DETERMINANTS OF BANK RISK-TAKING: THE ROLE OF CAPITAL ADEQUACY RATIO, RETURN ON EQUITY TO TOTAL ASSETS, AND LOAN TO DEPOSIT RATIO IN THE INDONESIAN BANKING SECTOR

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ABSTRACT

This study aims to analyze the factors that determine the level of banking risk-taking in Indonesia, focusing on the role of the Capital Adequacy Ratio (CAR), Return on Equity to Total Assets (RETTA), and Loan to Deposit Ratio (LDR). The study employs a multiple linear regression method to examine the influence of independent variables on Bank Risk Taking, measured using Non-Performing Loans (NPL). The data used in this research come from the banking sector in Indonesia, applying a quantitative approach. The findings indicate that CAR has a positive and significant impact on Bank Risk Taking, with a regression coefficient of 3.021. This suggests that an increase in CAR tends to raise NPL, implying that banks with stronger capital tend to take higher risks. Furthermore, RETTA also has a positive and significant effect on Bank Risk Taking, with a regression coefficient of 0.531, meaning that an increase in RETTA contributes to higher NPL. Conversely, LDR has a negative and significant impact on Bank Risk Taking, with a regression coefficient of -0.020, indicating that an increase in LDR can reduce NPL. The novelty of this study lies in the simultaneous analysis of three key indicators influencing bank risk-taking, providing a comprehensive perspective on the relationship between capital structure, profitability, and liquidity in Indonesia's banking sector. These findings have implications for the development of social sciences and humanities, particularly in economics and financial management, by highlighting the importance of banking risk management policies. Recommendations include strengthening regulations and supervision over CAR and RETTA to control higher risk exposure, as well as optimizing LDR to maintain financial stability in Indonesia's banking sector.

***Keywords**: Bank Risk Taking, Capital Adequacy Ratio, Loan to Deposit Ratio, Non-Performing Loan, Return on Equity to Total Assets*

INTRODUCTION

The stability of the banking sector is a crucial factor in maintaining a country's economic balance. As financial intermediaries, banks play a vital role in allocating funds from surplus entities to those in need. However, in performing this function, banks face significant challenges in managing risk, particularly related to risk-taking (Gbadebo, 2024; Nwani, 2022). The level of risk-taking is closely associated with Non-Performing Loans (NPL), which reflect the quality of credit disbursed by banks. In Indonesia, the fluctuating trend of NPLs in recent years has raised concerns about the resilience of the banking sector, especially in the face of global economic

shocks (Atichasari et al., 2023; Safar Nasir et al., 2022). Therefore, understanding the factors influencing banks' risk-taking levels is essential to guide banking policies toward strengthening a more stable financial system.

Studies on the factors affecting risk-taking in banking have been extensively conducted across various economic contexts, primarily focusing on how financial ratios influence banks' risk-taking behavior. One of the key factors frequently examined is the Capital Adequacy Ratio (CAR), which reflects a bank's capital sufficiency to absorb risk. Research by Benbouzid et al. (2022) and Tran & Nguyen (2025) suggests that banks with high CAR tend to take more risks, as they have a greater capital buffer to absorb potential losses. However, findings from Menicucci & Paolucci (2022) and Naili & Lahrichi (2022) indicate that banks with high CAR tend to adopt more conservative credit strategies to avoid larger systemic risks. Given these differences, it is crucial to examine the role of CAR in the context of Indonesian banking, especially amid global economic fluctuations.

Besides CAR, Return on Equity to Total Assets (RETTA), or profitability ratio, is another critical indicator of banking risk-taking. Several studies, such as those conducted by Goswami (2022) and Le et al. (2022), found that highly profitable banks tend to be more aggressive in credit expansion, which may increase NPL levels in the long run. However, research by Bastan et al. (2024) and Sharma et al. (2024) suggests that high profitability enhances a bank's resilience and reduces the likelihood of problematic loans. Further studies by López-Penabad et al. (2022) and Rakshit & Bardhan (2022) also indicate that the relationship between profitability and risk-taking can be influenced by regulations and macroeconomic conditions. Hence, understanding the role of RETTA in shaping banks' risk-taking strategies in Indonesia is essential.

Additionally, the Loan to Deposit Ratio (LDR), as a liquidity indicator, has implications for banking risk-taking. Banks with high LDRs rely more on external funds, potentially increasing liquidity and credit risk. Studies by Eltweri et al. (2024) and Junarsin et al. (2023) found that banks with high LDRs are more vulnerable to liquidity shocks, increasing the likelihood of default. However, research by Ally et al. (2025) and Idris et al. (2025) indicates that in some cases, banks with high LDRs adopt more cautious lending practices, keeping NPL levels low. Moreover, studies by Anwar et al. (2023) and Saha et al. (2024) highlight that the impact of LDR on risk-taking is highly influenced by regulatory frameworks and monetary policies in each country.

In the Indonesian context, previous studies have examined the relationship between these factors and banking stability. Research by Magnis et al. (2025) shows that CAR, RETTA, and LDR have varied effects on banks' risk-taking, depending on bank size, capital structure, and prevailing economic conditions. Furthermore, a study by Mateev et al. (2022, 2023) found that banking regulatory policies, including the implementation of Basel III, affect banks' risk-taking behavior. Although previous studies have provided a comprehensive understanding of the relationship between Capital Adequacy Ratio (CAR), Return on Equity to Total Assets (RETTA), and Loan to Deposit Ratio (LDR) in banking risk-taking, research that simultaneously examines these three variables within a single analytical model remains limited in the Indonesian context.

Most prior research has focused on one or two of these indicators, failing to provide a holistic understanding of how they collectively influence banks' risk-taking strategies.

Additionally, findings on the relationship between these indicators and risk-taking remain inconsistent. Some studies suggest that high CAR encourages banks to take more risks due to a capital safety net (H. N. Q. Le et al., 2022; Zhao et al., 2022), while others find that high CAR reduces risk-taking tendencies to maintain financial stability (Addou et al., 2024; Bao et al., 2024). Similar inconsistencies exist for RETTA and LDR, where differences in economic conditions, regulatory policies, and competition levels in the banking industry produce varying results.

Furthermore, with the unique characteristics of Indonesia's banking sector—such as the high proportion of consumer loans, dominance of state-owned banks, and stricter regulatory policies compared to some other developing countries—there is a need for a more specific analysis to understand risk-taking patterns in the national banking industry. Therefore, this study seeks to fill the research gap by examining how CAR, RETTA, and LDR simultaneously influence banks' risk-taking levels in Indonesia, particularly in navigating increasingly complex economic challenges.

This research offers several new contributions to banking studies, particularly in risk-taking analysis. First, it integrates three key indicators – CAR, RETTA, and LDR – into a single empirical analysis model to understand how they interact and collectively influence banks' risk-taking in Indonesia. This approach differs from previous studies, which typically focused on one or two variables in determining banking risk factors. Second, this study tailors its analysis to the characteristics of Indonesia's banking sector, which has distinct regulatory frameworks and industry structures compared to other countries examined in prior research. In this context, the study aims to contribute to clarifying the relationship between CAR, RETTA, and LDR and the level of banking risk-taking in Indonesia. By adopting a more comprehensive approach, this research is expected to provide new insights for regulators, bank managers, and academics in understanding banking risk dynamics and designing more effective policies to maintain financial sector stability in Indonesia.

RESEARCH METHOD

This study employs a quantitative approach with an associative method. This approach is chosen based on the primary research objective: to analyze the relationship between the Capital Adequacy Ratio (CAR), Return on Equity to Total Assets (RETTA), and Loan to Deposit Ratio (LDR) on Bank Risk-Taking in the Indonesian banking industry. A quantitative approach is selected because it enables objective measurement of research variables and empirical testing of causal relationships through statistical analysis (Creswell, 2017). The associative method allows this study not only to explain the relationship between variables but also to examine the extent of the influence of independent variables on the dependent variable (Bazaanah & Mothapo, 2024; Fauzi et al., 2025).

The population in this study includes all banking companies operating in Indonesia, totaling 106 banks. Given the broad scope of the population, this study applies a purposive sampling technique, which involves selecting samples based on specific criteria relevant to the research objectives (Guo et al., 2021; Rahmah & Satyaninggrat, 2023). The criteria for sample selection include banks registered with the Financial Services Authority (OJK) during the 2019–2023 period, those with complete annual financial reports for that period, and banks actively performing financial intermediation functions with analyzable financial ratios. Based on these criteria, 30 banks are selected as research samples, with a five-year observation period, resulting in a total of 150 observations. The 2019–2023 period is chosen to capture the dynamics of banking risk under fluctuating economic conditions, including the impact of the COVID-19 pandemic on the banking sector.

This study utilizes secondary data obtained from publicly available annual financial reports of banks. Secondary data is preferred as it allows for the analysis of financial trends over an extended period and avoids biases often found in primary data collection (Zain & Marsasi, 2023). The main data sources include annual financial reports from the official websites of banks and OJK, publications from Bank Indonesia on banking sector stability, and data from the Indonesia Stock Exchange (IDX) on the financial performance of publicly listed banks.

Data processing is conducted using quantitative methods, allowing for precise testing of relationships between variables. The collected data is analyzed using statistical software to ensure accurate and interpretable research findings. The analytical techniques employed in this study are designed to identify patterns of relationships between research variables objectively and systematically. The data analysis in this study is carried out in stages to ensure high validity and reliability of the results. The first stage involves classical assumption tests to verify that the data meets the requirements for linear regression modeling. A normality test is conducted to determine whether the data distribution is normal, which is a crucial requirement in regression analysis. Additionally, a multicollinearity test is applied to detect any excessively strong correlations between independent variables, which could lead to bias in regression parameter estimation (Henglin et al., 2022). Subsequently, a heteroscedasticity test is performed to ensure that the variance of errors in the regression model remains constant, thereby maintaining model validity. Lastly, an autocorrelation test is conducted to detect any systematic relationships between residuals in the model, which, if found, could indicate issues with the regression model specification.

Following the classical assumption tests, the next step involves multiple linear regression analysis. This model is used to examine the simultaneous effects of Capital Adequacy Ratio (CAR), Return on Equity to Total Assets (RETTA), and Loan to Deposit Ratio (LDR) on Bank Risk-Taking. The selection of the multiple linear regression model is based on its ability to measure quantitative relationships between multiple independent variables and a dependent variable simultaneously (Mehzabin et al., 2023; Tumiran, 2023). The regression equation used in this study is as follows:

$$Y = \beta 0 + \beta 1 CAR + \beta 2 RETTA + \beta 3 LDR + \in$$

The equation is structured as follows: Y represents Bank Risk-Taking, which serves as the dependent variable in the model. The term β_0 denotes the constant, while β_1, β_2, and β_3 are the regression coefficients that capture the influence of each independent variable on bank risk-taking. Lastly, $\in$ represents the residual error, accounting for the variability in bank risk-taking not explained by the model.

To test the validity of the model, hypothesis testing is conducted using the F-test and t-test. The F-test assesses whether CAR, RETTA, and LDR simultaneously have a significant effect on Bank Risk-Taking. Meanwhile, the t-test is used to examine the individual effects of each independent variable on Bank Risk-Taking (Ghanad, 2023; Wang et al., 2023). If the F-test results indicate significance, it can be concluded that the overall regression model has strong predictive capabilities. The t-test results, on the other hand, determine whether each independent variable has a significant individual effect on the dependent variable.

RESULTS AND DISCUSSION

Validity of the Regression Model: Normality, Multicollinearity, and Heteroscedasticity Tests

The normality test in this study was conducted using the Kolmogorov-Smirnov method to determine whether the residuals of the regression model meet the normality assumption. Based on the data processing results presented in Table 1, the obtained Asymp. Sig (2-tailed) value is 0.200, which is greater than the 0.05 significance threshold. This result indicates that the residual data follows a normal distribution, meaning the regression model used in this study meets the normality assumption and is suitable for further analysis.

Table 1 Normality Test Result

One-Sample Kolmogorov-Smirnov Tes		Unstandardized Residual
N		150
Normal Parameters[a,b]	Mean	0,0000000
	Std. Deviation	0,05040659
Most Extreme Differences	Absolute	0,058
	Positive	0,058
	Negative	-0,046
Test Statistic		0,058
Asymp. Sig. (2-tailed)		0,200[c,d]

a. Test distribution is Normal.
b. Calculated from data.

Source: Processed secondary data using SPSS, 2025

In addition to the normality test, this study also conducted a heteroscedasticity test to ensure that the variance of residuals in the regression model does not change systematically. The analysis results show that the data points are randomly scattered above and below zero without

forming a specific pattern, such as a wave pattern that widens and narrows. Therefore, this result indicates no heteroscedasticity in the regression model, confirming the assumption of homoscedasticity.

Furthermore, a multicollinearity test was conducted to examine whether there is a strong correlation between independent variables in the regression model. The analysis results presented in Table 2 indicate that the tolerance values for all independent variables are above 0.1 and the Variance Inflation Factor (VIF) values are below 10. The tolerance value for the Capital Adequacy Ratio (CAR) is 0.675 with a VIF of 1.482, the Return on Equity to Total Assets (RETTA) is 0.665 with a VIF of 1.503, and the Loan to Deposit Ratio (LDR) is 0.981 with a VIF of 1.020. These results confirm that there is no multicollinearity among the independent variables, making the regression model suitable for further analysis.

Table 2 Multicollinearity Test Result

Model		Collinearity Statistics	
		Tolerance	VIF
1	CAR (X1)	0,675	1,482
	RETTA (X2)	0,665	1,503
	LDR (X3)	0,981	1,020

Source: Processed secondary data using SPSS, 2025

The multiple linear regression analysis in this study aims to determine the effect of the Capital Adequacy Ratio (CAR), Return on Equity to Total Assets (RETTA), and Loan to Deposit Ratio (LDR) on Bank Risk-Taking, measured by Non-Performing Loan (NPL). The obtained multiple linear regression equation is as follows:

$$Y = 0{,}301 + 3{,}021\,(X1) + 0{,}531\,(X2) - 0{,}020\,(X3)$$

The interpretation of these regression results shows that the constant value of 0.301 indicates that if there is no influence from the independent variables, the Non-Performing Loan (NPL) value is 0.301. The regression coefficient for the Capital Adequacy Ratio (CAR) is 3.021, meaning that each unit increase in CAR will decrease NPL by 3.021, assuming other independent variables remain constant. The regression coefficient for Return on Equity to Total Assets (RETTA) is 0.531, which means that each unit increase in RETTA will increase NPL by 0.531. Meanwhile, the Loan to Deposit Ratio (LDR) has a negative regression coefficient of -0.020, indicating that each unit increase in LDR will reduce NPL by 0.020, assuming other independent variables remain constant.

These results indicate that CAR and LDR have a negative relationship with NPL, whereas RETTA has a positive relationship with NPL. Overall, the regression model used in this study has passed various classical assumption tests, including normality, heteroscedasticity, and multicollinearity, confirming that this model is valid for explaining the relationship between the independent and dependent variables in this study.

Table 3 Multiple Linear Regression Result

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	0,301	0,013	
	CAR (X1)	3,021	0,359	0,573
	RETTA (X2)	0,531	0,185	0,197
	LDR (X3)	-0,020	0,007	-0,165

Source: Processed secondary data using SPSS, 2025

Hypothesis Testing of Regression: F-Test, T-Test, and Coefficient of Determination

Based on data processing results using SPSS 25, the simultaneous test (F-test) presented in Table 3 shows that the calculated F-value ($F_{calculated}$) is 58.115, while the critical F-value (F_{table}) is 2.67. Since $F_{calculated}$ is greater than F_{table} (58.115 > 2.67) and the significance value is 0.000, which is lower than 0.05, it can be concluded that the variables Capital Adequacy Ratio (X1), Return on Equity to Total Assets (X2), and Loan to Deposit Ratio (X3) simultaneously have a significant effect on Non-Performing Loan (NPL). This confirms that the regression model used is capable of comprehensively explaining the relationship between the independent and dependent variables.

Table 3 Simultaneous Test (F-Test)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0,452	3	0,151	58,115	0,000[b]
	Residual	0,376	146	0,003		
	Total	0,828	149			

Source: Processed secondary data using SPSS, 2025

Next, based on the partial test (T-test) presented in Table 4, the critical t-value (t_{table}) is 1.976 at a 0.05 significance level. The analysis results show that the Capital Adequacy Ratio (X1) has a t-value of 8.415, which is greater than t_{table} (8.415 > 1.976), with a significance value of 0.000, which is lower than 0.05. This indicates that the Capital Adequacy Ratio has a positive and significant effect on Bank Risk-Taking. In other words, the higher the Capital Adequacy Ratio, the higher the risk taken by banks in credit management.

Table 4 Partial Test (T-Test)

Model	t	Sig.
(Constant)	23,088	,000
CAR (X1)	8,415	,000
RETTA (X2)	2,875	,005
LDR (X3)	-2,915	,004

Source: Processed secondary data using SPSS, 2025

Meanwhile, the Return on Equity to Total Assets (X2) has a t-value of 2.875, which is also greater than t_{table} (2.875 > 1.976), with a significance value of 0.005, which is lower than 0.05. Thus, it can be concluded that this variable has a positive and significant effect on Bank Risk-Taking. This means that the higher the equity-to-total-assets ratio, the greater the likelihood that banks will take risks in their financial management.

Conversely, the Loan to Deposit Ratio (X3) has a t-value of -2.915, which is lower than t_{table} (2.915 > 1.976), with a significance value of 0.004, which is lower than 0.05. These results indicate that the Loan to Deposit Ratio has a negative and significant effect on Bank Risk-Taking. In other words, as the loan-to-deposit ratio increases, the risk taken by banks in credit management tends to decrease.

In addition, the coefficient of determination test (R^2) presented in Table 5 shows that the Adjusted R^2 value is 0.537. This means that the variables Capital Adequacy Ratio, Return on Equity to Total Assets, and Loan to Deposit Ratio can explain 53.7% of the variation in Bank Risk-Taking, while the remaining 46.3% is explained by other variables not included in this study model.

Table 5 Coefficient of Determination (R^2 Test)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,739[a]	0,546	0,537	0,05093

Source: Processed secondary data using SPSS, 2025

Overall, the results of this study indicate that both simultaneously and partially, the independent variables used in the regression model have a significant effect on Non-Performing Loan (NPL). These findings provide valuable insights for the banking sector in understanding the factors influencing credit risk levels and strategies that can be implemented to manage such risks more effectively.

Financial Stability and Banking Risk: Analysis of CAR, RETTA, and LDR

Based on the hypothesis testing results presented in Table 5, the findings indicate that the null hypothesis (H_{01}) is rejected, and the alternative hypothesis (H_{a1}) is accepted. This result demonstrates that the Capital Adequacy Ratio (CAR), Total Equity to Total Assets Ratio (RETTA), and Loan to Deposit Ratio (LDR) influence Bank Risk Taking. Conceptually, this hypothesis validation indicates that these three independent variables contribute simultaneously to the variability of Bank Risk Taking. In the context of banking risk management, understanding the interrelation between capital factors, equity structure, and liquidity is a fundamental aspect in assessing the level of risk-taking by a financial institution.

Further analysis of Bank Risk Taking using the Non-Performing Loan (NPL) indicator reveals a downward trend in credit risk levels among banking companies, including PT Bank Aladin Syariah Tbk, with an average percentage of 0.03. This decline in NPL has positive implications for investor and customer confidence, as it indicates stability in credit management and a low level of non-performing loans. A low NPL percentage reflects a bank's ability to

maintain profitability by reducing the likelihood of borrower default. Additionally, both internal and external factors contribute to lowering NPL, including the effectiveness of loan disbursement strategies, the implementation of strict risk mitigation policies, and in-depth analysis of borrowers' capacity and credibility before fund disbursement.

This study's findings align with the theory proposed by the Atichasari et al. (2023), which asserts that Bank Risk Taking is influenced by several factors, including the Capital Adequacy Ratio, Total Equity to Total Assets Ratio, and Loan to Deposit Ratio. This is also consistent with research by Hendra & Bustaman (2024), which found that capital structure and equity ratio play a crucial role in determining the level of risk taken by banks in their operations. Consequently, this study reinforces the understanding of how fundamental financial factors contribute to banking risk management.

Furthermore, this research is supported by findings from Benbouzid et al. (2022) and Tran & Nguyen (2025), which affirm that the Capital Adequacy Ratio, Total Equity to Total Assets Ratio (RETTA), and Loan to Deposit Ratio influence Bank Risk Taking. Additionally, studies by Sharma et al. (2024) exhibit a similar pattern, indicating that capital and liquidity ratios have a significant relationship with the level of risk taken by banks. This further strengthens the empirical evidence regarding the importance of capital and equity management in determining the sustainability of banking performance and the broader financial system's stability.

The Impact of Capital Adequacy Ratio on Risk-Taking Behavior in the Banking Sector

Based on the t-test (partial test) results, it was found that the null hypothesis (H_{o2}) is rejected, and the alternative hypothesis (H_{a2}) is accepted, meaning that the Capital Adequacy Ratio (CAR) has a positive and significant effect on Bank Risk Taking in Indonesian banking companies. This finding indicates that the higher a company's Capital Adequacy Ratio, the lower its Non-Performing Loan (NPL), allowing better credit risk control. In the banking context, the Capital Adequacy Ratio reflects the extent to which a bank's capital can cover the risks it faces, particularly concerning non-performing loans. The higher this ratio, the greater the bank's ability to absorb losses arising from bad loans, thereby increasing investor confidence and driving demand for the bank's shares.

The continuous implementation of the Capital Adequacy Ratio in the banking industry is not only intended to ensure that companies have sufficient capital but also to maintain financial system stability in response to ever-changing economic dynamics. This process is not a one-time effort but an ongoing endeavor to ensure that banks can adapt to regulatory developments and macroeconomic and microeconomic conditions. With adequate capital, banks can maintain financial resilience and greater flexibility in dealing with potential economic shocks, including market fluctuations and global uncertainties.

The measurement of the Capital Adequacy Ratio shows an increasing trend over the years. For example, at PT Bank QNB Indonesia Tbk, this ratio experienced a significant increase in 2023, reaching 62.23%. This increase is a positive indication that companies, particularly in the

banking and financial sectors, are becoming more capable of managing risk and maintaining stronger capital reserves to mitigate potential losses. A bank's ability to improve its Capital Adequacy Ratio also demonstrates the effectiveness of its risk management strategies, particularly in maintaining credit portfolio quality and enhancing operational efficiency.

This finding aligns with the theory proposed by the López-Penabad et al. (2022), which states that one of the main factors influencing Bank Risk Taking is strict capital regulations. In banking theory, the higher the Capital Adequacy Ratio, the greater the bank's capacity to minimize credit risk, thereby reducing the potential for non-performing loans. Thus, this ratio serves as a protective mechanism for banks in facing financial uncertainties and maintaining public confidence in banking institutions' stability.

This study's findings are also supported by research from Mateev et al. (2022), which states that the Capital Adequacy Ratio has a positive and significant impact on Bank Risk Taking. However, these findings contradict research by Addou et al. (2024), which concluded that the Capital Adequacy Ratio does not have a positive and significant effect on Bank Risk Taking. These differing results reflect variations in external factors influencing banking risk in different contexts, such as economic conditions, banking policies, and risk management strategies implemented by each financial institution. Nevertheless, this study overall reinforces the argument that capital adequacy is a key factor in maintaining bank stability and effectively managing risk.

Financial Health of Banks: The Relationship Between RETTA and Bank Risk-Taking

Based on the results of the t-test (partial test), it was found that the null hypothesis (H_{o3}) was rejected, and the alternative hypothesis (H_{a3}) was accepted. This means that the Ratio of Total Equity to Total Assets has a positive and significant effect on Bank Risk Taking in banking companies in Indonesia. This finding indicates that the higher the ratio, the lower the tendency for Non-Performing Loans (NPL). In other words, banks with a higher proportion of equity relative to their total assets tend to be more stable in facing credit risk and have a lower loan default rate.

The proper application of the Ratio of Total Equity to Total Assets reflects the effectiveness of a company's financial management in utilizing its internal resources. This implies that companies that can optimize their equity and assets efficiently are better able to generate profits without relying too much on debt. This condition indicates that banks with a larger equity proportion have stronger financial resilience, as they are not overly burdened by interest and principal debt obligations, ultimately impacting financial stability and the sustainability of operations.

The measurement results of the Ratio of Total Equity to Total Assets show that some banks have relatively high ratios, as seen in PT Bank Amar Indonesia, which recorded a figure of 75%. This figure reflects that the bank has low dependence on debt and relies more on equity for its operations. With a high equity ratio, the company has a larger capital reserve to absorb potential losses arising from revenue declines or economic shocks. Additionally, with a stronger capital structure, the bank can be more flexible in expanding its business without facing excessive

financial risks.

This study's findings align with the theory proposed by Rahmama et al. (2019), which states that one of the factors influencing Bank Risk Taking is the equity-to-total-assets ratio. Theoretically, the higher this ratio, the lower the Non-Performing Loan risk, as banks with greater equity tend to have better loan quality and stronger credit risk management. In other words, banks with a strong capital structure are better equipped to handle potential customer defaults while maintaining their operational stability in the long run.

This study's findings are also supported by research conducted by C. Le et al. (2022), which showed that the Ratio of Total Equity to Total Assets has a positive and significant effect on Bank Risk Taking. However, these results contradict the research of Magnis et al. (2025), which found that this ratio does not significantly influence Bank Risk Taking. The differences in findings may be due to external factors varying across studies, such as macroeconomic conditions, banking policies, or the specific characteristics of the banks studied. Nevertheless, this study reaffirms that strong capitalization, reflected in the equity-to-assets ratio, plays a crucial role in reducing credit risk and enhancing banks' financial resilience.

Liquidity vs. Risk: Analysis of the Impact of LDR on Bank Risk-Taking

Based on the results of the t-test (partial test), it was found that the null hypothesis (H_{o4}) was rejected, and the alternative hypothesis (H_{a4}) was accepted. This means that the Loan to Deposit Ratio (LDR) has a negative and significant effect on Bank Risk Taking. This finding suggests that the higher the LDR value obtained by a company, the lower the level of Non-Performing Loans (NPL). In other words, effective LDR management can help banks reduce problematic credit risks and improve financial stability.

The negative relationship between the Loan to Deposit Ratio and Non-Performing Loans can be explained through several factors related to how banks manage credit risk and implement fund allocation strategies. A high LDR indicates that the bank has allocated more funds as loans relative to its deposits, which can affect its liquidity. If a bank lacks sufficient reserves to anticipate default risks, this condition could potentially increase financial risks and disrupt operational stability.

The measurement results of the Loan to Deposit Ratio can be observed through the amount of credit disbursed compared to the total third-party funds managed by the bank. For instance, PT Bank Capital Indonesia Tbk in 2021 recorded total third-party funds of IDR 2,276,545 and total credit disbursed of IDR 18,702,848. This situation indicates that the bank faces limitations in providing funds for new loans, while the level of Non-Performing Loans continues to increase. Consequently, the bank faces greater financial losses and challenges in maintaining its financial health.

This study's findings are consistent with the theory put forward by the Eltweri et al. (2024), which explains that one of the factors influencing Bank Risk Taking is the traditional measurement of time deposits, demand deposits, savings, and other financial instruments used

to meet customer loan requests. The more banks implement balanced LDR management strategies, the more investors will also be affected (Gao et al., 2023; Rizkia, 2023). A well-maintained LDR indicates that a bank can optimally manage its loans and deposits, reflecting a stable business model with lower risk levels. This stability is an essential factor for investors in assessing the long-term investment potential of a bank (Hunjra et al., 2022).

The findings in this study are supported by research conducted by Bastan et al. (2024), which showed that the Loan to Deposit Ratio has a negative and significant effect on Bank Risk Taking. However, these results contradict the study by H. N. Q. Le et al. (2022), which stated that the Loan to Deposit Ratio has a positive and significant effect on Bank Risk Taking. These differences may be due to factors such as varying banking policies, different macroeconomic conditions, and different financial strategies used by banks in managing credit risk. Nevertheless, this study affirms that good LDR management can be a key factor in maintaining bank financial stability and reducing excessive credit risk.

CONCLUSION

The findings of this study confirm that the level of bank risk-taking in the Indonesian banking sector is influenced by capital structure, profitability, and liquidity, as reflected in the Capital Adequacy Ratio (CAR), Return on Equity to Total Assets (RETTA), and Loan to Deposit Ratio (LDR). The analysis results indicate that CAR and RETTA have a positive and significant relationship with Bank Risk Taking, suggesting that the higher the capital level and profitability, the greater the tendency for banks to take risks that could increase Non-Performing Loans (NPL). Conversely, LDR has a negative and significant effect on Bank Risk Taking, indicating that improving a bank's ability to manage third-party funds and allocate them as credit can reduce problematic credit risks. This study also reveals that although stronger capital is often regarded as a risk mitigation tool, in the context of Indonesian banking, larger capital allows banks greater freedom to take risks. This implies that strict capital regulations must be combined with more effective supervision to ensure that banks' credit expansion remains controlled. Meanwhile, the positive impact of RETTA on Bank Risk Taking suggests that high profitability does not always indicate financial stability; rather, it may encourage banks to pursue greater profits through riskier means. The policy implications drawn from these findings highlight the need for a more balanced regulatory approach in managing CAR and RETTA to prevent banks from taking excessive risks, as well as the importance of optimizing LDR as a risk management tool to enhance the stability of the banking system. Thus, this study contributes to the development of more sustainable banking policies, particularly in balancing credit expansion and risk mitigation to create a more stable financial system in Indonesia.

ETHICAL STATEMENT AND DISCLOSURE

This study was conducted in accordance with established ethical principles, including informed consent, protection of informants' confidentiality, and respect for local cultural values. Special consideration was given to participants from vulnerable groups to ensure their safety, comfort, and equal rights to participate. No external funding was received, and the authors declare no conflict of interest. All data and information presented were collected through valid research methods and have been verified to ensure their accuracy and reliability. The use of artificial intelligence (AI) was limited to technical assistance for writing and language editing, without influencing the scientific substance of the work. The authors express their gratitude to the informants for their valuable insights, and to the anonymous reviewers for their constructive feedback on an earlier version of this manuscript. The authors take full responsibility for the content and conclusions of this article.

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