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THE INFLUENCE OF CAPITAL ADEQUACY RATIO, NON-PERFORMING LOANS, AND OPERATIONAL EXPENSES TO OPERATIONAL INCOME ON THE FINANCIAL PERFORMANCE OF PT BANK NEO COMMERCE TBK

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ABSTRACT

This study aims to examine the influence of Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), and Operational Expenses to Operational Income (BOPO) on the financial performance of PT Bank Neo Commerce Tbk, measured by Return on Assets (ROA). A quantitative approach with a causal research design was applied. The study used secondary data derived from the published financial statements of PT Bank Neo Commerce Tbk, the Financial Services Authority (OJK), and Bank Indonesia, covering the period from 2017 to 2022. The population consisted of all financial reports during this period, with the sample selected through purposive sampling. The data were converted into monthly time-series through interpolation to enhance analysis granularity. Classical assumption tests and multiple linear regression analysis were conducted using SPSS. The results indicate that CAR positively and significantly affects ROA, while NPL has a negative and significant effect. BOPO, however, does not significantly influence ROA. The model demonstrates strong explanatory power regarding financial performance.

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1. INTRODUCTION

The banking sector plays an exceptionally strategic role in maintaining national economic stability, primarily through its function as a financial intermediary that mobilizes funds from surplus parties and channels them to sectors requiring productive financing. The stability and performance of this sector have a direct impact on the sustainability of economic activities at the national level (Kasmir, 2020). In recent years, this critical role has become increasingly complex as the banking industry experiences rapid digital transformation, driven by changing consumer preferences that prioritize convenience and fast, technology-based financial services.

PT Bank Neo Commerce Tbk. (BNC) is one of the banking institutions that has proactively embraced this shift, undertaking a comprehensive transformation from a traditional banking model to a fully digital platform. Through continuous innovation, BNC successfully recorded substantial growth in its customer base. By mid-2022, the number of users of BNC's digital application had soared to 18.5 million, representing a ninefold increase compared to the same period the previous year (Bisnis.com, 2022). Such a remarkable increase reflects a strong and growing public confidence in BNC's digital banking services, highlighting the bank's ability to capture market opportunities amid intensifying competition.

However, alongside these promising developments, BNC faces significant challenges, particularly concerning the management of financial risks that accompany rapid digital expansion. As Pratiwi, D., & Kurniawan, B. (2018) noted, maintaining a healthy Capital Adequacy Ratio (CAR) is fundamental to ensuring that banks have adequate capital buffers to absorb potential losses. Regardless of the pace of growth, insufficient capital adequacy threatens the bank's financial stability and undermines its capacity for sustainable expansion.

Equally critical is the management of credit risk, as indicated by the Non-Performing Loan (NPL) ratio. Poor-quality credit portfolios lead to an increased burden of provisioning for loan losses, thereby reducing net interest income and weakening overall bank performance. Santoso

(2022) emphasized that a high NPL ratio directly correlates with declining bank profitability. Empirical evidence supports this concern, as BNC's gross NPL ratio escalated from 1.78% in mid-2022 to 3.69% by early-2023, signaling an urgent need for strengthened credit risk management (Bisnis.com, 2023).

Furthermore, operational efficiency remains a cornerstone of financial performance, especially in the digital banking landscape. Rahmawati and Sari (2020) asserted that efficient management of operational expenses enhances profitability by optimizing cost structures. Encouragingly, BNC has demonstrated improvements in this area, with its Operational Expenses to Operating Income (BOPO) ratio decreasing from 127.28% in 2021 to 112.27% in 2022 (Bisnis.com, 2023). Despite this progress, the ratio remains high, indicating that further efficiency improvements are essential to enhance overall competitiveness. Notably, most existing studies on the relationship between CAR, NPL, and operational efficiency and bank financial performance have predominantly focused on conventional banks with traditional business models (Christiano, M., Tommy, P., & Saerang, I, 2014). Meanwhile, research specific to digital banks, especially BNC, is still limited. Digital banks inherently operate under different risk environments; as Rachman (2022) highlighted, they face higher initial technological investments and elevated cybersecurity risks, both of which exert considerable pressure on their operational cost structures.

This research gap is further accentuated by the dynamic macroeconomic environment. According to Bank Indonesia (2022), factors such as interest rate volatility, currency fluctuations, and inflationary pressures are heightening credit risks and operational burdens across the banking sector, with digital banks being particularly vulnerable due to their reliance on online transactions. Additionally, stringent regulatory requirements concerning capital adequacy further constrain banks' flexibility to navigate these external challenges (Wicaksono, 2021).

Empirically, BNC's expansion trajectory has been notable. By the end of 2022, the bank's total credit disbursement surged to IDR 10.24 trillion, a sharp increase of 139.6% from the previous year (Bisnis.com, 2023). This growth was accompanied by a significant rise in net interest income, which grew by 436.94%, reaching IDR 1.69 trillion. The bank's total assets also increased by 73.7%, amounting to IDR 19.69 trillion by December 2022, further demonstrating its aggressive expansion strategy. Nevertheless, BNC continues to grapple with profitability challenges. From a funding perspective, BNC experienced a 37.86% year-on-year growth in Third-Party Funds (TPF) during the first half of 2022, reaching IDR 15.22 trillion (Bisnis.com, 2023). However, the bank's relatively low proportion of low-cost funds, specifically Current Account Saving Account (CASA), highlights the necessity for more strategic fundraising initiatives to create a balanced and sustainable funding structure.

Considering these dynamics, this study is both timely and necessary to address the existing gap in academic literature by specifically examining the interplay between Capital Adequacy Ratio, Non-Performing Loan, and Operational Expenses to Operating Income and their combined impact on the financial performance of digital banks, with a focused case study on PT Bank Neo Commerce Tbk. As emphasized by Kurniawan, H. (2022), an integrative approach to analyzing internal banking variables is essential to comprehensively understand the financial performance determinants of digital financial institutions.

The findings of this study are anticipated to offer valuable contributions both theoretically and practically. For academia, the study enriches the limited discourse on digital banking performance. For practitioners, it provides actionable insights into enhancing risk management strategies and operational efficiency. Additionally, the research outcomes are expected to assist regulators in crafting more adaptive policies and enable investors to make more informed, data-driven decisions in an increasingly competitive financial ecosystem. Thus, this research carries substantial academic and practical significance, making it a critical foundation for strengthening the future resilience and competitiveness of PT Bank Neo Commerce Tbk in Indonesia's evolving digital banking landscape.

2. METHODS

This study adopts a quantitative approach to analyze the influence of Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), and Operational Expenses to Operating Income (BOPO) on the financial performance of PT Bank Neo Commerce Tbk, as measured by Return on Assets (ROA). The quantitative method was chosen as it enables an objective and systematic examination of the relationships among variables, providing results that are generalizable across broader contexts (Sugiyono, 2021). This research is causal in nature, aiming to determine the extent to which the independent variables affect the dependent variable within a structured and measurable framework.

The data utilized in this study are secondary data collected from the published financial statements of PT Bank Neo Commerce Tbk, as well as credible financial sources such as the Financial Services Authority (OJK) and Bank Indonesia. The observation period covers the years 2017 to 2022. This time frame was selected to provide a comprehensive overview of BNC's financial dynamics amidst the rapid digital transformation of the banking industry and the economic volatility triggered by global factors such as the COVID-19 pandemic.

To obtain more granular data for robust analysis, the annual data were converted into monthly time-series data through interpolation using the EViews software. This interpolation technique enhances the number of observations without compromising data validity and helps mitigate the distortion effects of seasonal variations that are often less apparent in annual data (Gujarati & Porter, 2020). Consequently, the analysis captures variable movements more precisely, improving the accuracy of the model estimations.

The interpolated data were subsequently analyzed using the latest version of SPSS software. SPSS was employed to facilitate the processing of inferential statistical analyses, including classical assumption tests, multiple linear regression analysis, as well as significance tests—both partial (t-test) and simultaneous (F-test). Utilizing SPSS allows for a more accurate identification of causal relationships between variables in a measurable manner (Ghozali, 2020).

The independent variables in this study consist of the Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), and Operational Expenses to Operating Income (BOPO). The Capital Adequacy Ratio reflects the bank's capacity to absorb potential losses (Pratiwi, D., & Kurniawan, B. 2018). Non-Performing Loan serves as a proxy for credit quality risk (Santoso, 2022). Meanwhile, BOPO represents the bank's level of operational efficiency in managing expenses relative to operational income (Rahmawati & Sari, 2020). The dependent variable in this study is financial performance, proxied by Return on Assets (ROA). ROA was selected as it is a widely accepted indicator for evaluating a company's ability to generate profits from its total assets (Hery, 2023). ROA provides an objective measure of asset utilization effectiveness in producing net income, making it highly relevant for this research, which focuses on a digital bank with a dynamic asset structure like PT Bank Neo Commerce Tbk.

Prior to hypothesis testing, classical assumption tests were conducted to ensure that the data met the criteria for classical linear regression analysis. These tests included normality, multicollinearity, heteroscedasticity, and autocorrelation assessments. Once all assumptions were satisfied, multiple linear regression analysis was performed to evaluate both the simultaneous and partial effects of the independent variables on BNC's financial performance, as measured by ROA (Ghozali, 2020). Additionally, an F-test was conducted at a significance level of 5% ($\alpha = 0.05$) to examine the overall significance of the model. Partial effects of each independent variable were assessed using a t-test at the same significance level. The coefficient of determination (R^2) was also analyzed to determine the extent to which variations in the dependent variable could be explained by the independent variables in the model.

3. RESULTS AND DISCUSSION

Descriptive Statistics

Table 1. Descriptive Statistics

		Capital Adequacy Ratio	Non-Performing Loans	Operational Expenses to Operational Income	Financial Performance
N	Valid	72	72	72	72
	Missing	12	12	12	12
Mean		2.6661	.0027	8.7940	-.0029
Median		2.4486	.0020	8.2068	-.0015
Mode		1.35[a]	.00	5.82[a]	-.01[a]
Std. Deviation		1.12563	.00302	1.41314	.00479
Minimum		1.35	-.01	5.82	-.01
Maximum		4.76	.01	12.93	.00
Sum		191.96	.20	633.17	-.21

a. Multiple modes exist. The smallest value is shown

Table 1 presents the descriptive statistics for the variables analyzed in this study, including Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Operational Expenses to Operational Income (BOPO), and Financial Performance (measured by Return on Assets - ROA). Each variable consists of 72 valid observations, with 12 missing data points. The average value of CAR is 2.6661, with a median of 2.4486 and a standard deviation of 1.12563, indicating moderate variability among data points. The minimum and maximum CAR values are 1.35 and 4.76, respectively. The mode, or the most frequent value, is 1.35. For NPL, the mean value is 0.0027 with a standard deviation of 0.00302, indicating a relatively low and tightly clustered distribution. The BOPO variable has an average of 8.7940 and shows wider variability with a standard deviation of 1.41314. Its values range from 5.82 to 12.93. Meanwhile, Financial Performance (ROA) has a negative mean value of -0.0029 and a standard deviation of 0.00479, suggesting a slight net loss during the period observed. The minimum value recorded is -0.01, and the maximum is 0.00. These descriptive results offer an initial insight into the distribution and spread of data used in the regression analysis.

Classical Assumption Test

Normality Test

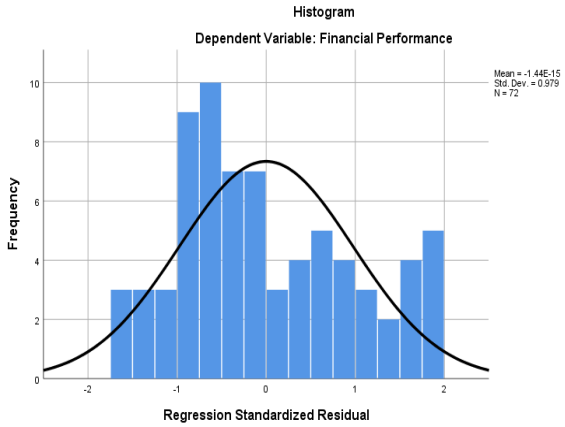

Figure 1. Normality Test

Figure 1 displays the results of the normality test using a histogram of the regression standardized residuals for the dependent variable, Financial Performance. The shape of the

histogram closely follows the bell curve (normal distribution line), indicating that the residuals are approximately normally distributed. This suggests that the assumption of normality is reasonably satisfied, which is essential for the validity of the linear regression analysis. The distribution appears symmetrical with no extreme skewness or kurtosis, further supporting the adequacy of the data for inferential statistical testing.

2. Linierity Test

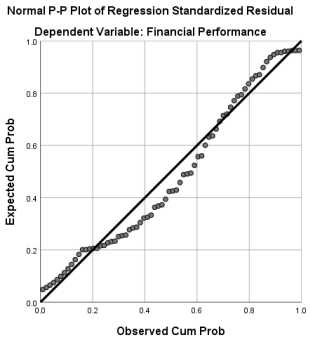

Figure 2. Normal P-P Plot

Figure 2 presents the Normal P-P Plot of regression standardized residuals for the dependent variable, Financial Performance. The data points are closely aligned along the diagonal line, indicating that the residuals follow a normal distribution. This alignment supports the assumption of normality in the regression model. The consistency between the observed cumulative probabilities and the expected cumulative probabilities suggests that the model does not suffer from serious deviations from normality, thus validating the use of parametric tests in the subsequent analysis.

Autocorrelation Test

Table 2. Autocorrelation Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.917[a]	.842	.835	.00195	1.833

a. Predictors: (Constant), Operational Expenses to Operational Income, Capital Adequacy Ratio, Non-Performing Loans
b. Dependent Variable: Financial Performance

Table 2 shows the results of the autocorrelation test based on the Durbin-Watson statistic, which is reported at 1.833. This value lies within the acceptable range of 1.5 to 2.5, indicating that there is no significant autocorrelation in the residuals of the regression model.

Multicollinearity Test

Table 3. Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Capital Adequacy Ratio	.784	1.276
	Non-Performing Loans	.543	1.843
	Operational Expenses to Operational Income	.589	1.698

Table 3 presents the results of the multicollinearity test using Tolerance and Variance Inflation Factor (VIF) values for each independent variable. All tolerance values are above 0.1 and

all VIF values are well below the critical threshold of 10, indicating no multicollinearity issues among the variables. Specifically, the Capital Adequacy Ratio has a tolerance of 0.784 and a VIF of 1.276; Non-Performing Loans show a tolerance of 0.543 and a VIF of 1.843; while Operational Expenses to Operational Income has a tolerance of 0.589 and a VIF of 1.698. These results confirm that each independent variable provides unique information to the model without redundancy.

Multiple Regression Test

Table 4. Multiple Regression Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.011	.002		5.446	.000		
	Capital Adequacy Ratio	.044	.000	1.026	18.836	.000	.784	1.276
	Non-Performing Loans	-.617	.104	-.389	-5.942	.000	.543	1.843
	Operational Expenses to Operational Income	-2.076	.000	-.006	-.097	.923	.589	1.698

a. Dependent Variable: Financial Performance

The results of the multiple regression analysis presented in Table 4 demonstrate the influence of Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), and Operational Expenses to Operational Income (BOPO) on the financial performance of PT Bank Neo Commerce Tbk, as proxied by Return on Assets (ROA). The regression model yields the following equation:

$$ROA=0.011+0.044(CAR)-0.617(NPL)-2.076(BOPO)$$

Ratio has a positive and statistically significant effect on financial performance, with a coefficient of 0.044 and a significance level of 0.000. This finding suggests that a higher CAR enhances the bank's ability to absorb risks and contribute positively to profitability. In contrast, the Non-Performing Loans variable shows a negative and significant influence on ROA, with a coefficient of -0.617 and a p-value of 0.000. This indicates that an increase in problematic loans significantly reduces the bank's financial performance, which is consistent with the theory that poor credit quality weakens profitability through higher provisioning costs and reduced interest income.

Meanwhile, Operational Expenses to Operational Income (BOPO) presents a negative coefficient of -2.076, but the significance value of 0.923 implies that this variable does not have a statistically meaningful effect on financial performance. Despite being a key indicator of efficiency, BOPO's insignificant result in this context may reflect either the delayed impact of cost efficiencies on profitability or the dominance of other financial variables such as risk and capital management in the digital banking environment. In conclusion, these results highlight that capital adequacy and credit risk are the most critical internal determinants of PT Bank Neo Commerce's financial performance, while operational efficiency appears to play a less direct role during the period under study.

Table 5. Simultaneous Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.001	3	.000	120.583	.000[b]
	Residual	.000	68	.000		
	Total	.002	71			

a. Dependent Variable: Financial Performance
b. Predictors: (Constant), Operational Expenses to Operational Income, Capital Adequacy Ratio, Non-Performing Loans

Table 5 presents the results of the simultaneous significance test (ANOVA), which evaluates whether the independent variables collectively influence the dependent variable, financial performance. The F-value obtained is 120.583 with a significance level (Sig.) of 0.000, which is far below the threshold of 0.05. This result indicates that the regression model is statistically significant, meaning that Capital Adequacy Ratio, Non-Performing Loans, and Operational Expenses to Operational Income, when considered together, have a significant joint effect on the financial performance of PT Bank Neo Commerce Tbk. Therefore, the null hypothesis, which states that all regression coefficients are equal to zero, is rejected.

Table 6. Coefficient of Determination

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.917[a]	.842	.835	.00195	1.833

a. Predictors: (Constant), Operational Expenses to Operational Income, Capital Adequacy Ratio, Non-Performing Loans
b. Dependent Variable: Financial Performance

Table 6 shows the coefficient of determination (R^2), which indicates the goodness-of-fit of the regression model. The R Square value of 0.842 implies that 84.2% of the variation in financial performance (ROA) of PT Bank Neo Commerce Tbk can be explained by the three independent variables: Capital Adequacy Ratio, Non-Performing Loans, and Operational Expenses to Operational Income.

Discussion

The findings of this study demonstrate that two out of the three independent variables—Capital Adequacy Ratio (CAR) and Non-Performing Loans (NPL)—have a significant influence on the financial performance of PT Bank Neo Commerce Tbk, as measured by Return on Assets (ROA). Conversely, Operational Expenses to Operational Income (BOPO) was found to have no statistically significant effect. These results provide important insights into the internal factors driving profitability in the context of digital banking institutions.

The positive and significant influence of CAR (coefficient = 0.044; $p < 0.05$) is consistent with theoretical expectations that adequate capital serves as a financial buffer against risk and enhances the institution's ability to withstand economic shocks. According to Pratiwi, D., & Kurniawan, B. (2018), CAR is a fundamental indicator of banking soundness, as it reflects the bank's capacity to absorb potential losses while continuing its operations. A higher CAR provides investors and regulators with assurance that the bank is financially healthy, which, in turn, improves market confidence and contributes to overall financial performance. These findings also align with previous studies by Christiano, M., Tommy, P., & Saerang, I (2014), who reported a significant positive effect of CAR on profitability in Indonesian banking firms, including conventional and transitioning digital banks.

On the other hand, NPL shows a negative and significant relationship with ROA (coefficient = -0.617; $p < 0.05$), supporting the assertion that deteriorating credit quality undermines financial

performance. When non-performing loans increase, banks are required to set aside more provisions for loan losses, reducing net interest income and consequently diminishing profitability. Santoso (2022) underscores that high NPL levels are indicative of poor risk assessment and ineffective credit management, which can threaten a bank's sustainability. Empirical support for this relationship is also found in the work of Sulton, F. A., Ardira, G. A., & Hersugondo, H. (2022), who identified NPL as a key determinant of declining bank performance across commercial banks in Indonesia. Therefore, the results reinforce the imperative for robust credit risk management systems, especially for digital banks like BNC that are rapidly expanding their loan portfolios in a competitive environment.

Interestingly, BOPO—although widely recognized as a measure of operational efficiency—was found to have no significant impact on ROA (coefficient = -2.076; p = 0.923). This outcome suggests that variations in operational expense ratios did not materially affect profitability during the observation period. Several explanations may account for this finding. First, as noted by Rahmawati and Sari (2020), the effects of operational cost efficiencies may not be immediately reflected in financial performance and may require a longer time horizon to materialize. Second, in the context of digital banking, other costs—such as upfront investments in technology infrastructure and cybersecurity—may distort BOPO metrics and mask their real impact on profitability (Rachman, 2022). This aligns with the findings of Supriyadi (2022), who observed that digital banks often experience a lag in operational efficiency gains due to the high costs of transformation and digital adoption.

Moreover, the simultaneous significance test (F-test) confirms that CAR, NPL, and BOPO collectively exert a statistically significant influence on ROA (F = 120.583; Sig. = 0.000). This affirms the relevance of integrating multiple financial indicators when assessing bank performance, as supported by Kurniawan, H. (2022), who emphasized the need for a multidimensional approach in analyzing the financial dynamics of digital banks in Indonesia.

4. CONCLUSION

The results of this study conclude that capital adequacy and credit risk management play a central role in influencing the financial performance of PT Bank Neo Commerce Tbk. The Capital Adequacy Ratio (CAR) shows a positive and significant relationship with Return on Assets (ROA), indicating that a strong capital position enhances the bank's ability to absorb financial shocks and improve profitability. In contrast, the Non-Performing Loans (NPL) variable demonstrates a negative and significant effect, suggesting that poor credit quality undermines financial stability and reduces the bank's performance. Operational Expenses to Operational Income (BOPO), however, does not exhibit a statistically significant influence on ROA. This implies that operational efficiency, although important in theory, may not directly translate into profitability improvements in the short term—especially within the unique environment of digital banking, where upfront investments in technology and infrastructure are high. Moreover, the joint analysis of all variables confirms their combined relevance in explaining the bank's financial performance. These findings highlight the importance of strengthening capital structure and implementing effective credit risk controls. For digital banks undergoing rapid transformation, maintaining financial resilience and ensuring asset quality remain essential for sustaining long-term growth and competitiveness in an evolving financial sector landscape.

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