

The Influence of Liquidity Capital Adequacy and Asset Quality on Financial Performance of People's Economy Banks in the Bogor Region from 2019 to 2023

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ABSTRACT

This study aims to analyze the effect of capital adequacy, liquidity, and asset quality on financial performance at Bank ABC during the period 2019–2023. Financial performance is measured using the Return on Assets (ROA) indicator as a representation of bank profitability. The independent variables in this study consist of the Capital Adequacy Ratio (CAR) as an indicator of capital adequacy, Loan to Deposit Ratio (LDR) as an indicator of liquidity, and Non-Performing Loan (NPL) as an indicator of asset quality. The method used in this study is quantitative with a descriptive and verification approach. The data used are secondary data obtained from *Bank Perkreditan Rakyat* financial statements for five years, and data analysis uses multiple linear regression with the help of statistical software (SPSS). The results of the study show that, both partially and simultaneously, capital adequacy, liquidity, and asset quality have a significant effect on Bank ABC's financial performance. This finding indicates that managing these factors is very important to maintain and increase bank profitability.

KEYWORDS Capital Adequacy; Liquidity; Asset Quality; Financial Performance at Bank.



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INTRODUCTION

The banking industry is one of the most vital sectors in a country's economy, functioning primarily as a financial intermediary that mobilizes funds from the public in the form of savings and redistributes them in the form of credit. The effectiveness and efficiency of performing this intermediary function are reflected in a bank's financial performance, which is a crucial indicator for assessing a bank's ability to generate profits and maintain business stability and continuity (Fahmi, 2015). In Indonesia, the banking sector consists of commercial banks and rural banks (Bank Perkreditan Rakyat/BPR), each with distinct roles and market segments. BPRs play a strategic role in serving low-income communities and micro, small, and medium enterprises (MSMEs) at the local level, thereby contributing significantly to financial inclusion and regional economic development (Keuangan, 2023).

Three main aspects frequently used to evaluate banking financial performance are capital adequacy, liquidity, and asset quality (Riyadi, 2021). Capital adequacy is measured using the Capital Adequacy Ratio (CAR), which indicates the extent to which a bank's capital can absorb potential losses arising from risk exposure. Liquidity is measured by the Loan to Deposit Ratio (LDR), which reflects a bank's ability to fulfill its short-term obligations. Meanwhile, asset quality is measured using Non-Performing Loans (NPL), which represent the proportion of problematic loans in a bank's credit portfolio (OJK, 2023).

During the 2019–2023 period, the global banking sector, including in Indonesia, experienced significant dynamics due to the COVID-19 pandemic, global economic instability, and challenges related to liquidity and credit quality (Demirguc-Kunt, Klapper, Singer, & Ansar, 2018; Ozili, 2018; Thakor, 2020; Vives, 2019). Rural Banks (Bank Perkreditan Rakyat/BPR), as an integral part of the national banking system, were also affected by these fluctuations. Financial reports of Rural Banks show variations in CAR, LDR, and NPL, accompanied by fluctuations in Return on Assets (ROA) as a key indicator of financial performance (Beck, 2017). This condition raises important questions regarding the relationship between these three variables and bank financial performance.

According to the 2023 Statistik Perbankan Indonesia (SPI) published by OJK, the national banking industry recorded an average CAR of 25.80%, indicating relatively strong capitalization. The average LDR stood at 82.22%, remaining within a safe range while reflecting increased post-pandemic credit expansion. Meanwhile, the average gross Non-Performing Loan (NPL) ratio was 2.44%, below the regulatory threshold of 5%, although it still indicates credit risk that requires continuous mitigation.

Specifically for Rural Banks, audited financial reports for the 2019–2023 period show that CAR declined from 24.5% in 2019 to 22.3% in 2021, before rising again to 25.1% in 2023. LDR increased from 78.2% in 2019 to 84.7% in 2023, reflecting growing credit distribution. Gross NPL rose from 2.10% in 2019 to 3.58% in 2021 and subsequently declined to 2.85% in 2023. ROA also fluctuated, decreasing from 2.21% in 2019 to 1.64% in 2021, before recovering to 2.07% in 2023 (OJK, 2023).

These data illustrate dynamic changes in capital adequacy, liquidity, and asset quality, which directly affect bank profitability and overall financial performance. Such fluctuations raise questions regarding the extent to which each of these variables influences ROA in Rural Banks over the past five years.

Further data from OJK in 2023 indicate that the national banking CAR remains relatively stable above the minimum regulatory threshold, averaging approximately 24%. However, several mid-sized banks, including Rural Banks, have experienced declining liquidity levels, with LDR approaching the upper regulatory limit. At the same time, non-performing loans increased significantly in 2020 and 2021 due to the pandemic. Although NPL levels began to decline in 2022–2023, credit risk remains a major challenge for the banking sector.

This phenomenon is also evident in the financial statements of Rural Banks during the 2019–2023 period, where an imbalance can be observed between productive asset growth and loan quality. ROA, as a profitability indicator, shows a fluctuating trend that is likely influenced by changes in these three variables.

Based on this condition, a research gap emerges when compared with previous studies. Although numerous studies have examined the influence of CAR, LDR, and NPL on ROA, either partially or simultaneously, most of them focus on the banking industry in aggregate or on large commercial banks in Indonesia. Very few studies specifically examine individual banks, particularly Rural Banks, within the post-pandemic period. For example, Rahmawati and Hidayat (2021) found that NPL had a significant effect on ROA in state-owned banks; however, this relationship has not been specifically examined in private banking institutions such as Rural Banks. In addition, much of the existing literature analyzes only one or two

variables without comprehensively examining the combined effect of capital adequacy, liquidity, and asset quality on financial performance.

Given this research gap, further specific and up-to-date studies are required to examine the extent to which capital adequacy, liquidity, and asset quality influence financial performance, particularly in Rural Banks during the economic transition and recovery period from 2019 to 2023.

Based on the background description, observed phenomena, and identified research gaps, this study formulates the research problems as follows: to examine the effect of the Capital Adequacy Ratio (CAR) on financial performance as measured by Return on Assets (ROA) at Bank ABC during the 2019–2023 period; to analyze the effect of liquidity, represented by the Loan to Deposit Ratio (LDR), on the financial performance of Bank ABC during the same period; to assess the effect of asset quality, measured by the Non-Performing Loan (NPL) ratio, on Bank ABC's financial performance from 2019 to 2023; and to determine whether capital adequacy, liquidity, and asset quality simultaneously have a significant influence on Bank ABC's financial performance during the 2019–2023 period.

In addition, the motivation for conducting this study is to provide empirical and practical contributions to the literature on risk management and financial performance in the banking sector. This research emphasizes the need for a more specific analysis focused on a single banking institution in the post-pandemic context to obtain a realistic description of how capital management, liquidity conditions, and asset quality contribute to bank financial performance. Furthermore, the results of this study are expected to provide valuable input for the management of Rural Banks in formulating strategic, data-driven, and objective financial policies.

METHOD

This study employed a quantitative research approach with a causal-associative design, which aimed to examine the causal relationship between variables (Sugiyono, 2021). The objective of this study was to analyze the influence of capital adequacy, liquidity, and asset quality—represented by the Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), and Non-Performing Loan (NPL), respectively—on financial performance measured by Return on Assets (ROA) at Rural Banks (Bank Perkreditan Rakyat/BPR) in the Bogor area.

The population of this study comprised all Rural Banks (BPR) operating in the Bogor area that published complete annual financial reports during the 2019–2023 period.

Sampling was conducted using a purposive sampling technique (Sekaran, 2020), based on specific criteria, namely: (1) BPRs located in the Bogor area; (2) BPRs that published complete annual financial reports for the 2019–2023 period; and (3) BPRs that disclosed CAR, LDR, NPL, and ROA data in their financial statements. Based on these criteria, 15 Rural Banks were selected as the research sample.

The data used in this study were secondary quantitative data, obtained from the annual financial reports of Rural Banks (BPR). These data were collected from the official websites of the Financial Services Authority (Otoritas Jasa Keuangan/OJK), Bank Indonesia, and the respective BPR websites. The data were compiled in a time-series format covering a five-year period from 2019 to 2023.

Data collection was carried out using a secondary data documentation method, by systematically collecting and recording financial report data related to the research variables, including CAR, LDR, NPL, and ROA, from official and credible sources.

Table 1. Operational Variables

Variable	Indicator	Measurement Unit
Capital Adequacy	Capital Adequacy Ratio (CAR)	%
Liquidity	Loan to Deposit Ratio (LDR)	%
Asset Quality	Non Performing Loan (NPL)	%
Financial Performance	Return on Assets (ROA)	%

Source : Data Processing, 2025

Before conducting multiple linear regression analysis, classical assumption testing was carried out to ensure the data met the conditions for analysis (Ghozali, 2021):

- 1) Normality Test: The Kolmogorov-Smirnov test was used to ensure the data were normally distributed.
- 2) Multicollinearity Test: The Variance Inflation Factor (VIF) was used to determine whether correlation occurred between independent variables.
- 3) Heteroscedasticity Test: The Glejser test was used to detect whether there was inequality in the variance of the residuals.
- 4) Autocorrelation Test: The Durbin-Watson (DW) test was used to determine whether there was a correlation between the current residual and the previous residual.

The regression model used in this study was:

$$ROA = \alpha + \beta_1 CAR + \beta_2 LDR + \beta_3 NPL + \epsilon$$

Where:

ROA = Financial performance

CAR = Capital Adequacy Ratio

LDR = Loan to Deposit Ratio

NPL = Non-Performing Loan

α = Constant

$\beta_1, \beta_2, \beta_3$ = Coefficients regression

ϵ = Error term

Hypothesis testing used:

- 1) t-Test (Partial): To test the influence of each independent variable on ROA.
- 2) F-Test (Simultaneous): To test the influence of CAR, LDR, and NPL simultaneously on ROA.
- 3) Coefficient of Determination (R^2): To determine how much of the variation in ROA can be explained by the three independent variables.

RESULT AND DISCUSSION

Rural Banks (BPRs) are a crucial component of the national financial system, particularly in promoting financial inclusion and supporting regional economic growth

(Kasmir, 2020). According to Law Number 10 of 1998 concerning Banking, BPRs are defined as banks that conduct business conventionally or based on Sharia principles, but do not provide payment services. Therefore, BPRs do not provide facilities such as checking accounts, credit cards, or clearing services, but instead focus on simple financial intermediation activities, namely collecting funds from the public and redistributing them in the form of credit.

As financial institutions operating locally, BPRs play a strategic role in serving low-income communities and micro, small, and medium enterprises (MSMEs). BPRs are crucial because they are able to reach groups often underserved by commercial banks, either due to limited collateral, relatively small business scale, or geographical distance from urban centers. In the context of measuring financial performance, the operational characteristics of BPRs require management to maintain a balance between capital adequacy (CAR), liquidity, and asset quality (NPL).

From a macro perspective, rural banks (BPRs) in the Bogor region are interesting to study because they combine urban and semi-rural areas with dynamic economic activity and a strong MSME base. A report (OJK.go.id, 2025) shows that rural banks in West Java, including Bogor, contribute significantly to microfinance, but also face challenges in improving efficiency and controlling credit risk (Tandelilin, 2021).

Thus, analyzing the simultaneous influence of capital adequacy, liquidity, and asset quality on the financial performance of rural banks (BPRs) is relevant and important (Siregar, 2023). This not only reflects the financial health of the institution but also reflects the extent to which BPRs are able to sustainably fulfill their role as drivers of the regional economy (Li & Wu, 2024; Nguyen & Pham, 2023).

Functions and Strategic Role of BPR

1. Local Financial Intermediation

BPR acts as an intermediary between those who have funds (savers) and those who need funds (borrowers) at the local level. It plays a crucial role in providing financial access to individuals who are not reached by commercial banks, particularly in areas where banking services are limited.

2. Promoting Financial Inclusion

BPR is present in remote and rural areas, helping to expand access for the community to formal financial services. This allows people who previously had no access to banking products and services to begin utilizing secure, formal financial solutions.

3. Supporting SMEs

BPR provides micro and small loans with simpler processes, offering an alternative to moneylenders or informal loans. The loans provided by BPR offer easier access compared to informal lending, which often has high interest rates and inflexible terms.

4. Reducing Economic Disparity

By targeting small economic sectors, BPR helps to distribute wealth more equitably. This contribution aids in reducing economic disparities, especially between urban and rural areas, as well as between large enterprises and small businesses.

Regulations and Supervision

1. Supervisory Authority

Since 2011, BPR has been supervised by the Financial Services Authority (OJK). This supervision ensures that BPR operates according to legal provisions and maintains stability in the financial system.

2. Deposit Guarantee

Deposits in BPR are guaranteed by the Deposit Insurance Corporation (LPS) under certain conditions, providing security for the community members who save money in BPR.

3. Capital and Licensing

BPR is required to meet minimum capital requirements set by OJK, according to the region in which they operate. For Region A (Jabodetabek), the required minimum capital is Rp 15 billion, Region B (excluding A and C) is Rp 10 billion, and Region C (remote areas) is Rp 6 billion.

Types of BPR Products

1. Deposit Products

BPR offers various deposit products suitable for community needs, such as savings with low initial deposits and competitive interest rates. There are also time deposits with flexible terms and fixed interest rates.

2. Credit Products

BPR provides a range of credit products, such as microcredit for small traders and households, working capital loans for micro/small businesses, and investment loans for long-term business assets. Some BPR also offer additional services like pick-up service, financial counseling, and simple technology-based services.

Performance and Challenges of BPR

1. Positive Performance

BPR is known for its low non-performing loan (NPL) ratios in microfinance, which demonstrates its effectiveness in managing risk (Martani, 2020). Many BPR remain healthy even in difficult economic conditions, due to their loyal customer base and close connection with local communities.

2. Challenges

However, BPR faces several challenges, particularly with digitalization. Many BPR have not fully adopted modern technologies, while competition is increasing with the rise of fintech and digital banks targeting the micro-segment. Additionally, OJK encourages consolidation, such as mergers and acquisitions of smaller BPR, to strengthen their capital and management (Boot, Hoffmann, Laeven, & Ratnovski, 2021; Darmawan, 2022; Hasan, Politsidis, & Sharma, 2022).

BPR Development Roadmap (OJK 2021–2025)

OJK has set out four pillars for strengthening BPR during the 2021–2025 period, which include: strengthening BPR's structure and capital, digital and operational transformation,

increasing BPR's role in financial inclusion, and reforms in regulation and supervision. These pillars aim to make BPR more robust, efficient, and capable of contributing more to the economy.

Practical Example of BPR's Role

For example, a small trader in a village who does not meet the requirements to receive a loan from a commercial bank due to a lack of salary slips or formal asset collateral can obtain a working capital loan from the local BPR. The simpler loan process provides an opportunity for small traders to grow their businesses without relying on informal loans that are often inaccessible or burdensome.

CONCLUSION

Bank Perekonomian Rakyat (BPR) plays a vital role in Indonesia's financial system, particularly in reaching grassroots communities and promoting local economic empowerment, MSME development, and equitable financial access. Despite their small-scale operations, BPRs have a substantial impact on regional economies, as evidenced by active institutions in the Bogor region such as PD BPR Bank Kota Bogor, PT BPR Dana Mandiri Bogor, PT BPR Bogor Jabar (Perseroda), and PT BPR Difobutama Bogor. To remain relevant and competitive in the digital economy era, BPRs are expected to continue innovating in digitalization, consolidating with other BPRs to strengthen their position and capacity, and improving governance quality and human resource development to ensure they remain a strong pillar of Indonesia's economic system. Future research could explore the impact of digital transformation initiatives on BPR financial performance and customer reach, as well as examine the effectiveness of consolidation strategies among BPRs in enhancing their competitive advantage and sustainability in an increasingly dynamic financial landscape.

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