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THE ROLE OF GOVERNANCE IN MODERATING CREDIT RISK AND CAPITAL ADEQUACY ON FINANCIAL PERFORMANCE IN INDONESIAN BANKS

PERAN TATA KELOLA DALAM MEMODERASI RISIKO KREDIT DAN KECUKUPAN MODAL TERHADAP KINERJA KEUANGAN PERBANKAN DI INDONESIA

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ABSTRACT

This study seeks to contribute to the existing corporate governance literature by examining its role as a moderator on the relationship between credit risk (CR), represented with loans to total assets (LTA) and non-performing loans (NPLs), as well as capital adequacy ratio (CAR), on financial performance (FP) of banks listed in the Indonesia Stock Exchange (IDX). This study uses quantitative data collected from the annual reports of 45 banks listed on the IDX, utilizing panel data regression analysis techniques of total 180 firm-year observations within the 2020-2023 period, with fixed and random effect model to examine the hypotheses. The study's findings demonstrated differing results between the variables, in which both LTA and CAR have a significant positive influence on return on equity (ROE), whereas it has inverse effects on Tobin's Q. Moreover, the regression results showed that corporate governance (CG) moderated the relationship between LTA and banks FP, as it weakens LTA effect on ROE but strengthens it on Tobin's Q. The study provides insights for bank managers and authorities alike in managing the proportion of LTA and the CAR while determine the optimal board size to stabilize banks performance better, as well as for investors to consider the importance of CR & CAR, as well as quality of governance in making investment decisions.

Keywords: *Credit Risk, Capital Adequacy Ratio, Corporate Governance, Financial Performance*

ABSTRAK

Penelitian ini bertujuan untuk memberikan kontribusi terhadap literatur tata kelola perusahaan yang ada dengan mengkaji perannya sebagai moderator pada hubungan antara risiko kredit (CR), yang direpresentasikan dengan rasio pinjaman terhadap total aset (LTA) dan pinjaman bermasalah (NPL), serta rasio kecukupan modal (CAR), terhadap kinerja keuangan (FP) bank yang terdaftar di Bursa Efek Indonesia (BEI). Penelitian ini menggunakan data kuantitatif yang dikumpulkan dari laporan tahunan 45 bank yang terdaftar di BEI, menggunakan teknik analisis regresi data panel dari total 180 observasi perusahaan-tahun dalam periode 2020-2023, dengan model efek tetap dan acak untuk menguji hipotesis. Temuan penelitian menunjukkan hasil yang berbeda antara variabel-variabel, di mana LTA dan CAR memiliki pengaruh positif yang signifikan terhadap laba atas ekuitas (ROE), sedangkan CAR memiliki pengaruh yang berlawanan terhadap Tobin's Q. Selain itu, hasil regresi menunjukkan bahwa tata kelola perusahaan (CG) memoderasi hubungan antara LTA dan FP bank, karena memperlemah pengaruh LTA terhadap ROE tetapi memperkuatnya pada Tobin's Q. Penelitian ini memberikan wawasan bagi manajer dan otoritas bank dalam mengelola proporsi LTA dan CAR sambil menentukan ukuran dewan yang optimal untuk menstabilkan kinerja bank dengan lebih baik, serta bagi investor untuk mempertimbangkan pentingnya CR & CAR, serta kualitas tata kelola dalam membuat keputusan investasi.

Kata Kunci: Risiko Kredit, Rasio Kecukupan Modal, Tata Kelola Perusahaan, Kinerja Keuangan

INTRODUCTION

The banking sector plays a key role in financial system stability that is necessary for an inclusive economy within the financial system (Chiappini et al., 2024). It controls and manages assets and liabilities, along with an ever increasingly complex risk structure. These are considered as important factors that affect the health of banks. As key players, banks have an important role in economic growth and

development. However, with their provided services came along the risks. Among them, the most prominent are credit and liquidity risks. (Galvis-Ciro et al., 2023).

Research by (Mohammad et al., 2024) shows that credit risk affects the financial performance of banks, denoting the bank's ability to manage bad debts and the default risks. High credit risk is often associated with declining financial performance, which threatens the profitability and sustainability of the bank itself. Therefore, credit risk has a negative impact on bank profitability because loans are the main source of interest income for banks (Evoney & Margaretha, 2024).

Several studies show that the implementation of governance in the banking sector can reduce the negative impact of credit risk on bank performance (Nour et al., 2022). In addition, some results pointed that governance moderates the relationship between credit risk and financial performance when good governance practices are implemented, indicating that adherence to good governance principles will reduce the impact of credit risk and improve financial performance (Mohammad et al., 2024).

Mohammad et al., (2024) also examined several control variables within the relationship between credit risk and financial performance, such as bank age, bank size, and bank liquidity. This is corroborated by (Opoku et al., 2016) which states that bank age, bank size, and bank liquidity have a significant positive effect on bank financial performance. Mawutor & Fred (2015) on their research on listed banks in Ghana also found that the same three control variables have a significantly positive impact on financial performance.

Capital adequacy ratio also plays an important role in determining the bank's resilience to various risks that may occur. Studies have shown a significant positive relationship between capital adequacy and bank performance, highlighting the importance of maintaining an adequate capital base. Adequate capital resources support financial growth and stability, which in turn has a positive impact on bank performance (Bhatt et al., 2024).

Many studies have discussed the effect of credit risk on financial performance, and yet there is still a gap in understanding how the capital adequacy ratio affects financial performance, which still needs to be filled with a more comprehensive approach, given the unique and dynamic conditions of the banking industry in Indonesia. In an effort to fill this research gap, this study will inspect further capital adequacy ratio as a relatively new element in analyzing its effect on financial performance. This is a novelty in this study, where the capital adequacy ratio as an important factor is examined in a deeper context by looking at how the capital adequacy ratio is significant in its influence on the financial performance of banks. Based on different phenomenon and research gaps, this study will focus on testing “The Role of Governance in Moderating Credit Risk and Capital Adequacy on Financial Performance in Indonesian Banking”.

This study aims to analyze the effect of the proportion of loans to total assets, non-performing loans and capital adequacy ratio, bank age, bank size and bank liquidity on banking financial performance in Indonesia. In addition, this study also want to analyze the effect of the role of bank governance moderating the relationship between the proportion of loans to total assets and

non-performing loans on the financial performance of banks in Indonesia.

Literature Review

Bank Performance

Described as an activity carried out by banks to see how effective a bank is to make a profit within a certain time (Alamsyah & MN, 2022). In order to understand their current financial condition, and to determine future business policies (Nurbaiti Pertiwi et al., 2023), banks must analyze their own financial performance (FP) as part of their business management. Using a combination of accounting and market-based measures, this study measured bank performance with Return on Equity (ROE) & Tobin's Q. ROE is a common FP indicator that shows the amount of profit a company achieves from shareholders' investment (Srouji et al., 2023), while Tobin's Q is one of the most important indicators that provide a more detailed measure that shows the effectiveness of the administration in managing its economic resources. If the Tobin's Q value is greater than one, it implies that investing in assets generates higher returns than investing in expenses. Hence, it is pointless to invest in a company with Tobin's Q value of less than one (Al-Okaily et al., 2023).

Loans to Total Assets

There are several ways to measure Credit Risk (CR), one of which is Loans to Total Assets (LTA), This ratio is an important indicator to measure the bank's total assets proportion allocated in the form of credit or loans, which reflects their ability in managing its assets to generate income through credit distribution. Banks are expected to have low LTA ratio in order to lessen the exposure to loan risk. the LTA ratio is calculated by dividing the total loans provided by the bank by the total assets it owns (Fitriani, 2024).

Non-Performing Loan

Another way to measure CR, non-performing loans (NPL) are described as the condition of debtors who cannot pay installment obligations that have been determined at the beginning, it can also be interpreted as banking activities on their credit ones (Lidiawan et al., 2022). NPL are loans that have passed the due date or cannot be repaid in full by the borrower (Singh et al., 2021). Credit provided by the bank will be categorized as NPL if principal payments are not made and/or interest is late, or there is a high probability that the debtor won't even repaid it (Sochib et al., 2023).

Capital Adequacy Ratio

Ngatno et al. (2021) refers to this ratio as bank's capital ability to absorb potential losses while maintaining financial stability. Other than absorbing loss, accumulating sufficient capital buffers also allows banks to comply with regulatory requirements and remain financially sound (Feng et al., 2020). The foundation theory for this relationship can be traced back to the capital adequacy framework outlined in the Basel Accords, emphasizing its protective role in securing banks from financial risks. Bătae et al. (2021) explained that an adequate capital level can provide assurance for bank operations by alleviate potential unexpected losses and protecting depositors and stakeholders.

Corporate Governance

Governance refers to the structures and systems that govern how to run and overseen a company. Good governance involves transparency, accountability, and effective risk management, with aims to maintaining a balance between

the interests of managers, shareholders, and other stakeholders. McKinsey & Co. (2023) in their book emphasizes the importance of good corporate governance in improving long-term performance and operational stability, especially in the face of increasingly complex market challenges.

Bank Age

Bank age refers to the number of years the company has been listed on the stock exchange, which is positively associated with FP (Palaniappan, 2017). Older banks tend to have higher stability and a stronger track record in terms of risk management and regulatory compliance. The age of a bank can affect its capacity to innovate and adapt to market changes, although older banks tends to took more conservative approach in taking risks. (McKinsey & Co., 2023)

Bank Size

Bank size refers to the amount of assets owned by the bank, with larger banks often have advantages in terms of risk diversification and greater resources for technological innovation and market expansion. According to McKinsey & Co. (2023), large banks can benefit from economies of scale, but must be able to maintain flexibility in the face of global economic changes.

Bank Liquidity

Bank liquidity refers to a bank's ability to meet its obligations, which can be measured by dividing total loans by total deposits (Baltas & Liñares-Zegarra, 2024). The higher the liquidity level, the easier it is for the bank to avoid financial problems caused by the inability to pay obligations. S&P Global Ratings (2023) noted that it is important for banks to have good liquidity in order to maintain operational stability and deal with volatile market conditions.

Conceptual Framework

Prior research and literature reported a conflicting correlation between CRs and FP, with most leaning to its negative association, albeit there is evidence that shows a positive effect of it, like Mohammad et al. (2024) in their research that concluded that there is a positive significant effect between LTA and FP as measured by ROE and Tobin's Q. Meanwhile Al-Eitan et al. (2019) found that LTA has a significant negative impact on ROE. These results are backed up by Ebenezer & Omar (2015) and (Million et al., 2015) studies.

Investigation conducted by Al-Eitan et al. (2019) indicates that NPL have a significant negative effect on ROE model. This result is once again supported by Ebenezer & Omar (2015) research. (Abbas et al., 2019) explained that these credit risk tends to affects the profitability of medium-to-large size commercial banks, leaving the impact to smaller bank insignificant.

Bhatt et al. (2024) research revealed that CAR is one of major influencing factors in Nepalese banks. These results are supported by Pareek et al. (2023) which study the correlation between capital adequacy and bank profitability among European banks, wihich resulted in a strong positive relationship. Feng et al. (2020) analysis also suggests positive association between high CAR with bank outcomes on Middle Eastern banks.

Research done by Mohammad et al. (2024) shows that the implement of governance moderates the relationship between the CR and FP of banks, stating that adherance to good governance principles and practices reduces the impact of credit risk and improves the bank performance as a result. This result

is corroborated by Lin & Liu (2015) finding where good CG can strenghten the association between the proportion of LTA and firm, measured by Tobin's Q and market-to-book ratio. Meanwhile, (Nurtrontong et al., 2021) noted how the level of governance moderated relationship between NPL and bank FP. These findings reinforced Ko et al. (2019) correlation between higher levels of governance with lower levels of operational risk events, improved performance, and reduced likelihood of loan defaults.

Mohammad et al. (2024) also proclaimed that bank age, bank size and bank liquidity have a significant positive influence on performance. This findings are backed up by previous studies (Opoku et al., 2016;Mawutor & Fred, 2015). These results implies that younger banks are more likely to seize emerging opportunities, effectively more adaptable to the ever-changing situation.

Based on the explanation above, the following theoretical framework is developed:

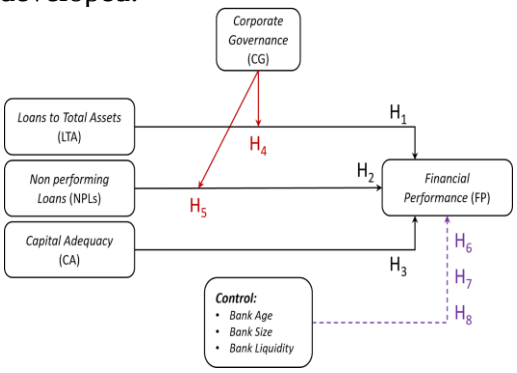

Figure 1. Conceptual Framework

Hypothesis Development

Loans to total assets on bank financial performance

Mohammad et al. (2024) recapitulated that there is a positive significant effect between LTA and FP as measured by ROE and Tobin's Q. While Al-Eitan et al. (2019) found significant negative impacts between LTA and ROE model. These results are backed up by past researches (Ebenezer & Omar, 2015; Million et al., 2015). Therefore, the following hypothesis is developed in this study:

H_1: There is a significant impact of LTA on FP of banks listed in IDX

Non-performing loans on financial performance

Study conducted by Al-Eitan et al. (2019) explained that NPL have a significant negative effect on ROE model. Results is once again supported by Ebenezer & Omar (2015) research. In addition, these credit risk tends to affects the profitability of medium-to-large size commercial banks, leaving the impact to smaller bank insignificant (Abbas et al., 2019). Therefore, the following hypothesis is developed in this study:

H_2: There is a significant impact of NPLs on FP of banks listed in IDX

Capital adequacy ratio on financial performance

Bhatt et al. (2024) investigation sheds into light how CAR is one of major factors affecting Nepalese banks. This is supported by Pareek et al. (2023) who studied the correlation between capital adequacy and bank profitability among European banks, wihich resulted in a strong positive relationship. Feng et al. (2020) also suggests positive association between high CAR with bank outcomes on Middle Eastern banks. Therefore, the following hypothesis is developed in this study:

H_3: There is a significant impact of CAR on FP of banks listed in IDX

Relationship between loans to total assets and financial performance moderated by governance

Analysis done by Mohammad et al. (2024) in Palestinian and Jordanian banks reveals that the level of CG

moderates the relationship between LTA and FP of banks (ROE Model). Mohammad et al. stated that adherance to good governance principles and practices reduces the impact of credit risk and improves the bank performance as a result. On the other hand, Lin & Liu (2015) explained how good CG can strenghten the association between the proportion of LTA and firm (Tobin's Q). Thus, the following hypothesis is developed in this study:

H_4: The relationship between LTA and FP is moderated by the role of CG for banks listed in IDX

Relationship between non-performing loans and financial performance moderated by governance

According to Mohammad et al. (2024), their research shows that the level of CG moderates the relationship between NPLs and FP of banks (ROE & Tobin's Q). The results are in line with Nurtrontong et al. (2021) who noted how the level of governance moderated relationship between NPL and bank FP. Moreover, Ko et al. (2019) explained the correlation between higher levels of governance with lower levels of operational risk events, improved performance, and reduced likelihood of loan defaults. Thus, the following hypothesis is developed in this study:

H_5: The relationship between NPLs and FP is moderated by the role of CG for banks listed in IDX.

Bank age, Bank size, and Bank liquidity as a control variable on financial performance

Research conducted by Mohammad et al. (2024) indicates that bank age, bank size, and bank liquidity have a significant positive impact on performance. These findings are in line with previous studies (Opoku et al., 2016;Mawutor & Fred, 2015). These results implies that younger banks are more likely to seize emerging opportunities, effectively more adaptable to the ever-changing situation. Therefore, the following hypothesis are developed:

H_6: There is a significant impact of bank age on FP of banks listed in IDX

H_7: There is a significant impact of bank size on FP of banks listed in IDX

H_8: There is a significant impact of bank liquidity on FP of banks listed in IDX

RESEARCH METHODS

Variable and Measurement

This study aims to analyze the impact of credit risk (CR), as measured by loans to total assets (LTA) and non-performing loans (NPL), as well as capital adequacy ratio (CAR) on bank financial performance (FP). At the same time, also intend to examine governance (CG) roles in moderating the relationship between these credit risk variables on FP of banks. This study offers quantitative data gathered through secondary data acquisition taken within the last four period, according to registered annual reports listed on IDX. This study utilizing panel data regression analysis method with *EViews9* software. The following is the measurement process for each variable.

Tabel 1. Definisi Operasional Variabel

Variable	Proxy	Formula	Reference
Dependent Variable			

Financial Performance	*Return on Equity*	$ROE = \frac{Net\ Income\ After\ Tax}{Shareholders\ \ Equity}$	Mohammad, Nour, & Al-Atoot (2024)
	TOBIN'S Q	$Tobin's\ Q = \frac{* Equity\ MV + Total\ Liabilities}{Total\ Assets}$ $* MVE = Harga\ saham\ x\ Jumlah\ saham\ beredar$	(Vellati & Oktaviani, 2024)
Independent Variable			
Credit Risk	*Loans to Total Assets*	$LTA = \frac{Total\ Loans}{Total\ Assets}$	Mohammad, Nour, & Al-Atoot (2024)
	Non performing Loans	$NPLs = \frac{Total\ NPLs}{Total\ Loans}$	Mohammad, Nour, & Al-Atoot (2024)
Capital Adequacy	*CA Ratio*	$CAR = \frac{Tier\ 1\ Capital + Tier\ 2\ Capital}{Risk\ Weighted\ Assets}$	Bhatt, Wang, Dang, & Jan (2024)
Moderating Variable			
Corporate Governance	*Board Size*	*Jumlah direktur dalam suatu dewan, baik dalam jajaran eksekutif maupun non-eksekutif*	(Hasan, Tawfiq, Hasan, & Islam, 2024)
Variabel Kontrol			
Bank Age	*BAGE*	*LN(Umur bank sejak tanggal pencatatannya di BEI)*	Mohammad, Nour, & Al-Atoot (2024)
Bank Size	*BSIZE*	$LN(Total\ Assets)$	Mohammad, Nour, & Al-Atoot (2024)
Liquidity	*Loans to Deposit ratio*	$LDR = \frac{Total\ Loans}{Total\ Deposits}$	Baltas & Liñares-Zegarra (2024)

Sampling Method

This study utilizing purposive sampling method, with the quantitative data gathered through secondary data method taken within the last four years (2020-2023 period), following the registered annual reports of listed banks provided from the Indonesia Stock Exchange (IDX) website (https://www.idx.co.id), as well as website of respective banks. This study pulled a total 180 observations of financial statements as a sample, consisting of 45 banks for these four periods.

Table 2. Sampling Criteria

Description	Total
Banking companies listed on the Indonesia Stock Exchange for the period 2020-2023	47
Banks whose data is incomplete in this study	(2)
Companies that are eligible to be sampled	45
Total data used for research	180

The following are the steps for testing the regression model in this study:

Chow Testing

There are two possible results from the chow test results, namely the Common Effect Model (CEM) or the Fixed Effect Model (FEM). The chow test can be used in this study to determine which model is more effective and acceptable. The chow test is based on two hypotheses, namely the null hypothesis that there is no individual heterogeneity and the alternative hypothesis that there is cross-sectional heterogeneity.

Table 3. Chow Test

Dependent Variable	Chi-Square	Probability	Decision
ROE	113.4186	0,0000	H_0 rejected, *Fixed Effect Model* (FEM) selected
TOBINSQ	153.7388	0,0000	H_0 rejected, *Fixed Effect Model* (FEM) selected

Source: Data processed with EViews9 (2024)

Based on the above table, ROE model has the chi-square value of 113.42, and the p-value of the cross-section chi-square is 0.0000 < 0.05, meaning H_0 is rejected (H_a is accepted), so it can be concluded that the appropriate model for the ROE is the Fixed Effect Model (FEM). As for the Tobin's Q model, the chi-square value is 153.73 and the p-value of the cross-section chi-square is 0.0000 < 0.05, so that H_0 is rejected (H_a is accepted), which can be concluded that the Tobin's Q model is also choosing the Fixed Effect Model (FEM).

Hausman Testing

Hausman testing is carried out if the results of the Chow test select the Fixed Effect Model (FEM). Hausman testing is used to choose whether the right model is the Fixed Effect Model (FEM) or the Random Effect Model (REM).

Table 4. Hausman Test

Dependent Variable	Chi-Square	Probability	Decision
ROE	17.983022	0.0214	H_0 rejected, *Fixed Effect Model* (FEM) selected
TOBINSQ	13.554214	0.0942	H_0 not rejected, *Random Efect Model* (REM) selected

Source: Data processed with EViews9 (2024)

Based on the results of the above test, ROE model with the chi-square value of 17.98 statistics has the p-value of the random cross section of 0.0214 < 0.05, confirming that H_0 is rejected (H_a is accepted), meaning that FEM is still the correct model. And as for the Tobin's Q model, the chi-square value is 13.55 statistics with the p-value of the random cross section of 0.0942 > 0.05, meaning that H_0 fails to be rejected (H_a is rejected), which can be concluded that the REM is more appropriate choise for Tobin's Q.

Data Analysis Method

Coefficient of Determination Test (R^2)

This test aims to determine how much influence the independent variable has on the dependent variable, provided that the F test results must have significant value in the regression analysis. The R^2 value is between 0 and 1 ($0 < R^2 > 1$), where if the value is close to 1, the independent and dependent variables have a closer relationship. If there are more than two variables, the adjusted R^2 value is used. The coefficient of determination (Adjusted R^2) essentially measures how far the model's ability to explain variations in the dependent variable. The Adjusted R^2 value ranges from 0-1% and if the value is close to 1, the better. The Adjusted R^2 value can be seen in the following table:

Table 5. Coefficient of Determination Test (R^2)

Koefisien Determinasi			
Dependent Variable	**Model**	**R^2**	**Adjusted R^2**
ROE	Prob (F Statistic)	0.972565	0.961332
TOBINSQ	Prob (F Statistic)	0.796704	0.787193

Source: Data processed with EViews9 (2024)

The coefficient of determination for the ROE model resulted in an adjusted R^2 value of 0.961332, meaning that the variation or behavior of the independent variables, namely Loan to Total Assets, Non-performing Loans, and Capital Adequacy is 96.13% while the remaining 3.87% is the variation of other independent variables not included in the model that can affect ROE.

The coefficient of determination for the Tobin's Q model obtained an adjusted R2 value of 0.787193 which means that the variation or behavior of the independent variables (LTA, NPLs, and CAR) is 78.72% while the remaining 21.28% is the variation of other independent variables not included in the model that can affect Tobin's Q.

Simultaneous Test (F Test)

This test is conducted in order to examine whether there are simultaneously significant effect of the independent variable on the dependent variable, with the sig of $F < 0.05$ means that simultaneously the independent variable has an influence on the dependent variable, so the regression model is suitable for use. On the other hand, If the sig of $F > 0.05$ means that simultaneously the independent variable has no influence on the dependent variable, making the regression model is not suitable for use.

Table 6. Simultaneous Test (Uji F)

Dependent Variable	F Value	Probability	Decision
ROE	86.57917	0.000000	H_0 rejected, significant effect
TOBIN'S Q	83.76740	0.000000	H_0 rejected, significant effect

Sumber: Data Diolah dengan EViews9 (2024)

For ROE model, the p-value of F is $0.0000 < 0.05$, thus it can be concluded that H_0 is rejected (H_a is accepted), proving that there will be at least one independent variable will have a significant effect on the dependent variable.

While for Tobin's Q model, the p-value of F is $0.0000 < 0.05$, thus it can be concluded that H_0 is rejected (H_a is accepted), so it is proven that at least one independent variable will has a significant effect on the dependent variable.

RESULTS AND DISCUSSIONS

Descriptive Statistical Analysis

Descriptive statistics of research variables are used to explain the characteristics of the data of the variables used in the study. Descriptive statistics for the Return on Equity variable resulted in an average value of 0.0239. With a standard deviation value of 0.1490. Shows that the variation in ROE between companies does not vary enough. The minimum value of -1.2393 occurred in the AGRO company in 2021 and the maximum value of 0.2117 occurred in the BTPS company in 2022.

Descriptive statistics for the Tobin's Q variable produce an average value of 0.7785. With a standard deviation value of 0.1527. Shows that the variation in TobinsQ between companies does not vary enough. The minimum value of 0.0781 is in the BBSI company in 2022 and the maximum value of 0.9447 is in the BBTN company in 2020.

Descriptive statistics for the Loan to Total Assets variable produce an average value of 0.5163. With a standard deviation value of 0.1594. Indicates that the variation in Loan to Total Assets between companies does not vary enough. The minimum value of 0.0065 is in the BBCA company in 2021. The maximum value of 0.7935 is in the BNLI company in 2023.

Descriptive statistics for the Non-Performing Loans variable produce an average value of 0.0149. With a standard deviation value of 0.0149. Shows that the variation in Non-Performing Loans between companies does not vary enough. The minimum value of 0.0000 is found in several companies, namely BACA in 2020-2023 and ARTO in 2020. The maximum value of 0.1133 is found in the PNBS company in 2020.

Descriptive statistics for the Capital Adequacy variable produce an average value of 0.3792. With a standard deviation value of 0.3330. Shows that the variation in Firm Size between companies does not vary enough. The minimum value of 0.1078 is in the MAYA company in 2023 and the maximum value of 2.8388 is in the BBSI company in 2022.

Descriptive statistics for the Corporate Governance variable produce an average value of 6.5889. With a standard deviation value of 2.7131. Shows that the variation in Corporate Governance between companies is quite varied. The minimum value of 3 is found in several companies, namely AMAR in 2020-2023, BACA in 2020, BBHI in 2020 & 2021, BBSI in 2020-2023, BBYB in 2020, BEKS in 2020, BGTG in 2020 & 2021, and PNBS in 2020. The maximum value of 4.7005 is found in several companies, namely BBCA in 2020 - 2023, BBNI in 2021-2023, BBRI in 2020-2023, BMRI in 2020-2023, and BNGA in 2020.

Descriptive statistics for the Bank Age variable produce an average value of 17.2111. With a standard deviation value of 9.5455. Indicates that the variation in Bank Age between companies is quite varied. The minimum value of 1 occurred in BBSI and AMAR companies in 2020. The maximum value of 42 occurred in the PNBN company in 2023.

Descriptive statistics for the Bank Size variable produce an average value of 6.5889. With a standard deviation value of 2.7131. Indicates that the variation in Bank Size between companies is quite varied. The minimum value of 3 is found in several companies, namely AMAR in 2020-2023, BACA in 2020, BBHI in 2020 & 2021, BBSI in 2020-2023, BBYB in 2020, BEKS in 2020, BGTG in 2020 & 2021, and PNBS in 2020. The maximum value of 4.7005 is found in several companies, namely BBCA in 2020-2023, BBNI in 2021-

2023, BBRI in 2020-2023, BMRI in 2020-2023, and BNGA in 2020.

Descriptive statistics for the Bank Liquidity variable produce an average value of 0.8505. With a standard deviation value of 0.5498. Indicates that the variation in Bank Liquidity between companies is quite varied. The minimum value of 0.0081 occurred in the BBCA company in 2021. The maximum value of 4.2847 occurred in the BBSI company in 2023.

Table 7. Descriptive Statistical

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Return on Equity	180	-1.2393	0.2117	0.0239	0.1490
TobinsQ	180	0.0781	0.9447	0.7785	0.1527
Loans to Total Assets	180	0.0065	0.7935	0.5163	0.1594
Non Performing Loan	180	0.0000	0.1133	0.0149	0.0149
Capital Adequacy	180	0.1078	2.8388	0.3792	0.3330
Corporate Governance (Orang)	180	3.0000	12.0000	6.5889	2.7131
Bank Age (Tahun)	180	1.0000	42.0000	17.2111	9.5455
Bank Size (Rp)	180	3.0000	12.0000	6.5889	2.7131
Bank Liquidity	180	0.0081	4.2847	0.8505	0.5498
Valid N (listwise)	180				

Sumber: Data Diolah dengan EViews9 (2024)

Test t (Partial Test)

Partial test (T test) This test is conducted to determine whether each independent variable has a significant effect on the dependent variable. The criteria for taking is if the sig of t < 0.05 then H0 is rejected, meaning that the independent variable has an influence on the dependent variable. If the sig of t> 0.05 then h0 is accepted, meaning that the independent variable has no influence on the dependent variable.

H_1: There is a significant effect of loans to Total Assets on bank financial performance

Loans to Total Assets have an effect on Financial Performance. The processed results for both ROE and Tobin's Q models show:

The bank's financial performance measured by ROE obtained a p-value of t statistics of 0.0007 <0.05 then Ho is rejected and Ha is accepted so it can be concluded that the proportion of loans to total assets is proven to affect the financial performance of banks (ROE). With an estimated coefficient value of 0.2020, which means that an increase in the proportion of loans to total assets will improve the bank's financial performance (ROE) and vice versa, the lower the proportion of loans to total assets will reduce the bank's financial performance (ROE). The results of this study are in line with research conducted by Reem Mohammad et al. (2024) which found that there is a significant positive relationship between the proportion of loans to total assets on bank financial performance (ROE). This is due to the dominant role of the banking sector and financial institutions in the Indonesian economy, where banks' main income comes from interest margins on loans. As the proportion of loans to total assets ratio increases, banks tend to maximize

the use of their assets for income generating activities, such as lending to productive sectors effectively. High net interest income from such loans then increases net profit, which in turn has a positive impact on return on equity. In addition, under stable economic conditions and high credit demand, effective lending will also support banks' profitability without significantly increasing risk, especially if the loans are distributed to sectors with low risk. This reflects the bank's operational efficiency in utilizing assets to generate higher returns for shareholders.

The bank's financial performance measured by Tobin's Q obtained a p-value of t statistics of 0.0000 <0.05, so Ho is rejected and Ha is accepted so it can be concluded that the proportion of loans to total assets is proven to have an effect on bank financial performance (Tobin's Q). With an estimated coefficient value of -0.3832, which means that an increase in the proportion of loans to total assets will reduce the bank's financial performance (Tobin's Q) and vice versa, the lower the proportion of loans to total assets will improve the bank's financial performance (Tobin's Q). The results of this study are in line with research conducted by Reem Mohammad et al. (2024) showing that the ratio of loans to total assets has a significant negative effect on financial performance as measured by Tobin's Q. This can be explained by the theory that too many loans can increase the risk of bank liquidity and solvency. With increasing debt burden, the risk of default increases, which in turn will harm investors' perception of the company's performance.

H_2: There is a significant effect of non-performing loans on bank financial performance

Non-performing loans have an effect on Financial Performance. The processed results for both ROE and Tobin's Q models show:

The bank's financial performance measured by ROE obtained a p-value of t statistics of 0.3113> 0.05, so Ho failed to be rejected and Ha was rejected, so it can be concluded that non-performing loans are not proven to have an effect on bank financial performance as measured by return on equity. The results of this study are in line with research conducted by Reem Mohammad et al. (2024) who found that non-performing loans have no significant effect on bank financial performance as measured by return on equity. Non-performing loans that have no significant effect on bank financial performance as measured by return on equity in Indonesia can be explained by several factors. First, many banks in Indonesia have strong risk management policies, including adequate provisioning to deal with credit risk, so that the impact of NPLs on profitability can be minimized. Second, the contribution of net interest income and diversification of income sources, such as income from financial services and fee-based income, can help maintain stable return on equity despite the increase in non-performing loans. Third, the banking structure in Indonesia, which is largely dominated by large banks with significant economies of scale, allows them to absorb the impact of non-performing loans without drastically reducing profits. In addition, proactive government and monetary authority policies, such as credit restructuring during periods of uncertainty, have allowed them to absorb the impact of non-performing loans without drastically reducing profits.

The bank's financial performance measured by Tobin's Q obtained a p-value from the t statistic of 0.4788> 0.05,

so Ho failed to be rejected and Ha was rejected, so it can be concluded that non-performing loans have not been proven to affect the bank's financial performance as measured by Tobin's Q. The results of this study are in line with research conducted by Sochib et al., (2023) which states that non-performing loans do not affect Company Performance as measured by Tobin's Q. This is due to mitigating factors such as sufficient reserves to cover losses on non-performing loans, as well as effective management policies in handling bad debts. Banks with a good structure and strong risk management implementation tend to be able to maintain performance even though there are non-performing loans.

H_3: There is a significant effect of capital adequacy on bank financial performance

Capital Adequacy affects Financial Performance. The processed results for both ROE and Tobin's Q models show:

The bank's financial performance measured by ROE obtained a p-value from the t statistic of 0.0101 <0.05, so Ho is rejected and Ha is accepted, so it can be concluded that Capital Adequacy has been proven to have an effect on bank financial performance (ROE). With an estimated coefficient value of 0.0364, which means that increasing Capital Adequacy will increase bank financial performance (ROE) and vice versa, the lower the Capital Adequacy will decrease bank financial performance (ROE). The results of this study are in line with research conducted by Bhatt et al. (2024) showed a significant positive relationship between capital adequacy and bank performance, meaning that increasing Capital Adequacy will increase bank financial performance (ROE) and vice versa, the lower the Capital Adequacy will decrease bank financial performance (ROE). Thus, increasing Capital Adequacy will improve a company's financial performance, as measured by Return on Equity (ROE), because adequate capital provides security and stability in financial operations. Conversely, if Capital Adequacy is low, financial performance tends to decline because the company faces higher financial risks and is less able to bear losses.

The bank's financial performance measured by Tobin's Q obtained a p-value from the t statistic of 0.0000 <0.05, so Ho is rejected and Ha is accepted, so it can be concluded that Capital Adequacy has been proven to have an effect on bank financial performance (Tobin's Q). With an estimated coefficient value of -0.3329, which means that increasing Capital Adequacy will reduce bank financial performance (Tobin's Q) and vice versa, the lower the Capital Adequacy will increase bank financial performance (Tobin's Q). The results of this study are in line with research conducted by Obiedallah and El Mahdy (2024) which found that capital adequacy has a significant negative effect on financial performance.

This can be explained that increasing Capital Adequacy can lead to a decline in financial performance because it reduces the bank's flexibility in making riskier but potentially more profitable investments. In this case, a policy that is too conservative in maintaining the capital adequacy ratio can have an impact on reducing the company's profitability and ultimately affecting the market value reflected in Tobin's Q.

H_4: There is a relationship between loans to total assets and bank financial performance moderated by the role of governance.

Loans to Total Assets affect Financial Performance with moderated Corporate Governance.The processed results for both ROE and Tobin's Q models show:

The bank's financial performance measured by ROE obtained a p-value from the t statistic of 0.0097 <0.05, so Ho is rejected and Ha is accepted, so it can be concluded that the proportion of loans to total assets is proven to have an effect on bank financial performance (ROE) moderated by corporate governance. With an estimated coefficient value of -0.0132, which means that increasing the proportion of loans to total assets will reduce bank financial performance (ROE) moderated by corporate governance and vice versa, the lower the proportion of loans to total assets will increase bank financial performance (ROE) moderated by corporate governance. The results of this study are in line with research conducted by Lin and Liu (2015) which found that corporate governance can weaken the relationship between the proportion of loans to total assets and bank financial performance (ROE). In other words, companies that implement effective governance can be better able to manage risks and utilize loans productively so that their negative impact on financial performance will be smaller.

The bank's financial performance measured by Tobin's Q obtained a p-value from the t statistic of 0.0000 <0.05, so Ho is rejected and Ha is accepted, so it can be concluded that the proportion of loans to total assets has been proven to affect bank financial performance (Tobin's Q) moderated by corporate governance. With an estimated coefficient value of 0.0427, which means that increasing the proportion of loans to total assets will increase bank financial performance (Tobin's Q) moderated by corporate governance and vice versa, the lower the proportion of loans to total assets will decrease bank financial performance (Tobin's Q) moderated by corporate governance. The results of this study are in line with research conducted by Nour et al. (2022) corporate governance can strengthen the relationship between the proportion of loans to total assets and financial performance (Tobin's Q). This can be explained because good corporate governance can strengthen the relationship between the proportion of loans to total assets and the company's financial performance measured by Tobin's Q because effective governance ensures more efficient allocation and use of funds, better risk management, and transparency in decision making. In Indonesia, this phenomenon is relevant because many companies rely on external funding such as bank loans for business expansion. However, without adequate governance, the use of these funds can be unproductive. With good governance, companies can utilize loans for projects that generate added value, thereby increasing investor confidence and ultimately increasing market valuation as reflected in Tobin’s Q. This is also in line with the efforts of the Indonesian government and OJK to encourage the implementation of good corporate governance principles to improve the competitiveness and sustainability of companies in the global market.

H_5: There is a relationship between non-performing loans and bank financial performance moderated by the role of governance

Non-Performing Loans have an effect on Financial Performance moderated by Corporate Governance. The processed results for both ROE and Tobin's Q models show:

The bank's financial performance measured by ROE obtained a p-value of t statistics of 0.2690> 0.05, so Ho failed to be rejected and Ha was rejected, so it can be concluded that non-performing loans have not been proven to affect bank financial performance (ROE) moderated by corporate governance. The bank's financial performance measured by Tobin's Q has a p-value of t statistics of 0.9224> 0.05, so Ho failed to be rejected and Ha was rejected, so it can be concluded that non-performing loans have not been proven to affect bank financial performance (Tobin's Q) moderated by corporate governance. The results of this study are in line with research conducted by Sutrisno (2016) which found that non-performing loans have not been proven to affect bank financial performance (ROE and Tobin's Q) moderated by corporate governance. This can be explained because although non-performing loans are often considered to increase credit risk, their impact on Return on Equity and Tobin's Q in Indonesian banking can be reduced by strict risk management and loss reserve policies regulated by the Financial Services Authority (OJK). However, the uneven implementation of corporate governance in some companies may limit its effectiveness in moderating the impact of non-performing loans on financial performance. In addition, investors in the Indonesian capital market tend to focus more on growth prospects than risk indicators such as non-performing loans, with market values more influenced by economic expectations and market sentiment. This combination of regulation, varying governance practices, and market dynamics explains the insignificant relationship between non-performing loans, return on equity, and Tobin's Q.

H_6: There is an effect of bank age on bank financial performance

Bank age affects Financial Performance. The processed results for both ROE and Tobin's Q models show:

The bank's financial performance measured by ROE obtained a p-value from the t statistic of 0.0000 <0.05, so Ho is rejected and Ha is accepted, so it can be concluded that bank age has been proven to have an effect on bank financial performance as measured by ROE. With an estimated coefficient value of 0.0141, which means that increasing bank age will increase bank financial performance (ROE) and vice versa, the lower the age of the bank will decrease bank financial performance (ROE). The results of this study are in line with the research of Reem Mohammad et al. (2024) which states that there is a significant positive relationship between bank age and bank financial performance (ROE), indicating that younger banks may have fewer inherent problems from the company or unproductive assets, which leads to better financial health and can increase profitability.

The bank's financial performance measured by Tobin's Q obtained a p-value from the t statistic of 0.6349> 0.05, so Ho failed to be rejected and Ha was rejected, so it can be concluded that bank age has no effect on bank financial performance (Tobin's Q). The results of this study are in line with research conducted by Averio et al. (2024) which shows that bank age has no effect on bank financial performance (Tobin's Q). This can be explained because although older banks have longer operational experience, this does not always guarantee an increase in financial performance, because financial performance is influenced by other factors such as operational efficiency, innovation, and management's ability to

respond to market dynamics. Then, newer banks may have competitive advantages such as adopting the latest technology or a more flexible organizational structure, which allows them to compete effectively despite their shorter age. In addition, Tobin's Q, as a market indicator, is more influenced by investor perceptions of the bank's future prospects than by the history or age of the bank itself. Therefore, bank age is not a significant determinant of bank financial performance.

H_7: There is an influence of bank size on bank financial performance

Bank size affects Financial Performance. The processed results for both ROE and Tobin's Q models show:

The bank's financial performance measured by ROE obtained a p-value from the t statistic of 0.0000 <0.05, so Ho is rejected and Ha is accepted, so it can be concluded that bank size has been proven to affect bank financial performance (ROE). With an estimated coefficient value of -0.0063, which means that increasing bank size will decrease bank financial performance (ROE) and vice versa, the lower the bank size will increase bank financial performance (ROE). The results of this study are in line with research conducted by Nananjaya & Dana (2023) which states that large companies often face efficiency challenges, which can reduce profitability such as return on equity. Larger banks have more complex structures, so they may face higher operating costs or less optimal asset management compared to smaller banks.

The bank's financial performance measured by Tobin's Q obtained a p-value from the t statistic of 0.0000 <0.05, so Ho is rejected and Ha is accepted, so it can be concluded that bank size has been proven to affect bank financial performance (Tobin's Q). With an estimated coefficient value of -0.0157, which means that increasing bank size will decrease bank financial performance (Tobin's Q) and vice versa, the lower the bank size will increase bank financial performance (Tobin's Q). The results of this study are in line with research conducted by Mukaromah & Suwarti (2022) which states that large company size is often balanced with a high level of leverage, which can suppress company performance (Tobin's Q). Larger banks tend to be less flexible in responding to market changes, which can reduce investor perceptions of the bank's market value which will have an impact on the bank's financial performance.

H_8: There is an effect of bank liquidity on bank financial performance

Bank liquidity has an effect on Financial Performance. The processed results for both ROE and Tobin's Q models show:

The bank's financial performance measured by ROE obtained a p-value from the t statistic of 0.0117 <0.05, so Ho is rejected and Ha is accepted, so it can be concluded that bank liquidity has proven to have an effect on bank financial performance (ROE). With an estimated coefficient value of -0.0157, which means that increasing bank liquidity will decrease bank financial performance (ROE) and vice versa, the lower the bank liquidity will increase bank financial performance (ROE). The results of this study are in line with research conducted by Pracoyo & Ladjadjawa (2020) which shows that high liquidity indicates idle funds that are not optimally invested, thus reducing profitability such as ROE. Banks with high liquidity tend to focus more on financial security than maximizing returns, which has an impact on decreasing ROE.

The bank's financial performance measured by Tobin's Q obtained a p-value from the t statistic of 0.0000 <0.05, so Ho is rejected and Ha is accepted, so it can be concluded that bank liquidity has proven to have an effect on bank financial performance (Tobin's Q). With an estimated coefficient value of -0.0578, which means that increasing bank liquidity will reduce bank financial performance (Tobin's Q) and vice versa, lower bank liquidity will increase bank financial performance (Tobin's Q). The results of this study are in line with research conducted by Kristanti (2020) which shows that excessive liquidity can indicate inefficient asset management, which has a negative impact on Tobin's Q. Investors can view high liquidity as the bank's inability to allocate assets for growth efficiently, thereby reducing the bank's financial performance as reflected in Tobin's Q.

Table 8. Partial Test Results (Uji-T)

Variable	Model ROE		Model TobinsQ		Conclusion
	Coef	Prob.	Coef	Prob.	
C	-0.2446	0.0000	1.1132	0.0000	-
LTA	0.2020	0.0007**	-0.3832	0.0000**	Significant positive to ROE Significant negative to Tobin's Q
NPL	0.2537	0.3113	0.1344	0.4788	Not Significant
CAR	0.0364	0.0101**	-0.3329	0.0000**	Significant positive to ROE Significant negative to Tobin's Q
*LTA*CG*	-0.0132	0.0097**	0.0427	0.0000**	Significant negative to ROE Significant positive to Tobin's Q
*NPL*CG*	0.0414	0.2690	-0.0022	0.9224	Not Significant
AGE	0.0141	0.0000**	-0.0003	0.6349	Significant positive to ROE
SIZE	-0.0063	0.0000**	-0.0157	0.0000 **	Significant negative to ROE & Tobin's Q
LIQ	-0.0157	0.0117**	-0.0578	0.0000 **	Significant negative to ROE & Tobin's Q

***) Significant at 5%*

Source: Data Processed with EViews9 (2024)

Research Regression Model

The panel data regression model used based on previous research by Reem Mohammad et al., (2024) can be described as follows:

Model 1:

$$ROE = -0.2446 + 0.2020(LTA) + 0.2537(NPLs) + 0.0364(CAR) - 0.0132(LTA*CG) + 0.0414(NPLs*CG) + 0.0141(BAGE) - 0.0063(BSIZE) - 0.0157(LIQUID)$$

Model 2:

$$Tobin's\ Q = 1.1132 - 0.3832(LTA) + 0.1344(NPLs) - 0.3329(CAR) + 0.0427(LTA*CG) - 0.0022(NPLs*CG) - 0.0003(BAGE) - 0.0157(BSIZE) - 0.0578(LIQUID)$$

Where:

ROE = *Return on Equity*
Tobin's Q = *TOBIN'S Q*
LTA = *Loans to Total Assets*
NPLs = *Non performing Loans*
CAR = *Capital Adequacy*
BS = *Board Size*
BAGE = *Bank Age*
BSIZE = *Bank Size*
LIQUID = *Bank Liquidity*

CONCLUSION AND SUGGESTION

Based on the results of the tests conducted, several conclusions regarding bank financial performance

were obtained. It was found that loans to total assets have a significant positive effect on bank financial performance when measured by Return on Equity (ROE), but a significant negative effect when measured by Tobin's Q. Non-performing loans, however, do not show a significant effect on bank financial performance in terms of either ROE or Tobin's Q. Capital adequacy demonstrates a significant positive effect on ROE but a significant negative effect on Tobin's Q. Furthermore, the interaction between loans to total assets and governance reveals a moderating effect, where governance weakens the impact on ROE but strengthens the effect on Tobin's Q. In contrast, non-performing loans moderated by governance do not show a significant effect on bank financial performance, regardless of the performance indicator used. The age of a bank positively influences financial performance in terms of ROE, but it does not significantly affect Tobin's Q. On the other hand, bank size has a significant negative effect on financial performance across both ROE and Tobin's Q. Similarly, bank liquidity negatively affects financial performance under both indicators. These findings provide valuable insights into the dynamics of various factors influencing bank performance, highlighting the nuanced roles of governance, bank size, liquidity, and other key variables.

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