



The influence of financial technology and capital adequacy ratio (CAR) on the financial performance of bank

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ABSTRACT

The primary objective of the inquiry is to examine the impact of capital adequacy ratios and financial technology on banks' financial performance. This study utilised Capital Adequacy Ratio and Financial Technology as measured by Mobile Banking as independent variables. In this study, Financial Performance as determined by Return On Assets is the dependent variable, and the mediator variable is bank operational efficiency. The methodology used is a quantitative approach employing multiple regression analysis techniques. This analysis uses data from PT Mandiri Bank from 2018 to 2022. This investigation utilises secondary data as its source of information. Secondary data was extracted from Mandiri Bank's annual financial statements. The impact of mobile banking and capital adequacy ratio on return on assets is negligible and positive, respectively. Meanwhile, the ratio of Operational Costs to Operational Income has no impact on Mobile Banking's effect on ROA. There is no discernible effect of adjusting variable operational costs against operational income on the correlation between the capital adequacy ratio and return on assets.

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INTRODUCTION

The world has entered the digital era, affecting nearly every aspect of human existence. In general, the digital age is an era in which all activities and tasks are directly related to technology. This significant change has altered how humans learn, work, communicate, and interact with their surrounding environment. The development of the digital age must be connected to the continuous growth and globalization of technology, which makes access to innovations easier. As a result, numerous innovations have emerged to make daily life easier for humans. The primary goals of this innovation are to increase efficiency, save time, and make activities more comfortable (Arif & Masdupi, 2020).

Digitalization has occurred and provides numerous benefits to contemporary life. Communication and transaction ease, as well as increased mobility and flexibility, are some of the benefits that have been realized, along with other positive effects. In contrast to the pre-digital era, people can engage in intense interactions regardless of location. Because digitalization simplifies tasks and can directly save time, it is unsurprising that many parties are optimistic about this development (Azmi & Yuniawati, 2022).

Digitalization has permeated every industry, including finance, accelerating technological growth. The result of merging technology with finance is called Financial Technology, which occurs after changes in people's lives. Especially in today's digital era, people need instant access to all information and activities more than ever. This is a consequence of the digitalization that has occurred in the current digital age, in which one way to obtain information is to use digital tools such as mobile phones, the internet, and other digital devices. As a result of the existing conveniences, the populace desires that all activities become more convenient or extremely convenient and instant.

Financial Technology is the specialized response in the financial sector to the desire and imperative to continue adapting to the current environment. Financial Technology resolves every transaction problem, so people no longer need to look for retail locations directly, go to a bank or ATM to transmit money, and perform other tasks. In other words, Financial Technology enables more accessible, cost-effective, and cheaper access to various financial services. M-Banking (Mobile Banking) and E-Payment (Electronic Payment) are examples of Financial Technology innovations currently utilized by society.

M-banking is a service that enables bank consumers to conduct banking transactions using cell phones connected to the Internet. Through the application developed by the relevant bank, this service is readily accessible. This application has enabled the creation of an abundance of transaction menus. Among the many features of this M-Banking service is the ability to check account balances, transfer account balances, and pay expenses. E-payment is a payment system that utilises an internet network connection. Many UMKMs are currently implementing digital or contactless payment methods. The only requirements for this E-Payment method are internet access and a mobile device, making it highly convenient for merchants and customers. E-Payment provides a significantly higher level of security assurance due to the immediate and direct transfer of funds. The E-Payment system in Indonesia that has attained national standardisation is the QRIS of the Bank of Indonesia.

Mandiri Bank, part of the Indonesian State-Owned Enterprises Agency, is among the banks that utilize Financial Technology innovations such as M-Banking. In addition to contributing to the growth of the Indonesian economy, Mandiri Bank is also responsible for increasing public financial literacy. In addition, Mandiri Bank has many branches and ATMs in every city and has a large customer base. Mandiri Bank, like other financial institutions, continues to take numerous steps to meet customer needs and to grow. This relates to Mandiri Bank's financial performance because, as a bank whose purpose is to aid in the development of the Indonesian economy, Mandiri Bank must have strong financial performance. Financial Technology implementation at Mandiri Bank is anticipated to positively impact financial performance (Miftahuddin & Hendars, 2019).

With the implementation of numerous Financial Technology innovations, Mandiri Bank experienced several positive effects, including increased efficiency in bank operations. This Financial Technology innovation has not only had a positive impact on the financial sector but has also benefited the general public. Mandiri Bank has made M-banking services available to the general public so that transactions can be conducted. With this service, customers are no longer required to visit an ATM or bank in person, making the transaction process more efficient. The populace can conduct transactions wherever they choose using their mobile devices. For the bank to reduce its operating expenses, such as employee operating expenses, building rental costs, and other expenses.

Effective risk management for banks requires them to place a high priority on efficient operations. In determining an institution's capacity to manage these risks, the Capital Adequacy Ratio is vital. The Capital Adequacy Ratio (CARR) is a financial indicator utilized to assess the capability of a company and complete high-risk operations by verifying the presence of sufficient capital (Karim & Hanafia, 2020). A higher CAR indicates that the bank can better withstand the risks associated with its assets. This affords the bank a competitive edge in supporting its operational activities, allowing it to achieve its utmost profitability.

Operating Expense to Operating Income (BOPO) can be used to determine the efficacy attained by banks through the application of the Financial Technology and Capital Adequacy (CAR) Ratio. According to (Malini & Putri, 2020), BOPO is a ratio that determines a bank's operational capacity and efficiency (Malini & Widayatmoko, 2021). Banking operations that positively impact financial performance become more efficient as the BOPO ratio falls. By analysing the BOPO ratio, financial managers can determine which banks can effectively manage and control operational expenses to support more efficient bank operations.

Previous research has examined various crucial aspects of the bank's financial performance. In Ferdinandus et al. (2022) study titled "Analysis of the Influence of Financial Technology on the Profitability of State-Owned Banking Companies in Indonesia," it was determined that Mobile Banking has an impact on Return On Asset (Ferdinandus et al., 2022). In the literature, however, there are also contradictory findings, such as Ayuningtyas & Sufina study, "The Effect of Using Mobile Banking, Internet Banking, and ATM on Performance Banking Finance (Case Study of the Conventional Bank Sector Registered in Indonesian Stock Exchange) 2017-2021," which suggests that Mobile Banking not significantly on banking financial performance (Ayuningtyas & Sufina, 2023).

Additionally, Astuti's (2022) research titled "The Influence of CAR, FDR, NPF, and BOPO on Sharia Banking Profitability" indicates that the Capital Adequacy Ratio is not significant on Sharia banking profitability (Astuti, 2022). However, Rahmawati et al., (2021) study titled "Analysis of the Influence of CAR, NPF, FDR, BOPO, and NOM on Financial Performance Sharia Commercial Bank for the Period 2015-2019" discovered that Variable CAR significantly on Financial Performance Sharia Commercial Bank (Rahmawati et al., 2021).

The researcher was motivated to do the research titled "the Influence of Financial Technology and Capital Adequacy Ratio (CAR) on the Financial Performance of Banks" after observing a variety of research results indicating differences in the relation of Financial Technology, Capital Adequacy Ratio, and bank financial performance. This research is necessary so that banks can understand how to improve their operational efficiency by focusing on the use of financial technology and capital adequacy ratios, making better business decisions, and assisting bank management in developing better strategies related to the application of financial technology and management capital. Aside from that, it improves understanding of the relationship between financial technology, capital adequacy ratios, and bank operational efficiency in the context of financial performance and can serve as a base for future research in the financial field.

RESEARCH METHOD

According to Bank Indonesia (2020), Financial Technology is the result of combining financial services with technology, leading to changes in business models (Mulyanti & Nurhayati, 2022). Financial technology is viewed as a new form of monetary services trading that combines information technology with similar financial services for payments, money transfers, and asset management. In addition, Financial Technology encompasses technology-based financial solutions that include all the services and products typically offered by traditional financial institutions such as banks (Supriyadi et al., 2023). One type of Financial Technology that is growing rapidly in

Indonesia is digital banking, which includes Mobile Banking, Internet Banking, SMS Banking, and others (Wijaya, 2020).

Mobile Banking is a banking service that allows consumers to conduct transactions via smartphone (Ayuningtyas & Sufina, 2023). The continued expansion of Mobile Banking in Indonesia is due to the convenience and flexibility offered to customers during transactions and information access (Syahputra & Suparno, 2022). The available services can enhance the capability to conduct banking transactions, pay expenses, create accounts, and access approved information (Imamah & Ayu Safira, 2021). Bank transactions can be accessed anytime and from any location (Amali & Selvi, 2021). According to research, Mobile Banking significantly ROA (Widyandri & Nisful, 2022) (Samsu et al., 2020) (Indrianti et al., 2022). Research indicates that Mobile Banking does not significantly on ROA (Thio & Yusniar, 2021).

Superior bank performance can support business growth by providing investment funds and working capital to business entities so that they can carry out their responsibilities (Ningsih & Dewi, 2020). Various financial ratios that reflect multiple indicators can affect a bank's financial performance. Return on Asset (ROA) is a fundamental financial performance indicator for banks (Ichsan & Nasution, 2020). Return On Assets indicates the probability that a company will generate profits after taxes by utilizing all its assets. This ratio is significant for determining the extent of management effectiveness and efficacy in administering all company assets (Mayasari et al., 2021). A bank's performance improves as Return On Assets (ROA) increases, indicating that it generates more profits (Grilseda & Riyadi, 2021).

The Capital Adequacy Ratio assesses the ability of a bank to sustain operations by comparing its capital to the dangers associated with its assets, as determined by the ATMR ratio. When CAR is high, banks can better manage asset-related risk, which improves their ability to raise capital and boosts their bottom line (Dwiningsih & Ilhami, 2023). According to research, the Capital Adequacy Ratio significantly and positive financial performance of banks (Yuliana & Listari, 2021) (Pratama et al., 2021). According to the research, the Capital Adequacy Ratio (CAR) not significantly financial performance (Wirnawati & Diyani, 2019) (Efriyenty, 2020) (Syachreza & Gusliana, 2020).

Operational efficiency refers to assessing whether a bank's activities are conducted accurately and in alignment with the objectives of its shareholders. As highlighted by Sudarini in 2005, efficiency plays a pivotal role in shaping a bank's performance as it signifies its capacity to make the most effective use of all its production resources (Fadhil & Riza, 2020). BOPO relates operating expenses to operating income. The BOPO level decreases as the bank's management becomes more effective and its resources are used more efficiently (Sitompul & Nasution, 2019). According to Dendawijaya (2003), any increase in operational expenses will decrease the Return On Assets (ROA) (Syafina, 2019). BOPO can moderate the Capital Adequacy Ratio and Return On Assets (Syafina, 2019). An additional investigation shows that BOPO can moderate the influence of Mobile Banking on increasing profitability (H et al., 2023).

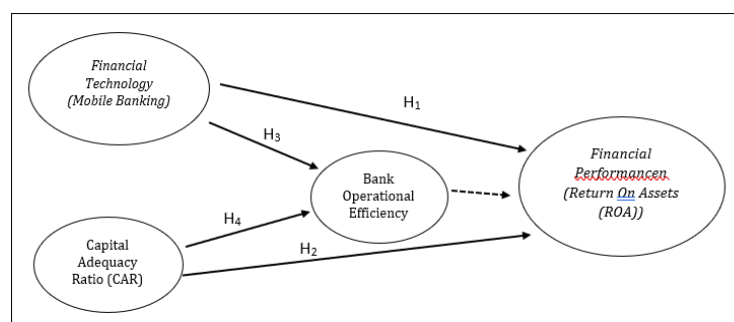


Figure 1. Research Framework

Mobile Banking and Return On Aset (ROA)

According to Kurniawati, Wahyu, and Alfi (2017), Mobile Banking is a banking service accessible through a cellular phone network or Global For Mobile Communication or CDMA mobile phone utilizing cellular operator-provided data services (Sudirman et al., 2023). It is possible to check account balances, view account changes, transfer funds, pay expenses and make purchases via the Mobile Banking platform. In addition, these transactions are available around the clock, 24 hours a day. Return On Assets (ROA) represents the relationship between a corporation's earnings prior to accounting for interest and taxes and the total value of its assets (Syafina, 2019). ROA indicates the skills of a bank to generate returns on its assets. Consequently, the higher a bank's ROA, the more profitable it is (Yasin Maulana et al., 2023). Research by Imamah & Safira (2021) said that Mobile Banking is positive but insignificant on ROA, ROA, and NPM (Imamah & Ayu Safira, 2021).

H1 = Mobile Banking influences Return On Aset (ROA)

Capital Adequacy Ratio (CAR) and Return On Aset (ROA)

Capital Adequacy Ratio, according to Dendawijaya (2005), is the ratio of minimal capital provision obligations (KPM) that banks must satisfy (Prasetyo & Yushita, 2019). A higher Capital Adequacy Ratio signifies an enhanced capacity of the financial institution to withstand the risks inherent in credit and potentially perilous investment endeavours (Chaerunisak et al., 2019). According to research by Widyastuti & Aini (2021), the Capital Adequacy Ratio does not significantly Return On Assets of commercial banks in Indonesia from 2017-2019 (Widyastuti & Aini, 2021). In the meantime, Prasetyo and Yushita's (2019) investigation discovered the Capital Adequacy Ratio (CAR) positive and significant Financial Performance of Rural Banks in the Special Region of Yogyakarta for the 2015-2016 period (Prasetyo & Yushita, 2019).

H2: Capital Adequacy Ratio (CAR) influences Return On Aset (ROA)

Bank Operational Efficiency mediates the relationship between Mobile Banking and Return On Aset (ROA) at Mandiri Bank

Operating Expenses to Operating Income (BOPO) serves as an indicator for evaluating the effectiveness of a bank's management in overseeing and controlling its operational activities (Astuti, 2022). Analysing the spending efficacy of a bank or BPO can reveal its operational performance. Bank operational costs can be compared with operating income to measure the BOPO ratio. According to research conducted by H et al. (2023), BOPO can moderate the influence of Mobile Banking on increasing profitability (H et al., 2023).

H3: The Bank's Operational Efficiency is able to moderate the relationship between Mobile Banking and Return On Aset (ROA) at Mandiri Bank

Bank Operational Efficiency mediates the relationship between Capital Adequacy Ratio (CAR) and Return On Aset (ROA) at Mandiri Bank

According to Rivai et al. (2013), Operating Expenses to Operating Income (BOPO) determines institutions' operational capability and effectiveness. A lower BOPO ratio indicates a favourable situation, highlighting the bank's capability to meet its operational costs using the income generated from its operations (Syafina, 2019). According to research by Syafina (2019), the Operational Expenses to Operating Income (BOPO) variable moderated the relationship between Capital Adequacy Ratio (CAR), Non-Performing Financing (NPF), and Financing to Deposit Ratio (FDR) on Return On Assets (ROA) (Syafina, 2019).

H4: Bank Operational Efficiency is able to moderate the relationship between Capital Adequacy Ratio (CAR) and Return On Aset (ROA) at Mandiri Bank

This empirical investigation of PT Mandiri Bank uses quantitative research methods. This study used Capital Adequacy Ratio (CAR) and Financial Technology, as measured by Mobile Banking, as independent variables. In this study, the dependent variable is Financial Performance as indicated by Return On Asset (ROA), while the mediating variable is bank operational efficiency (BOPO). The secondary source of information utilized in this analysis. Secondary sources of data utilized in this investigation are the annual financial statements of Mandiri Bank, which can be obtained at <https://bankmandiri.co.id/web/ir/annual-reports>. This research uses multiple linear regression analysis to analyze its data, while the MRA Test, T-test, and F-Test are used to test the hypothesis using Eviews 12.

The following is the multiple linear regression equation for the hypothesis:

$$Y = c + b_1X_1 + b_2X_2 + b_3Z + e$$

$$Y = c + b_1X_1 + b_3Z + b_4X_1_Z + e$$

$$Y = c + b_2X_1 + b_3Z + b_5X_2_Z + e$$

Information:

Y = Financial Performance (ROA)

C = Constant

X₁ = Financial Technology (Mobile Banking)

X₂ = Capital Adequacy Ratio (CAR)

Z = Bank Operational Efficiency (BOPO)

X_{1_Z} = Interaction of Financial Technology (Mobile Banking) and Bank Operational Efficiency (BOPO)

X_{2_Z} = Interaction of Capital Adequacy Ratio and Bank Operational Efficiency (BOPO)

b₁..... b₅ = Regression Coefficient

e = error of term

RESULTS AND DISCUSSIONS

3.1 Result

Classical Assumption Test

Normality Test

Table 1. Normality Test

N	Mean	Median	Maximum	Minimum	Std.Dev	Jarque-Bera	Probability
5	-6.94e-18	-5.30e-05	0.000205	-0.000132	0.000139	0.576178	0.749695

It displays the outcomes of the data distribution based on Table 1. When the significance value exceeds 0.05, the residual value follows a normal distribution, while a significance value below 0.05 signifies that the residual values do not exhibit a normal distribution. According to the outcomes of the previous test, the Probability Jarque-Bera value of 0.749695 is greater than the significance of 0.05. Therefore, the remaining data in this analysis have a normal distribution.

Autocorrelation Test

Table 2. Autocorrelation Test

R-squared	Adjusted R-squared	Durbin-Watson Stat	F-statistic	Prob (F-statistic)
0.999577	0.998307	2.880143	787.3130	0.026191

Using the Durbin-Watson method, autocorrelation tests can be performed. Table 2 indicates that the Durbin-Watson statistic is 2.880135 with a confidence level of 5%. In conclusion, the regression model has a problem with negative autocorrelation.

Heteroscedasticity Test

Table 3. Heteroscedasticity Test

F-statistic	Obs*R-squared	Scaled explained SS	Prob. F (3,1)	Prob. Chi-squared (3)	Prob. Chi-squared (3)
0.750399	3.462105	0.341131	0.6681	0.3257	0.9521

Heteroscedasticity is ordinarily absent from efficient regression models. Various tests, among which the Glejser test stands out, are applicable for ascertaining the existence of heteroscedasticity. If the Significance value (Sig) is more significant than 0.05, the Glejser test concludes that heteroscedasticity is absent in the regression model. Heteroscedasticity is identified when the Significance value (Sig.) is less than 0.05. In Table 3, the Probability Chi-Square (3) is 0.3257, more significant than 0.05. Therefore, there are no indications of heteroscedasticity in these data.

Multicollinearity Test

Table 4. Multicollinearity Test

	X1	X2	Z	Y
X1	1.000000	-0.954686	0.034760	-0.3394735
X2	-0.954686	1.000000	0.107148	0.306194
Z	0.034760	0.107148	1.000000	-0.907571
Y	-0.3394735	0.306194	-0.907571	1.000000

A successful regression analysis should be devoid of multicollinearity, which helps confirm the absence of a strong association between independent variables. The decision criterion for the multicollinearity test is that multicollinearity is considered present when the significance value exceeds 0.8. Conversely, when the significance value is below 0.8, there are no indications of multicollinearity. Table 4 demonstrates that the data above do not exhibit multicollinearity. The obtained results are less than 0.8.

Regression Test

Table 5. Regression Test

Dependent Variabel : ROA				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.045102	0.012400	-3.637235	0.1708
Mobile Banking	0.007746	0.001503	5.153325	0.1220
CAR	0.627139	0.061626	10.17647	0.0624
BOPO	-0.084489	0.001959	-43.13448	0.0148
R-squared		0.999577		
Adjusted R-squared		0.998307		
F-statistic		787.3130		
Prob(F-statistic)		0.026191		

$$Y = -0.0451022528903 + 0.00774622614528 \cdot X1 + 0.627139224816 \cdot X2 - 0.0844891224894 \cdot Z$$

First, the constant coefficient is -0.045102, indicating that the dependent variable (ROA) will decrease by -0.045102 if the independent variables remain constant. The coefficient of Mobile Banking is 0.007746, which indicates that an increase of one unit in Mobile Banking will result in an increase of 0.007746 in ROA. The Capital Adequacy Ratio coefficient is 0.627139, suggesting that a 1% increase in CAR will result in a corresponding increase of 0.627139 in ROA. Fourth, the BOPO coefficient is -0.084489, suggesting that a one percent increment in BOPO will result in a 0.627% decline in ROA.

Hypothesis Test T-Test

Table 6. T-Test

Dependent Variabel : ROA				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.045102	0.012400	-3.637235	0.1708
Mobile Banking	0.007746	0.001503	5.153325	0.1220
CAR	0.627139	0.061626	10.17647	0.0624
BOPO	-0.084489	0.001959	-43.13448	0.0148

Based on the T-test results in Table 6, it can be concluded that the Mobile Banking and Capital Adequacy Ratio (CAR) variables show a positive direction. In contrast, the BOPO variable shows a negative direction towards ROA. Significantly, Mobile Banking and Capital Adequacy Ratio (CAR) variables did not significantly ROA because their significance values were more significant than 0.05, whereas the BOPO variable significantly affected ROA. After all, its significance value was less than 0.05. Based on the findings above, it can be deduced that mobile banking and capital adequacy ratio fluctuations have no significant impact on return on assets. Return On Asset is inversely proportional to the BOPO variable, such that an increase or decrease in BOPO will influence the ROA ratio.

F-Test

Table 7. F-Test

R-squared	Adjusted R-squared	Durbin-Watson Stat	F-statistic	Prob (F-statistic)
0.999577	0.998307	2.880143	787.3130	0.026191

According to the F test results in Table 7, the F value is 0.02619. This implies that both the independent variable (Mobile Banking and Capital Adequacy Ratio (CAR)) and the moderation variable (BOPO) significantly the dependent variable (ROA), as this value is less than the 0.05 confidence level. This study concludes that ROA will be affected if Mobile Banking, Capital Adequacy Ratio (CAR), and BOPO increase or decrease simultaneously in a regression.

Moderated Regression Analysis (MRA) Test

BOPO Moderates Mobile Banking and ROA

Table 8. BOPO Moderates Mobile Banking and ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.320404	0.130951	2.446746	0.2470

Mobile Banking	-0.419483	0.224953	-1.864758	0.3134
BOPO	-0.431658	0.194643	-2.217697	0.2697
Mobile Banking*BOPO	0.614357	0.335042	1.833672	0.3178

As shown in Table 8, the sum of the Probability results was 0.3178. The value greater than 0.05 indicates that the BOPO variable does not moderate the relationship between Mobile Banking and ROA. Based from the aforementioned discoveries, it can be concluded that Mobile Banking continues to have a stable impact on ROA, unaffected by fluctuations or changes in BOPO. Regardless of BOPO, the relationship between Mobile Banking and ROA remains constant.

BOPO Moderates CAR and ROA

Table 9. BOPO Moderates CAR and ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.015438	0.019826	0.778690	0.5788
CAR	0.332071	0.137261	2.417516	0.2497
BOPO	-0.080671	0.012239	-6.591100	0.0959
CAR*BOPO	0.006140	0.058913	-0.104226	0.9339

As shown in Table 9, the sum of the Probability results was 0.3178. A value greater than 0.05 indicates that the BOPO variable does not moderate the relationship between Mobile Banking and ROA. Based on the discoveries above, Mobile Banking continues to have a stable impact on ROA, unaffected by fluctuations or changes in BOPO. Regardless of BOPO, the relationship between Mobile Banking and ROA remains constant.

3.2 Discussion

Based on the outcomes of the hypothesis test, it becomes apparent that while Mobile Banking exhibits a positive correlation with Return On Assets (ROA), it does not significantly impact ROA. This research underscores that the presence of Mobile Banking does not contribute positively to the enhancement of Return On Assets. Furthermore, the fluctuation in the count of Mobile Banking transactions from one year to another underscores that Mobile Banking needs to be fully harnessed to its maximum capacity. In contrast to 2018, 2020, and 2022, when the number of Mobile Banking transactions at Mandiri Bank increased, the number decreased in 2019 and 2021. In 2019 and 2021, the decline in Mobile Banking transactions may hurt bank revenue. This is because Bank Mandiri may charge fees for using Mobile Banking services, and if the number of transactions decreases, income from these fees also decreases. However, increased transactions in subsequent years could increase the bank's income. This result is consistent with the study's findings (H et al., 2023), which prove Mobile Banking has no impact on profit growth and contradict the findings of an additional study (Samsu et al., 2020), which indicates that Mobile Banking has a positive effect and is significantly influenced by PT Bank Negara Indonesia (Persero) Tbk's financial performance.

Subsequent experiments demonstrated that the Capital Adequacy Ratio (CAR) positively influences Return On Assets (ROA), but this effect is statistically insignificant. The findings of this research show that the Capital Adequacy Ratio (CAR) does not increase ROA. When a bank

maintains a higher, lower, or consistent Capital Adequacy Ratio level, it has no significance as the primary metric for evaluating the success of bank management in achieving increased profitability levels, nor is it considered to have a direct impact on Return On Assets. According to previous research (Maulana et al., 2021), the Capital Adequacy Ratio (CAR) is not significantly profitability. In contrast to the investigation (Rahmawati et al., 2021), the CAR variable significantly affects the financial performance of Sharia commercial banks.

The subsequent test results reveal that the Operating Expenses-to-Operating Income ratio does not moderate the relationship between Mobile Banking and Return On Assets (ROA). The findings of this research indicate that Operational Costs to Operational Income do not contribute to the influence of Mobile Banking on ROA. This is likely due to Mobile Banking's operational costs, such as application, development and maintenance, customer support, and technology security. However, it is only sometimes proportional to Mobile Banking's Operating Income. These costs may include additional infrastructure or administrative expenses necessary to operate these services, and they may indirectly affect the company's overall profitability. This finding contradicts (H et al., 2023), which asserts that BOPO can moderate the impact of Mobile Banking on profitability growth.

Furthermore, the test results show that Operational Costs on Operational Income do not moderate the influence of the Capital Adequacy Ratio (CAR) on ROA. The findings of this research indicate that Operational Costs to Operational Income do not contribute to the influence of the Capital Adequacy Ratio (CAR) on ROA. Interest on loans, consumer commissions and fees, investment income, and other sources can all contribute to a bank's operational income. The effect of CAR on profitability has more to do with banks' ability to manage asset and liability-related risks than with how they generate operating income. According to research (Syafina, 2019), An observed moderating effect of the variable operating expenses to operating income (BOPO) is evident in the correlation between capital adequacy ratio (CAR) and return on assets (ROA). This observation contradicts this theory.

CONCLUSION

It is possible to conclude from the available empirical evidence that Mobile Banking cannot have a noticeable impact on Return On Assets (ROA). An absence of statistically significant correlation is noted between Return On Assets (ROA) and the Capital Adequacy Ratio (CAR). There is no moderating effect of the variable representing the ratio of operational costs to operational income on the relationship between mobile banking and ROA. Additionally, it should be noted that the Operational Costs to Operational Income ratio does not moderate the correlation between Return On Assets (ROA) and the Capital Adequacy Ratio (CAR). However, simultaneously, Mobile Banking, Capital Adequacy Ratio (CAR), and BOPO significantly affect Return On Assets (ROA).

This research is vital in assisting stakeholders in the banking industry and bank management in making decisions, as well as providing insight into how to improve bank financial performance through financial technology with a focus on optimizing operational efficiency. Furthermore, this research has the potential to advance theory, broaden understanding in this field, and serve as a model for future research. However, this study is partly limited by its reliance on a singular financial sector organization. Apart from that, this study's observation periods were only five years, namely 2018-2022. Suggestions for Bank Mandiri, the provision of Mobile Banking services can be carried out with maximum research to increase ROA for banks and management who are expected to be able to assess financial ratios in making policies in the aspects of capital adequacy levels and operational efficiency levels. Furthermore, it is recommended to expand the research object and extend the observation period so that the number of data samples that can be used in research increases to obtain good analysis. Apart from that, it is recommended that further

research be carried out by adding other potential dependent variables that may influence Bank Mandiri's financial performance.

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