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Working Capital Management and Bank Profitability: Evidence from Indonesian Listed Banks

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Abstract: When banks don't make enough money, their capacity to function as a middleman, their internal capital, and their liquidity all get weaker. This study examines whether indicators of working capital and liquidity management clarify the disparities in Return on Assets (ROA) among banks listed on the Indonesia Stock Exchange. This study included Current Ratio (CR), Loans/Advances to Total Assets (LATA), Current Assets to Total Assets (CATA), Current Liabilities to Total Assets (CLTA), and Loan to Deposit Ratio (LDR) as explanatory variables. This study utilizes balanced panel data from 29 banks for the period 2019–2023, encompassing 145 bank-year observations. This research estimates panel data regression and use the Hausman test to select the fixed effects model. This study use robust standard errors to address indications of heteroscedasticity and autocorrelation. The results show that LATA has a big positive effect on ROA. The results show that LDR has a big negative effect on ROA. The results show that CR, CATA, and CLTA do not have a big effect on ROA. The discussion links the LATA results to the enhancement of productive assets. The conversation links the LDR results to the trade-off between making money and having enough cash on hand when credit growth puts pressure on the liquidity buffer. The results demonstrate that a combination of productive assets and liquidity discipline is more significant for ROA than static liquidity ratios.

Keywords: *return on assets, loans and advances to total assets, current assets to total assets, current liabilities to total assets, loan to deposit ratio*

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INTRODUCTION

Bank profitability was a pivotal concern because profit performance determined the sustainability of intermediation functions, liquidity resilience, and the overall stability of the financial system. Historically, banks performed maturity transformations by collecting relatively short-term funds and channeling them into productive assets, meaning that strategic decisions regarding liquidity management and asset-liability structures possessed the potential to influence Return on Assets directly (Diamond & Dybvig, 1983; Diamond, 1984). Researchers noted that while excessively loose liquidity management increased opportunity costs through a higher proportion of low-yield assets, overly restrictive policies heightened the risk of funding pressures during sudden cash flow shocks (Mohamad & Saad, 2010; Soda et al., 2022). This fundamental tension led to the necessity of determining whether specific working capital management and banking liquidity indicators could reliably explain variations in ROA.

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Previous literature displayed varying scientific responses to the relationship between working capital management and bank profitability. While several studies confirmed a connection between asset-liability composition and profitability, the strength and direction of this influence were not consistent across different contexts and observation periods (Mengstie et al., 2024). Empirical evidence in certain settings supported the importance of asset composition or liquidity policy in influencing ROA (Mazreku et al., 2020; Mansour, 2024), while other investigations emphasized the existence of trade-offs that neutralized the influence of specific ratios when opportunity costs and liquidity buffer requirements offset one another (Nigatu, 2015; Shrestha, 2023). A significant gap remained because many prior investigations utilized repetitive proxies or imprecise methodologies, which limited the theoretical expansion of how marginal changes in policy truly impact financial performance (Martinho, 2021). Furthermore, there was a noticeable lack of empirical evidence regarding how these dynamics evolved under the recent operational and digital shifts in the banking landscape (Mittal, 2025).

This article addressed these lingering debates by examining the effects of working capital management and liquidity indicators on the ROA of banks listed on the Indonesia Stock Exchange between 2019 and 2023. To offer a more comprehensive perspective than previous models, this study integrated the Current Ratio, Loans to Total Assets, Current Assets to Total Assets, Current Liabilities to Total Assets, and Loan to Deposit Ratio as representatives of operational liquidity and asset structures (Kaddumi & Ramadan, 2012; Raheman et al., 2010; Tufail et al., 2013). By utilizing a robust panel data regression and selection procedure, the research clarified the mechanisms through which liquidity discipline interacted with profit performance in a modern emerging market (Mengstie et al., 2024). The resulting findings provided both theoretical clarity and practical relevance for bank management in balancing asset expansion against the limitations of credit risk and funding costs (Cebenoyan & Strahan, 2004; Wu et al., 2022).

Banking working capital management fundamentally centers on balancing liquidity resilience and profit optimization through an efficient asset-liability framework. Liquidity indicators, such as the Current Ratio and Current Assets to Total Assets, serve as static buffers to absorb sudden cash shocks and ensure operational continuity; however, maintaining overly conservative policies risks incurring opportunity costs that diminish Return on Assets by locking funds into low-yield assets (Martinho, 2021; Mengstie et al., 2024). Conversely, elevating intermediation intensity via Loans and Advances to Total Assets acts as a primary catalyst for interest income, enhancing asset utilization efficiency, provided it is coupled with robust risk management to mitigate the provisioning costs associated with aggressive credit expansion (Mengstie et al., 2024; Mittal, 2025).

Regarding funding strategies, utilizing Current Liabilities to Total Assets provides significant cost-of-fund efficiencies, yet a high reliance on short-term liabilities introduces roll-over risks that can impair financial performance if not managed with strict discipline (Martinho, 2021; Mittal, 2025). This tension is similarly evident in the Loan to Deposit Ratio, where transforming third-party deposits into productive loans must be maintained at moderate levels to prevent liquidity pressures from compromising interest margins (Martinho, 2021; Mittal, 2025). Collectively, contemporary literature suggests that successful working capital management depends on a bank's capacity to minimize the adverse effects of liquidity imbalances on long-term operational performance (Mengstie et al., 2024; Mittal, 2025). Based on this trade-off framework, this research hypothesizes that LATA, CATA, and CLTA exert positive influences, whereas CR and LDR exert negative influences on ROA.

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RESEARCH METHODS

Sampling

This study applies an explanatory quantitative design to examine how working capital management influences bank profitability. Such a design is appropriate when the objective is hypothesis testing using numerical indicators and statistical inference, while also allowing other researchers to reproduce the same procedures using the same criteria and dataset construction rules (Saunders et al., 2016; Sekaran & Bougie, 2016). The target population comprises all commercial banks listed on the Indonesia Stock Exchange (IDX) during 2019–2023. The unit of analysis is the bank-year observation.

The sample is selected using purposive sampling, meaning that banks are included only when they meet explicit eligibility requirements aligned with the research purpose and measurement feasibility (Sekaran & Bougie, 2016). The criteria are: listed on IDX throughout 2019–2023, continuously publishing annual financial statements during 2019–2023, and reporting positive net income consistently over 2019–2023. From an initial population of 47 listed banks (eligible frame), 4 banks were excluded due to incomplete continuity of annual reports/financial statements across the period, and 13 banks were excluded due to persistent net losses, resulting in a final sample of 30 banks. With five years of observation, the dataset forms a balanced panel of 150 bank-year observations (30 × 5).

Data collection

The study uses secondary (archival) data, collected through document review of banks' annual financial statements and/or annual reports for 2019–2023 obtained from the official IDX website and the official websites of each sampled bank. Secondary data are suitable in business and finance research when the indicators are objective, standardized, traceable, and verifiable, thereby supporting reliability and replication (Saunders et al., 2016). The data collection procedure follows a reproducible workflow: downloading the relevant reports for each bank-year, extracting the required account items, compiling them into a panel dataset (bank identifier and year), and conducting consistency checks by tracing any unusual values back to the original source documents (Saunders et al., 2016).

Measures

Profitability is measured using Return on Assets (ROA), computed as net income divided by total assets. Working capital management is proxied by five ratios: Current Ratio (CR), Loans and Advances to Total Assets (LATA), Current Assets to Total Assets (CATA), Current Liabilities to Total Assets (CLTA), and Loan to Deposit Ratio (LDR). All variables are measured on a ratio scale and are replicable from publicly available financial statement items (Saunders et al., 2016; Sekaran & Bougie, 2016).

The analytical model employs panel data regression, which is appropriate for combining cross-sectional and time-series information, improving estimation efficiency, and controlling for unobserved time-invariant heterogeneity across banks (Wooldridge, 2002). Estimation is conducted using EViews, which provides standard workflows for pooled, fixed-effects, and random-effects specifications in applied panel analysis (Agung, 2014). The empirical specification is:

$$\boldsymbol{ROA_{it} = \alpha + \beta_1 CR_{it} + \beta_3 LATA_{it} + \beta_4 CATA_{it} + \beta_5 CLTA_{it} + \beta_6 LDR_{it} + \in_{it}}$$

Model selection follows a structured panel decision path: Chow test to compare pooled versus fixed effects; Hausman test to choose between fixed and random effects;

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and Lagrange Multiplier (Breusch–Pagan) test to compare pooled versus random effects, ensuring that the final estimator matches the data structure and underlying assumptions (Agung, 2014; Wooldridge, 2002). To strengthen the reliability of inference, diagnostic checks are performed for common regression issues (e.g., multicollinearity and error structure concerns), and the final interpretation is based on the selected model's assumptions and diagnostic outcomes (Agung, 2014; Wooldridge, 2002).

RESULTS AND DISCUSSION

Result

Descriptive statistics for the research variables can be seen in Table 1, which presents measures of central tendency and dispersion (mean, median, minimum–maximum values, and standard deviation) for all observations (N = 145).

Table 1. Descriptive statistics of research variables

	ROA	CR	CATA	LATA	CLTA	LDR
Mean	1.286090	1.078242	0.556830	0.558741	0.717115	0.963633
Median	0.953407	0.602059	0.431479	0.585032	0.758791	0.840003
Maximum	9.098554	8.368601	1.059123	0.820566	0.910986	5.126210
Minimum	0.015622	0.052165	0.043289	0.057464	0.057647	0.123190
Std. Dev.	1.398673	1.469575	0.307295	0.147860	0.181210	0.723032
Observations	145	145	145	145	145	145

Based on Table 1, Return on Assets (ROA) has an average value of 1.286 with a median of 0.953, indicating that in general the profitability level of banks in the sample is at a moderate level, but there is still quite a wide variation (minimum 0.016; maximum 9.099; standard deviation 1.399). The Current Ratio (CR) variable recorded an average of 1.078 with a median of 0.602, accompanied by a very wide range (minimum 0.052; maximum 8.369) and a standard deviation of 1.470, indicating high heterogeneity in short-term liquidity capabilities among banks during the observation period. For asset composition, Current Assets to Total Assets (CATA) had an average of 0.557 (median 0.431) with a standard deviation of 0.307 and a range of 0.043–1.059, which illustrates the differences in the proportion of current assets in total assets among banks. Meanwhile, Loan/Advances to Total Assets (LATA) shows an average of 0.559 (median 0.585) with relatively smaller variation (standard deviation 0.148; minimum 0.057; maximum 0.821), so that the proportion of credit/advances disbursement to total assets tends to be more stable than the variation in current assets. On the liabilities side, Current Liabilities to Total Assets (CLTA) had an average of 0.717 and a median of 0.759 (standard deviation of 0.181; minimum of 0.058; maximum of 0.911), indicating that in most banks, current liabilities are a relatively dominant component of funding in the balance sheet structure. Furthermore, the Loan to Deposit Ratio (LDR) has an average of 0.964 with a median of 0.840, but shows a wide distribution (minimum 0.123; maximum 5.126; standard deviation 0.723), which indicates differences in credit distribution policies relative to third-party funds. in some banks, a very high LDR value may reflect aggressive credit expansion and potentially increase liquidity pressure.

The following is the structure of Model & Model Selection, Assumption Testing, and Hypothesis Testing, which has been academically refined and is ready to be pasted into the *Results* section.

This study uses panel data regression because the data contains cross-sectional (between banks) and time-series dimensions. Although theoretically there are three estimation approaches (CEM, FEM, REM), the Common Effect Model (CEM/pooled OLS) is

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not used as an inferential basis because CEM assumes the same intercept for all banks and ignores unobserved bank-specific heterogeneity. In the banking context, relatively constant characteristics such as risk management quality, intermediation strategy, and operational efficiency have the potential to affect ROA and may correlate with explanatory variables. Therefore, model evaluation focuses on the Fixed Effect Model (FEM) and Random Effect Model (REM), and the best model is determined using the Hausman Test.

Table 2. Model selection (Hausman Test: FEM vs REM)

Test	Chi-Sq.	df	p	Decision
Hausman Test	54.572792	5	0.0000	Selected FEM

Based on Table 2, the p-value of 0.0000 < 0.05 indicates that the individual effects of banks are correlated with the independent variables, so FEM is more appropriate than REM for hypothesis testing.

To ensure the validity of the inference, the model was evaluated through diagnostic tests. The Jarque–Bera normality test shows that the residuals are normally distributed (JB = 1.518816; p = 0.467943). Multicollinearity is evaluated through the correlation between independent variables; the maximum absolute correlation is 0.714329, indicating that there is no very high correlation between regressors. However, diagnostic tests also revealed issues with the error term: Breusch Pagan Godfrey indicated potential heteroscedasticity in the *Scaled explained SS* statistic (p = 0.0216), and the Breusch Godfrey LM Test indicated serial correlation (p = 0.0000). Thus, to maintain the robustness of the conclusions, the t-test and p-value are reported using robust standard errors (clustered by bank/cross-section), while the FEM coefficients continue to represent the direction and magnitude of the effect.

Table 3. Summary of assumption/diagnostic tests

Aspect	Test	Statistics	p-value	Conclusion
Normality	Jarque–Bera	1.518816	0.467943	Normal
Multicollinearity	Correlation (max	r	)	0.714329
Heteroscedasticity	Breusch–Pagan–Godfrey (*Scaled explained SS*)	13.19483	0.0216	There are indications of heteroscedasticity
Autocorrelation	Breusch–Godfrey LM (up to 2 lags)	F = 36.95064	0.000	There is serial correlation

Hypothesis testing

Hypothesis testing was conducted based on the selected model (FEM). Table 3 presents the FEM estimation results; the Std. Error, t-Stat, and p-value columns use robust standard errors (bank cluster) so that the hypothesis decision remains valid in conditions of heteroscedasticity and autocorrelation.

Table 3. Estimation results of the selected model (FEM with robust standard errors)

Variable	Coefficient (β)	Std. Error (Robust)	t-Stat	p-value	Decision (α=5%)
CR	0.00442	0.037043	0.119427	0.9058	Not significant (Rejected)
LATA	1.68829	0.578329	2.919257	0.0069	Significant (+) (Accepted)
CATA	0.07114	0.328081	0.216864	0.8299	Not significant (Rejected)
CLTA	-0.28992	0.406235	-0.713683	0.4813	Not significant (Rejected)
LDR	-0.59156	0.088527	-6.682290	<0.001	Significant (-) (Accepted)

The overall model validity shows high explanatory power (R^2 = 0.911600; Adj. R^2 = 0.885319; N = 145). Partially, the results show that LATA has a significant positive effect on ROA, while LDR has a significant negative effect on ROA. Conversely, CR, CATA, and CLTA do not have a significant effect on ROA in the research period and sample.

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Findings that contradict the hypothesis are also stated explicitly: CR, which was predicted to have a significant negative impact, was not proven (the coefficient was positive but not significant); CLTA, which was predicted to be significantly positive, was actually negative and insignificant; and CATA, which was hypothesized to be significantly positive, was also not statistically proven. Thus, empirical support was only obtained for the relationship between LATA and ROA and between LDR and ROA, while the relationships between CR and ROA, CATA and ROA, and CLTA and ROA were not supported by the model estimation results.

Discussion

This discussion interprets the results of hypothesis testing on the fixed effects model (FEM) to explain how *working capital management* and banking liquidity indicators CR, LATA, CATA, CLTA, and LDR are related to ROA. The results show that LATA has a significant positive effect on ROA, while LDR has a significant negative effect on ROA. Meanwhile, CR, CATA, and CLTA do not have a significant effect on ROA. This pattern of findings confirms that the profitability of banks in the research sample is more responsive to the portion of productive assets (loans) and intermediary liquidity pressures than to static liquidity indicators or the composition of current assets/liabilities, the effects of which can neutralize each other (Mengstie et al., 2024; Puspitasari et al., 2025).

First, the finding that CR is not significant indicates that the level of short-term liquidity buffer measured by *the current ratio* is not necessarily a direct determinant of ROA in banks. Theoretically, CR can support operational stability by reducing the risk *of liquidity distress*, but at the same time, an overly conservative increase in liquidity can lead to *a liquidity profitability trade-off* because more funds are tied up in relatively low-yielding assets, thereby increasing *opportunity costs* and potentially weakening ROA (Mohamad & Saad, 2010; Soda et al., 2022). Thus, the insignificance of CR can be interpreted as an indication that the variation in CR during the study period was not strong enough to explain the variation in ROA or that the effect of CR works through indirect mechanisms that are closed- d by the bank's asset-liability structure and intermediation policy (Mazreku et al., 2020; Mengstie et al., 2024).

Second, the finding that LATA has a significant positive effect on ROA reinforces the intermediation argument, namely that an increase in the proportion of credit/loans in total assets reflects an intensification of fund placement in *earning assets* that has the potential to increase interest income and asset utilization efficiency, thereby increasing ROA (Radovanov et al., 2023). However, conceptually, this strengthening of the positive impact requires banks to be able to maintain credit quality through *screening–monitoring* processes and credit risk management, so that the increase in LATA is not accompanied by a surge in risk that erodes profits (Cebenoyan & Strahan, 2004). The literature also emphasizes that aggressive credit expansion can increase risk and suppress performance when portfolio quality deteriorates, for example through an increase in NPLs and provisioning costs (Wu et al., 2022). Therefore, the positive results of LATA in this study are most consistently interpreted as relatively effective expansion of productive assets, where risk and liquidity management practices serve as conditions that enable LATA to drive ROA (Alim et al., 2021; Baselga-Pascual et al., 2018).

Third, the finding that CATA is not significant indicates that the proportion of current assets to total assets does not contribute significantly to explaining ROA in the research sample. Theoretically, a higher CATA can strengthen liquidity stability and reduce the risk of cash shortages, which under certain conditions can support asset-based profitability; some banking evidence does show a positive direction of CATA towards ROA

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(Mansour, 2024), and other studies have found positive but insignificant coefficients (Mengstie et al., 2024). However, when the proportion of current assets increases beyond the optimal level, banks may face *opportunity costs* because current assets generally have lower returns than productive assets, so that the net effect of CATA on ROA becomes weak or undetectable (Nigatu, 2015; Shrestha, 2023). Thus, the insignificant results in this study can be understood as a consequence of this trade-off or as a result of differences in liquidity strategies between banks that are not large enough to cause consistent variations in ROA.

Fourth, the finding that CLTA is not significant indicates that the proportion of current liabilities to total assets does not directly determine ROA during the research period. In the context of working capital financing policy, high CLTA is often associated with more aggressive financing; under conditions of stable short-term funds and controlled funding costs, CLTA can increase efficiency and profitability (Sultana & Jalloh, 2025). However, the *risk–return trade-off* literature emphasizes that excessive reliance on short-term liabilities can increase *roll-over* risk and liquidity pressure, which ultimately depresses profits through emergency funding costs and portfolio adjustments (Kaddumi & Ramadan, 2012; Raheman et al., 2010; Tufail et al., 2013). Evidence from banking also shows that the effect of CLTA can become insignificant when the funding structure and characteristics of banks are taken into account (Mengstie et al., 2024). Therefore, the insignificance of CLTA in this study can most rationally be interpreted as the result of a neutralizing effect between potential funding cost efficiency and increased liquidity risk.

Fifth, the finding that LDR has a significant negative effect on ROA confirms that intensifying intermediation through increasing credit distribution relative to third-party funds, at a certain point, can reduce profitability because it increases liquidity pressure and funding mismatch vulnerability. In the theory of intermediation and liquidity transformation, banks earn profits through *maturity transformation*; however, when liquidity buffers decline and dependence on expensive funding increases, profitability can weaken (Diamond & Dybvig, 1983; Diamond, 1984). Empirically, the literature referenced in the literature review also shows that LDR is often found to have a negative impact on profitability/ROA in several contexts (De Vuyst & Rotsaert, 2019; Maharjan, 2023; Adhim & Mulyati, 2024), although there are also studies that report insignificant or even positive effects in conditions of strong risk management and funding efficiency (Anggari & Dana, 2020; Permata & Dewi, 2022; Yulyanti et al., 2024; Walzer et al., 2024; Mulyani et al., 2025). Thus, the significant negative results in this study are consistent with the argument that an increase in LDR that exceeds a moderate level is more likely to cause liquidity pressure and credit risk, thereby suppressing ROA.

Overall, the results of this study also confirm findings that do not support the hypothesis on several variables. The insignificance of CR, CATA, and CLTA indicates that static liquidity indicators and current asset/liability structure are not always directly correlated with ROA, as their influence is likely to depend on the optimal point, intermediation strategy, and the quality of liquidity and credit risk management. Conversely, the significance of LATA and LDR places the main focus on the two aspects that most determine bank profitability, namely the optimization of productive assets (credit) accompanied by risk control and the management of intermediation balance to maintain liquidity (Cebenoyan & Strahan, 2004; Diamond & Dybvig, 1983; Mengstie et al., 2024).

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CONCLUSION AND RECOMMENDATIONS

This study concludes the results of hypothesis testing as follows. This study proves that LATA has a significant positive effect on ROA, so that an increase in the proportion of credit/loans to total assets is associated with an increase in bank profitability. This study also proves that LDR has a significant negative effect on ROA, so that an increase in credit distribution relative to third-party funds at a certain level is associated with a decline in bank profitability due to liquidity pressure and funding costs. This study did not prove the effect of CR, CATA, and CLTA on ROA because these three variables were not statistically significant in the sample and research period, so the hypotheses related to CR, CATA, and CLTA did not obtain empirical support.

This study makes a theoretical contribution by confirming that bank profitability is more influenced by the structure of productive assets and the liquidity position of intermediation than by static liquidity indicators based on current assets/liabilities. The significant findings of LATA reinforce the argument that increasing *earning assets* through lending drives ROA when banks maintain portfolio quality and risk control. The significant negative findings of LDR reinforce the concept *of liquidity–profitability trade-off* because a lending ratio that is too high relative to third-party funds increases liquidity pressure and lowers ROA. The insignificant findings on CR, CATA, and CLTA explain that liquidity ratios and current asset/liability structures can serve as indicators of balance sheet conditions, but their effect on ROA does not always appear directly due to mutually neutralizing effects or because their effects work through intermediary mechanisms such as funding costs, risk, and asset quality.

This study provides practical contributions to bank management by emphasizing policies that balance credit expansion and liquidity control. Bank management needs to improve the effectiveness of credit distribution to strengthen productive assets without sacrificing credit quality and risk absorption capacity. Bank management also needs to control the LDR through adequate funding strategies so that liquidity pressures and funding costs do not weigh on ROA. Regulators can use these findings to strengthen liquidity and funding structure supervision, as funding pressure indicators reflected in the LDR have proven to be relevant to profitability.

Further research needs to expand the model by incorporating bank-specific and macroeconomic control variables to strengthen the validity of inferences and reduce the risk *of omitted variable bias*. Future research needs to examine nonlinear or threshold relationships, particularly in LDR, to identify the optimal LDR level for profitability. Future research needs to use a stronger approach to endogeneity, such as a dynamic panel model, so that researchers can distinguish the effect of policy on profitability from the possibility that profitability drives changes in credit and liquidity policy.

REFERENCES

Adhim, C., & Mulyati. (2024). The influence of capital adequacy ratio (CAR), non-performing loan (NPL), loan to deposit ratio (LDR), and operational costs to operating income (BOPO) on return on assets (ROA) in banks listed on the Indonesia Stock Exchange. *International Journal of Science, Technology & Management, 4*(5), 1067–1075.

Agung, I. G. N. (2014). *Panel data analysis using EViews*. John Wiley & Sons.

Alim, W., Ali, A., & Metla, M. R. (2021). *The effect of liquidity risk management on financial performance of commercial banks in Pakistan* (MPRA Paper No. 112482). Munich Personal RePEc Archive.

Vol. 4 No. 2, June 2026 | E-ISSN: 2987-7407 | DOI: https://doi.org/10.70716/ecoma.v4i2.463

Aryawan, I., & Indriani, A. (2020). Working capital management and profitability: Evidence from Indonesian manufacturing companies. *Diponegoro International Journal of Business, 3*(1), 36–46. https://doi.org/10.14710/dijb.3.1.2020.36-46

Baselga-Pascual, L., del Orden-Olasagasti, O., & Trujillo-Ponce, A. (2018). Toward a more resilient financial system: Should banks be diversified? *Sustainability, 10*(6), Article 1903. https://doi.org/10.3390/su10061903

Basyith, A., Djazuli, A., & Fauzi, F. (2021). Does working capital management affect profitability? Empirical evidence from Indonesia listed firms. *Asian Economic and Financial Review, 11*(3), 236–251. https://doi.org/10.18488/journal.aefr.2021.113.236.251

Cebenoyan, A. S., & Strahan, P. E. (2004). Risk management, capital structure and lending at banks. *Journal of Banking & Finance, 28*(1), 19–43. https://doi.org/10.1016/S0378-4266(02)00391-6

De Vuyst, J., & Rotsaert, L. (2019). *The determinants of the loan-to-deposit ratio and its influence on bank profitability in the Belgian banking sector* (Master's dissertation).

Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *The Review of Economic Studies, 51*(3), 393–414. https://doi.org/10.2307/2297430

Godswill, O., Ikpefan, A., Osabohien, R., Ndigwe, C., & Nkwodimmah, P. (2018). Working capital management and bank performance: Empirical research of ten deposit money banks in Nigeria. *Banks and Bank Systems, 13*(2), 49–61. https://doi.org/10.21511/bbs.13(2).2018.05

Lestari, H. S. (2021). The effect of liquidity, leverage and bank size on bank profitability of Indonesian listed banks. *Jurnal Manajemen, 12*(2). https://doi.org/10.32832/jm-uika.v12i2.3946

Mazreku, I., Morina, F., & Zeqaj, F. (2020). Does working capital management affect the profitability of commercial banks: The case of Kosovo. *European Journal of Sustainable Development, 9*(1), 126–140. https://doi.org/10.14207/ejsd.2020.v9n1p126

Mengstie, B., Mosisa, T., & Mosisa, T. (2024). Impact of working capital management on profitability of private commercial banks in Ethiopia. *Journal of Innovation and Entrepreneurship, 13*, Article 23. https://doi.org/10.1186/s13731-024-00379-3

Mohamad, N. E. A. B., & Saad, N. B. M. (2010). Working capital management: The effect of market valuation and profitability in Malaysia. *International Journal of Business and Management, 5*(11), 140–147. https://doi.org/10.5539/ijbm.v5n11p140

Mulyani, R., Oktaviani, R. F., & Fauziyah, N. K. (2025). The effect of key financial indicators on bank profitability. *Shafin: Sharia Finance and Accounting Journal, 5*(1), 96–110. https://doi.org/10.19105/sfj.v5i1.18132

Nigatu, H. Y. (2015). *Working capital management and firms' profitability: Evidence from manufacturing S.C. in Addis Ababa, Ethiopia* (Master's thesis, Addis Ababa University).

Permata, S. U., & Dewi, R. K. (2022). The effect of capital adequacy ratio (CAR), loan to deposit ratio (LDR), and non-performing loans (NPL) on return on assets (ROA) in banking companies listed on the Indonesia Stock Exchange during the period 2016–2020. *Journal of Scientific Research, Education, and Technology (JSRET), 1*(2), 359–377.

Prasanto, O., Wulandari, D., Narmaditya, B. S., & Kamaludin, M. (2020). Determinants of bank profitability: New evidence from state-owned banks in Indonesia. *Trikonomika, 19*(1), 29–35. https://doi.org/10.23969/trikonomika.v19i1.1443

Vol. 4 No. 2, June 2026 | E-ISSN: 2987-7407 | DOI: https://doi.org/10.70716/ecoma.v4i2.463

Puspitasari, D. M., Chin, J., & Dasman, S. (2025). Determinants and prediction model for rural bank sustainability in Indonesia post-COVID-19. *Sustainability, 17*(16), 7207. https://doi.org/10.3390/su17167207

Radovanov, B., Milenković, N., Kalaš, B., & Horvat, A. M. (2023). Do the same determinants affect banks' profitability and liquidity? Evidence from West Balkan countries using a panel data regression analysis. *Mathematics, 11*(19), 4072. https://doi.org/10.3390/math11194072

Rizaldy, R., & Hariasih, M. (2023). Unlocking profitability in Indonesian banks: The impact of liquidity and working capital turnover. *Indonesian Journal of Law and Economics Review, 19*. https://doi.org/10.21070/ijler.v19i0.910

Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (7th ed.). Pearson.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). John Wiley & Sons.

Shrestha, P. M. (2023). The impact of working capital management on profitability: Evidence from non-financial firms listed in NEPSE. *Journal of Innovation in Academia, 2*(1), 53–63. https://doi.org/10.32674/

Soda, M. Z., Makhlouf, M. H., Oroud, Y., & Al Omari, R. (2022). Is firms' profitability affected by working capital management? A novel market-based evidence in Jordan. *Cogent Business & Management, 9*(1), 2049671. https://doi.org/10.1080/23311975.2022.2049671

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*(2), 39–45. https://doi.org/10.32479/ijefi.17439

Walzer, M., At Tamimi, A. H., & Firmansyah, A. (2024). Are banking financial performances and green banking disclosure associated with bank profitability? *Accounting Student Research Journal, 3*(1), 55–71. https://doi.org/10.62108/asrj.v3i1.7645

Wooldridge, J. M. (2002). *Econometric analysis of cross section and panel data*. MIT Press.

Wu, S.-W., Nguyen, M.-T., & Nguyen, P.-H. (2022). Does loan growth impact bank risk? *Heliyon, 8*(8), e10319. https://doi.org/10.1016/j.heliyon.2022.e10319