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Analysis Of Liquidity Risk and Credit Risk on Financial Performance with Capital Structure as a Moderating Variable (Case Study on the Banking Financial Sector Listed on the Indonesia Stock Exchange for the Period 2018–2023)

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Abstract

The study utilises quantitative techniques, namely multiple linear regression and Moderated Regression Analysis (MRA), investigating the correlation between liquidity risk and 43 conventional banks using data collected over a six-year period, credit risk, and financial performance in the banking sector listed on the Indonesia Stock Exchange from 2018 to 2023, with capital structure as a moderating variable. The Loan quantifies liquidity risk to Deposit Ratio (LDR), credit risk is indicated by the Non-Performing Loan (NPL) ratio, financial performance is assessed by Return on Assets (ROA), and the Debt represents capital structure to Equity Ratio (DER). The findings indicate that both LDR and NPL exert a substantial risky outcome on ROA, suggesting that inadequate risk management diminishes profitability. The Debt-to-Equity Ratio (DER) significantly enhances Return on Assets (ROA), indicating that an optimal capital structure improves performance. Even while DER significantly lessens the correlation between NPL and ROA, it has no effect on how LDR affects ROA. These findings emphasize the necessity of a well-balanced capital structure and effective risk management to improve banks' financial performance.

Keywords: *liquidity risk, credit risk, capital structure, financial performance, banking sector, Indonesia Stock Exchange*

1. INTRODUCTION

Financial performance is a key indicator that shows the extent to which companies, including banks, are able to maintain business continuity and create added value for stakeholders. The efficiency of operational operations, the efficacy of risk management, and the ability to produce profits are all shown by financial performance in the banking sector. Banking financial performance is a reflection of banks policy to manage their asset and liability portfolios efficiently, maintain a balance between profitability and liquidity, and respond to change market dynamics (Syachreza & Mais, 2020).

The phenomenon of conventional banking financial performance in Indonesia in the 2018-2023 period shows significant dynamics. At the beginning of the period, namely 2018-2019, the banking sector was in a moderate growth phase in line with stable economic growth and supportive monetary policy. The profitability of conventional banks is reflected in relatively stable ROA and ROE ratios, with maintained asset quality and manageable non-performing loan (NPL) levels (Putri & Yunita, 2023). Worldwide and national economies were hit hard by the COVID-19 epidemic in the beginning of 2020, which had a major impact on the bottom lines of many companies. The credit risk has grown due to the debtor's diminished capacity to pay back loans, which has led to a spike in non-performing loans (NPLs) and a decline in bank profitability. (Wardoyo et al., 2020).

But, between 2021 and 2023, traditional banks' financial performance started to improve, driven by government stimulus policies, relaxation of credit restructuring, and national economic recovery. Conventional banks showed good adaptability in maintaining liquidity, managing credit risk, and capitalizing on emerging business opportunities (Nurkhalifa et al., 2021). Financial ratios such as ROA and ROE have started to recover, although they have not fully returned to pre-pandemic levels. The above events show how important it is to handle liquidity risk and credit risk well in order to maintain long-term financial health. Thus, analyzing the financial performance of conventional banks in the period

2018-2023 is very relevant to understand the factors that affect the stability and growth of the Indonesian banking sector.

The financial performance of conventional banks in Indonesia from 2018 - 2023 exhibits a dynamic interplay of financial performance, liquidity risk, and credit risk. At the start of this time, the financial performance of traditional banks remained stable, consistent with relatively favourable national economic conditions. When the COVID-19 pandemic emerged in 2020, banks saw substantial strain on asset quality resulting from a rise in credit risk.

Throughout the COVID-19 epidemic, the financial sector had several issues in sustaining liquidity. First, the economic slowdown led to weaker growth in Third-Party Funds (DPK), with the elasticity of the economy toward DPK growth continuing to decline since 2021. Second, the surge in the issuance of Government Securities (SBN) to cover the fiscal deficit absorbed a large portion of liquidity, as SBN yields became more attractive than bank deposits. Third, the phenomenon of "mantab" (eating savings) emerged, where people withdrew their savings to meet daily needs, especially among the middle and lower-income groups affected by layoffs or income reductions.

Liquidity risk generally arises when a bank experiences difficulties in meeting its current liabilities, either as a result of the inability to convert liquid assets into cash or because of large-scale fund withdrawals by customers, while the bank must ensure sufficient liquidity is available to meet these short-term liabilities. As Saunders & Allen in (Hutabarat, 2022) in the book entitled explains that "Liquidity risk is indicated by the inability to obtain sufficient funds to meet obligations or to sell assets within a reasonable time without causing a significant decline in price."

Many debtors faced difficulties in fulfilling their payment obligations due to the impact of the pandemic, leading to an elevation in the non-performing loan (NPL) ratio. This rise in NPL subsequently pressured bank profitability, as reflected in the decline of ROA and ROE ratios. Conventional banks undertook various efforts to maintain their liquidity ratios, such as optimizing funding sources and improving efficiency in managing liquid assets. Banks that are able to manage both risks effectively tend to maintain stability and improve profitability, even under severe external pressure. Such conditions can lead to a financial crisis, where institutions are forced to sell assets at a loss or even face bankruptcy.

Credit risk refers to the potential losses that may be incurred by banks or other financial institutions if debtors or related parties fail to meet their obligations as agreed in the contract (Aulianisa, 2020). Debtor default can undermine the financial stability of banks. Consequently, credit risk management in banking is crucial to mitigate possible losses resulting from borrowers' failure to fulfil their financial commitments. During the pandemic, which triggered a sharp economic slowdown, many business sectors were affected and household incomes declined. As a result, debtors' ability to repay loans came under pressure, causing the NPL (Non-Performing Loan) ratio to rise. In response, the government and financial authorities, such as the Financial Services Authority (OJK), issued credit restructuring policies through POJK No. 11/POJK.03/2020 and other follow-up regulations. These policies provided relief for debtors impacted by the pandemic through rescheduling, loan tenor extensions, or interest rate adjustments, thereby helping maintain banking system stability. However, while these credit restructuring policies eased short-term NPL pressures, credit quality challenges continued in the following years.

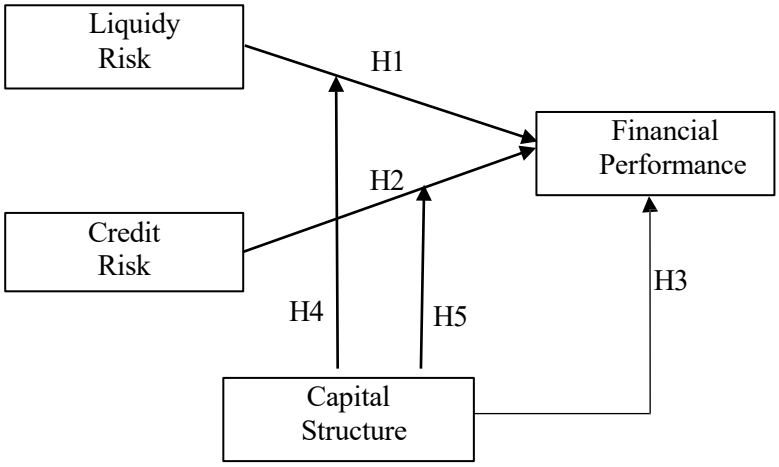
Many debtors have continued to struggle in recovering their businesses post-pandemic, especially those in severely disrupted sectors such as tourism, transportation, and the informal sector. This situation has compelled banks to closely monitor their credit portfolios, adjust lending strategies, and strengthen credit risk management procedures. These strategies include improving internal supervision, employing more cautious creditworthiness analyses, and using technology and big data to monitor debtor payment behavior in real-time.

While many prior research have investigated the effects of liquidity and credit risk on bank financial performance, the majority have concentrated solely on the COVID-19 crisis period or have isolated a single category of risk. Liquidity and credit risks substantially and mutually influence the financial performance of conventional banks. Furthermore, several studies have not particularly investigated the impact of capital structure as a moderating element that may influence the intensity of the relationship between these risks and financial performance.

Debt to equity ratio, or capital structure, is critical determinant factors in a bank's liquidity and credit risk management capabilities. Banks with strong capital structures typically have sufficient capital buffers to absorb losses from rising NPLs or sudden fund withdrawals. Banks with inadequate capital structures are more susceptible to liquidity constraints and losses from non-performing loans. Traditional banks' liquidity risk, credit risk, and financial performance are all interrelated, but the moderating effect of capital structure has received less attention (Pramana & Darmayanti, 2020).

An effective capital structure, characterised by an appropriate Debt to Equity Ratio (DER), may improve a bank's risk management capabilities, uphold financial stability, and promote sustainable financial success (Suzan & Aini, 2022). Bank Mandiri, for example, recorded strong financial performance in Q2 2024, with a net profit of IDR 26.6 trillion—an increase of 5.23% compared to the previous year. Credit growth outpaced the industry average, driven by the corporate segment which grew 29.7% YoY to IDR 561 trillion. Asset quality also improved, with the NPL ratio decreasing to 1.01%. Interest income rose by 12.5%, supported by digital innovations through the Livin' by Mandiri app, which now serves over 26 million users and handles substantial transaction volumes (Bank Mandiri Reports Impressive Performance in Q2 2024).

Moreover, prior research has predominantly concentrated on either pre-pandemic or pandemic phases, so neglecting to offer a holistic understanding of the dynamics throughout the whole 2018–2023 timeframe (Rizqulloh et al., 2023). This era includes the pre-pandemic, pandemic, and post-pandemic periods, each marked by unique hazards and financial strains. The study's objective is to examine conventional banks trading on the IDX from 2018 to 2023 and find out how liquidity risk and credit risk affected their financial performance. It will also look at how capital structure influenced that relationship. In addition to providing suggestions for bank management and pertinent stakeholders, this study aims to shed light on the significance of risk management in enhancing the financial performance of Indonesian banks.



2. MATERIAL AND METHOD

Research Design

This study is an exploration of causal relationships, seeking to elucidate the interactions between multiple independent variables and a dependent variable (Sarwono & Handayani, 2021). This research utilizes secondary data, specifically annual financial data of companies. Financial report data from 2018 to 2023 from the Indonesia Stock Exchange (IDX) via www.idx.co.id.

The sample comprises banking firms registered on the IDX that have routinely submitted financial reports from 2018 to 2023. This research implemented purposive sampling as its methodology. The criteria working towards sample selection include:

1. Banks registered on the Indonesia Stock Exchange from 2018 - 2023.
2. Financial sector organizations that have consistently been listed on the IDX from 2018 to 2023.
3. Financial sector firms that have routinely released yearly financial reports from 2018 to 2023.

4. Financial sector firms that did not incur losses over the 2018–2023 study period.
5. Companies possessing a Debt to Equity Ratio (DER) within a permissible range, facilitating unconstrained regression model estimation.

Definition and Measurement of Variables

Dependent Variable

Sugiyono (2019) asserts that any alteration in the independent factors would impact the dependent variable, sometimes referred to as the outcome variable. In this second journal research, Return on Assets (ROA) serves as the dependent variable for evaluating financial performance. One measure of a company's profitability is its return on assets (ROA). The two independent variables that affect this performance measure are liquidity risk and credit risk. Profitability is a metric that measures a company's capacity to convert its assets into cash flow, and a high return on assets (ROA) indicates that the bank is performing well financially. This research, conducted from 2018 to 2023, seeks to elucidate the correlation between nonperforming loans (NPLs) and liquidity risk (LDR) concerning the financial performance of banking sector firms listed on the Indonesia Stock Exchange. The study includes capital structure as a moderating variable to elucidate the link among these parameters. The subsequent formula elucidates this:

$$ROA = \frac{Laba\ bersih}{Total\ Aset} x100\%$$

Independent Variables

The independent variables operate as the causal agents affecting the dependent variable. This study identifies Non-Performing Loan (NPL), Loan to Deposit Ratio (LDR), and capital structure as independent factors.

Liquidity Risk

LDR assess the extent to which a bank utilizes its own capital for lending purposes, as stated by Liyana & Indrayani (2020). LDR reflects the bank's liquidity level, where a high ratio indicates aggressive use of funds but also poses a risk to financial stability. An increase in LDR may indicate operational efficiency, but at the same time, it raises liquidity risk. The formula for calculating LDR is as follows:

$$LDR = \frac{\text{Total Kredit yang Diberikan}}{Total\ Dana\ Pihak\ Ketiga} x100\%$$

Credit Risk

According to Gunawan & Mahardika (2024), NPL ratio indicates the proportion of non-performing loans compared to the agregate loans issued by a bank. This percentage indicates the bank's capacity to handle credit risk, with a higher NPL signifying poorer asset quality. Martini et al., (2021) explain that a high NPL may reflect a greater risk of loss from uncollectible loans. In this study, the equation of NPL is performed using the below formula:

$$NPL = \frac{\text{Kredit bermasalah}}{Total\ kredit} x100\%$$

Moderation Variable

Capital Structure

A company's capital structure refers to the amalgamation of debt and equity implemented to finance its activities. Financial stability can be affected by the capital structure of a corporation of the organization by indirectly impacting the link between liquidity and credit risk on financial performance (Irawan & Apriwenni, 2021). In order to quantify capital structure, this study used the following method to estimated the Debt to Equity Ratio (DER):

$$DER = \frac{\text{Total utang}}{Total\ ekuitas} x100\%$$

Research Data Analysis Techniques

Multiple Linear Regression Analysis

The goal of doing a multiple linear regression analysis is to determine how nonperforming loans (NPLs) and liquidity risk (LDRs) affect Return On Asset (ROA). This approach determines the degree and direction of effect (positive or negative) of each independent variable while adjusting for other factors.

Moderated Regression Analysis (MRA)

Moderated Regression Analysis (MRA) is applicable when a moderating variable affects the magnitude or trajectory of the two variables. In this study, MRA is used because a moderating variable called capital structure (DER) is present. This variable is expected to influence the relationship between credit risk (NPL) and liquidity risk (LDR) on financial performance (ROA). The regression equation for this study has an multiplicative term, A company's capital structure denotes the amalgamation of debt and equity utilized to finance its activities.

3. Results and discussion

Analysis Results

Table 1. Descriptive Statistics

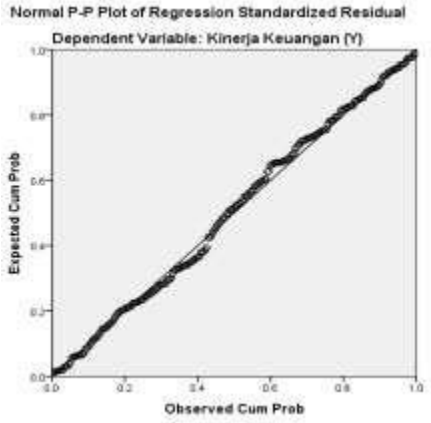
	N	Minimum	Maximum	Mean	Std. Deviation
ROA (Y)	258	.02	4.59	2.1347	.98242
LDR (X1)	258	62.00	115.26	85.5053	9.43996
NPL (X2)	258	.16	7.66	2.1979	.98531
DER (M)	258	2.64	9.22	4.9792	.98136
Valid N (listwise)	258				

Descriptive analysis encompasses the characterisation of study findings, including sample averages, mean values, maximum and minimum values, and standard deviations for each variable. Information from 258 samples taken from the 2018–2023 yearly company accounts of banking companies registered on the BEI is used in this analysis (data from Table 1).

Table 1 provides the descriptive statistics for the variables included in the study. The financial performance variable (Y) includes a sample size of 258, with a minimum value of 0.02 and a maximum of 4.59. The average value is 2.1347, with a standard deviation of 0.98242. This suggests that, on average, the financial performance of the examined enterprises is modest, exhibiting considerable variability. The liquidity risk variable (X1) ranges from 62.00 to 115.26, with an average of 85.5053 and a standard deviation of 9.43996, suggesting moderate liquidity risk with some dispersion among the data. Credit risk (X2) has values between 0.16 and 7.66, a mean of 2.1979, and a standard deviation of 0.98531, indicating variability in credit risk levels across companies. Lastly, the capital structure variable (M) ranges from 2.64 to 9.22, with a mean of 4.9792 and a standard deviation of 0.98136, showing relatively consistent leverage levels among the firms in the sample. Overall, the descriptive data suggest that there is sufficient variability in all variables to support further statistical analysis.

Classical Assumption Test

Normality Test



Picture 1

In a regression model, normality testing determines if the dependent and independent variables follow a normal distribution. As seen in the picture above, the distribution of points is around a straight line or close to the diagonal. It can be seen from the picture that in this study has a normal distribution.
Table 2 Normality Test

One-Sample Kolmogorov-Smirnov Test

	Unstandardized Residual
Asymp. Sig. (2-tailed)	.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

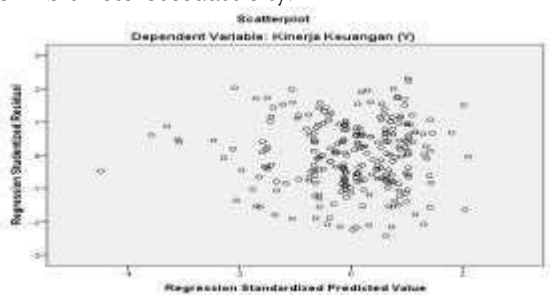
The outcomes of the data analysis are presented in Table 2. A significance value of 0.200 for the Kolmogorov-Smirnov test exceeds 0.05, indicating that the residuals of the regression model adhere to a normal distribution and satisfy the normality assumption. This indicates that the data is appropriate for substantiating the hypothesis, since it is regularly distributed.
Multicollinearity Test
The multicollinearity test assesses issues by evaluating the variance inflation factor (VIF) and the tolerance value. To mitigate multicollinearity, ensure that the tolerance value exceeds 0.1 and the VIF value remains below 10.
Table 3 Multicollinearity Test Results

Coefficients[a]

Model		Collinearity Statistics		Information
		Tolerance	VIF	
1	(Constant)			
	Risiko Likuiditas (X1)	.954	1.048	Non Multicollinearity
	Risiko Kredit (X2)	.962	1.039	Non Multicollinearity
	Struktur Modal (M)	.988	1.012	Non Multicollinearity

a. Dependent Variable: Kinerja Keuangan (Y)

The multicollinearity test identifies the presence of multicollinearity among independent variables through the analysis of tolerance and Variance Inflation Factor (VIF) values. Multicollinearity is deemed non-problematic when the tolerance value exceeds 0.1 and the VIF value is below 10, as per the established criterion. All of the independent variables meet these requirements, as shown in Table 3. There is a 0.954 tolerance and a 1.048 VIF for liquidity risk (X1), a 0.962 tolerance and a 1.039 VIF for credit risk (X2), and a 0.988 tolerance and a 1.012 VIF for capital structure (M). The regression model demonstrates the absence of multicollinearity, evidenced by tolerance values exceeding 0.1 and VIF values significantly below 10. A high VIF value suggests that multicollinearity may somewhat elevate the variance of the computed coefficients, resulting in a diminished t-value.
Heteroscedasticity test
Ghozali (2011) the heteroscedasticity test evaluates a regression model to see if there is unequal variance in the residuals across different observations. A regression model is considered effective if it does not exhibit heteroscedasticity.



Picture 2

The figure above has no discernible trend between individual observations. The inequality denoting the variance of the residuals, along with the inequality among the points that extend above and below 0 on the Y-axis, signifies the absence of heteroscedasticity.

Coefficient of Determination Test (R^2)

Table 4 R^2 Determination Coefficient Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.319[a]	.102	.091	.93648

a. Predictors: (Constant), DER, NPL, LDR
b. Dependent Variable: ROA

Figure 4 shows the results of the R2 (coefficient of determination) tests. An R-value of 0.319 indicates a moderate to low level of correlation in the model. With a R Squared value of 0.102, we may deduce that liquidity risk, credit risk, and capital structure together account for around 10.2% of the variation in return on assets (ROA). The adjusted R Square is 0.091, indicating a somewhat lower value, as this metric considers the whole number of predictors in the model. This indicates the model's capacity to elucidate the dependent variable is constrained. The standard error of the estimate, which quantifies the average dispersion of data points from the regression line, is 0.93648. It seems that additional factors, not included in this model, may exert a more substantial influence on ROA, given the model's limited explanatory power.

Hypothesis Testing

t-test

This study ran various tests utilising the t-test to validate the proposed hypothesis. In this study, the Debt to Equity Ratio (DER) serves as a moderating variable for capital structure. The objective is to assess how the impact of liquidity risk (LDR) and credit risk (NPL) on financial performance (ROA) varies with the degree of debt-to-equity ratio (DER). Moderated Regression Analysis (MRA) evaluates the interaction term between DER and the independent variables. The existence of statistically significant interaction terms ($p < 0.05$) indicates that DER functions as a moderator, modifying the relationship in a way that risk factors can exert either a greater or lesser influence on financial success, as demonstrated by the subsequent results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.183	.532		7.862	.000
	LDR (X1)	-.018	.006	-.172	-2.836	.005
	NPL (X2)	-.238	.060	-.238	-3.941	.000
	DER (M)	1.025	.527	1.024	1.947	.003
	LDR.DER	-.008	.006	-.808	-1.360	.175
	NPL.DER	.098	.060	.551	2.623	.006

a. Dependent Variable: ROA (Y)

$Y = \alpha + \beta X1 + \beta X2 + \beta M + \beta X1.M + \beta X2.M + \varepsilon$

$Y = 4.183 - 0.018 - 0.238 + 1.025 - 0.008 + 0.098 + \varepsilon$

Hypothesis Testing 1

The primary hypothesis examines how Liquidity Risk (LDR) impacts Return on Assets (ROA). The LDR coefficient is -0.018 and the p-value is 0.005 at the 0.05 level of significance. This points to a substantial negative impact, implying that a decline in ROA is a common consequence of raising LDR.

Hypothesis Testing 2

The second hypothesis investigates the impact of credit risk (NPL) on ROA. The NPL coefficient is -0.238, with a significance value of 0.000, indicating high importance. This data indicates that NPL exerts a negative and substantial impact on ROA, implying that an increase in credit risk correlates with a decline in financial performance.

Hypothesis Testing 3

The third hypothesis assesses the direct effect of Capital Structure (DER) on ROA. The coefficient for DER is 1.025, and the significance value is 0.003, which is below the 0.05 threshold. This indicates a significant and positive relationship, suggesting that an increase in DER (capital structure) is associated with a higher ROA.

Hypothesis Testing 4

The fourth hypothesis determines how DER influences the relationship between LDR and ROA. The interaction term LDR is discussed. DER has a coefficient of –0.008 and a significance value of 0.175, which exceeds the 0.05 threshold. This suggests that liquidity risk and financial performance does not significantly affected by DER.

Hypothesis Testing 5

The final hypothesis assesses whether DER moderates the association between NPL and ROA. The interaction term NPL.DER possesses a coefficient of 0.098 and a p-value of 0.006, indicating statistical significance. This suggests that Debt-to-Equity Ratio (DER) positively moderates the effect of credit risk on financial performance, indicating that the correlation between Non-Performing Loans (NPL) and Return on Assets (ROA) becomes less adverse either more steady with a rise in DER.

DISCUSSION

Effect of Licuidity Risk On Financial Performance

NPL represents the ratio of non-performing loans to total loans issued. As non-performing loans rise, banks face a decline in interest revenue and are required to allocate reserves to mitigate future losses. An important measure for evaluating a company's efficiency in producing profit from its assets, ROA, falls as a result of a decrease in net profit caused by an increase in provisioning. The bank's credit quality is declining, which puts it in a more precarious credit risk position, as seen by a growing nonperforming loan ratio (Bimantara & Mariana, 2025).

Bank Indonesia mandates rule No. 17/11/PBI/2015, which establishes a healthy non-performing loan (NPL) ratio for banks at below 5%. Multiple linear regression analysis demonstrates that liquidity risk, quantified by the Loan to Deposit Ratio (LDR), significantly negatively impacts ROA, evidenced by an LDR coefficient of -0.018 and a significance value of 0.005. If the bank is more likely to not meet its short-term obligations because it lends out more money than it receives from third parties, it could mean that it makes less money. If the Loan-to-Deposit Ratio (LDR) goes up without any other changes, it could hurt the bank's finances if the credit quality isn't strong. These two outcomes indicate that inadequate credit and liquidity risk management will adversely affect bank profitability.

The data indicates that traditional banks in Indonesia have not completely achieved an efficient credit risk management system. This condition indicates that, in practice, there remain deficiencies in the lending process, namely on the assessment of debtor eligibility, credit oversight, and collection procedures. The bank's capacity to earn profits is significantly contingent upon the quality of loans issued, as credit is the primary productive asset in the banking sector.

Silitonga & Manda (2022) findings that credit risk has a substantial adverse impact on financial performance are consistent with our own. Furthermore, the findings of the study by Kamaluddin & Ika (2023) corroborate that credit risk adversely affects profitability. Aji & Manda (2021) found that credit risk consequences profitability to a lesser extent than previously thought. Agustina et al. (2022) and Siagian & Listiawati (2022) come to different, the findings about the credit risk and financial performance and profitability are not significantly correlated.

Effect Of Credit Risk On Financial Performance

Credit risk denotes the likelihood that a mortgagor may not meet their financial commitments, either by postponing payment or failing completely. In banking, credit risk is a fundamental component influencing financial performance, as loans constitute a significant amount of a bank's earning assets. When borrowers default on their loans, banks incur a loss of anticipated revenue, hence diminishing profitability. This is frequently assessed using measures like the Non-Performing Loan (NPL) ratio, where an elevated NPL signifies a higher incidence of problematic loans. As credit risk increases, banks are forced to allocate more funds for loan-loss provisions, reducing their net income and, subsequently, their Return on Assets (ROA) and Return on Equity (ROE). Therefore, effective credit risk management

through proper borrower assessment, risk-based pricing, and consistent monitoring is essential to maintain financial health, protect capital, and ensure the long-term sustainability of banking operations. When the LDR ratio shows a higher number, this generally correlates with an increase in bank profitability, while if the LDR ratio is at a lower level, bank profitability tends to decrease (Putra, 2023). Bank Indonesia stipulates regulation No.178 of 2015 regarding the health ratio of bank LDR, which is between 78% and 92%. Based on multiple linear regression analysis, LDR exhibits a negative and statistically significant impact on ROA, with a coefficient of -0.018 and a significance level of 0.005 ($p < 0.05$).

When a bank is too aggressive in lending (has a high LDR) but does not manage risk optimally, it will face liquidity pressures, due to the constraints of reserving cash for fulfilling current liabilities. If the loans also have a risk of default (high NPL), then the potential for losses is greater, which ultimately reduces profits and ROA. This means that conventional banks in Indonesia tend to face pressure on liquidity, especially when the proportion of loans disbursed (LDR) is too high. The discovery that LDR exerts a negative and substantial influence on ROA suggests that an increase in deposit money allocated to credit correlates with diminished bank profitability unless accompanied by effective risk management. This reflects that some conventional banks have not been optimal in managing the balance between lending and short-term liquidity capabilities.

In practice, this condition can occur when banks focus too much on loan growth to pursue interest income, but ignore the potential risk of liquidity or the quality of loans. If non-performing loans increase or deposits are withdrawn suddenly, the bank will find it difficult to meet its obligations, which in turn reduces financial performance. Therefore, these results emphasize that conventional banks in Indonesia need to strengthen their liquidity management strategies and apply prudential principles.

The results of this analysis correspond with those of Liyana & Indrayani (2020) indicating that a high Loan to Deposit Ratio (LDR) may adversely affect Return on Assets (ROA). The study elucidates that when banks adopt too aggressive lending practices, as shown by a rise in the Loan-to-Deposit Ratio (LDR), it jeopardises their liquidity. When liquidity is disrupted, the bank will find it difficult to meet current liabilities and potentially face operational pressures, which ultimately lead to a decrease in profitability.

Effect Of Capital Structure On Financial Performance

The capital structure of a corporation is expressed as the ratio of debt to equity that is utilized in the process of funding the operations of the organization. When it comes to the world of banking, the Debt to Equity Ratio (DER) is an extremely important factor in evaluating the level of financial performance, particularly in connection to measures such as Return on Assets (ROA). A high DER signal that the bank uses more debt than equity. This can increase financial risk due to the interest burden that must be borne, but on the other hand it can also increase profitability if the borrowed funds are able to generate profits greater than the cost of debt. In other words, efficient use of debt can act as leverage to improve financial performance. However, if not managed carefully, a capital structure that is too heavy on debt can actually worsen the bank's financial condition. Therefore, a balanced capital structure management is essential to preserve sustainability and financial health of the bank.

Moderated Regression Analysis (MRA) indicates that capital structure, as quantified by the Debt to Equity Ratio (DER), directly influences Return on Assets (ROA). The DER coefficient of 1.025, accompanied with a particular value of 0.003, which is below the 0.05 threshold, signifies a positive and statistically significant influence. An increase in DER will consequently result in an increase in ROA. This conclusion suggests that the incorporation of debt into the capital structure of banks can enhance financial performance, provided that the debt is handled effectively and profitably. Banks that are able to utilize borrowed funds for activities that generate profits greater than the cost of debt, tend to earn a higher return on assets. Nonetheless, despite the beneficial impact, debt management must be coupled with effective risk management to prevent future financial strain.

This study's conclusions align with Prekazi et al., (2023), which asserts that capital structure positively and significantly influences financial performance. Their analysis elucidates that the leverage within the capital structure may enhance fund utilisation efficiency and augment profitability, provided that the cost of debt is kept below reasonable limits. This study similarly illustrates that a rise in the Debt to Equity Ratio (DER) results in an increase in Return on Assets (ROA). In summary, in both general corporate

environments and especially within the banking sector, the utilisation of debt in capital structure may function as an efficient leverage mechanism to enhance financial performance, contingent upon rigorous risk management. These findings reinforce the notion that an effective capital structure is essential for attaining financial objectives.

The Effect Of Licuidity Risk On Financial Performance With Capital Structure As A Moderating Variable

Liquidity risk significantly impacts financial performance, particularly within the banking field. The Loan to Deposit Ratio (LDR) measures liquidity risk, demonstrating the bank's capacity to fulfill its short-term liabilities. A high Loan-to-Deposit Ratio (LDR) signifies that a substantial portion of deposit money has been allocated as credit, potentially elevating risk if the bank lacks adequate liquid assets to satisfy abrupt withdrawal demands.

The results of the Moderated Regression Analysis (MRA) for the fourth hypothesis look at the relationship between liquidity risk (LDR) and financial performance (ROA) and whether the Debt to Equity Ratio (DER) acts as a moderating variable. The study indicates that the coefficient for the interaction term LDR.DER is -0.008, with a significance level of 0.175, exceeding the conventional threshold of 0.05. If this is the case, then liquidity risk has no effect on a bank's bottom line regardless of its capital structure. To sum up, DER does show how much a bank relies on debt for funding, but it isn't big enough to make liquidity risk worse or better for ROA.

The Effect Of Credit Risk On Financial Performance With Capital Structure As A Moderating Variable

Credit risk is essential in assessing a bank's financial performance, as it reflects the borrower's ability to repay loans. The evaluation of this risk category frequently involves the analysis of the Non-Performing Loan (NPL) ratio. An elevation in the NPL ratio indicates an augmented likelihood of loan deliquency, thus detrimentally affecting the bank's Return on Assets (ROA).

The findings from the Moderated Regression Analysis (MRA) indicate that the fifth hypothesis examines the role of the Debt to Equity Ratio (DER) as a moderating variable between Non-Performing Loans (NPL) and Return on Assets (ROA). The study demonstrates a statistically significant association between NPL and DER, evidenced by a significance level of 0.006 and an interaction term coefficient of 0.098. This finding demonstrates that the Debt-to-Equity Ratio (DER), which is responsible for evaluating the capital structure of a bank, has the potential to favorably affect the link between credit risk and performance. A larger DER often mitigates the adverse impact of increasing NPLs on ROA, indicating that banks with robust capital positions exhibit more resilience to credit risk and sustain more stable performance among non-performing loans.

4. CONCLUSION

From the findings of the study, data analysis, and discourse on the impact of liquidity risk and credit risk on financial performance, with capital structure serving as a moderating variable for banks listed on the Indonesia Stock Exchange from 2018 to 2023, the subsequent conclusions can be emerged:

1. Liquidity Risk (LDR) adversely and significantly impacts financial performance (ROA). Elevated loan-to-deposit ratios without sufficient liquidity management diminish profitability.
2. Credit Risk (NPL) adversely and significantly affects ROA, signifying that inferior credit quality diminishes bank profitability.
3. The Debt-to-Equity Ratio (DER) exerts a favourable and considerable influence on Return on Assets (ROA). Prudent utilisation of debt can augment profits if well administered.
4. Capital structure has no impact on the relationship between liquidity risk and return on assets, demonstrating that debt-to-equity ratio does not affect financial performance.
5. Capital Structure positively moderates the relationship between NPLs and ROA, suggesting that a higher Debt-to-Equity Ratio (DER) may offset the negative impact of credit risk on profitability.

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