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Factors Affecting Return on Asset with The Moderation Role of Non-Performing Loans in National Private Banking

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ABSTRACT

The aim of this research is to determine the influence of capital adequacy levels, liquidity levels, bank operational efficiency levels, inflation and interest rates on banks' ability to generate profits before tax with the moderating role of non-performing loans. The level of capital adequacy is proxied by the Capital Adequacy ratio (CAR), the level of liquidity is proxied by the Loan to Deposit Ratio (LDR), the level of operational efficiency is proxied by operational cost to operating income ratio (CI) and the level of the bank's ability to generate profits before tax is proxied by Return on Assets (ROA) while non-performing loans are proxied by Non-Performing Loans (NPL). The indicator for measuring the level of inflation is the Consumer Price Index (CPI) while the interest rate used in this research is the BI rate. The sample was selected using the purposive sampling method, 45 banks were selected as samples. The analysis technique in this research is partial least squares (PLS) for testing measurement and structural models. The results of this research are: 1) CAR has no effect on ROA, 2) LDR has no effect on ROA, 3) CI has a significant negative effect on ROA, 4) Inflation has no effect on ROA, 5) Bank Rate has a significant positive effect on ROA, 6) NPL does not strengthen the influence of CAR on ROA, 7) NPL does not strengthen the influence of CAR on ROA, 8) NPL does not strengthen the influence of CI on ROA, 9) NPL does not strengthen the influence of inflation on ROA, 10) NPL does not strengthen the influence of the BI rate on ROA.

KEYWORDS: Bank Capital, liquidity, efficiency, Inflation, Central Banks Rates, Non-Performing Loans, profitability

INTRODUCTION

The condition of the banking world in Indonesia has experienced many changes over time. The changes occurred due to internal developments in the banking world and developments outside the banking world. Likewise, industries from various business sectors are growing rapidly in Indonesia, making the role of the banking sector even greater because economic movements in Indonesia are greatly influenced by banking conditions. The important role of banks requires banks to improve their performance well so that they can carry out their role optimally. Bank performance can be influenced by internal and external factors. External factors include inflation, interest rates and exchange rates, while internal factors include the level of profitability. Good performance can be evaluated by the level of profitability. Increased profitability identifies the bank's performance as good (Pandia, 2012).

Profitability is a company's ability to generate profits during a certain period. A high level of profitability reflects that the company has good prospects and is able to maintain the company's viability for the long term. Profitability ratios reflect the company's success in gaining profits. The level of profitability of a company can be seen and measured through published financial reports by analyzing and calculating ratios in financial performance. The profitability ratio used in this research is ROA. There are several other factors that influence banking profitability, including CAR (Capital Adequacy Ratio), LDR (Loan Deposit Ratio), CI (operating expenses on operating income), inflation rate (Inflation Rate), Bank Indonesia interest rate (BI Rate).

CAR (Capital Adequacy Ratio) is a ratio that reflects the ability of bank capital to cover the risk of credit failure (Susanto and Kholis; 2016). CAR is an indicator of a bank's ability to cover the decline in its assets as a result of bank losses caused by risky assets with its capital adequacy. Capital Adequacy Ratio (CAR) is a bank performance ratio to measure the adequacy of capital owned by the bank to support assets that contain or produce risk. Capital can be used to develop future business ventures and can also cover possible losses that could be experienced at any time. An

increasing CAR can provide a big opportunity for banks to generate profits because with large capital, bank management can easily place their funds into profitable investment activities. Banks in managing capital come from the trust of the public who place funds in the bank. The appropriated funds are used by the bank for operational activities with the aim of maintaining liquidity and fixed assets. So, the higher the CAR achieved by a bank, the better the bank's performance can protect its customers. This can increase customer trust in the bank which can ultimately increase company profits. The higher the CAR, the higher the ROA because the bank's profits will be higher, so bank management needs to increase its capital, because with sufficient capital the bank can maintain its performance. There is a research gap variable used in this research which states that a higher CAR makes banks confident in financing their operational risks (Susanto and Kholis; 2016). On the other hand, a high CAR will prevent banks from expanding their business because existing capital must be allocated to loss reserves (Hasny and Oey; 2017).

Loan to Deposits Ratio (LDR) is a measure of a bank's ability to pay for fund withdrawals made by depositors by relying on credit provided as a source of liquidity (Dendawijaya, 2015). LDR is a ratio to see the bank's ability to channel funds to third parties. The size of the LDR will affect the bank's profitability. A higher LDR indicates that more third-party funds are being channeled in the form of credit. The greater the amount of credit disbursed means that it will effectively provide greater interest income so as to increase profitability (Septiani and Lestari; 2016) while on the other hand the research results of Putrianingsih and Yulianto (2016) as well as Prastiyaningtyas (2010), Ahmad, et. al (2012) states the opposite.

Operating Costs Operating Income is a ratio used to measure the level of efficiency and ability of a bank in carrying out its operations (Yuliana and Listiari, 2021). When a bank can reduce operational costs, it will reduce losses caused by the bank's inefficiency in managing its business, meaning that the profits obtained will increase. Thus, a smaller CI means that the operational costs incurred are smaller, so there is an indication that the bank will face fewer problematic conditions (Sudarmawanti and Pramono; 2017). The results of this research show that there is a positive influence of CI on ROA, but on the other hand, it is stated that CI has a negative influence on ROA, including Syakhrun et al., 2019 and Capriani and Dana (2016).

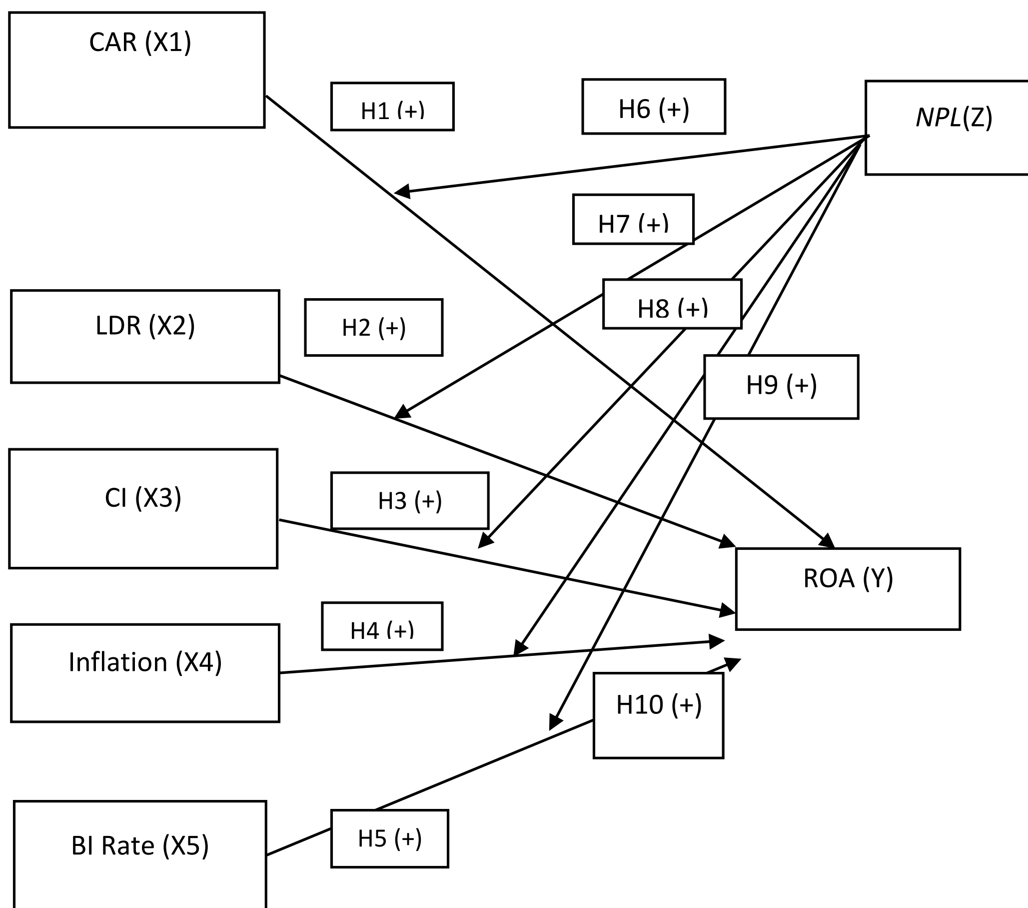
Inflation is the amount of price increase over time (Brigham and Houston, 2014:228). The inflation rate is defined as a condition where there is a general increase in prices that occurs continuously over a certain time. The high level of inflation causes an increase in the prices of goods, which will have an impact on reducing the real value of savings in banks because people will use the assets they own first to fulfill their needs and have to adjust to the fairly high prices of goods. The decline in the real value of savings causes bank profitability to decline, therefore high and low levels of inflation have a significant effect on the profitability generated by banks. The indicator that is often used to measure the level of inflation is the Consumer Price Index (CPI). Changes in the CPI from time to time show price movements of the package of goods and services consumed by the public. Previous research results found that inflation had a significant positive effect on profitability (Kusumanintyas, et.al, 2021). Meanwhile, the results of Tinkonggan's research (2013) found that inflation had a negative effect on ROA. Meanwhile, Restu (2017) found that before and after regional autonomy, inflation had a negative and significant influence on profitability (ROA).

The interest rate is a measure of the costs or income associated with the use of money for a certain period of time (Loen and Ericson, 2008). The interest rate used in this research is the Bank Indonesia Interest Rate (BI Rate). The BI Interest Rate (BI Rate) is the policy interest rate set by Bank Indonesia and announced to the public. High interest rates will increase people's desire to save in the hope of getting a return. The high amount of savings causes a decrease in the level of financing that can be provided by banks, meaning a reduction in the amount of credit, which will have an impact on reducing banking profitability. The research results show that interest rates have a significant positive influence on profitability (Kusumaningtias, et all 2021). Likewise, Kalengkongan (2013) stated that interest rates have a positive effect on profitability. Meanwhile, Sahara (2013) found that BI interest rates had a negative and significant influence on profitability as measured by the bank's ROA percentage. Meanwhile, Restu (2017) found that after regional autonomy, interest rates had no influence on the profitability (ROA) of regional development banks in Indonesia and before regional autonomy, interest rates had a positive and significant influence on profitability (ROA).

RESEARCH PURPOSES

The aim of this research is to analyze the effect of knowing the influence of the capital adequacy level (CAR), liquidity level (LDR), bank operational efficiency level (CI), inflation and interest rates (BI rate) on the bank's ability to generate profits before tax (ROA) with a moderating role in the level of non-performing loans (NPL). The framework of thinking can be depicted in Figure 1 below

Figure 1



The independent variables in this research are CAR, LDR, CI, Inflation Rate and BI Rate. The dependent variable in this research is the ROA value. H1 is formulated as the effect of CAR on ROA, H2 is formulated as the effect of LDR on ROA, H3 is formulated as the effect of CI on ROA, H4 is formulated as the effect of the inflation rate on ROA, H5 is formulated as the effect of the BI Rate on ROA, H6 is formulated as the effect of CAR on ROA with NPL as a moderating variable, H7 is formulated as the effect of LDR on ROA with NPL as a moderating variable, H8 is formulated as the effect of CI on ROA with NPL as a moderating variable, H9 is formulated as the effect of the inflation rate on ROA with NPL as a moderating variable and H10 is formulated as the effect of BI Rate of ROA with NPL as a moderating variable.

THEORITICAL REVIEW

Agency Theory

In Agency Theory, it is stated that there are two economic behaviors, namely, principal and agent (Bendickson, et.al, 2016). The principal is the party who owns the capital. If seen from the banking side, the principal is the third-party fund holder or capital owner who hands over the funds to the agent to manage. Based on this understanding, it can be explained that banks play their role as facilities for investment. In carrying out investment facilities, banks through their financial reports provide information to the principal about the company's performance. It is important in this case how the banking company manages the finances that have been entrusted by the principal.

Good performance is certainly shown by high profitability, so that it can give principal trust. The principal assesses the agent (bank) by conditioning the bank's balance sheet. Banking Balance Sheet has an important impact on lending. As explained by Mishkin (2021:276), if banking balance sheets worsen, banks will have fewer resources to lend to, and this will cause a decline in investment. So, this has an impact on reducing the profits obtained by the bank. If the decline is very sharp the bank will start to fail, in this condition the principal will worry about their funds and can withdraw their funds without knowing the quality of the bank's loan portfolio, then this event is Asymmetric Information.

Signaling Theory

Signaling theory was first introduced by Michael Spence in 1973 and developed by Ross in 1977. This theory was created by the existence of asymmetric information between information from management and shareholders. Signal theory is related to information asymmetry which leads to similarities between information between parties who need the information and company management, so managers need to issue financial reports to provide announcements in the form of information to parties who want it.

Brigham and Ehrhardt (2015: 162) explain that a signal, also known as a signal, is an action taken by company management that provides clues to investors about how management views the company's prospects. This signal is in the form of information about what management has done to realize the owner's wishes.

In general, signaling theory is closely related to the availability of information. Financial reports can be used to make decisions for investors, financial reports are the most important part of a company's fundamental analysis. The ranking of companies that have gone public is usually based on this financial ratio analysis. This analysis is carried out to facilitate interpretation of the financial reports that have been presented by management.

Definition of Bank

Banks are financial institutions that have an important role in supporting economic success (Widawati, e.al, 2019). Banks can also be defined as financial intermediary institutions that help people channel excess funds they have and provide loans/credit to people who need it (intermediation function). (Widowati and Bambang, 2015). Basically, the main task of banks according to Law No. 19 of 1998 is to assist the government in regulating, maintaining and maintaining the stability of the value of the rupiah, encouraging smooth production and development and expanding employment opportunities in order to improve the standard of living of many people.

ROA (*Return on Asset*)

Return On Assets (ROA) is also called Return on Investment (ROI). Return On Assets (ROA) looks at the extent to which the investment that has been invested is able to provide a profit return as expected and the investment is the same as the company assets invested or placed (Fahmi, 2018).

CAR (*Capital Adequacy Ratio)*

CAR is capital that shows the bank's ability to provide funds for business development purposes and cover the risk of loss of funds resulting from bank operational activities. CAR shows the extent to which the decline in bank assets can still be covered by the bank's available equity, the higher the CAR, the better the condition of a bank (Taswan, 2019:38).

LDR (*Loan to Deposit Ratio*)

LDR is a banking company's financial ratio which is related to liquidity aspects. LDR is a traditional measurement that shows time deposits, current accounts, savings, etc. used to fulfill customers' loan requests. This ratio is used to measure the level of liquidity (Kasmir, 2018: 225) states that LDR is a ratio to measure the composition of the amount of credit given compared to the amount of public funds and own capital used is the ratio between the size of the entire volume of credit disbursed by the bank and the amount of revenue funds from various sources.

CI (Operating Costs to Operating Income)

CI (Operating Costs to Operational Income) is a ratio that describes banking efficiency in carrying out its activities. Operational costs are interest costs given to customers, while operational income is interest obtained from customers (Kasmir, 2015: 56). Operational efficiency is carried out by banks to determine whether the bank's operational activities related to the bank's main business have been carried out correctly in accordance with the agreement between management and shareholders and can be used to show whether the bank has used all its production factors appropriately and successfully.

Inflation Rate

Inflation is an increase in the prices of goods and services, which occurs if spending increases compared to the supply of goods on the market, in other words, too much money is chasing too few goods (Downes & Jordan, 1994). Inflation is an economic indicator that describes the decline in the value of the rupiah. This condition is characterized by a continuous increase in the prices of necessities on the market, resulting in a decline in people's purchasing power, but people's income remains constant. Investors tend not to be interested in buying shares so that the company's share price decreases, which results in a decrease in company value.

Interest rate

Interest rates are a measure of the costs or income associated with the use of money for a certain period of time (Loen and Ericson, 2008). Unreasonable interest rates can directly disrupt banking development. High interest rates, on the one hand, will increase people's desire to save so that the amount of banking funds will increase (Pohan, 2008).

NPL (*Non-Performing Loan)*

NPL (Non-Performing Loan) describes the comparison between non-performing loans (with the criteria of substandard, doubtful, loss) to total credit. (Taswan, 2010;390). The higher this ratio, the worse the quality of bank credit will be, causing the number of non-performing loans to increase, thereby losing the opportunity to earn income from the credit provided and reducing the bank's income as reflected through ROA. In banking companies, financial risk has a major impact on the decline in firm value (Suarjana and Warmana, 2022).

RESEARCH METHOD

The population in this research is banking companies registered with the Financial Services Authority, namely the period 2017 to 2022. Determining the sample, the sampling technique used was purposive sampling, namely a sampling method based on the criteria of the Company successively publishing its financial reports from 2017 to 2022 and the

Company having the data needed for the variables to be studied. The number of data samples used in the research was 45 sample data. This research focuses on empirical testing of the model developed from the theoretical model that has been proposed. Identification of CAR, LDR, CI, inflation, interest rates on ROA with NPL as a moderating variable is carried out through empirical research models. The variables involved in this research are as follows:

1. *Return on Asset* (ROA)
   Return on Assets (ROA) is a ratio used to measure a bank's ability to earn profits before tax with all the assets it owns which is formulated as: (Rivai, Basir, Sudarto, & Veithzal, 2013, p. 490)

$$ROA = \frac{\text{profits before tax}}{\text{Total Assets}} \; x \; 100\%$$

2. Capital Adequacy Ratio (CAR)
   Capital Adequacy Ratio (CAR) is a ratio used to measure the level of minimum capital adequacy of a bank (Dendawijaya, 2009, p. 121). The CAR ratio is calculated using the following formula:

$$CAR = \frac{\text{Bank Capital}}{\text{Risk Weighted Assets}} \; x \; 100\%$$

3. Loan to Deposit Ratio (LDR)
   Loan to Deposit Ratio (LDR) is a ratio used to measure the level of bank liquidity in repaying withdrawals made by depositors at any time. The LDR ratio is formulated by: (Rivai, Basir, Sudarto, & Veithzal, 2013, p. 484)

$$LDR = \frac{\text{Amount of Credit}}{\text{Third Party Funds}} \; x \; 100\%$$

4. Ratio of Operating Cost to Operating Income (CI)
   The Operational Cost to Operational Income Ratio (CI) is a ratio used to measure the level of bank operational efficiency (Dendawijaya, 2009; 120). The CI ratio is calculated using the formula:

$$CI = \frac{\text{Operationg Cost}}{\text{Operational Income}} \; x \; 100\%$$

5. Inflation is the amount of price increase over time. The indicator for the inflation rate is the Consumer Price Index (CPI).

6. The BI rate interest rate is the policy interest rate determined by Bank Indonesia (BI) and announced to the public.

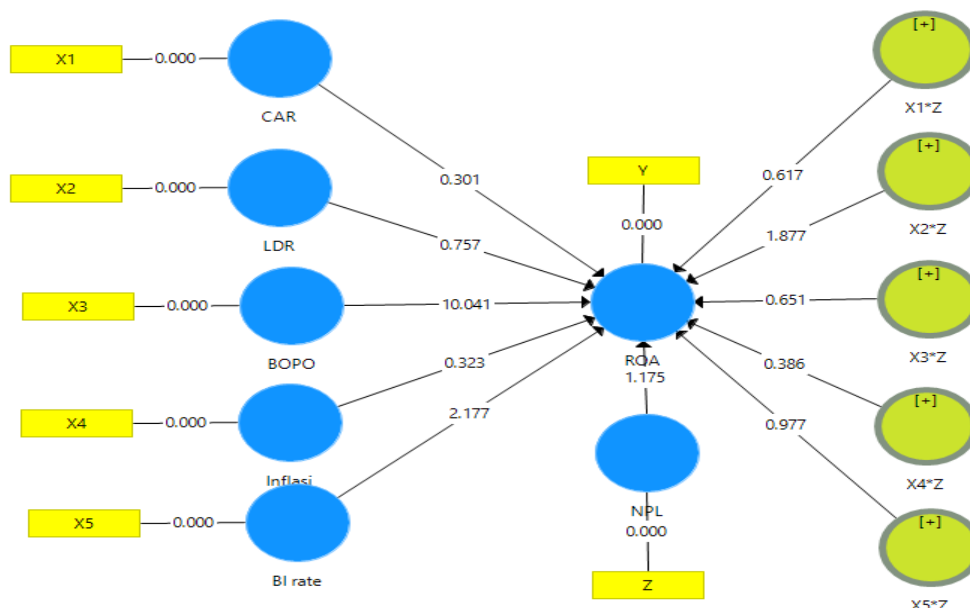
7. Non Performing Loans (NPL)
   Non Performing Loans (NPL) is a ratio used to measure the level of problematic credit due to the inability of customers to repay the credit provided by the bank. According to Ismail (2009, p 228) NPL ratio is formulated as:

$$NPL\ ratio = \frac{\text{Non Performing Loans}}{\text{Total loan}} \; x \; 100\%$$

RESULTS AND DISCUSSION

The inner model shows the relationship between constructs and the t-statistic value and R-square value. An R-square value of 0.663 means that the variability of return on assets (ROA) can be explained by the constructs of Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Operational cost on Operating Income (CI), Inflation, BI Rate and Non-Performing Loans. (NPL) and its interaction of 66.3% for the endogenous latent variable in the structural model identify that the model is strong. Meanwhile, 33.7% is explained by other variables not included in this study.

Figure 2. Output Moderating SmartPLS



Source: Data processed, 2023

Table 1. R-Square

	R-Square
Return on Asset (ROA)	0.663

Source: Data processed, 2023

Hypothesis testing is done by looking at the t-statistic. The path coefficient results are as follows:

Table 2. Path Coefisien

	Original Sample (O)	**Sample Mean (M)**	**Standard Deviation (STDEV)**	**T Statistics (|O/STDEV|)**	**P Values**
CAR -> ROA	-0.019	-0.016	0.061	0.301	0.763
LDR -> ROA	-0.074	-0.069	0.098	0.757	0.449
CI -> ROA	-0.730	-0.737	0.073	10.041	0.000
Inflation -> ROA	0.015	0.012	0.045	0.323	0.747
BI rate -> ROA	0.083	0.084	0.038	2.177	0.030
X1*Z -> ROA	0.029	0.129	0.371	0.617	0.538
X2*Z -> ROA	-1.104	-0.905	0.588	1.877	0.061
X3*Z -> ROA	0.218	0.082	0.335	0.651	0.516
X4*Z -> ROA	0.095	0.086	0.246	0.386	0.700
X5*Z -> ROA	0.201	0.093	0.206	0.977	0.329

Source: Data processed, 2023

The test results presented in Table 2 can be explained as follows:

a. The results of the Test on the Effect of Capital Adequacy Ratio (CAR) on Return on Assets (ROA) show that the original sample value is negative, namely - 0.019, while the p-values are > 0.05, namely 0.763. Based on this data, it shows that one of the criteria is not met so it can be concluded that H1 is rejected. So, the Capital Adequacy Ratio (CAR) has no effect on Return on Assets (ROA).

b. The results of the Test on the Effect of Loan to Deposit Ratio (LDR) on Return on Assets (ROA) show that the original sample value is negative, namely - 0.074, while the p-values are > 0.05, namely 0.449. Based on this data, it shows that one of the criteria is not met so it can be concluded that H2 is rejected. So, the Loan to Deposit Ratio (LDR) has no effect on Return on Assets (ROA).

c. The results of the Operational Expense Test on Operating Income (CI) on Return on Assets show that the original sample value is negative, namely - 0.730, while the p-values are <0.05, namely 0.000. Based on this data, it shows that one of the criteria is not met so it can be concluded that H3 is rejected. So Operational cost on Operating Income (CI) have a significant negative effect on Return on Assets (ROA).
d. The results of the Inflation Test on Return on Assets (ROA) show that the original sample value is positive, namely 0.015, while the p-values are > 0.05, namely 0.747. Based on this data, it shows that one of the criteria is not met so it can be concluded that H4 is rejected. So, inflation has no effect on Return on Assets (ROA).
e. The results of the BI Rate Test on Return on Assets (ROA) show that the original sample value is positive, namely 0.083, while the p-values are <0.05, namely 0.030. Based on these data, it shows that the criteria are met so it can be concluded that H5 is accepted. So, the BI Rate has a significant positive effect on Return on Assets (ROA).
f. The results of the Loan to Deposit Ratio (LDR) test on Return on Assets (ROA) with Non-Performing Loan (NPL) moderation show that the original sample value is negative, namely -1.104, while the p-values are > 0.05, namely 0.061. Based on these data, it shows that one of the criteria is not met so it can be concluded that H7 is rejected. So Non-Performing Loans (NPL) do not strengthen the influence of the Loan to Deposit Ratio (LDR) on Return on Assets (ROA).
g. The results of the Operational Expense Test on Operating Income (CI) on Return on Assets show that the original sample value is positive, namely 0.218, while the p-values are > 0.05, namely 0.51. Based on this data, it shows that one of the criteria is not met so it can be concluded that H8 is rejected. So Non-Performing Loans (NPL) do not strengthen the influence of Operational cost on Operating Income (CI) on Return on Assets (ROA).
h. The results of the Inflation Test on Return on Assets (ROA) with Non-Performing Loan (NPL) moderation show that the original sample value is positive, namely 0.095, while the p-values are > 0.05, namely 0.700. Based on this data, it shows that one of the criteria is not met so it can be concluded that H9 is rejected. So Non-Performing Loans (NPL) do not strengthen the influence of inflation on Return on Assets (ROA).
i. The results of the BI rate test on Return on Assets (ROA) with Non-Performing Loan (NPL) moderation show that the original sample value is positive, namely 0.201, while the p-values are > 0.05, namely 0.329. Based on this data, it shows that one of the criteria is not met so it can be concluded that H10 is rejected. So Non-Performing Loans (NPL) do not strengthen the influence of the BI rate on Return on Assets (ROA).
j. The results of the Test on the Effect of Capital Adequacy Ratio (CAR) on Return on Assets (ROA) with Non-Performing Loan (NPL) moderation show that the original sample value is positive, namely 0.229, while the p-values are > 0.05, namely 0.538. Based on this data, it shows that one of the criteria is not met so it can be concluded that H6 is rejected. So Non-Performing Loans (NPL) does not strengthen the influence of the Capital Adequacy Ratio (CAR) on Return on Assets (ROA).
k. The results of the Loan to Deposit Ratio (LDR) test on Return on Assets (ROA) with Non-Performing Loan (NPL) moderation show that the original sample value is negative, namely -1.104, while the p-values are > 0.05, namely 0.061. Based on these data, it shows that one of the criteria is not met so it can be concluded that H7 is rejected. So Non-Performing Loans (NPL) do not strengthen the influence of the Loan to Deposit Ratio (LDR) on Return on Assets (ROA).
l. The results of the Operational Expense Test on Operating Income (CI) on Return on Assets (ROA) with Non-Performing Loan (NPL) moderation show that the original sample value is positive, namely 0.218, while the p-values are > 0.05, namely 0.51. Based on this data, it shows that one of the criteria is not met so it can be concluded that H8 is rejected. So Non-Performing Loans (NPL) do not strengthen the influence of Operational cost on Operating Income (CI) on Return on Assets (ROA).
m. The results of the Inflation Test on Return on Assets (ROA) with Non-Performing Loan (NPL) moderation show that the original sample value is positive, namely 0.095, while the p-values are > 0.05, namely 0.700. Based on this data, it shows that one of the criteria is not met so it can be concluded that H9 is rejected. So Non-Performing Loans (NPL) do not strengthen the influence of inflation on Return on Assets (ROA).
n. The results of the BI rate test on Return on Assets (ROA) with Non-Performing Loan (NPL) moderation show that the original sample value is positive, namely 0.201, while the p-values are > 0.05, namely 0.329. Based on this data, it shows that one of the criteria is not met so it can be concluded that H10 is rejected. So Non-Performing Loans (NPL) do not strengthen the influence of the BI rate on Return on Assets (ROA).

CONCLUSION

The capital adequacy ratio (CAR) has no effect on profitability because there are Bank Indonesia regulations which require banks to maintain the CAR value in accordance with the minimum standard, 8%. This BI regulation is a requirement for banks to continue to provide reserve funds to

meet the minimum requirements provided by Bank Indonesia and to anticipate credit risks that may occur. Investment is a policy that can influence bank profitability, as well as public trust is a key factor that can influence the level of bank profitability. If the bank's capital is high and the CAR ratio is high, it will not have much influence on profitability if the bank does not balance it with good fund distribution and investment. The results of this research are in line with the results of research conducted by previous researchers which stated that CAR has no effect on ROA (Suhandi, 2019) while the research results of Dedy, et.al (2019), Alaziz (2020), Rizky (2021), Kusumaningtyas, et. al (2022) states that CAR has an effect on ROA.

Loan to Deposit Ratio (LDR) has a significant positive effect on Return on Assets (ROA). A high LDR can reduce profitability. Banks with a high level of liquidity have the opportunity to increase credit to increase profitability, but this can happen if bank management in disbursing credit is not balanced by applying the principle of prudence in assessing potential customers so that it can increase the possibility of credit repayment rates. experiencing failure which has an impact on increasing bank expenses so that it can reduce the level of bank liquidity. The results of this research are in line with the results of research conducted by previous researchers which stated that LDR had no effect on ROA (Suhandi, 2019; Alaziz, 2020; Rizky, 2021) while the research results of Saleh and Eddy (2021) stated that LDR had an effect on ROA.

Operational risk as proxied by Operational cost to operating income ratio (CI) has a significant negative effect on ROA. An increase in the bank's CI ratio indicates that there is an increase in the proportion of operational cost to operational income received by the bank. Increasing costs can reduce profit before tax which has an impact on reducing ROA for the bank, so the greater the CI, the smaller the bank's ROA, because the profit earned by the bank will also be small. This signals that there is inefficiency in operational performance at the bank. The results of this research are in line with the results of research conducted by previous researchers which stated that CI had a significant negative effect on ROA (Alaziz, 2020; Rizky, 2021).

Inflation has a positive but not significant effect on profitability as proxied by Return on Assets (ROA). High or low inflation rates will not affect a company's profitability, even if the inflation rate increases or decreases. As long as bank management can anticipate rising inflation rates, the bank can adjust interest rates appropriately in order to increase income faster than costs, thereby generating higher profits. Based on the results of research on average inflation each year, it shows that inflation is still below 10% (classified as low), therefore low inflation will still encourage individuals to set aside and save their money so this will clearly have an impact on increasing banking profits. So that the bank's function as an intermediation institution (collecting funds) both from credit and savings can function well during times of inflation.

The interest rate as measured by the BI interest rate has a significant positive effect on ROA. In Indonesia, banking interest rates play a role in the amount of funds entering banks. Interest rates influence people's interest in investing their funds. The higher the interest rate offered by banks will attract people's interest in investing their funds, and conversely, the lower the interest rate offered will reduce people's interest in investing their funds. Banks as intermediaries can channel invested funds to be managed so that this management will increase bank profitability.

Capital Adequacy Ratio does not strengthen profitability with NPL moderation. A high CAR gives a positive signal that the bank is performing well. The higher the CAR, the higher the ROA because profitability increases. In managing profitability, banks can use it as capital to expand through improving credit services. Providing high credit can increase NPL, but by providing credit selectively to customers taking into account the principles of credit provision, it can reduce NPL, thus NPL is not able to strengthen the influence of CAR on ROA. The results of this research are in line with the results of Taufik (2017) and are not in line with Septiarini (2020) and Agustina (2020).

Loan to Deposit Ratio (LDR) has a significant positive effect on Return on Assets (ROA) with Non-Performing Loans (NPL) as Moderation. A high level of liquidity should be able to increase bank profitability, however if the application of the principle of prudence in selecting prospective customers is insufficient it will actually reduce profitability. Therefore, in order for profitability to be increased, banks are required to be more careful in channeling their funds by implementing efficient, innovative, creative and productive work patterns in carrying out their business activities so that collectibility problems, known as Non-Performing Loans, which consist of substandard payments, are in doubt. and traffic jams are not able to strengthen the influence of LDR on ROA.

CI does not strengthen profitability as proxied by ROA (Return on Assets_ with NPL as moderation. An increase in operational costs will reduce the bank's profit or profitability. If there is a condition where operational costs increase without being accompanied by operational income, it will reduce ROA. Other factors that can affect income Banking is an unbalanced competition between banks, resulting in management efficiency and impacting income and the emergence of bad credit which causes a decrease in profits. High NPLs will increase operational costs which are used to cover losses caused by credit financing, thus having the potential to reduce profits. generated by the bank. On the other hand, the lower the NPL will reduce the operational costs used to cover losses caused by credit financing, so that it can influence the increase in ROA. Any increase in operational income will result in a reduction in profit before

tax which will ultimately reduce the level of profit or profitability (ROA) of a bank. This research is supported by Sulistiowati (2019) who states that NPF does not moderate the relationship between CI and ROA.

Inflation has a significant positive effect on Return on Assets (ROA) with Non-Performing Loans (NPL) as Moderation. The higher inflation there tends to be a decrease in profitability, however if inflation is still in the low category, it still provides opportunities for profitability for banks, it's just that few prospective bank customers will invest in productive assets so that the credit facilities provided by banks for these investments are not the expectations of prospective customers, because That's small credit risk (NPL) which occurs because profitability decreases due to low demand for credit.

BI Rate does not strengthen profitability as proxied by Return on Assets (ROA) with NPL as moderation. NPL (Non-Performing Loan) The higher the BI rate, the higher the level of bank profitability because it is accompanied by an increase in savings interest rates so that potential customers are interested in saving. However, this increase will affect operational activities in terms of financing and distribution of funds so that it will have an impact on increasing profitability, but there tends to be a decrease in potential customers when the BI rate is high using credit provided by banks, so that credit risk is minimal but on the other hand it can actually reduce profitability. Thus, NPL is unable to strengthen the influence of the BI rate on ROA.

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