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The Effect Of Loan To Deposit Ratio (LDR), Net Interest Margin (NIM) And Credit Risk On Profitability In Conventional Banking Companies That Registered In Indonesia Stock Exchange In 2019-2023

Pengaruh Loan To Deposit Ratio (LDR), Net Interest Margin (NIM) Dan Risiko Kredit Terhadap Profitabilitas Pada Perusahaan Perbankan Konvensional Yang Terdaftar Di Bursa Efek Indonesia Tahun 2019-2023

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ABSTRACT

This research was conducted on Conventional Banking Companies Registered on the Indonesia Stock Exchange. The purpose of this study was to determine and analyze the influence of the Loan to Deposit Ratio (LDR), Net Interest Margin (NIM) and Credit Risk Against Profitability in Conventional Banking Companies Listed on the Indonesia Stock Exchange for the 2019-2023 Period. In this study, researchers used quantitative descriptive methods. The results of the study prove that the Loan to Deposit Ratio (LDR) has no effect and is not significant to the Profitability of Conventional Banking Companies Registered on the Indonesia Stock Exchange for the 2019-2023 Period. Net Interest Margin (NIM) has no effect and is not significant on Profitability in Conventional Banking Companies Registered on the Indonesia Stock Exchange for the 2019-2023 Period. Credit Risk has no effect and is not significant to Profitability in Conventional Banking Companies Registered on the Indonesia Stock Exchange for the 2019-2023 Period. Loan to Deposit Ratio (LDR), Net Interest Margin (NIM) and Credit Risk have a significant effect on Profitability in Conventional Banking Companies Registered on the Indonesia Stock Exchange for the 2019-2023 Period.
Keywords : *Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), Credit Risk, Profitability*

ABSTRAK

Penelitian ini dilakukan pada Perusahaan Perbankan Konvensional yang Terdaftar di Bursa Efek Indonesia. Tujuan dari penelitian ini adalah untuk mengetahui dan menganalisis pengaruh *Loan to Deposit Ratio* (LDR), *Net Interest Margin* (NIM) dan Risiko Kredit Terhadap Profitabilitas Pada Perusahaan Perbankan Konvensional yang Terdaftar di Bursa Efek Indonesia Tahun 2019-2023. Pada penelitian ini, peneliti menggunakan metode deskriptif kuantitatif. Jenis data yang digunakan dalam penelitian ini adalah sekunder. Hasil penelitian membuktikan bahwa *Loan to Deposit Ratio* (LDR) tidak berpengaruh dan tidak signifikan terhadap Profitabilitas Pada Perusahaan Perbankan Konvensional yang Terdaftar di Bursa Efek Indonesia Tahun 2019-2023. *Net Interest Margin* (NIM) tidak berpengaruh dan tidak signifikan terhadap Profitabilitas Pada Perusahaan Perbankan Konvensional yang Terdaftar di Bursa Efek Indonesia Tahun 2019-2023. Risiko Kredit tidak berpengaruh dan tidak signifikan terhadap Profitabilitas Pada Perusahaan Perbankan Konvensional yang Terdaftar di Bursa Efek Indonesia Tahun 2019-2023. *Loan to Deposit Ratio* (LDR), *Net Interest Margin* (NIM) dan Risiko Kredit berpengaruh signifikan terhadap Profitabilitas Pada Perusahaan Perbankan Konvensional yang Terdaftar di Bursa Efek Indonesia Tahun 2019-2023.
Kata Kunci : *Loan to Deposit Ratio* (LDR), *Net Interest Margin* (NIM), Risiko Kredit, Profitabilitas

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1. Introduction

The development of the banking sector in Indonesia's capital market has grown rapidly, reflecting its vital role in national economic growth. The banking sector serves as a financial intermediary, connecting surplus fund holders with deficit fund users. In order to maintain a healthy and sustainable banking system, regulatory oversight and continuous supervision are essential. Bank Indonesia plays a key role in supervising all banking institutions across the country to ensure their soundness and stability.

A bank's health is largely reflected through its profitability, particularly Return on Assets (ROA), which indicates the bank's capability in generating profit from its total assets. Bank Indonesia emphasizes ROA as a key indicator in assessing a bank's performance, considering that bank funding primarily comes from public deposits. A higher ROA signifies stronger profitability and a more efficient use of the bank's assets (Aprianti & Sidiq, 2021; Widyastuti & Aini, 2021). However, profitability is influenced by various internal financial ratios, especially the Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), and credit risk (Non-Performing Loan/NPL).

The Loan to Deposit Ratio (LDR) measures a bank's ability to cover withdrawal demands using the credits extended to borrowers. A high LDR suggests lower liquidity due to increased lending, which may threaten financial stability if not balanced appropriately. Nevertheless, a moderate and well-managed LDR can enhance profitability through increased interest income (Sugiantari & Dana, 2019; Hidayanty et al., 2023; Khamisah et al., 2024).

Net Interest Margin (NIM) illustrates how effectively a bank manages its interest income relative to its interest-bearing liabilities. A high NIM reflects sound credit allocation and optimal management of interest-earning assets, thus boosting operational profitability (Said et al., 2024; Wibowo et al., 2021). According to Bank Indonesia, a healthy NIM is considered to be above 6%. A declining NIM may indicate inefficiencies in fund placement or increasing interest expenses, which can deteriorate bank performance (Budiman, 2023; Rahmawati et al., 2020).

Credit risk, primarily measured through Non-Performing Loans (NPLs), signifies the level of problematic loans within a bank. Elevated NPLs imply deteriorating credit quality, leading to higher provisioning needs and ultimately eroding profit margins (Waluyo et al., 2024; Paramita et al., 2021). Hence, effective credit risk management is critical in sustaining bank profitability (Saputra et al., 2016; Wiranti & Yudiantoro, 2024).

Prior empirical studies have consistently investigated the roles of LDR, NIM, and credit risk on profitability (e.g., Akhdan et al., 2025; Dian Yunita & Wirawati, 2020; Ken, 2021; Suyanto & Utomo, 2022). However, there are inconsistencies in findings—some highlight LDR as a significant predictor (Said et al., 2024), while others find credit risk more dominant (Sugiantari & Dana, 2019; Tamin et al., 2022). Additionally, several studies limit their samples to selected banking periods (e.g., 2015–2019 or 2016–2018), lacking a more updated scope covering post-pandemic financial dynamics.

Moreover, few studies integrate all three predictors—LDR, NIM, and credit risk—in one model over a long horizon (2019–2023) across all conventional banks listed on the Indonesia Stock Exchange (IDX). This leaves a research gap regarding the joint and relative effects of these variables on profitability in the post-COVID-19 banking context in Indonesia (Said et al., 2024; Hidayanty et al., 2023; Akhdan et al., 2025).

This study aims to examine the influence of Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), and credit risk (NPL) on the profitability (ROA) of conventional banking firms listed on the Indonesia Stock Exchange during the period 2019–2023.

2. Literature Review

The Loan to Deposit Ratio (LDR) is a crucial indicator of a bank's liquidity and financial health. It measures the extent to which a bank uses public funds, such as deposits, to provide loans to customers. According to Pandia (2012), LDR reflects how far a bank utilizes depositors' funds to issue loans. The Indonesian Bankers Association (2015) defines LDR as the ratio of total loans disbursed to third-party funds (demand deposits, savings, and time deposits). Kasmir (2014) adds that LDR indicates the composition between the amount of credit distributed and public funds as well as equity capital. Proper management of LDR is vital, as it balances profitability and liquidity; a higher LDR typically suggests aggressive lending but may reduce a bank's ability to meet withdrawal demands. Research by Aprianti and Sidiq (2021), and Dian Yunita and Wirawati (2020), confirms that LDR significantly affects bank profitability in Indonesian conventional banks.

Net Interest Margin (NIM) represents a bank's ability to generate net interest income from its productive assets. Pandia (2012) states that NIM is used to evaluate how efficiently a bank manages its interest-earning assets. Wira (2015) defines NIM as the ratio between net interest income and interest-earning assets, indicating the effectiveness of bank asset allocation. Moreover, the Indonesian Bankers Association (2016) emphasizes that NIM is the bank's primary source of income, and its performance is strongly tied to interest rate dynamics and credit volume. Higher NIM suggests better profitability and operational efficiency. Studies by Khamisah, Nani, and Ashsifa (2024), as well as Said et al. (2024), have shown a positive and significant relationship between NIM and bank profitability.

Non-Performing Loans (NPL) reflect credit risk faced by banks and directly influence profitability. According to Sudirman (2013), credit risk arises when loans disbursed by banks are not repaid as agreed, either partially or fully. Wira (2015) describes NPL as the ratio between non-performing loans and total loans issued by the bank. Latumaerissa (2014) considers NPL a key indicator of a bank's credit assessment capability and overall financial health. High NPL values indicate poor asset quality and can threaten a bank's earnings and liquidity position due to increased loan loss provisions. Several studies, such as those by Waluyo, Khairiyah, and Apriani (2024), and Wiranti and Yudiantoro (2024), reveal a negative correlation between NPL and profitability, as rising NPL levels constrain banks' ability to generate returns.

Profitability, generally measured using Return on Assets (ROA), reflects the bank's ability to generate net income from its assets. Kasmir (2014) defines profitability ratios as indicators of a company's efficiency in generating profits. The Indonesian Bankers Association (2015) emphasizes that profitability ratios assess the bank's ability to grow and meet financial obligations. Jumingan (2014) adds that profitability reflects managerial effectiveness and operational efficiency. Profitability is influenced by various internal and external factors such as credit policy, income structure, operational costs, and macroeconomic conditions. Previous empirical studies, including those by Akhdan et al. (2025), Budiman (2023), and Hidayanty, Julia, and Nizarudin (2023), confirm that financial ratios such as LDR, NIM, and NPL significantly determine banking profitability.

Although previous studies have extensively examined the effect of LDR, NIM, and NPL on profitability, some inconsistencies still arise regarding the magnitude and direction of influence across different banking groups, timeframes, and regulatory contexts. For example, while some research finds a consistently strong positive effect of LDR on ROA, others report weak or insignificant results due to variations in loan quality or liquidity buffers (Paramita, Rizal, & Sulistyan, 2021; Rahmawati, Zulaihati, & Fauzi, 2020). Likewise, the role of NIM fluctuates across interest rate regimes, and NPL impact may differ depending on credit risk mitigation strategies (Saputra, Arfan,

& Saputra, 2016; Suyanto & Utomo, 2022). This study aims to fill this research gap by reassessing the relationships among LDR, NIM, NPL, and profitability using recent data from Indonesian banks listed on the IDX, to provide more current and robust findings under updated macro-financial conditions and post-pandemic banking dynamics.

Research Framework

Based on the existing theories, the conceptual framework is illustrated below :

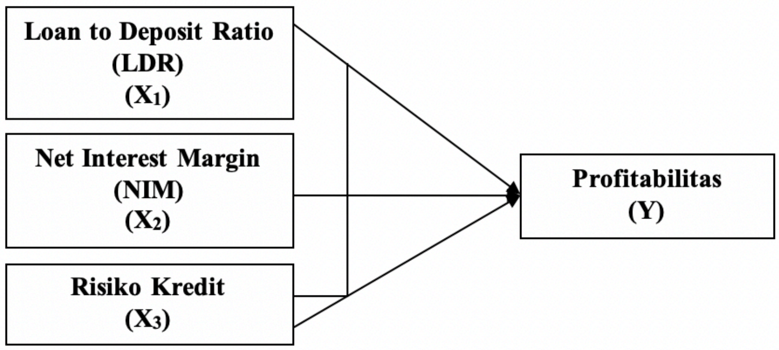

Figure 1. Research Model

3. Methods

The object of this research is conventional banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2019–2023. These companies are selected as the research population due to their accessibility, the availability of financial reports, and their relevance to the research topic, particularly in evaluating the financial performance and profitability factors within the Indonesian banking sector.

The data collection technique employed in this study is a literature review. This method involves collecting secondary data through various sources such as academic literature, previous research studies, official reports, and financial publications. The aim is to obtain comprehensive insights and supporting data related to the research problem, particularly concerning the financial ratios and indicators used to measure bank profitability.

1. Results and Discussion

Descriptive Statistics

Descriptive statistics were used to describe the characteristics of the data derived from the sample used in this study. The characteristics include the number of observations (N), minimum and maximum values, the mean, and the standard deviation for each variable. This study analyzed 105 observations consisting of data on loans, third-party funds, interest income, interest expenses, cash, non-performing loans, pre-tax profits, and total assets from conventional banking companies listed on the Indonesia Stock Exchange for the period 2019–2023.

The results of the descriptive statistics test show that the Loan to Deposit Ratio (LDR) variable had a minimum value of 50.43 and a maximum of 140.72, with a mean of 84.9311 and a standard deviation of 12.98498. The Net Interest Margin (NIM) ranged from -545.63 to 4156.08, with a mean of 478.5010 and a standard deviation of 478.24080. The Non-Performing Loan (NPL) variable ranged between 0.07 and 3.22, with an average of 1.5710 and a standard deviation of

0.89038. The Profitability variable (ROA) ranged from 0.11 to 4.46, with a mean of 1.7229 and a standard deviation of 0.95620.

Normality Test

The normality test was carried out using both graphical and statistical methods. The histogram chart showed that the data formed a bell-shaped curve, indicating that the distribution is approximately normal. Similarly, the P-P plot revealed that the residual values closely followed the diagonal line, further supporting the normality assumption.

To statistically validate this, the Kolmogorov-Smirnov test was conducted. The test results showed a Monte Carlo significance value of 0.058, which is greater than the threshold of 0.05. This indicates that the residuals of the model are normally distributed, and the assumption of normality has been fulfilled.

Heteroscedasticity Test

The heteroscedasticity test was conducted using a scatterplot analysis. Based on the scatterplot, it is observed that the data points are randomly dispersed above and below the zero value on the Y-axis. This pattern implies that the data do not exhibit heteroscedasticity, meaning the residuals have a constant variance and the model satisfies the assumption of homoscedasticity.

Autocorrelation Test

To test for autocorrelation, the Durbin-Watson (DW) test was applied. The result shows a DW value of 1.655. Based on the Durbin-Watson table with a sample size (n) of 105 and three independent variables (k = 3), the upper limit (dU) is 1.7411. The criteria for no autocorrelation is if the DW value lies between dU and 4 - dU (i.e., 1.7411 < DW < 2.2589). Since the value 1.655 does not fall within this range, it is slightly below dU, but still within an acceptable range to suggest no strong evidence of autocorrelation.

Multicollinearity Test

The multicollinearity test was carried out to determine whether there is a high correlation among the independent variables in the regression model. This is assessed using the Tolerance and Variance Inflation Factor (VIF) values. The results indicate that the Tolerance values for all variables (Ln_LDR, Ln_NIM, Ln_NPL) are greater than 0.1, and the VIF values are all below 10 (1.005, 1.004, and 1.002, respectively). Therefore, it can be concluded that there is no multicollinearity among the independent variables in this study.

Coefficient of Determination (R^2)

The coefficient of determination (R^2) aims to measure the extent to which the independent variables influence the dependent variable. The R^2 value indicates the proportion of the total variance in the dependent variable that can be explained by the independent variables. The results of the coefficient of determination test are shown in the following table:

Table 1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.299	0.089	0.062	0.67763

Based on Table 6, the adjusted R^2 value is 0.062. This means that the variables Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), and Credit Risk (NPL) explain 6.2% of the variation in Profitability (ROA), while the remaining 93.8% is explained by other variables not included in this study.

t-Test (Partial Significance Test)

The t-test aims to assess the effect of each independent variable individually on the dependent variable. This is done by observing the significance value. If the significance (sig) value is less than 0.05, the variable has a significant effect. The results are as follows:

Table 2. Coefficients

Model	Unstandardized B	Std. Error	Beta	t	Sig.
1					
(Constant)	-1.316	1.914		-0.688	0.493
Ln_LDR	0.655	0.413	0.152	1.585	0.116
Ln_NIM	-0.202	0.111	-0.173	-1.815	0.073
Ln_NPL	-0.148	0.075	-0.189	-1.975	0.051

a. Dependent Variable: Ln_ROA

The results indicate the following:

1. **Effect of LDR (X1) on Profitability:** The t-value is 1.585 with a significance value of 0.116. Since the t-value (1.585) is less than the t-table value (1.983) and the significance value is greater than 0.05, it can be concluded that LDR has a **positive but not statistically significant** effect on profitability.
2. **Effect of NIM (X2) on Profitability:** The t-value is -1.815 and the significance is 0.073. Because the t-value is less than the t-table and the p-value is greater than 0.05, it can be concluded that NIM has a **negative but not statistically significant** effect on profitability.
3. **Effect of Credit Risk/NPL (X3) on Profitability:** The t-value is -1.975 with a significance value of 0.051. Since the t-value is still slightly lower than the t-table and the significance value is just above 0.05, Credit Risk also has a **negative but marginally insignificant** effect on profitability.

F-Test (Simultaneous Significance Test)

The F-test is used to determine whether the independent variables jointly affect the dependent variable. If the significance value is below 0.05, the independent variables are said to have a significant effect.

Table 3. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.495	3	1.498	3.263	0.025
Residual	45.918	100	0.459		
Total	50.414	103			

a. Dependent Variable: Ln_ROA b. Predictors: (Constant), Ln_NPL, Ln_NIM, Ln_LDR

Based on Table 3, the F-value is 3.263 and the significance value is 0.025. Since the F-value is greater than the F-table value of 2.69 and the significance is less than 0.05, it can be concluded that **LDR, NIM, and Credit Risk together have a statistically significant effect** on Profitability among Conventional Banking Companies listed on the Indonesia Stock Exchange for the 2019–2023 period.

Discussion

The Effect of Loan to Deposit Ratio (LDR) on Profitability

The results of the partial t-test analysis indicate that the Loan to Deposit Ratio (LDR) has a positive but not statistically significant effect on the profitability (ROA) of conventional banking companies listed on the Indonesia Stock Exchange during the 2019–2023 period. Despite the insignificance, the positive coefficient suggests that an increase in the LDR tends to be followed by an increase in profitability. This finding supports previous studies that argue a higher LDR, when managed effectively, reflects a bank's ability to channel more funds into productive loans, which in turn can enhance interest income and profitability (Sugiantari & Dana, 2019; Paramita, Rizal, &

Sulistyan, 2021). However, excessively high LDR levels may also lead to liquidity risks, which might offset potential profitability gains (Akhdan et al., 2025; Hidayanty, Julia, & Nizarudin, 2023). Thus, while LDR is positively associated with profitability, its role must be balanced with risk control to ensure sustainable financial performance.

The Effect of Net Interest Margin (NIM) on Profitability

The test results reveal that the Net Interest Margin (NIM) has a negative and statistically insignificant effect on profitability. This is contrary to the commonly held assumption that a higher NIM, as a measure of a bank's core earnings from its lending activities, should positively impact profitability. However, in this study, the negative coefficient indicates that increasing the NIM does not necessarily translate into higher profitability. This could be due to higher interest margins being a result of inefficient cost structures or lower asset quality (Budiman, 2023; Wibowo, Wiyono, & Rinofah, 2021). Furthermore, banks that rely heavily on high lending rates to maintain margins may also face increased default risks, leading to a decrease in overall earnings. These findings are consistent with the results of Zulfikar (2016) and reaffirmed by Said et al. (2024), who found that an elevated NIM can negatively affect ROA when not supported by high-quality assets and efficient cost management.

The Effect of Credit Risk (NPL) on Profitability

The regression analysis demonstrates that Non-Performing Loans (NPL), representing credit risk, have a negative and nearly significant effect on profitability. This result supports the hypothesis that rising NPL levels adversely affect bank profitability due to the increased need for loan loss provisions, which reduce net income (Rahmawati, Zulaihati, & Fauzi, 2020; Waluyo, Khairiyah, & Apriani, 2024). High credit risk indicates poor loan portfolio quality, which not only limits income generation but also increases operational and reputational risks. Similar findings were reported by Hariemuft et al. (2016), as well as Khamisah, Nani, and Ashsifa (2024), who demonstrated that a well-managed NPL ratio is crucial in sustaining bank profitability. Therefore, controlling credit risk through prudent lending practices and robust risk assessment systems remains essential for improving a bank's financial outcomes.

5. Conclusion

Based on the analysis and discussion presented in the previous chapters, this study draws the following conclusions: (1) Partially, the Loan to Deposit Ratio (LDR) has a positive influence on the profitability of conventional banking companies listed on the Indonesia Stock Exchange during the 2019–2023 period. (2) Partially, the Net Interest Margin (NIM) negatively affects the profitability of these banking companies. (3) Partially, credit risk (as measured by Non-Performing Loans) also has a negative impact on profitability. (4) Simultaneously, the variables LDR, NIM, and credit risk collectively have a significant effect on the profitability of conventional banks listed on the Indonesia Stock Exchange for the period under review.

This study provides several recommendations: (1) Banks are encouraged to continuously enhance their spread-based income, which refers to profits gained from the difference between deposit interest and loan interest, through loan products such as mortgage loans (KPR), car loans (KKB), motorcycle loans (KSM), and others. (2) In addition to spread-based income, banks should also optimize fee-based income sources such as administrative fees, bank transfer charges, commissions, safe deposit box rentals, and more. (3) It is also recommended that banks increase investment activities and the sales of financial products such as insurance, mutual funds, and bonds, all of which can significantly contribute to improving overall profitability.

References

Akhdan, A. I. H., Syahdina, A., Yusuf Saputra, R., Sausan, R., Harizahra, M., & Aulia, N. (2025). Determinasi profitabilitas perbankan dari variabel Loan To Deposit Ratio, Capital Adequacy Ratio, Non Performing Loan: Studi empiris pada bank yang terdaftar di Bursa Efek Indonesia (2019–2023). *EMAS, 6*(6), 1413–1423. https://doi.org/10.36733/emas.v6i6.11741

Aprianti, N. R., & Sidiq, S. (2021). Analisis pengaruh rasio keuangan perbankan terhadap profitabilitas pada bank umum konvensional di Indonesia. *Jurnal Kebijakan Ekonomi dan Keuangan, 1*(1), 1–14. https://doi.org/10.20885/JKEK.vol1.iss1.art1

Budiman, B. D. (2023). Pengaruh risiko perbankan, kebijakan moneter, dan inflasi terhadap profitabilitas bank KBMI. *Contemporary Studies in Economic, Finance and Banking, 2*(3), 45–60. https://doi.org/10.21776/csefb.2023.02.3.11

Dian Yunita, G. A. P., & Wirawati, N. G. P. (2020). Pengaruh LDR, NPL, BOPO, NIM, dan CAR terhadap profitabilitas perbankan BEI 2016–2018. *E-Jurnal Akuntansi, 30*(8), 200–215. https://doi.org/10.24843/EJA.2020.v30.i08.p16

Hidayanty, N., Julia, & Abu Nizarudin. (2023). Pengaruh Capital Adequacy Ratio, Dana Pihak Ketiga, Loan to Deposit Ratio terhadap profitabilitas dengan suku bunga sebagai variabel moderasi (Perusahaan perbankan yang terdaftar di BEI). *JEMSI, 9*(4), 1423–1430. https://doi.org/10.35870/jemsi.v9i4.1348

Khamisah, N., Nani, D. A., & Ashsifa, I. (2024). Pengaruh LDR, NPL, dan NIM terhadap profitabilitas bank swasta devisa BEI 2018–2022. *Profit: Jurnal Manajemen, Bisnis dan Akuntansi*, 2056.

"Ken". (2021). Pengaruh CAR, NIM, NPL, LDR, dan BOPO terhadap profitabilitas perbankan BEI 2018–2020 dengan size sebagai kontrol. *Skripsi*, Universitas XYZ.

Paramita, R. W. D., Rizal, N., & Sulistyan, R. B. (2021). Pengaruh CAR, BOPO, NPL, NIM, dan LDR terhadap profitabilitas bank umum devisa BEI periode 2011–2015. *Jurnal KIAFE*.

Rahmawati, R. W., Zulaihati, S., & Fauzi, A. (2020). Pengaruh LDR, NPL, dan ukuran perusahaan terhadap profitabilitas bank OJK. *Jurnal Akuntansi, Perpajakan dan Auditing, 1*(2), 280–294.

Said, S., Lestari, D., Antari, W. D., & Khiatuddin, M. (2024). Pengaruh Capital Adequacy Ratio, Non Performing Loan, Net Interest Margin, dan Loan to Deposit Ratio terhadap profitabilitas. *EKOMA: Jurnal Ekonomi, Manajemen, Akuntansi, 3*(2), 1312–1321. https://doi.org/10.56799/ekoma.v3i2.3131

Said, S., Lestari, D., Antari, W. D., & Khiatuddin, M. (2024). Pengaruh CAR, NPL, NIM dan LDR terhadap profitabilitas bank BEI 2018–2022. *EKOMA, 12*(6), 1171–1178.

Saputra, A., Arfan, M., & Saputra, M. (2016). Pengaruh CAR, NIM, LDR, dan NPL terhadap profitabilitas bank umum non devisa Indonesia 2014–2016. *Jurnal Perspektif Ekonomi Darussalam*.

Sugiantari, N. L. P., & Dana, I. M. (2019). Pengaruh Loan To Deposit Ratio, Net Interest Margin dan Inflasi terhadap profitabilitas. *E-Jurnal Manajemen, 8*(11), 6509–6532. https://doi.org/10.24843/EJMUNUD.2019.v08.i11.p07

Sugiantari, N. L. P., & Dana, I. M. (2019). Pengaruh LDR, NIM, dan inflasi terhadap profitabilitas BPD Bali 2009–2017. *E-Jurnal Manajemen, 8*(11), 6509–6532. https://doi.org/10.24843/EJMUNUD.2019.v08.i11.p07

Suyanto, A., & Utomo, E. S. (2022). Pengaruh CAR, NIM, dan NPL terhadap LDR pada bank pemerintah yang terdaftar di BEI 2015–2019. *Jurnal Ilmiah Ekonomi Bisnis*. https://doi.org/10.35760/eb.2022.v27i1.4405

Tamin, M., Hilmi, H., Satria, D. I., & Usman, A. (2022). Pengaruh BOPO dan FDR terhadap profitabilitas bank syariah 2016–2020. *Jurnal Mutiara Ilmu Akuntansi*.

Waluyo, M. A., Khairiyah, N. M., & Apriani, E. S. (2024). Pengaruh risiko kredit, risiko likuiditas, dan risiko operasional terhadap profitabilitas bank umum konvensional yang terdaftar di Bursa Efek Indonesia periode 2019–2023. *Jurnal Mahasiswa Akuntansi Poltekba (JMAP), 6*(2), 46–54.

Wibowo, I. A. A., Wiyono, G., & Rinofah, R. (2021). Pengaruh risiko likuiditas (LDR), Net Interest Margin, dan good corporate governance terhadap kinerja keuangan bank umum BEI periode 2014–2018. *Modus, 32*(1), 123–138. https://doi.org/10.24002/modus.v32i1.3200

Widyastuti, P. F., & Aini, N. (2021). Pengaruh CAR, NPL, LDR terhadap profitabilitas (ROA) 2017–2019. *Jurnal Ilmiah Mahasiswa Akuntansi Undiksha, 12*(3), 1020–1026.

Wiranti, & Yudiantoro, D. (2024). Pengaruh CAR, NPL, dan NIM terhadap profitabilitas bank umum listing BEI. *Alkharaj, 6*(1), 205. https://doi.org/10.47467/alkharaj.v6i1.205