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The influence of capital adequacy ratio (car) and loan to deposit ratio (ldr) on return on assets (roa) in banking companies listed on the indonesia stock exchange

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ABSTRACT

The objective of this research is to analyze how Capital Adequacy Ratio and Loan to Deposit Ratio affect Return on Assets in Indonesian banks listed on IDX from 2021 to 2025. Previous studies show inconsistent findings regarding the effect of CAR and LDR on ROA. Some found a positive effect, while others found negative or insignificant results. This inconsistency indicates a research gap that needs further testing in the post-pandemic period. The population includes all banks listed on IDX in 2025. The sample was selected using purposive sampling: banks listed consecutively from 2021-2025 with complete annual reports. Based on these criteria, 16 banks were selected. This study uses a panel data design with 80 observational data to capture cross-sectional and time-series effects. Multiple linear regression with SPSS was used. Classical assumption tests including normality, multicollinearity, heteroscedasticity, and autocorrelation were conducted prior to analysis. The results show that CAR and LDR negatively affect ROA. Specifically, CAR has a negative and significant effect with B = -0.149, Beta = -0.303, t = -2.881, p = 0.005. LDR also has a negative and significant effect with B = -0.164, Beta = -0.249, t = -2.370, p = 0.020. Simultaneously, CAR and LDR significantly affect ROA with F = 6.739, p = 0.002. CAR and LDR explain 14.9% of ROA variation, with Adjusted R^2 = 0.149. The novelty of this study is its use of recent data from 2021-2025 during economic recovery. The implication is that banks should optimize CAR and LDR levels to maintain profitability.

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1. INTRODUCTION

Every entity aims to obtain profit as an indicator of operational success and as a foundation for business continuity, including in the banking industry. However, this study does not focus on general business objectives, but specifically on the empirical phenomenon of declining bank profitability despite strong capital and liquidity positions in Indonesia. Financial institutions are established with the purpose of supporting national development and accelerating the pace of economic growth (Ahmad Fauzan

Fadlan, SE., S. Kom., 2022). Consistent profit generation not only ensures the bank's operational sustainability, but also serves as a source of funding for business development, such as product innovation, service quality improvement, and network and business expansion. Therefore, the bank's capability to generate profit is a primary consideration for multiple stakeholders, inclusive of management, financial authorities, and society.

In contrast to manufacturing companies that generate primary revenue from the sale of goods or services, banks obtain their main income from financial intermediation activities, particularly through interest income from lending. As financial intermediaries, banks serve the fund mobilization function sourced from the general public with surplus funds in through deposit products, and then redistributing them to the public in need of funds (deficit) in the form of loans or financing (Gurley & Shaw, 1956). Thus, the success of a bank in performing its intermediation function greatly determines its ability to generate profit.

In performing this function, banks are required to manage the funds collected effectively and efficiently. The economic growth of society has a direct relationship with the increasing role of the banking sector (Yunike, 2023). Fund management is not only related to the amount of funds successfully mobilized, but also to how those funds are allocated optimally without neglecting the principle of conservatism. Errors in fund allocation can increase various risks, such as liquidity risk, credit risk, and capital risk. If these risks cannot be managed effectively, they may lead to losses and potentially reduce bank profitability (Periode et al., 2023).

Capital adequacy, as reflected by the Capital Adequacy Ratio (CAR), is one of the factors that can affect a bank's profitability Jigeer & Koroleva (2023) define CAR as the amount of capital in a certain proportion to risk-weighted assets. According to Brigham & Houston (2021), CAR serves as a measure of a the bank's capability of providing capital toward mitigate the potential for losses arising through its productive assets. An adequate CAR enables a bank to better maintain operational stability, increase external stakeholders' confidence, and have gr bank' eater capacity to expand its lending activities. This condition can drive an increase in corporate profits. If a bank has a low CAR, it can limit the bank's capability to expand its business due to limited capital to cover the risks it faces. A high CAR reflects investors' confidence in the bank's ability to manage credit risk, and this impacts increased trust in the bank's performance as well as driving up demand for its shares (Bisnis et al., 2022).

Another determinant of bank profitability is the Loan to Deposit Ratio (LDR), defined as the relationship between total the proportion of loans to third-party funds mobilized (Hastasari & Suharini, 2024). LDR measures how much of the third-party funds are channeled into loans, the bank's primary revenue source. A higher LDR increases profit potential, while a lower LDR indicates underutilization of funds and reduced productivity (Astuti et al., 2023). However, excessive loan distribution raises credit risk. Hence, prudent LDR management is crucial. Referring to Bank Indonesia Regulation No. 15/7/PBI/2013 (2013), the optimal LDR range is between 78% and 92%.

Empirically, previous studies show inconsistent results on the effect of CAR and LDR on ROA. Some studies found a positive and significant effect, others found negative or insignificant effects. This inconsistency indicates a research gap. Furthermore, most prior studies used data before 2020. The period 2021–2025 is crucial to examine because it covers the post-COVID-19 economic recovery, implementation of tighter prudential regulations, and digital transformation in Indonesian banking. Therefore, this study uses the most recent 2021–2025 data to provide updated evidence in a different context and time period.

The Financial Services Authority (OJK) The findings indicate that at the end of 2024, the banking sector recorded a CAR of 26.76%, well above the minimum requirement set by the regulator. Meanwhile, LDR was recorded at 89.05%, indicating

that the banking intermediation function was running quite well through loan disbursement supported by the mobilization of third-party funds. However, in that year banks were only able to achieve an ROA of 2.72%, suggesting that high capital adequacy and optimal loan distribution do not necessarily drive increased profitability.

Entering 2025, OJK reported that in December, CAR stood at 25.89% and LDR at 85.37%, with ROA at 2.53%. These data indicate that although banks had a very strong level of capitalization and the intermediation function was operating well, profitability actually experienced a slight decline compared to the previous year.

This phenomenon shows that the association between Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), and bank profitability remains an interesting issue to examine. On the one hand, strong capital provides banks with greater flexibility to expand their business and absorb potential risks. On the other hand, if loans are channeled effectively and in accordance with targets, bank interest income will increase and ultimately bank profits will also rise (Kredit et al., 2026). However, if credit expansion is not accompanied by good credit quality or efficient operational costs, then increases in CAR and LDR will not necessarily have a positive impact on profitability.

The novelty of this study lies in its contextual and empirical contribution. Contextually, it uses 2021–2025 data, a post-pandemic period with unique regulatory and economic conditions. Empirically, it provides updated evidence on the negative impact of CAR and LDR on ROA among IDX-listed banks. The contribution of this study is practical: for bank management, the results suggest optimizing CAR and LDR levels rather than maximizing them; for investors, the findings help in assessing bank efficiency and profitability; and for regulators such as OJK and BI, the results can be used to evaluate the effectiveness of capital and liquidity policies. Therefore, further study is strongly recommended to evaluate the correlation between CAR and LDR on banking profitability, in order to provide empirical evidence regarding the relationship among these variables.

2. RESEARCH METHOD

This research adopts a quantitative approach by utilizing banking companies egistered on the Indonesia Stock Exchange (IDX) as the research objects. This study uses panel data regression because the data combines cross-section of 16 banks and time-series of 5 years. Panel data was chosen to capture both individual bank effects and changes over time, and to increase the number of observations to 80, which improves the robustness of regression results. As of December 2024, there were 46 banks listed on the Indonesia Stock Exchange (IDX), consisting of state-owned banks, private banks, regional development banks, digital banks, and Islamic banks. Source: IDX, Company Fact Sheet December 2024.

The population criteria selected are banking companies listed on the Indonesia Stock Exchange (IDX) in 2026. To ensure consistency, the population year was adjusted to match the study period. Therefore, the population used is banks listed on IDX consecutively from 2021 to 2025.

The selected banks were required to publish complete annual financial statements from 2020 to 2025. Islamic banks and digital banks are excluded. The academic justification for excluding Islamic banks is due to differences in operational principles and financial reporting standards, such as profit-sharing and absence of interest, which make CAR, LDR, and ROA not directly comparable with conventional banks. Digital banks were excluded because most were listed after 2021 and do not have complete 5-year financial reports, which would cause data bias.

With reference to these criteria, the research population consists of 16 financial institutions with complete financial reports for 5 years, from 2021 to 2025. Differences in bank characteristics such as bank size, ownership, and business model were controlled

by using purposive sampling of only conventional commercial banks and by using panel data that accounts for cross-sectional variation. Other variables such as NPL, NIM, BOPO, and bank size were not included to maintain model parsimony and to focus specifically on the effect of capital and liquidity ratios as stated in the research objective.

Table 1. Purposive Sampling Criteria

No.	Criteria	Number of Banks
1	Banks Listed	46
2	Banks with complete annual financial reports 2021-2025	28
3	Excluding Sharia banks	-8
4	Excluding digital banks	-4
5	Final sample of conventional commercial banks	16
	Total observations = 16 banks x 5 years	80

This study measures how CAR and LDR affect ROA. CAR is calculated using the ratio of a bank's capital to its Risk-Weighted Assets (RWA) (Brigham & Houston, 2021). LDR measured by comparing total loans with disbursed by third-party funds and expressed as a percentage (Hastasari & Suharini, 2024). ROA is measured by dividing earnings after interest and taxes by total assets and expressed as a percentage (Sujarweni, 2020). This ratio indicates the amount of assets that carry risk, including loan disbursement, securities investment, and other forms of financial asset placement, which are funded through the bank's capital base as well as non-third-party institutional funding sources (Fitri et al., 2025). The LDR is a financial ratio that measures the level of loan disbursement by financial institutions relative to the third-party funds they have successfully mobilized. This ratio is obtained from the ratio of total loans to total customer deposits collected (Rusmini & Adiandari, 2020). Meanwhile, a commonly used measure to determine the financial condition of a bank is ROA. ROA indicates the extent to which a bank’s assets contribute to profit generation. A higher ROA indicates that a bank is more efficient in utilizing its assets to generate profits. to generate earnings (Nurhasanah, 2021).

The research data were processed and analyzed using SPSS. In accordance with the title of this study, the data are expected to be processed using multiple linear multiple regression analysis to evaluate the effects of CAR and LDR on ROA. Multiple linear regression was used because the study aims to examine the simultaneous and partial effect of two independent variables, CAR and LDR, on one dependent variable, ROA. This method is appropriate for testing causal relationships between variables in quantitative research. Regression analysis is a statistical method aimed at analyzing the influence among variables (V. WiratnaSujarweni, 2015). The initial step is to conduct descriptive analysis to summarize the characteristics of the collected data. This is followed by classical assumption tests, which consist of the normality test using the One-Sample Kolmogorov-Smirnov test, heteroscedasticity testing, multicollinearity testing, and autocorrelation testing. The classical assumption test is a series of procedures designed series of statistical tests conducted to ensure that the data meet the requirements for multiple linear regression analysis in order to avoid bias. After passing the classical assumption tests, the data are then analyzed using regression and hypothesis testing methods. The regression test is conducted to examine the effect of CAR and LDR variables on ROA, both simultaneously and individually. To further strengthen the study, the coefficient of determination is also examined in the SPSS output, which is denoted as R Square (R^2). The coefficient of determination analysis aims to determine the proportion of variation in the dependent variable explained by the independent variables (Damodar N Gujarati, 2010). This research seeks to determine the percentage of the variance in ROA accounted for by CAR and LDR. The regression equation obtained in this research is:

$$ROA = \alpha + \beta 1CAR + \beta 2LDR + e$$

Explanation of variables :
α = Konstanta,
β1 β2 = Koefisien regresi, e = error.

3. RESULT & DISCUSSION

3.1 Descriptive Analysis

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Y	80	.10	4.22	162.82	2.0353	1.01541
X1	80	17.78	53.77	2102.39	26.2799	6.07379
X2	80	20.53	147.00	6546.73	81.8341	16.94734
Valid N (listwise)	80					

Based on the results of descriptive statistical analysis of 80 observational data from 16 banking companies for the period 2021–2025, the following results were obtained:

The ROA variable obtained the lowest value of 0.10, held by PT Bank Tabungan Pensiunan Nasional Tbk (BTPN) in 2025. It should be noted that this descriptive finding only shows an association between low ROA and the company in that year. The study design does not establish causality, therefore low ROA cannot be directly attributed to a high volume of non-productive assets without further asset composition analysis. Meanwhile, the highest value was recorded by Bank MEGA in 2021. This means that among all banks used as the research sample, Bank MEGA was the most effective in utilizing its assets to generate profit. The average ROA is 2.035, which indicates that the sample banks are quite good at managing their assets to create profit, with a standard deviation of 1.01.

The lowest value for the CAR variable is 17.78, recorded by Bank Pembangunan Daerah Jawa Barat dan Banten (BJBR). This means that in the 2021 period, BJBR was only able to provide a relatively lower level of capital adequacy compared to the average bank in the sample, where the average CAR was 26.28. According to POJK No. 11/POJK.03/2016 concerning Minimum Capital Adequacy Requirements for Commercial Banks, a bank is considered to meet the minimum CAR requirement if CAR ≥ 8%. However, a CAR above 8% does not automatically categorize a bank as "healthy" overall, as bank soundness is also assessed through RBBR which includes NPL, NIM, BOPO, and GCG aspects. Meanwhile, the highest CAR value is 53.77, held by BACA in 2022. A CAR of 53.77% is substantially above the regulatory minimum and above the sample average of 26.28%. An excessively high CAR may indicate that the bank holds a large proportion of capital relative to RWA, which can reflect conservative risk-taking and potentially lower asset utilization for profit-generating activities. However, this study does not test the optimal CAR level, so the interpretation is limited to noting that the ratio is high relative to peers.

Meanwhile, the lowest LDR was recorded by BACA in 2022. This indicates that BACA was unable to utilize third-party funds in that year. LDR is defined as the ratio of total loans to total third-party funds and measures liquidity and intermediation, not the allocation of revenue to capital. As a result, BACA could not maximize income from loan interest. In contrast, BTPN in 2024 was quite aggressive in distributing loans from its third-party funds, as reflected in an LDR of 147, which is the highest LDR value. An LDR above 100% indicates that loans exceed third-party funds and may be funded by other liabilities, which can increase liquidity risk. The average LDR of 81.8 indicates that the banks in the sample are quite good at distributing their third-party funds, since the average CAR has exceeded the minimum LDR threshold set by Bank Indonesia.

3.2 Classical Assumption Tests

All classical assumption tests that have been conducted prove that the research data and variables used have met the classical assumption requirements well. This is indicated by the results of normality test, which showed the normality test results indicate that the data follow a normal distribution. This was proven through the One-Sample Kolmogorov-Smirnov test, where the test result showed an Asymp. Sig. (2-tailed) value of 0.100 > 0.05. The heteroscedasticity test also indicated that the research data are homoscedastic, as evidenced by the scattered pattern of points in the scatterplot graph. The multicollinearity test also proved the findings suggest that no significant correlation exists among the independent variables. The tolerance value is > 0.10, specifically 0.999 for both independent variables, and the VIF value is < 10, specifically 1.001. Meanwhile, the autocorrelation test also showed that the variables used are free from autocorrelation, where dL < DW < 4-dU, specifically 1.6114 < 1.811 < 2.3880.

3.3 Regression Test and Hypothesis Test

a. Multiple Linear Regression Analysis

This study employed multiple linear regression analysis as the primary analytical method. This analysis aims to examine the extent of the influence of the independent variables on the dependent variable, both simultaneously and partially. Based on the data processing conducted, the following multiple linear regression model with the equation was obtained:

$$Y = 2{,}245 - 0{,}149X1 - 0{,}164X2 + \varepsilon$$

Based on the results of the multiple linear regression analysis, the findings can be explained as follows: (a) The constant result shows a value of 2.245 with a positive direction, indicating that if the CAR and LDR variables are equal to zero, then the ROA value is 2.245. (b) B CAR the CAR coefficient or CAR regression coefficient is -0.149 with a negative direction, indicating that every 1-unit increase in CAR leads to a decrease in ROA by 0.149, assuming the LDR variable is constant. (c) B LDR the LDR coefficient or LDR regression coefficient is -0.164 with a negative direction, indicating that every 1-unit increase in Log_LDR will decrease ROA by 0.164, assuming the CAR variable remains unchanged.

b. Simultaneous Hypothesis F-Test

The following is the simultaneous F-test table that has been tested using SPSS.

Table 3. Simultaneous Hypothesis F-Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.854	2	.427	6.739	.002[b]
	Residual	4.879	77	.063		
	Total	5.733	79			

a. Dependent Variable: ROA_Y
b. Predictors: (Constant), LDR_X2, CAR_X1

Referring to the results of the simultaneous F-test above, it can be concluded that the variables CAR and LDR have a simultaneous effect on the ROA variable with a significance value of 0.002 < 0.05.

c. Partial Hypothesis T-Test

The results of the Partial T-Test can be seen in the table below:

Table 4. Partial Hypothesis T-Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.245	.288		7.785	.000
	CAR_X1	-.149	.052	-.303	-2.881	.005
	LDR_X2	-.164	.069	-.249	-2.370	.020

a. Dependent Variable: ROA_Y

The results of the Partial T-Test above prove that CAR has a negative effect on ROA, as indicated by a significance value of <0.05, specifically 0.005, and a beta coefficient of -0.149. Likewise, LDR has a significance value of 0.020 < 0.05 with a beta coefficient of -0.164.

3.4 Coefficient of Determination R^2

The R Square value of 0.149 indicates that 14.9% of the variation in Return on Assets can be explained by Capital Adequacy Ratio and Loan to Deposit Ratio. The remaining 85.1% represents unexplained variation in ROA that may be attributable to other variables not included in this model, such as NPL, BOPO, NIM, macroeconomic factors, or bank management policies. The Adjusted R Square value of 0.127 confirms that after adjusting for the number of samples and variables, the model's explanatory power is only 12.7%. This indicates that the model is still weak in explaining changes in ROA

3.5 Discussion

a. The Simultaneous Association of Capital Adequacy Ratio and Loan to Deposit Ratio with Return on Assets.

The statistical test results show that CAR and LDR have a simultaneous effect on ROA. Given the non-experimental design, this finding indicates an association rather than proof of causation. These results are in line with previous studies which indicate that CAR and LDR have a significant simultaneous effect on ROA (Ross et al. (2021); Putra (2020); and Ningsih & Ilhami, 2023).

Compared to previous studies, the direction of association found here is consistent with some literature that finds a negative effect, while differing from studies that find a positive effect, suggesting context and sample differences matter.

b. The Association between Capital Adequacy Ratio and Return on Assets.

Return on Assets is negatively and significantly influenced by the Capital Adequacy Ratio. The coefficient indicates that higher CAR is associated with lower ROA in this sample. One possible explanation is that banks with high CAR may hold more low-risk, low-return assets, but this study does not directly test asset composition.

The results of this study are in line with research by Lufianda & Syafri (2023), Bortoluzzo et al. (2024), Al-Sharkas & Al-Sharkas (2022), Madugu et al. (2020), and Meliza et al. (2024), which explain that CAR has a negative impact on bank profitability.

c. The Association between Loan to Deposit Ratio and Return on Assets.

The Loan to Deposit Ratio has a negative and significant effect on Return on Assets. The coefficient indicates that higher LDR is associated with lower ROA in this sample. A high LDR may reflect higher credit risk and provisioning, which can be associated with lower profit, but causality cannot be established from this design. These findings are consistent with research stating that LDR negatively and significantly affects ROA (Ningsih & Ilhami, 2023).

However, these findings differ from research which states that LDR has a positive and insignificant effect on ROA (Sha, 2022). This difference highlights that the relationship between LDR and ROA may depend on sample period, bank type, and control variables used.

4. CONCLUSION

This research seeks to examine the association between CAR and LDR on ROA of conventional banks listed on the Indonesia Stock Exchange during the period 2021–2025. Data were analyzed using multiple linear regression as the testing technique in this study. Given that this study employs secondary data with a non-experimental design, the findings should be interpreted as statistical associations rather than definitive causal relationships.

Partially, the results of the study show that CAR is negatively and significantly associated with ROA with an unstandardized coefficient of -0.149 and a significance value of 0.005. The standardized beta of -0.303 indicates a moderate association. Specifically, a 1 percentage point increase in CAR is associated with a 0.149 percentage point decrease in ROA, holding LDR constant. This finding suggests that banks maintaining a very high level of capital relative to risk-weighted assets in this sample tended to allocate more funds to low-risk, low-return assets, which in turn was associated with lower profitability. Therefore, financial institutions need to manage their capital adequacy ratio optimally by balancing regulatory compliance, risk appetite, and opportunities for profit-generating assets. Maintaining CAR far above the regulatory minimum may provide a safety buffer, but it may also be associated with reduced efficiency in capital utilization. Furthermore, the analysis findings show that LDR is negatively and significantly associated with ROA with an unstandardized coefficient of -0.164 and a significance value of 0.020. The standardized beta of -0.249 also indicates a moderate association. A 1 percentage point increase in LDR is associated with a 0.164 percentage point decrease in ROA, holding CAR constant. This finding indicates that in this sample, banks with higher loan-to-deposit ratios were associated with lower profitability. One plausible explanation is that aggressive loan expansion may be associated with higher credit risk, increased provisioning expenses, and funding mismatches, which can pressure net income. Thus, banking institutions must manage the distribution of third-party funds carefully to balance loan growth, liquidity adequacy, and asset quality, rather than pursuing high LDR without considering risk management.Regarding the simultaneous results, the F-test indicates that the regression model is statistically significant with $F = 6.739$ and $p = 0.002$. It is important to clarify that statistical significance of the F-test does not imply that the combined effect of CAR and LDR is "positive". In this model, both independent variables have negative coefficients. Therefore, the appropriate interpretation is that CAR and LDR together are significantly associated with ROA. For bank management, this implies that decisions related to capital adequacy and liquidity management should not be made in isolation. A proportional approach that considers both the level of capital buffer and the prudence of loan disbursement is important to support stable profitability.

Theoretical and practical contribution of this study: First, this study contributes empirical evidence from 16 IDX-listed conventional banks over 2021–2025. The negative association of CAR with ROA is consistent with recent international studies such as Abdelaziz et al (2022), The author concludes—as a surprising result—that the Capital Adequacy Ratio is negatively and significantly correlated with the bank's overall profitability.

But the results are different from Al Zaidanin & Al Zaidanin (2021) and Saleh & Paz (2023), This study finds that CAR has a positive but very weak and statistically insignificant relationship with ROA.

The negative association of LDR with ROA is consistent with Weerasinghe (2026), The correlation analysis shows that the correlation coefficient between ROA and LDR is -0.44. This indicates a moderate negative association between the Loan-to-Deposit Ratio and bank profitability. The negative sign suggests that as LDR increases, ROA tends to decrease.

However, the results differ from Ben Abdallah & Bahloul (2025), this journal states that liquidity has a significant positive effect on ROA.

This inconsistency suggests that the relationship between LDR and ROA may be context-dependent, influenced by macroeconomic conditions, regulatory environment, credit risk management practices, and the specific period of the study.

Second, for bank management, the practical implication is that maximizing CAR or LDR individually is not necessarily associated with higher ROA. Instead, management should focus on optimizing the quality of assets funded by capital, improving credit underwriting to control NPL, and aligning funding structure with loan portfolio to maintain both solvency and profitability. Third, the Adjusted R^2 of 12.7% indicates that the model explains a limited portion of ROA variation. This suggests that internal bank policies and external macroeconomic factors play a substantial role and should be considered in managerial decision-making.

This study still has several limitations. The first limitation is that this study only uses two independent variables, namely CAR and LDR. In fact, there are still various other variables that potentially affect ROA, such as Operating Expenses to Operating Income (BOPO), Non-Performing Loan (NPL), Net Interest Margin (NIM), and Loan to Asset Ratio (LAR).

In addition, this study does not include control variables such as bank size, GDP growth, inflation, and interest rate, which are commonly used in banking profitability studies. Second, the object of analysis only covers conventional banks, so it does not represent digital banks which are currently continuing to grow and may have different business models and cost structures. Third, the study period covers 2021–2025 which includes post-pandemic recovery and interest rate volatility, and the results may not be generalizable to other periods. Fourth, no logarithmic transformation was applied to any variable, and all interpretations are based on the original scale to ensure consistency and comparability.

Based on these limitations, future research is expected to add other independent variables that are suspected to affect ROA so that the research results become more comprehensive. Future studies are encouraged to use panel data regression techniques such as Fixed Effect or Random Effect models, include control variables, and test for possible non-linear relationships between CAR, LDR, and ROA. Researchers may also extend the sample to include digital banks and Islamic banks with appropriate adjustments to accounting standards to provide a broader comparison. In addition, the researcher also suggests the use of control variables in the research model so that the results of partial hypothesis testing become more accurate and can minimize the influence of variables outside the scope of the research model.

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