (2024). The role of corporate governance structures in mediating the relationship between external supervision, credit appraisal measurement, capital adequacy, and performance of commercial banks in Nepal. *PLoS ONE*, 19(6 June), 1–22. <https://doi.org/10.1371/journal.pone.0303926>
- Bortoluzzo, A. B., Ciganda, R. R., & Bortoluzzo, M. M. (2024). Determinant Factors of Banking Profitability: An Application of Quantile Regression for Panel Data. *Future Business Journal*, 10(1), 1–10. <https://doi.org/10.1186/s43093-024-00347-z>
- Caparusso, J., Lewrick, U., & Tarashev, N. (2023). Profitability, valuation and resilience of global banks - a tight link. *BIS Working Paper No. 1144*, 1144.
- Darto, D., Priharta, A., & Maryati, M. (2023). Capital Adequacy Ratio, Likuiditas, Efisiensi Operasional, Ukuran Perusahaan dan Profitabilitas: Bukti Empiris pada Bank Umum Syariah di Indonesia. *BALANCE: Economic, Business, Management and Accounting Journal*, 20(2), 132. <https://doi.org/10.30651/blc.v20i2.18341>
- Hakim, L., & Sugianto, S. (2018). Determinant profitability and implications on the value of the company: Empirical study on banking industry in IDX. *International Journal of Economics and Financial Issues*, 8(1), 205.
- Jolevski, L. (2017). the Impact of the Non-Performing Loans To Banks' Performance: the Case of the Republic of Macedonia. *EMC Review - Časopis Za Ekonomiju - APEIRON*, 14(2). <https://doi.org/10.7251/emc1702184j>
- Kumar Jha, A., & Agrawal, A. (2022). An Impact Of Capital Adequacy Ratio On The Profitability Of Commercial Banks In India. *Migration Letters*, 19, 80–89.
- Maaji, M. M., Barnett, C., & Long, C. (2023). Non-Performing Loans and Commercial Bank Profitability: Evidence from Cambodia. *Journal of Entrepreneurship and Business Innovation*, 10(2), 1. <https://doi.org/10.5296/jebi.v10i2.21229>
- Marlina, R. (2023). Determinants of Capital Adequacy Ratio Bank in Indonesia (Case Study on Banks Listed on the Idx). *Journal of Business and Finance in Emerging Markets*, 6(2), 87–96.
- Nguyen, T. H. (2020). Impact of bank capital adequacy on bank profitability under Basel II Accord: Evidence from Vietnam. *Journal of Economic Development*, 45(1), 31–46.
- Obeid, R. (2023). Factors Affecting Return on Assets (ROA) in the Banking Sector of Selected Arab Countries: Is There a Role for Financial Inclusion and Technology Indicators? *International Journal of Economics and Finance*, 15(9), 1. <https://doi.org/10.5539/ijef.v15n9p1>
- OJK. (2016). *Peraturan Otoritas Jasa Keuangan Nomor 11/POJK.03/2016 Tentang Kewajiban Penyediaan Modal Minimum Bank Umum*.
- Perdana, A. W., Setyaningrum, R. P., Dasman, S., & Aminah, S. (2024). Analisis Pengaruh Manajemen Risiko Terhadap Profitabilitas Perusahaan Dengan Good Corporate Governance Sebagai Variabel Moderasi. *Jurnal Manajemen Perbankan Keuangan Nitro*, 7(2), 120–129. <https://doi.org/10.56858/jmpkn.v7i2.355>

- Pradhan, P., Jha, P., Sah, P., & Magar, R. B. (2024). Impact of Non-Performing Loans on Bank Profitability and Lending Behavior in Nepalese Commercial Banks. *Nepalese Journal of Economics*, 8(3), 71–90. <https://doi.org/10.3126/nje.v8i3.79449>
- Setiawati, C., Orbaningsih, D., & Muawanah, U. (2024). Financial Performance And Company Value: Good Corporate Governance As Moderation. *JAS (Jurnal Akuntansi Syariah)*, 8(2), 341–363. <https://doi.org/10.46367/jas.v8i2.2076>
- Shkodra, J., Anastasioub, D., & Kallandranisc, C. (2024). the Impact of Non-Performing Loans on Commercial Bank Profitability: Evidence From the Western Balkans. *Financial and Credit Activity: Problems of Theory and Practice*, 3(56), 49–58. <https://doi.org/10.55643/FCAPTP.3.56.2024.4355>
- Sutisnawati, Y., & Anggraeni, F. A. (2023). The Influence of Non-Performing Loans on Profitability at Bank Rakyat Indonesia Persero Tbk. *Jurnal Ilmu Keuangan Dan Perbankan (JIKA)*, 12(2), 215–222. <https://doi.org/10.34010/jika.v12i2.8303>
- Tjatriani, R. (2019). *Prinsip Good Corporate Governane dalam Pengelolaan Pungutan Sumbangan Pihak Ketiga Pada Perum Perhutani Jateng*. 2(3), 493–498.
- Yanti, E. D. (2022). *Implementation of the Principles of Good Corporate Governance in an Effort to Improve the Performance of PT PLN (Persero)*. 6(2), 204–209.
- Yusnita, R. T., Waspada, I., & Sari, M. (2022). Investment Decision Judging from Personal Income, Financial Literacy and Demographic Factors. *Proceedings of the 6th Global Conference on Business, Management, and Entrepreneurship (GCBME 2021)*, 657(Gcbme 2021), 67–71. <https://doi.org/10.2991/aebmr.k.220701.016>