Jurnal Ilmu Manajemen Advantage

E-ISSN : 2597-8888, P-ISSN : 2598-1072
Available online at:
https://ejournal.itbwigalumajang.ac.id/index.php/adv

The Influence of Financial Indicators on The Performance of Commercial Banks in Indonesia

Filda Rizky[1], Tiara Anindya Larasati[2], Susy Muchtar[3]

Program Studi Manajemen, Fakultas Ekonomi dan Bisnis, Universitas Trisakti, Indonesia[1,2,3]

Corresponding Author: Susy Muchtar (susy_muchtar@trisakti.ac.id)

ARTICLE INFO

Date of entry:
30 Oct 2025
Revision Date:
20 November 2025
Date Received:
01 December 2025

ABSTRACT

This study aims to analyze the effect of financial indicators on the performance of commercial banks in Indonesia, as measured by Return on Assets (ROA). The indicators examined include loan growth (LG), non-performing loans (NPL), loan-to-deposit ratio (LDR), market share (MS), loan loss provision (LLP), cost-to-income ratio (CIR), effective tax rate (ETR), and net interest margin (NIM). A quantitative approach was employed using hypothesis testing and panel data regression analysis on 43 conventional banks listed on the Indonesia Stock Exchange (IDX) for the 2020–2024 period. The results show that LG, LLP, CIR, and ETR have a significant adverse effect on ROA, while LDR and NIM have a significant positive effect. Meanwhile, NPL and MS show no significant effect. These findings highlight that operational efficiency, credit and tax management strategies, and effective fund intermediation are the main determinants of bank profitability. This study is expected to provide practical insights for managerial decision-making and investment evaluation, as well as enrich the academic discourse on the drivers of financial performance in Indonesia's banking sector. However, this study is limited to a specific data period and does not consider external factors. For future research, the analysis should be expanded to include macroeconomic variables.

Keywords: Return on Assets, Loan Growth, Non-Performing Loans, Net Interest Margin, Cost-to-Income Ratio.

Cite this as: Rizky, F., Larasati, T. A., & Muchtar, S. (2025). The Influence of Financial Indicators on The Performance of Commercial Banks in Indonesia. *Jurnal Ilmu Manajemen Advantage*, *9*(2), 217–226. https://doi.org/10.30741/adv.v9i2.1755

INTRODUCTION

Bank performance is a key indicator in assessing the stability and effectiveness of the banking sector in an economy (Chantha et al., 2024). This sector is the mainstay of the global economy, but still faces various dynamic challenges (Wiguna et al., 2024). Profitability is a reflection of bank performance that not only shows the ability to generate profits but also indicates the bank's long-term value (Yudianto, 2020). In Indonesia, bank performance regulation is set out in Law Number 7 of 1992, in conjunction with Law Number 10 of 1998, as well as in OJK regulations, including SEOJK 6/2016. OJK data from January 2025 shows an increase in credit risk. However, it has not been offset by the optimal conversion of significant assets into profits, indicating inefficiencies in some commercial banks. Chantha et al. (2024) in their research in Cambodia found that financial indicators such as Loan Growth (LG), Non-Performing Loans (NPL), Loan to Deposit Ratio (LDR),

Market Share (MS), Loan Loss Provision (LLP), Cost to Income Ratio (CIR), Effective Tax Rate (ETR), and Net Interest Margin (NIM) significantly affect Return on Assets (ROA), as a measure of bank performance.

LG is considered important in increasing ROA through interest income growth, but it can be a risk if not managed effectively (Bhowmik & Sarker, 2021; Wu et al., 2022). The findings of Chantha et al. (2024) instead show that LG is not significant to ROA in Cambodia, in contrast to previous findings. NPLs risk reducing investor confidence and bank profitability (Gabriel et al., 2019; Wahyuni et al., 2023), but the results of Chantha et al. (2024) show that NPLs actually have a positive impact on ROA, indicating the need for further study in the managerial and macroeconomic context of Indonesia (Saliba et al., 2023; Kalkan, 2024). LDR affects profitability through liquidity management (Muhammed et al., 2024), whereas Chantha et al. (2024) showed a negative relationship with ROA. In contrast, Lew & Lau (2022) found a positive effect, indicating the effectiveness of LDR is highly contextualised. MS does not always reflect profitability, although banks with large shares are considered more stable (Altunbas et al., 2019; Hossain & Ahamed, 2021). Chantha et al. (2024) found that MS is not significantly associated with ROA.

LLP is necessary to mitigate credit risk in the long run, but in the short run, it can reduce profitability (Sultana & Jalloh, 2025; Gurung et al., 2023). The results of Chantha et al. (2024) show a significant negative relationship with ROA. High CIR suppresses profitability, as it indicates cost inefficiency (Al-Sharkas & Al-Sharkas, 2022), and Chantha et al. (2024) found a significant adverse effect on ROA. ETR plays a strategic role by effectively managing tax burdens to increase profitability (Simone, 2019; Sobiech et al., 2021). Research shows that adaptive tax strategies increase banking competitiveness (Andrejovska et al., 2024). NIM shows how efficiently a bank generates interest income. The higher the NIM, the higher the ROA, which indicates an optimal credit intermediation role (Yuniarti et al., 2024; Chantha et al., 2024). Based on the research by Chantha et al. (2024), there is a gap that warrants further study in the Indonesian context, as evidenced by the study titled "The Effect of Financial Indicators on Commercial Bank Performance in Indonesia". As Indonesia strengthens its position as one of Southeast Asia's largest emerging markets, the stability and efficiency of its banking sector become pivotal to sustaining national economic growth. However, the recent increase in credit risk without a corresponding rise in profitability signals potential inefficiencies that could undermine financial resilience if left unaddressed. Thus, a comprehensive empirical analysis of financial indicators affecting bank performance is crucial, not only to fill existing research gaps in the Indonesian context but also to provide timely insights for regulators, investors, and policymakers in formulating adaptive strategies that enhance profitability, risk management, and long-term sustainability of the banking industry.

Recent studies, such as Chantha et al. (2024), have expanded the understanding of how multiple financial indicators collectively influence bank profitability, particularly through ROA as a performance metric. However, cross-country variations in the significance of variables such as Loan Growth, NPL, and LDR highlight the need for context-specific investigations, especially in Indonesia's evolving financial landscape. Building on previous findings, this study aims to empirically examine the effects of eight financial indicators on the ROA of Indonesian banks, to make a practical contribution to banking management and investors in strategic decision-making to strengthen the profitability and sustainability of the national financial sector.

METHODS

1. Sampling

This study uses a quantitative approach with a hypothesis testing design to analyse the effect of financial indicators such as loan growth (LG), non-performing loans (NPL), loan to deposit ratio (LDR), market share (MS), loan loss provision (LLP), cost to income ratio (CIR), effective tax rate (ETR), and net interest margin (NIM) on return on assets (ROA) as a measure of bank performance (Chantha et al., 2024). The data analysed is panel data combining cross-sectional and time-series

dimensions, covering 43 commercial banks listed on the Indonesia Stock Exchange (IDX) during the 2020-2024 period, selected using a purposive sampling technique. The sample selection focused on banks that consistently published audited annual financial statements throughout the observation period to ensure data reliability and comparability. In addition, only banks with complete data for all eight financial indicators and ROA were included (Ghozali, 2018; Sugiyono, 2021).

2. Data Collection and Analysis

Data collection was conducted on a secondary basis, sourced from public documents such as annual reports and bank financial statements, obtained from the official websites of the IDX, the Financial Services Authority (OJK), and each bank (www.idx.co.id; www.ojk.go.id). The total number of observations analysed in this study was 215 (43 banks × 5 years). The data were analysed using descriptive statistics to summarise the characteristics and trends of each financial indicator over the study period. Furthermore, a t-test was employed to determine the significance of the relationship between each independent variable and ROA, identifying which financial indicators have a statistically significant effect on bank performance. The data criteria are commercial banks listed on the Indonesia Stock Exchange that consistently publish financial and annual reports for the 2020–2024 period. Additionally, only banks with complete data relevant to the research variables are included in the analysis.

3. Measurement

Variable measurement is carried out using relevant formulas. ROA, the dependent variable, is measured by dividing net income by total assets and multiplying by 100% (Chantha et al., 2024). Independent variables such as LG, NPL, LDR, MS, LLP, CIR, ETR, and NIM are each calculated using formulas that reflect the bank's financial activity and efficiency, in accordance with banking performance analysis standards used in the financial literature. Below are the detailed standard formulas for each variable mentioned: (Chantha et al., 2024; Gurung et al., 2023; Wu et al., 2022).

Table 1. Variable Formulas

Variable	Formula
Return of Assets (ROA)	$ROA = \frac{Net\ Income}{Total\ Assets} \times 100\%$
Loan Growth (LG)	$LG = \frac{Total\ Loans_t - Total\ Loans_{t-1}}{Total\ Assets} \times 100\%$
Non-Performing Loans (NPL)	$NPL = \frac{Non\ Performing\ Loans}{Total\ Loans} \times 100\%$
Loan to Deposit Ratio (LDR)	$LDR = \frac{Total\ Loans}{Total\ Deposits} \times 100\%$
Market Share (MS)	$MS = \frac{Total\ Assets\ of\ Bank}{Total\ Assets\ \ of\ Banking\ Industry} \times 100\%$
Loan Loss Provision (LLP)	$LLP = \frac{Loan\ Loss\ Provision}{Total\ Loans} \times 100\%$
Cost to Income Ratio (CIR)	$CIR = \frac{Operating\ Expenses}{Operating\ Income} \times 100\%$
Effective Tax Rate (ETR)	$ETR = \frac{Income\ Tax\ Expense}{Earnings\ Before\ Tax} \times 100\%$
Net Interest Margin (NIM)	$NIM = \frac{Net\ Interest\ Income}{Average\ Earning\ Assets} \times 100\%$

Source: Chantha et al., 2024; Gurung et al., 2023; Wu et al., 2022

RESULTS AND DISCUSSION

In this analysis, researchers capture the dynamics of various financial indicators, including Return on Assets (ROA), loan growth, non-performing loans (NPL), loan-to-deposit ratio, market share, loan loss provision, cost-to-income ratio, effective tax rate, and net interest margin.

Table 2. Descriptive Statistics Test Results

Variables	N	Mean	Median	Maximum	Minimum	Std. Dev
ROA	215	0.004885	0.006654	0.049724	-0.180577	0.023835
LG	215	0.153244	0.084111	5.344425	-0.638787	0.499183
NPL	215	0.032271	0.025271	0.284287	0.000000	0.030585
LDR	215	0.934674	0.804928	4.836972	0.123190	0.608349
MS	215	0.019660	0.002491	0.194786	0.000157	0.041006
LLP	215	0.029030	0.013000	0.399167	0.000000	0.056071
CIR	215	0.839088	0.824767	2.612290	0.250117	0.293635
ETR	215	0.113413	0.219869	4.738255	-8.417999	0.846812
NIM	215	0.046659	0.041894	0.242090	-0.041459	0.033965

Source: Eviews 9 processing results

Based on the results of descriptive statistical tests on data from 43 conventional banking companies during the 2020-2024 period, it is found that most variables show a relatively large spread of data, characterised by a higher standard deviation value or close to the average (mean), which indicates a data gap between banks. In particular, Return on Assets (ROA), Loan Growth (LG), Loan Loss Provision (LLP), Cost to Income Ratio (CIR), Effective Tax Rate (ETR), and Net Interest Margin (NIM) have high standard deviations, indicating significant variations between banks and potential gaps in financial performance. To determine average limits and identify performance disparities, the mean of each variable served as a benchmark to assess whether a bank's performance was above or below the industry average. When the mean differs notably from the median, it indicates an uneven distribution, suggesting that certain banks dominate in profitability or efficiency indicators. Larger banks generally record higher ROA and NIM due to better asset management and economies of scale. In comparison, smaller banks tend to have higher CIR and LLP, reflecting higher operational costs and credit risk. These variations point to existing performance gaps within Indonesia's banking industry that may require targeted strategies to improve efficiency and competitiveness.

While the Non-Performing Loan (NPL), Loan to Deposit Ratio (LDR), and Market Share (MS) variables have standard deviations lower than their average values, the data distribution is relatively homogeneous and does not show a large gap. Extreme values are found in several variables, such as ETR, with a minimum of -8.417999 and a maximum of 4.738255, and LG, with a maximum of 5.344425, suggesting outlier cases or very unusual financial conditions across several companies. These findings illustrate that the financial structure and performance of banks in Indonesia vary widely, which must be taken into account when analysing the determinants of profitability. The panel data regression and t-test (partial) results reveal that Loan Growth, Loan Loss Provision, Cost to Income Ratio, and Effective Tax Rate have a significant adverse effect on bank profitability. This finding is interesting because, in theory, loan growth is often expected to increase profitability through higher interest income. However, this study shows the opposite effect, suggesting potential inefficiencies or excessive risk-taking in credit expansion. Similarly, the adverse effects of LLP, CIR, and ETR highlight how risk management costs, operational inefficiency, and tax burdens can substantially erode returns, suggesting that Indonesian banks may still face structural and managerial challenges in balancing growth with sustainable profitability.

Table 3. T-test results

Variables	Coefficient	Prob.	Hypothesis	Decision
Constanta	0.025476	0.0064	-	-
LG	-0.007709	0.0012	H_0 rejected	Significantly Negative
NPL	-0.012928	0.7907	H_0 accepted	Not Significant
LDR	0.005045	0.0237	H_0 rejected	Significantly Positive
MS	-0.724300	0.0625	H_0 accepted	Not Significant
LLP	-0.365112	0.0000	H_0 rejected	Significantly Negative
CIR	-0.029347	0.0000	H_0 rejected	Significantly Negative

E-ISSN : 2597-8888, P-ISSN : 2598-1072
Available online at:
https://ejournal.itbwigalumajang.ac.id/index.php/adv

ETR	-0.003359	0.0072	H_0 rejected	Significantly Negative
NIM	0.560147	0.0000	H_0 rejected	Significantly Positive

Source: Eviews 9 processing results

Based on the T-test results, six variables have a significant effect on the bank's Return on Assets (ROA). Loan Growth (LG), Loan Loss Provision (LLP), Cost to Income Ratio (CIR), and Effective Tax Rate (ETR) have a significant adverse effect on ROA, indicating that increases in these variables tend to reduce bank profitability. Conversely, the Loan to Deposit Ratio (LDR) and Net Interest Margin (NIM) have a significant positive effect on ROA, indicating that the efficiency of fund intermediation and interest income management can encourage increased profits. While Non-Performing Loan (NPL) and Market Share (MS) have no significant effect on ROA, this indicates that the ratio of non-performing loans and the size of the market share do not directly determine the level of bank profitability. The significance of each variable was determined based on the t-statistic and probability (p-value) obtained from the t-test results. Variables with p-values < 0.05 were considered statistically significant for ROA, indicating that changes in those variables are likely to affect profitability. In contrast, variables with p-values greater than 0.05 were classified as not significant, indicating that their variations do not have a measurable or consistent impact on bank performance during the observed period.

This study contributes to managerial and academic understanding of how specific financial indicators impact bank profitability. Based on the partial regression test results (T-test), it is found that Loan Growth (LG), Loan Loss Provision (LLP), Cost to Income Ratio (CIR), and Effective Tax Rate (ETR) have a significant adverse effect on ROA. In contrast, the Loan-to-Deposit Ratio (LDR) and Net Interest Margin (NIM) have a significant positive effect. Meanwhile, Non-Performing Loan (NPL) and Market Share (MS) have no significant effect on ROA. The findings of this study empirically confirm that internal financial indicators play a dominant role in shaping bank profitability in Indonesia, as evidenced by the significant influence of 6 of 8 variables tested. The negative relationship between Loan Growth (LG) and ROA supports the argument that rapid credit expansion can reduce profitability when not balanced with effective credit risk management (Bhowmik & Sarker, 2021). This aligns with the risk–return trade-off theory, which suggests that aggressive lending strategies increase the likelihood of non-performing loans, thereby reducing net income. Similarly, the significant adverse effect of Loan Loss Provision (LLP) on ROA illustrates how increased reserves for potential losses, while crucial for long-term stability, temporarily suppress profits in the short term (Sultana & Jalloh, 2025). These findings indicate that Indonesian banks still face a dilemma between growth and prudence, highlighting the importance of maintaining an optimal balance between credit expansion and asset quality.

The negative impact of Cost to Income Ratio (CIR) and Effective Tax Rate (ETR) further supports the efficiency theory, which posits that operational and fiscal efficiency are key determinants of profitability. High CIR values indicate inefficiencies in operational activities that burden bank performance (Al-Sharkas & Al-Sharkas, 2022), while the significant negative relationship between ETR and ROA shows that excessive tax expenses can erode net returns (Simone, 2019). Interestingly, this result contrasts with that of Chantha et al. (2024), who found a positive link between ETR and ROA, suggesting that differences in tax regulation and enforcement across countries may yield varying effects. The positive and significant effects of Loan to Deposit Ratio (LDR) and Net Interest Margin (NIM) on ROA are consistent with intermediation theory, reflecting the role of efficient liquidity management and optimal interest income generation in enhancing profitability. This suggests that banks with better intermediation efficiency tend to achieve higher profitability, consistent with Evci et al. (2024). The insignificant effect of Non-Performing Loans (NPL) and Market Share (MS) on profitability presents an interesting context for Indonesia's banking sector. Although NPLs are generally associated with increased credit risk, their insignificance in this study may indicate that Indonesian banks have adopted more effective risk mitigation strategies or maintained more substantial capital buffers, thereby cushioning the impact of bad loans on profits. Similarly, the insignificance of market share implies that having a larger

market presence does not automatically guarantee higher profitability, aligning with the structure, conduct, and performance paradigm, which recognises that performance is influenced more by managerial efficiency and innovation than by size alone. These insights underline that the sustainability of profitability depends not only on market dominance but also on internal management capabilities, cost control, and adaptive strategies amidst changing economic conditions.

These results are in line with several previous studies, such as Bhowmik & Sarker (2021), Gupta & Bansal (2024), and Sultana & Jalloh (2025), which show the negative impact of LG and LLP on ROA, and Evci et al. (2024), who support the positive relationship between NIM and ROA. However, there are also inconsistent results, such as Chantha et al. (2024), which found that ETR has a positive effect, whereas this study found the opposite. The finding that NPL and MS are insignificant indicates that, although theoretically important, these factors do not necessarily have a direct relationship with profitability in the Indonesian banking context. This cannot be separated from the effectiveness of risk management and income diversification strategies implemented by each bank. The managerial implications of this study indicate the importance of cost efficiency, optimal credit risk management, and strategic tax planning in improving banks' financial performance. In addition, the findings emphasise the need for banks to not only focus on credit expansion or market share, but also on the quality of asset management and fund intermediation strategies. The main limitation of this study is that it is bound to a specific data period (2020-2024) and does not account for external factors, such as macroeconomic or regulatory conditions, that changed during that period. For future research, it is suggested that the analysis be expanded to include macroeconomic variables such as inflation, interest rates, and political stability, as well as a comparison between conventional and Islamic banks to obtain a more comprehensive picture of the determinants of bank profitability in Indonesia.

CONCLUSION

Based on the research results and discussion on Effective Digital HR Optimization to Improve Work-Life Balance and Employee Productivity, this study shows that the use of digital technology in HR management can help employees better manage their work time and personal lives, thereby improving work-life balance and employee productivity. Digital HR plays an important role in creating a work ecosystem that supports work-life balance through system efficiency, flexibility, and attention to employee Well-being. Effective Digital HR optimization requires integration of technology systems, training, and organizational culture. This combination will improve work efficiency, support flexibility, and ultimately sustainably enhance work-life balance and employee productivity. Effective Digital HR optimization is not just a technological transformation, but an integration of digital systems, competency development, data analysis, and a work culture that supports balance and productivity. Effective Digital HR optimization strategies include implementing HRIS and Employee Self-Service (ESS) Systems, digitalizing communication and Collaboration, Strengthening E-Learning and Digital Self-Development Programs, facilitating effective communication, and developing organizational culture.

REFERENCES

Abdulrauf, L. A.-O., Rabiu, S. A., Akande, J. O., & Gbadebo, A. D. (2024). How Does Financial Risk Management Impact the Financial Performance of Microfinance Banks? *ACTA Universitatis Danubius*, *20*, 118–135.

Abu Khalaf, B., Awad, A. B., & Ellis, S. (2024). The Impact of Non-Interest Income on Commercial Bank Profitability in the Middle East and North Africa (MENA) Region. *Journal of Risk and Financial Management*, *17*. https://doi.org/10.3390/jrfm17030103

Adato, A. A. (2022). Effect of Credit Risk Management on Business Performance of Banks Operating in Ethiopia. *Research Journal of Finance and Accounting*, *13*. https://doi.org/10.7176/rjfa/13-9-02

Adenuga, A. O., Mohammed, J. A., Laniyan, C. V., Akintola, A. A., & Asuzu, O. C. (2021). Measuring the Impact of Loan-to-Deposit Ratio (LDR) on Banks' Liquidity in Nigeria. *Economic and Financial Review*, *59*, 3–6.

Al Zaidanin, J. S., & Al Zaidanin, O. J. (2021). The impact of credit risk management on the financial performance of United Arab Emirates commercial banks. *International Journal of Research in Business and Social Science (2147–4478)*, *10*, 303–319.

Aledeimat, S. R. M., & Bein, M. A. (2025). Does Uncertainty Affect the Banks' Non-Performing Loans/Non-Performing Finance in the MENA Region? A Comparison Study Between Conventional and Islamic Banks in the MENA Regions. *SAGE Open*, *15*, 1–22.

Allam, A. Z. (2022). Analysis of the Effect of Capital Intensity Ratio, Debt to Equity Ratio (DER), and Return on Assets Ratio (ROA) on Effective Tax Rate. *International Journal of Innovative Science and Research Technology*, *7*. Retrieved from www.ijisrt.com

Ally, Z. (2024). Sustainability and Financial Performance in Tanzanian Banks : Examining the Role of Environmental, Social, and Governance Factors and Influence of Digital Transformation. *AJER*, *12*, 144–167.

Alnabulsi, K., Kozarević, E., & Hakimi, A. (2023). Non-Performing Loans as a Driver of Banking Distress: A Systematic Literature Review. *Commodities*, *2*, 111–130.

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

Altunbas, Y., Marques-Ibanez, D., van Leuvensteijn, M., & Zhao, T. (2019). Competition and Bank Risk: The Role of Securitization and Bank Capital. *IMF Working Papers*, *19*, 1.

Aminah, S., Erina, N., Khairudin, & Damayanti, T. (2019). Financial performance and market share in Indonesian Islamic Banking: Stakeholder theory perspective. *International Journal of Scientific and Technology Research*, *8*, 14–18.

Andrejovska, A. (2019). Effective Tax Rate in the Context of the Economic Determinants. *Montenegrin Journal of Economics*, *15*, 31–40.

Andrejovska, A., Glova, J., Regaskova, M., & Slyvkanyc, N. (2024). The Impact of The Effective Tax Rate Change on Financial Assets of Commercial Banks: The Case of Visegrad Group Countries. *E a M: Ekonomie a Management*, *27*, 175–191.

Anh, N. T., & Huong, D. T. (2024). Bank-Specific Factors Influencing the Profitability of Listed Commercial Banks in Vietnam. *Revista Finanzas y Politica Economica*, *16*, 469–488.

Antwi, F. (2019). Capital Adequacy, Cost Income Ratio, and Performance of Banks in Ghana. *International Journal of Academic Research in Business and Social Sciences*, *9*. https://doi.org/10.6007/ijarbss/v9-i10/6471

Ayinuola, T. F., & Gumel, B. I. (2023). The Impact of Cost-to-Income Ratio on Bank Performance in Nigeria. *International Journal of Multidisciplinary and Current Educational Research*, *5*, 0408–0308.

Badirkhani, R., Majed, V., Faraji Dizaji, S., & Mehdi Naji Esfahani, S. (2019). Impact of Bankruptcy Risk and Competition on Profitability in the Iranian Banking System Using the BOONE Indicator: Generalized Method of Moments. *RELIGACIÓN. REVISTA DE CIENCIAS SOCIALES Y HUMANIDADES*, *4*, 151–160.

Begum, R., & Atiq, Z. (2023). Non-Performing Loans and Banks' Profitability: A Review of the Banking Industry in Pakistan. *Periodicals of Social Sciences*, *3*. Retrieved from https://psocialsciences.com/poss/index.php/poss/article/view/55

Beni, S., Putra, W., & Bariyah, N. (2023). The Effect of Credit Circulation, Loan to Deposit Ratio (LDR), and Interest Rate on Return On Assets (ROA) Due to Non-Performing Loan (NPL) on Credit Unions in Indonesia. *International Journal of Multi-Disciplinary Science (IJ-MDS)*, *6*, 60.

Bhowmik, P. K., & Sarker, N. (2021). Loan growth and bank risk: empirical evidence from SAARC countries. *Heliyon*, *7*. https://doi.org/10.1016/j.heliyon.2021.e07036

CFA Institute. (2022). *Enhancing Investors' Trust*. Retrieved from https://www.cfainstitute.org/sites/default/files/-/media/documents/article/Enhancing-Investors-Trust-Report_2022_Online.pdf

Chantha, K., Seng, S., Ratha, P., & Sovanvatthana, K. (2024). *An Integrated Analysis of Key Financial Metrics Driving Commercial Bank Performance in Cambodia*. *6*, 517–543.

Chun, S. H., & Ardaaragchaa, N. (2024). Analysis of Factors Affecting the Loan Growth of Banks with a Focus on Non-Performing Loans. *Journal of Risk and Financial Management*, *17*. https://doi.org/10.3390/jrfm17050203

Ciptawan, & Melly. (2022). The Influence of Loan to Deposit Ratio, Effective Tax Rate, and Non-Performing Loan Toward Return on Assets in Banking Companies Listed on the Indonesia Stock Exchange. *The 2nd International Conference on Entrepreneurship (IConEnt)*.

Çollaku, B., & Aliu, M. (2021). Impact of Non-Performing Loans on Banks' Profitability: Empirical Evidence from Commercial Banks in Kosovo. *Journal of Accounting Finance and Auditing Studies (JAFAS)*, *7*, 226–242.

Dal Maso, L., Kanagaretnam, K., Lobo, G. J., & Mazzi, F. (2024). Does Disaster Risk Relate to Banks' Loan Loss Provisions? *European Accounting Review*, *33*, 825–854.

Dewi, A. C., & Pernamasari, R. (2022). *The Effect of Return on Assets and Debt to Equity Ratio on Tax Aggressivity: Total Asset as Moderating Variable*. *15*, 254–266.

Do, H. L., Ngo, T. X., & Phung, Q. A. (2020). The effect of non-performing loans on the profitability of commercial banks: Case of Vietnam. *Accounting*, *6*, 373–386.

Dwitama, A., & Hasanudin. (2024). The Influence of Loan Growth, Loan to Assets, and Size on Return on Assets Through Non-Performing Loans in Banking Companies. *Journal Apresiasi Ekonomi*, *12*, 613–632.

Evci, S., Kefe, İ., & Kefe, İ. (2024). The Impact of Energy Prices on the Performance of Banks in Türkiye. *International Journal of Energy Economics and Policy*, *14*, 492–500.

Folorunso, E. A., Schmautz, Z., Gebauer, R., & Mraz, J. (2023). The Economic Viability of Commercial-Scale Hydroponics: Nigeria as a Case Study. *Heliyon*, *9*. https://doi.org/10.1016/j.heliyon.2023.e18979

Gabriel, O., Victor, I. E., & Innocent, I. O. (2019). Effect of Non-Performing Loans on the Financial Performance of Commercial Banks in Nigeria. *American International Journal of Business and Management Studies*, *1*. Retrieved from www.acseusa.org/journal/index.php/aijbms

Ghimire, S. R., Chaurasiya, S., & Basnet, A. (2024). Impact of Liquidity on Profitability of Nepalese Commercial Banks. *Splint International Journal of Professionals*, *11*, 169–181.

Ghosh, K., & Mondal, A. (2022). Credit Risk Management and Financial Performance of Indian Commercial Banks: A Study. *International Journal of Financial Management*, *12*, 26–37.

Gledistin, E., Tawas, Y., & Kambey, A. (2021). Analisis Perbandingan Kinerja Keuangan Bank BUMN dan Bank Swasta dari Tahun 2014-2018 Menggunakan Rasio NPL, LDR, GCG, ROA, NIM, dan CAR. *JAIM: Jurnal Akuntansi Manado*, *2*, 176–186.

Gupta, S., & Bansal, R. (2024). Manifestations of Loan Growth – Profitability and Non-Performing Loans – A Study of the Indian Banking Sector. *South Asian Journal of Business Studies*. https://doi.org/10.1108/SAJBS-04-2023-0100

Gurung, R., Ghimire, B., & Dahal, P. (2023). Exploring the Impact of Loan Loss Provision on Profitability: An Analysis of Commercial Banks in Nepal. *The Journal of Business and Management*, *VII*. https://doi.org/10.3126/jbm.v7i02

Hadian, N., & Phety, D. T. O. (2021). The Effect of Non-Performing Loans and Loan to Deposit Ratio on Return On Assets in the Banking Industry. *Turkish Journal of Computer and Mathematics Education*, *12*, 791–798.

Hossain, S., & Ahamed, F. (2021). *Comprehensive Analysis of Determinants Of Bank Profitability In Bangladesh*. https://doi.org/10.48550/arXiv.2105.14198

Jaloudi, M., & Bakir, A. (2019). Market Structure, Efficiency, and Performance of Jordan Insurance Market. *International Journal of Business and Economics Research*, *8*, 6.

Jaya, B. J., Nur, B., Hefri, F., Suryanti, A., & Wulandari, T. R. (2024). The Relationship Between Loan Growth, Risk, and Bank Performance: Evidence from Indonesia. *Sebelas Maret Business Review*, *9*, 96–105.

Kalkan, G. (2024). The Impact of Non-performing Loans on Bank Profitability: Evidence from Türkiye. In *the İslahiye Faculty of Economics and Administrative Sciences*. https://doi.org/10.13140/RG.2.2.24626.62404

Khalil, A., & Farooq, U. (2019). Determinants of Net Interest Margins in Emerging Markets: A Generalized Method of Moments Approach. *Journal of Quantitative Methods*, *3*, 38–55.

Kohlscheen, E., Murcia, A., & Contreras, J. (2019). *Determinants of bank profitability in emerging markets*. Retrieved from www.bis.org

Koont, N. (2023). The Digital Banking Revolution: Effects on Competition and Stability. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4624751

Kumar, A., & Srivastava, A. (2021). A Comparative Assessment of Cost Income Ratio of Scheduled Urban Cooperative Banks in India: Benchmarking the Operational Efficiency. *Search.Ebscohost.Com*, *XLX*, 2021–2043.

Laporšek, S., Švagan, B., Stubelj, M., & Stubelj, I. (2025). Profitability Drivers in European Banks: Analyzing Internal and External Factors in the Post-2009 Financial Landscape. *Risks*, *13*, 1–21.

Le, T. D. Q. (2020). The interrelationship among bank profitability, bank stability, and loan growth: Evidence from Vietnam. *Cogent Business and Management*, *7*. https://doi.org/10.1080/23311975.2020.1840488

Lew, B.-Y., & Lau, W.-T. (2022). Credit Risk and Commercial Bank Performance: Evidence from ASEAN. *International Journal of Academic Research in Economics and Management Sciences*, *11*, 274–288.

Maina, M. M., Kiai, R., & Muchiri, J. (2024). Effect of loan-loss provisioning on financial performance of deposit-taking SACCOs in Kirinyaga County, Kenya. *International Journal of Research in Business and Social Science (2147- 4478)*, *13*, 463–472.

Mala, C. M. F., Hosen, M. N., & Al Arif, M. N. R. (2023). An Analysis of Market Power and Efficiency of Islamic Banking in Indonesia and Malaysia. *Jurnal Ekonomi & Keuangan Islam*, *9*, 1–16.

Muhammed, S., Desalegn, G., & Emese, P. (2024). Effect of Capital Structure on the Financial Performance of Ethiopian Commercial Banks. *Risks*, *12*, 1–16.

Nguyen, H. M., Ho, T. K. T., & Ngo, T. T. (2024). The Impact of Service Innovation on Customer Satisfaction and Customer Loyalty: A Case in Vietnamese Retail Banks. *Future Business Journal*, *10*. https://doi.org/10.1186/s43093-024-00354-0

Nguyen, V.-T., & Liu, D.-Y. (2020). The Impact of Ownership Structure on Vietnamese Commercial Banks' Profitability. *International Journal of Economics and Financial Issues*, *10*, 187–194.

Ogbaragu, S. J., & Offor, T. N. (2024). Taxation Policies and Profitability of Deposit Money Banks in Nigeria. *INTERNATIONAL JOURNAL OF RESEARCH AND INNOVATION IN SOCIAL SCIENCE (IJRISS)*, *VIII*. https://doi.org/10.47772/IJRISS

Ozili, P. K. (2024). Bank Loan Loss Provision Determinants in Non-Crisis Years: Evidence from African, European, and Asian Countries. *Journal of Risk and Financial Management*, *17*. https://doi.org/10.3390/jrfm17030115

Parvin, S. S., Hossain, B., Mohiuddin, M., & Cao, Q. (2020). Capital Structure, Financial Performance, and Sustainability of Micro-Finance Institutions (MFIs) in Bangladesh. *Sustainability (Switzerland)*, *12*. https://doi.org/10.3390/su12156222

Patwary, M. S. H., & Tasneem, N. (2019). Impact of Non-Performing Loan on Profitability of Banks in Bangladesh: A Study from 1997 to 2017. *Global Journal of Management and Business Research: C Finance*, *19*. Retrieved from https://www.researchgate.net/publication/330968385

Phan, D. T., Nguyen, T. T., & Hoang, T. T. (2022). Impact of income diversification on the business performance of Vietnamese commercial banks. *Cogent Business and Management*, *9*. https://doi.org/10.1080/23311975.2022.2132592

Psaila, A., Spiteri, J., & Grima, S. (2019). The impact of non-performing loans on the profitability of listed Euro-Mediterranean commercial banks. *International Journal of Economics and Business Administration*, *7*, 166–196.

Rahagi, M. R., Najmudin, N., & Laksana, R. D. (2023). The Effect of Net Interest Margin as a Mediator and Selected Factors in Determining the Profitability of Digital Banks. *Jurnal Riset Manajemen*, *1*, 10–27.

Rajindra, R., Guasmin, G., & Burhanuddin, B. (2021). Costs and Operational Revenue, Loan to Deposit Ratio Against Return on Assets: A Case Study in Indonesia. *Journal of Asian Finance, Economics and Business*, *8*, 109–0115.

Sahyouni, A., & Wang, M. (2019). Liquidity Creation and Bank Performance: Evidence from MENA. *ISRA International Journal of Islamic Finance*, *11*, 27–45.

Saliba, C., Farmanesh, P., & Athari, S. A. (2023). Does country risk impact the banking sectors' non-performing loans? Evidence from BRICS emerging economies. *Financial Innovation*, *9*. https://doi.org/10.1186/s40854-023-00494-2

Salsabila, Z., Rhamdani, E. W., Putri, A. N., & Komara, A. (2024). The Impact of Lending Growth and Financial Statistics on Bank Profitability : The Moderating Role of Credit Risk. *International Journal of Business, Economics and Social Development*, *5*, 251–259.

Sari, L., & Septiano, R. (2020). Effects of Intervening Loan to Deposit Ratio on Profitability. *Journal of Accounting and Finance Management*, *1*, 228–241.

Sharif, M. J., & Khan, S. A. (2024). Determinants of Effective Tax Rate: Empirical Evidence From Selected Manufacturing Industries in Bangladesh. *Accounting Analysis Journal*, *12*, 177–189.

Simone, P. (2019). The Determinants of the Corporate Effective Tax Rate of Italian Private Companies. *African Journal of Business Management*, *13*, 507–518.

Sobiech, A. L., Chronopoulos, D. K., & Wilson, J. O. S. (2021). The Real Effects of Bank Taxation: Evidence for Corporate Financing and Investment. *Journal of Corporate Finance*, *69*. https://doi.org/10.1016/j.jcorpfin.2021.101989

Sultana, A., & Jalloh, T. (2025). Loan Loss Provisioning and Profitability of the Private Commercial Banks of Bangladesh. *International Journal of Economics and Financial Issues*, *15*, 39–45.

Sutiman, S., Suteja, J., Anwar, M., & Rachmawaty, R. (2024). Determinants of Bank Profitability and Implications for Company Value with Moderating Dividend Policy. *Owner*, *8*, 2856–2867.

Todorovic, V., Bogicevic, J., & Vrzina, S. (2019). Income Tax Management in Banks in the Republic of Serbia. *Economic Horizons*, *21*, 195–208.

Vu, N. T., Huong, N. T. T., & Van Anh, T. T. (2024). Navigating Risks: How External Environments Shape Nonperforming Loans In Vietnam's Commercial Banks. *Revista de Gestao Social e Ambiental*, *18*. https://doi.org/10.24857/rgsa.v18n3-074

Wahyuni, W., Badollahi, I., Nurhidayah, N., & Mardiastuti, W. (2023). Analyzing the Impact of Non-Performing Loans and Loan-to-Deposit Ratios on Return on Assets: A Study of Conventional Commercial Banks in Indonesia. *Advances in Management & Financial Reporting*, *1*, 107–118.

Wiguna, A., Alfianto, E., Kumala, E. C., & Maryadi, M. G. P. (2024). Problematika dan Tantangan dalam Sektor Perbankan dan Keuangan di Tahun 2024. *Jurnal Ekonomi, Manajemen Dan Akuntansi*, *2*, 627–632.

Wu, S. W., Nguyen, M. T., & Nguyen, P. H. (2022). Does loan growth impact bank risk? *Heliyon*, *8*, e10319.

Yudianto, A. (2020). Pengaruh Kinerja Keuangan Terhadap Kinerja Perusahaan pada Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia. *Jurnal Indonesia Sosial Sains*, *1*, 238–255.

Yuniarti, R., Sari, D., Rusmawan, W., & Fadjar, A. (2024). Influence of Net Interest Margin, Non-Performing Loan, and Capital Adequacy Ratio on Return on Assets of Foreign Banks 2018 – 2022. *Jurnal Riset Akuntansi*, *16*.