



ANALYSIS OF CAPITAL ADEQUACY RATIO, FINANCING TO DEPOSIT RATIO, OPERATIONAL COSTS OPERATIONAL REVENUE, AND NON PERFORMING LOAN ON PROFITABILITY OF BANK RAKYAT INDONESIA MAKASSAR BRANCH

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Abstract

This study aims to examine and find out how the effect of Capital Adequacy Ratio (CAR), Financing to Deposit (FDR), Operating Income Operational Costs (BOPO), and Non-Performing Loans (NPL) on Return On Assets (ROA) at Bank BRI Makassar Branch. This research is a quantitative research by analyzing ratios and using multiple linear regression analysis. The results show that the CAR variable has no significant and negative effect on ROA, this is because high CAR used to cover the risk of loss or assets that contain risks can reduce the bank's ability to expand its business. FDR has a positive and significant effect on ROA, which means that increased FDR absorption can cause ROA to increase and the increase in the number of loans given by banks will increase the level of public confidence. BOPO has a significant and negative effect on ROA, which means a low BOPO ratio so that banks can minimize operational risks derived from the large value of operating income. NPL has a significant and negative effect on ROA, this shows that the increasing number of non-performing loans makes banks not dare to increase lending, especially since the total third party funds received by banks are not optimal, causing bank liquidity to be disrupted. However, CAR, FDR, BOPO and NPL show that simultaneously or simultaneously have an effect on ROA with a determinant value of 0.82%.

Keywords: *capital adequacy ratio, deposit financing, operating income operating costs, non-performing loans, return on assets.*

A. INTRODUCTION

The existence of financial intermediaries, especially banks, has a very important position in the current economic system. To be a bank intermediary, one must have a good financial track record, because with a good financial track record, it is more practical for a bank to gain the trust of its customers (trusting agents).

Profitability is a measure used to measure a company's ability to generate profits. A commonly used ratio to measure profitability is the ability of bank management to manage available capital to generate net profit, while return on assets shows the ability of bank management to generate profit from managed assets.

Capital adequacy ratio (CAR) is an indicator related to bank capital factors, which is used to measure the adequacy of bank capital to support risky assets. CAR is an indicator to measure the bank's ability to make up for the

reduction of assets due to losses.

The funds-to-deposit (FDR) or loan-to-debt (LDR) ratio of a traditional bank is the ratio of the total credit extended by the bank to the funds borrowed by the bank. FDR is a measure of a bank's liquidity level, which is related to the bank's ability to use its total assets to meet credit requirements.

Operating costs to operating income (BOPO) refers to the comparison between operating costs and operating income. The operating expense ratio measures the efficiency level and ability of a bank to carry out operating activities.

Non-performing loans (NPL) is a metric used to measure the amount of non-performing loans incurred by banks. The high NPL ratio should be of concern to management, as an increase in NPLs threatens the bank's health. When a bank makes a loan, there is a risk that the debtor will default.

B. LITERATURE REVIEW

Financing to Deposit Ratio (FDR)

a. Definition Financing to Deposit Ratio (FDR)

The fund-to-deposit ratio (FDR) is a ratio that measures the liquidity of banks relying on funds provided as a source of liquidity to repay depositors' withdrawals, that is, the amount of funds provided by banks is distributed to third-party funds (DPK).

b. Measuring instrument

The amount of company value can be calculated by the formula:

$$\text{FDR} = \frac{\text{the financing provided}}{\text{third - party funds}} \times 100\%$$

Source: Harmono, 2016:119

Capital Adequacy Ratio (CAR)

a. Definition of Capital Adequacy Ratio

The capital adequacy ratio is the capital adequacy ratio, which shows the ability of the bank to maintain sufficient capital and the ability of the bank's management to identify, measure, monitor and control risks - the risks that occur that may affect the level of capital.

b. Benefits of Capital Adequacy Ratio

According to Herman Darmawi (2012: 90), Capital Adequacy Ratio (CAR) has basic functions, namely: 1) To provide funds for the organization and operation of the bank. 2) Provide a sense of protection to depositors and other creditors. 3) Give depositors and authorities a sense of confidence.

c. Measuring instrument

The principle of capital adequacy ratio calculation is that any high-risk investment must have a capital amount equivalent to a certain proportion of the total investment. According to the standard, a healthy bank has a capital adequacy ratio of at least 8%. Bank for International Settlements (BIS). Based on CAR ratio assessment conducted under BI DIR Decree No. 30/12/KEP/DIR dated April 30, 1997, the minimum CAR value is 8%.

CAR ratio calculation is :

$$\text{CAR} = \frac{\text{Capital}}{\text{Risk Weighted Assets (RWA)}} \times 100$$

Source:Harmono,(2016:116)

Operating Cost to Operating Income (BOPO)

a. Definition of BOPO

BOPO is the ratio between the costs incurred by the bank in carrying out its main activities to the income derived from these activities. the bank's main activities such as interest costs, labor costs, marketing costs and other operating costs, while operating income is interest income derived from placement of funds in the form of credit and other operating income.

b. Measuring instrument

BOPO ratio calculation according to SE. No.6/23/DPNP dated 31 May 2004 is as follows: Bank Indonesia sets the best figure for the BOPO ratio below 90%, because if the BOPO ratio exceeds 90% to close to 100%, the bank can be categorized as inefficient in carrying out its operations .

$$\text{BOPO} = \frac{\text{Operating Expenses}}{\text{Operating Income}} \times 100$$

Source:Harmono,(2016:116)

Non Performing Load (NPL)

According to Ismail (2010: 226), NPL (Non Performing Loan) is a loan that is overdue for more than 90 days. Where NPL is divided into substandard, doubtful and loss loans this ratio can be formulated as follows:

$$\text{NPL} = \frac{\text{problem credit}}{\text{total credit}} \times 100$$

Return on Assets

a. Definition of Return on Assets

ROA is a ratio used to measure a company's ability to generate profits from a number of assets owned by the business unit. Hanafi (2007:83) states that ROA is a ratio that measures a company's ability to generate profits by using the total assets (wealth) it has after adjusting for the costs to mark these assets. In other words, this ratio is used to measure the ability of the capital invested in all assets to generate profits for the company.

b. Factors that affect Return On Assets (ROA)

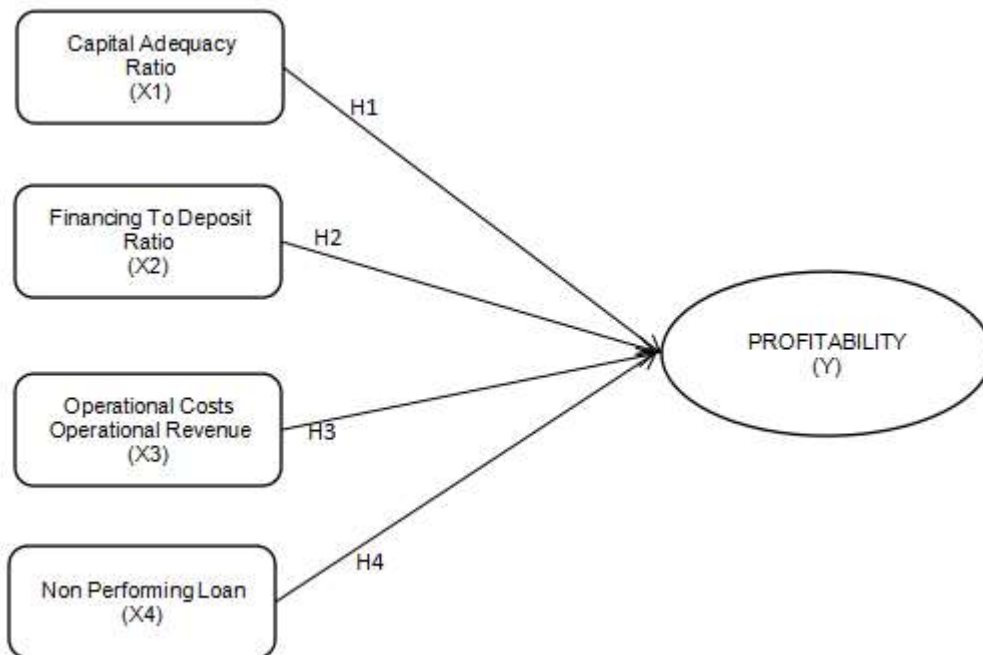
The amount of Return on Assets (ROA) will change if there is a change in profit margin or asset turnover, either individually or both. Therefore, company leaders can use one or both of them in an effort to increase ROA According to Munawir (2007: 26) the value of ROA can be influenced by two factors, namely:

1. Turnover from operating assets (turnover rate of assets used for operations)
 2. Profit margin, namely the amount of operating profit expressed in percentage and the amount of net sales. This profit margin measures the level of profit that can be achieved by the company in relation to its sales
- c. Measuring instrument The value of return on assets can be calculated by the formula:

$$ROA = \frac{\textit{Profit Before Tax}}{\textit{Total Assets}} \times 100$$

Source: Harmono, (2016:11)

Conceptual Model



Hypothesis

H1: Capital Adequacy Ratio (CAR) has a positive and significant effect on profitability

H2: Financing to Deposit Ratio (FRD) have a positive and significant effect on profitability

H3: Operational Costs and Revenue Costs (BOPO) has a positive and significant effect on profitability

H4: Non Performing Loan (NPL) have a positive and significant effect on profitability

C. RESEARCH METHOD

Research Design and Location

This research was conducted at the Makassar Branch of Bank Rakyat Indonesia, which has the address Ruko Jasper I, Jl. Panakkukang Mas Boulevard No. 16, Pandang, Kec. Panakkukang, Makassar City, South Sulawesi 90231. The target time for the research is around \pm 4 months in 2022.

Data Collection Method

The data collection technique was carried out using the documentation method for secondary data, namely collecting and recording company financial data during the research period from 2017-2020 at Bank Rakyat Indonesia Makassar Branch.

Data Analysis Method

Data analysis method is a method used to process research results in order to obtain a conclusion.

1. Multiple Linear Regression Analysis

Testing the hypothesis in this study uses multiple regression analysis. Multiple regression analysis must be used to examine the effect of the independent variables, namely CAR, FDR, BOPO, and NPL on financial performance as the dependent variable. The regression equation can be written as follows:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + e$$

Y = Financial performance

a = Constant b_i = Regression Coefficient (I = 1,2,3,)

X_1 = CAR (Capital Adequacy Ratio)

X_2 = FDR (Financing To Deposit Ratio)

X_3 = BOPO (Cost Revenue to Operating Income)

X_4 = NPL (Non Performing Loans)

E = standard error (error rate)

2. The coefficient of determination (R²)

Provides information about the fitness of the regression model constancy: it is a statistical measure of how well the regression line approximates the actual data points. R² is the percentage of variance in the dependent variable explained by the variation in the independent variable. If R² is 1, the regression model using perceived quality correctly predicts the propensity for the Y variable. In other words, the regression model fits the data exactly. On the other hand, if R² is 0, there is no variance in the tendency for the variable Y to be associated with the independent variable (Uma Sekaran, 2017: 139)

3. Hypothesis Test

a. T Test (Partial)

The t test where the t value is obtained at the output of the regression coefficient which serves to be used as a partial or individual hypothesis tester when we use multiple linear regression procedures where we use independent variables or predictors of more than 1. This test is carried out by comparing the values t count (t) with t table (t critical value) by using the provisions, namely if the value of t count > t table with a certain level of

significance (α), for example 0.05 then H0 is rejected and H1 is accepted, otherwise if t count < t table, then H0 is accepted and H1 is rejected (Umi Nariwati, 2020: 48)

b. F Test (Simultaneous)

The F test is used to determine the magnitude of the influence of the independent variables significantly on the dependent variable. Where F count > F table, then H1 is accepted or together the independent variables can explain the dependent variable simultaneously. Conversely, if F count < F table then H0 is accepted or together the independent variables have no influence on the dependent variable.

D. EMPIRICAL RESULTS

In this study the data used are financial report data in the form of CAR, FDR, BOPO, NPL and ROA ratios of Bank BRI Makassar Branch for the period 2017 - 2021 in the following table:

Table 4.1
Research result CAR, FDR, BOPO, ROA Periode 2017 - 2021

No.	Tahun	CAR (%)	FDR (%)	BOPO (%)	NPL (%)	ROA (%)
1	2017	20,09%	73,68%	56,02%	2,10%	3,29%
2	2018	22,96%	74,39%	77,15%	2,14%	3,22%
3	2019	22,77%	81,96%	70,55%	2,62%	3,06%
4	2020	21,17%	75,27%	81,24%	2,99%	1,77%
5	2021	26,24%	73,38%	74,63%	8,83%	2,44%

Source: Data Keuangan BRI Cabang Makassar.

Testing with multiple linear regression analysis aims to determine the effect of a number of independent variables with a dependent variable.

Table 4.2
Multiple Linear Regression Test Results
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	1,454	0,000				
CAR	,464	0,000	1,678		-,121	,161
FDR	-,042	0,000	,232		3,293	,001
BOPO	-,064	0,000	-,966		-2,730	,031
NPL	-,375	0,000	-1,668		-3,421	,040

a. Dependent Variable: ROA

Source: data keuangan, SPSS 20.

From the results of testing the data shows the multiple linear regression equation which explains whether or not there is a relationship between the independent and dependent variables as follows:

$$ROA = 1.454 + 0.464 \text{ CAR} - 0.042 \text{ FDR} - 0.064 \text{ BOPO} - 0.375 \text{ NPL}$$

This equation shows that the coefficient of:

a. Capital Adequacy Ratio (CAR)

The test results show that the CAR coefficient has a positive direction of 0.464. This value means that for every 1% increase in CAR, the ROA of Bank BRI Makassar Branch increases, although not significantly by 0.464 assuming constant FDR, BOPO and NPL.

b. Financing To Deposit Ratio (FDR) The test results show that the FDR coefficient has a negative direction of -0.042. This value means that for every 1% increase in FDR, the ROA of Bank BRI Makassar Branch decreases by -0.042 assuming constant FDR, BOPO and NPL. This is because the amount of credit given by the bank is smaller than the funds received back by the bank.

c. Operating Costs to Operating Income (BOPO) The test results show that the BOPO coefficient has a negative direction of -0.064. This value means that for every 1% increase in BOPO, the ROA of Bank BRI Makassar Branch decreases by -0.064 assuming constant FDR, BOPO and NPL. These results are in accordance with the theory that if operating costs increase while operating income does not, it will cause the Bank to be inefficient and cause a decrease in profitability.

d. Non Performing Loan (NPL) The test results show that the NPL coefficient has a negative direction of -0.375. This value means that for every 1% increase in NPL, the ROA of Bank BRI Makassar Branch decreases by -0.375 assuming constant FDR, BOPO and NPL. The results of this study are in accordance with the theory that if there is an increase in non-performing loans it will cause a decrease in profitability.

1. t test

Tabel 4.3
Test results t
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1,454	0,000			
CAR	,464	0,000	1,678	-,121	,161
FDR	-,042	0,000	,232	3,293	,001
BOPO	-,064	0,000	-,966	-2,730	,031
NPL	-,375	0,000	-1,668	-3,421	,040

a. Dependent Variable: ROA

Source: olahan data keuangan, SPSS 20.

From the results of the t test shown in table 4.3 obtained:

- a. Testing the effect of CAR on ROA yields a t value of -0.121 with a significance value of 0.161. Based on these results it can be said that the CAR significance value is greater than the test level value ($0.161 > 0.05$) then H_0 is rejected and H_1 is accepted.
- b. Testing the effect of FDR on ROA yielded a t value of 3.293 with a significance value of 0.001, based on these results it can be said that the significance value of FDR is smaller than the test level ($0.001 < 0.05$) then H_0 is accepted and H_1 is rejected.
- c. Testing the effect of BOPO on ROA yielded a t value of -2.730 with a significance value of 0.031 based on these results it can be said that the significance value of BOPO is smaller than the test level value ($0.031 < 0.05$) then H_0 is accepted and H_1 is rejected.
- d. Testing the effect of NPL on ROA produces a t value of -3.421 with a significance value of 0.040, based on these results it can be said that the significance value of NPL is smaller than the test level ($0.040 < 0.05$) then H_0 is accepted and H_1 is rejected.

2. F test

Table 4.4
Test results F
ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	1,664	4	,416	8,740	.002 ^b
Residual	,001	6			
Total	1,665	4			

a. Dependent Variable: ROA

From the results of the analysis of the f test on regression it can also be seen that together the independent variables have a significant influence on the dependent variable. This can be proven from the Fcount of 8.740 with a significance value of 0.002. Because profitability is much smaller than 0.05 or 5%, the regression transformation model can be used to predict Return On Assets (ROA) or it can be said Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Operational Costs to Revenue Costs (BOPO) and Non Performing Loans (NPL) together have an effect on Return On Assets (ROA).

3. Test the Coefficient of Determination

Table 4.5
Test results R²

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846 ^a	,644	,537	3,29000

a. Predictors: (Constant), NPL, BOPO, FDR, CAR

Source: olahan data keuangan, SPSS 20.

From the table above it is known that the contribution of the Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Operational Costs to Revenue Costs (BOPO) and Non Performing Loans (NPL) variables to Return On Assets (ROA). by looking at the results of the adjusted *RSquare* or (Adjusted R²) = 0.537 this means that the Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Operational Costs to Revenue Costs (BOPO) and Non Performing Loans (NPL) to Return On Assets (ROA) of 53.7% while the remaining 41.3% is explained by other factors outside the variables.

This research was conducted to examine the effect of Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Operational Costs to Revenue Costs (BOPO) and Non Performing Loans (NPL) on Return On Assets (ROA). The following is a discussion of each dependent variable in this study.

1. Effect of Capital Adequacy Ratio on Return On Assets

According to the hypothesis test results of the t-test, it can be seen that the value of the variable capital adequacy ratio is -0.121, and the significance value is 0.161, which means that it has no significant negative impact on the return. About the capital of BRI Bank Makassar branch from 2017 to 2021. The results of this study are not consistent with the assumption and theory that the larger the CAR, the higher the ROA achieved, because the capitalization of banks is more flexible in terms of financing assets involving risk and business development. The discrepancy between the study and this assumption may be due to the high capital adequacy ratio used to cover the risk of loss or assets containing risks that may affect the bank's ability to expand its business. Delays in business expansion due to high capital adequacy ratios will have a negative impact on banks' financial performance.

2. Effect of Financing to Deposit Ratio on Return On Assets

According to the results of the t-test hypothesis test, it can be seen that the calculation result of the variable "fund deposit ratio" has a t-value of 3.293 and a significance value of 0.001, which means that it has a 2017-2021 period. The return on assets is significantly and positively affected. The results of this study are consistent with the hypothesis and theory that the higher the FDR, the higher the ROA achieved. This is due to the rising uptake of FDRs, which has led to higher returns on investment, as well as higher numbers of loans disbursed by banks and stronger public confidence. As ROA increases, there is additional income from funding sources from public funds and third-party funds.

3. Effect of Operational Costs on Revenue Costs on Return On Assets

According to the hypothesis test results of the t test, the significance value of the BOPO variable is 0.031, and the

calculated t value is -2.730, which means that there is a significant and negative impact on the investment return of the Bank BRI Makassar Branch 2017 to 2021 year period. The results of this study are consistent with the hypothesis and theory that the larger the BOPO, the greater the reduction in ROA achieved due to the poorer performance of bank management in managing available resources. This result suggests that the more operating expenses cannot be offset by an increase in operating income, the bank will not be able to effectively manage the operating income received because operating expenses are directly related to the bank's business activities, such as: B. Interest costs and Foreign exchange costs, labor costs, depreciation and other costs. With a lower BOPO ratio, banks can minimize operational risk arising from high operating income.

4. The Effect of Non Performing Loans on Return On Assets

According to the results of the t test hypothesis, it can be seen that the calculated t value of the non-performing loan variable is -3.421, and the significance value is 0.040, which means that there is a significant negative impact on the return on investment BRI Bank Makassar Branch 2017 to 2021 data during the year. The results of this study are consistent with the hypothesis and theory that the higher the non-performing loans, the lower the realized ROA, because the higher the number of non-performing loans, the higher the increase in the number of non-performing loans. This shows that the increase in the number of non-performing loans means that banks are afraid to increase lending, especially because the total amount of third-party funds received by banks is not satisfactory, causing liquidity disruptions to banks.

CONCLUSION

Based on the results of the research described in the previous section, it can be concluded that:

1. Whereas the Capital Adequacy Ratio (CAR) variable has no significant and negative effect on Return On Assets (ROA) this is not in accordance with the hypothesis because it is caused by high CAR which is used to cover the risk of loss or assets that contain risks can reduce the Bank's ability to expand its business.
2. Whereas the variable Financing to Deposit Ratio (FDR) has a significant and positive effect on Return On Assets (ROA) this is in accordance with the research hypothesis which means that increased absorption of FDR causes Return On Assets to also increase as well as increase in the number of loans provided by banks, so the level of public trust rises.
3. Whereas the variable Operational Costs to Revenue Costs (BOPO) has a significant and negative effect on Return On Assets (ROA) this is in accordance with the research hypothesis which means that a low BOPO ratio can minimize operational risks obtained from the large value of operating income.

4. Whereas the Non Performing Loan (NPL) variable has a significant and negative effect on Return On Assets (ROA) this is in accordance with the hypothesis which means that the increasing number of problem loans makes banks not dare to increase lending let alone the total third party funds received by banks not optimal, causing bank liquidity to be disrupted.
5. Whereas the variables Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Operational Costs to Revenue Costs (BOPO) and Non Performing Loans (NPL) show jointly or simultaneously an effect on Return On Assets (ROA).

SUGGESTION

1. For Banks Based on the results of research, bank management should pay attention to the total credit that will be given to customers so that non-performing loans can be minimized, increase and regulate owned capital so that it does not negatively affect bank performance.
2. For further researchers For future researchers, it is better to add other financial ratios as research variables and extend the research period, both yearly and quarterly in order to obtain better, varied and accurate research results.

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