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## **The Factor Affecting to Profitability of Bank Mandiri (Persero) Tbk. Period 2011-2020**

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### **Abstract**

The purpose of this study is to determine factors Capital Adequacy Ratio, Non-Performing Loans and Operational Cost of Operating Income, Return On Assets as profitability at PT. Bank Mandiri (Persero) Tbk. with periode 2011-2020. The research method used in this study is descriptive quantitative. The population used is the financial statements of PT. Bank Mandiri (Persero) Tbk. The sample used is data that comes from the notes to the financial statements and income statements of PT. Bank Mandiri (Persero) Tbk. in the period 2011 to 2020. Based on the results of the partial test (t test) the results is Capital Adequacy Ratio and Non Performing Loan have not a significant influence on Return On Assets and Operational Cost of Operating Income has a significant influence on Return On Assets. But base on simultan (F test) shows that the Capital Adequacy Ratio, Non Performing Loan and Operational Cost of Operating Income have a significant influence on Return On Assets. In the coefficient of determination, the value of Adjusted R Square is 92.60%, Return On Assets can be explained by the Capital Adequacy Ratio, Non-Performing Loans and Operating Cost of Operating Income, which means that the relationship between variables has a strong correlation, while the remaining 7.4% can be explained by other variables.

**Keywords :** Capital Adequacy Ratio, Non Performing Loan, Operational Cost of Operating Income and Return On Assets

### **INTRODUCTION**

Banking plays an important role as a source of capital in financial intermediaries. Increasingly fierce business competition and the development of people's lives and economic transactions

of a country according to the banking sector improve its performance by developing its service products. The emergence of the banking sector is expected to be able to encourage overall economic progress. So the government continues

to strive to improve the performance of national banks so that improved performance is achieved against the value of the company.

In this research used PT Bank Mandiri (Persero) Tbk. because it is one of the state-owned banks (SOEs) registered in Indonesia and is the largest bank in Indonesia in terms of assets, loans, and deposits and PT Bank Mandiri (Persero) Tbk. was selected as one of the best banks in 2017 out of 115 banks operating in Indonesia.

Some of the factors that affect the performance of Bank Mandiri are Capital Adequacy Ratio (CAR), Non Performing Loan (NPL) and Operational Cost of Operating Income (BOPO). Capital Adequacy Ratio (CAR) is a capital adequacy ratio that serves to accommodate the risk of losses that are likely faced by banks. This research is important because there is a gap in previous research, such as in Amira Sutra Dewi, et al (2017), Nani Mulyani and Erick Agustinus (2021) who stated that variable capital adequacy ratio (CAR) had no significant influence on return on assets. But not in line with the research conducted by I Gusti Ayu Dwi Ambarawati & Nyoman Abundanti (2018), Daniel Nugroho, et al (2019) which stated that the CAR ratio had a significant influence on ROA stating that the CAR ratio had a significant influence on ROA.

NPL in research conducted by Abdurrohman, et al (2020), Habibah S. Fauziyyah & Nurismalatri (2021) which states that the NPL ratio had no significant on ROA. But it is not in line with the research conducted by Nurul Khotimah, et al (2020), Ida Ayu Adiatmayani Peling & Ida Bagus Panji Sedana (2018) who stated that the NPL ratio had significant influence on ROA.

BOPO in research conducted by Nadi Hernadi Moorcy, et al (2020), Muhammad Ali & R. Roosaleh Laksono T.Y (2017), Jordi Suwandi &

Hening widi Oetomo (2017) which states that the bopo ratio had significant influence on ROA. But not in line with research conducted with Daniel Nugroho, et al (2019), Nani Mulyani & Erick Augustine (2021) which states that the BOPO ratio had no significant influence on ROA.

In a study conducted by Jordi Suwandi & Hening Widi Oetomo (2017) which showed that simultaneously the ratio of CAR, NPL and BOPO had a positive and significant influence on ROA, and was supported also by research conducted by Amira Sutra Dewi (2017) which showed that simultaneously CAR, NPL and BOPO variables had a positive and significant influence on ROA.

As for the growth data of CAR, NPL, BOPO and ROA PT. Bank Mandiri (Persero) Tbk. for the last 10 years is as Table 1.

**Table 1.** CAR, NPL, BOPO, ROA of PT. Bank Mandiri (Persero) Tbk. Period 2011-2020

Year	CAR (%)	NPL (%)	BOPO (%)	ROA (%)
2011	15,34	2,23	53,76	2,99
2012	15,48	1,88	52,81	3,23
2013	14,93	1,60	53,93	3,28
2014	16,60	1,66	54,02	3,04
2015	18,60	2,29	60,62	2,90
2016	21,36	3,96	74,77	1,79
2017	21,64	3,45	64,84	2,41
2018	20,96	2,79	60,11	2,82
2019	21,39	2,38	58,45	2,76
2020	19,90	3,26	72,96	1,63

Source: Data from financial report PT. Bank Mandiri (Persero) Tbk.

In below figure illustrates the ratio of Table 1 Capital Adequacy Ratio, Non Performing Loan, Operating Expenses of Operating Income and Return On Asset in PT. Bank Mandiri (Persero) Tbk Period 2011-2020.

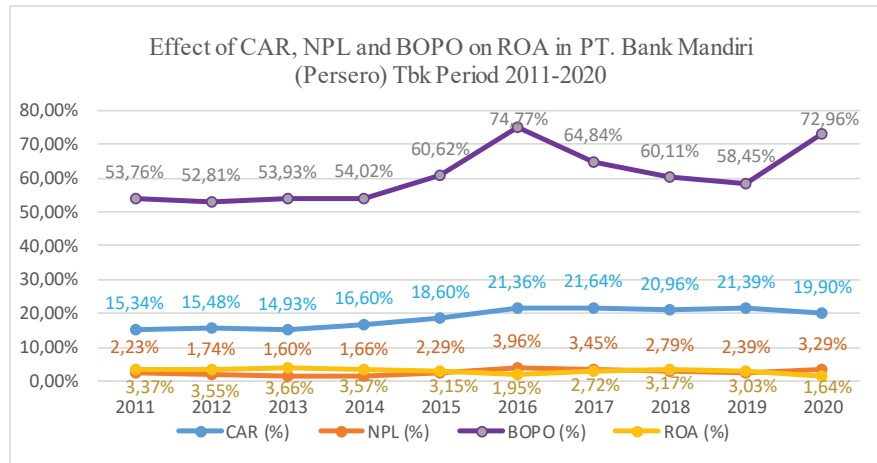


Figure 1. Graph CAR, NPL, BOPO, ROA of PT. Bank Mandiri (Persero) Tbk. Period 2011-2020

From the table and figure 1. PT Bank Mandiri (Persero) Tbk above can be known that the value of Capital Adequacy Ratio (CAR) is stable. Non Performing Loan (NPL), Operating Expense Value (BOPO) and Return On Asset (ROA) are unstable conditions every year.

Based on the background outlined above and the research gap of previous studies on the relationship between Capital Adequacy Ratio, Non Performing Loan and Operating Expenses of Operating Income to Return On Asset, it can be concluded that there is still a difference in results between researchers and other researchers.

**METHODS**

**Data Collection Methods**

This type of research is done in this writing using quantitative methods. Quantitative research methods are one type of research whose

specifications are systematic, planned and clearly structured from the beginning until the creation of the research design. Methods of data collection with literature studies and research using secondary data in the form of company financial statement data.

**Data Analyze Methods**

The techniques used to analyze the data in this study are quantitative descriptive analysis and data processing in research using Microsoft Excel and Statistical Product and Service Solutions (SPSS) for Windows Version 26. As for the data processed by the author during the period 2011-2020.

This research study relationship between Capital Adequacy Ratio, Non Performing Loan and Operating Expenses of Operating Income to Return On Asset, with frame of this research as Figure 2.

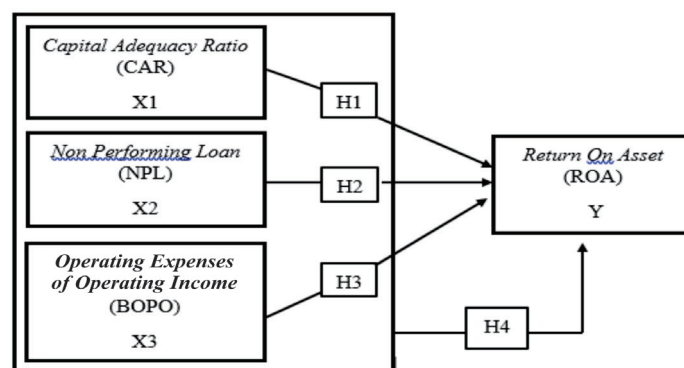


Figure 2. Path analyst method

### Operational Research Variable

According to Sugiyono (2017: 63) argues that the operational variables are as follows: "An attribute or trait or value of an object or activity person who has a certain variation is applied by the researcher to be studied and then drawn conclusions". In accordance with the research title selected by the author, namely "The Influence of Capital Adequacy Ratio (CAR), Non Performing Loan (NPL) and Operating Expenses of Operating Income (BOPO)

against Return on Asset (ROA) in PT Bank Mandiri (Persero) Tbk. Period 2011-2020". So the authors grouped the variables used in the study into independent variables (X) and dependent variables (Y). The explanation is as follows: Independent variables in this study are Capital Adequacy Ratio (CAR), Non Performing Loan (NPL) and Operational Cost of Operating Income (BOPO). Dependent variable is Return On Asset (ROA). The operational variables of this study are Table 2.

**Table 2.** Operational research variable PT. Bank Mandiri (Persero) Tbk. Period 2011-2020

Number	Variable	Definition	Indicator	Scale
1	Capital Adequacy Ratio (CAR)	Kasmir (2016:46) Capital Adequacy Ratio (CAR) is a capital adequacy ratio that serves to accommodate the risk of losses that are likely faced by banks.	•Modal •ATMR	Ratio
2	Non Performing Loan (NPL)	Kasmir (2013:155) Non Performing Loan (NPL) is a problem credit or bad credit is credit in which there are obstacles caused by two (2) elements, namely from the bank in analyzing and from the customer who intentionally or unintentionally in his obligation does not make payments.	•Credit Not Per- form •Total Credit	Ratio
3	Operational Cost of Operating Income (BOPO)	Rivai, V (2013) Bopo ratio is a comparison between operating expenses and operating income to measure the efficiency and ability of banks to conduct their operations.	•Operating Cost •Operating Rev- enue	Ratio
4	Return On Asset (ROA)	Rivai, V (2013:480) Return on Asset (ROA) is the ability of a company to utilize its assets to earn profits.	•Net Income •Total Asset	Ratio

**Data Test**

We calculate Classic Assumption Test. In this study there were 4 (four) classical assumption tests, namely: normality test, multicollinearity test, heteroskedasticity test, and autocorrelation test. After fulfilling the classical assumption test, the Hypothesis Test is a multiple linear regression analysis, determination coefficient test (R<sup>2</sup>), partial test (T-test), and simultaneous test (F-Test).

**RESULTS**

Descriptive analysis is used to provide an overview and information of variable data in this study so descriptive tables are used. This descriptive statistical table includes, the amount of data (N), Maximum and Minimum data values, average values (mean) and standard deviations from independent variables namely Capital Adequacy Ratio (CAR), Non Performing Loan (NPL) and Operational Cost of Operating Income (BOPO) as variables affecting Return On Asset (ROA) at PT. Bank Mandiri (Persero) Tbk period 2011-2020 as seen in the following Table 3.

**Table 3.** Descriptive statistics data

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	
CAR	10	14,93	21,64	18,6200	2,78348	
NPL	10	1,60	3,96	2,5500	,79598	
BOPO	10	52,81	74,77	60,5320	8,06352	
ROA	10	1,63	3,28	2,6850	,57056	
Valid N (listwise)	10					

**Classis Assumption Test**

The classic assumption test is used to determine whether the results of multiple linear regression analysis used to analyze in this study are free from deviations of classical assumptions that include normality tests, multicollinearity tests, autocorrelation tests and heteroskedasticity tests.

**Normality Test**

The statistical test used in this study is to test residual normality is the non parametric statistics test kolmogorov-smirnov (K-S). The K-S test is done by making a hypothesis with  $\alpha = 5\%$   
H<sub>0</sub> : Residual data is abnormally distributed, if if

the value of Asymp.Sig (2-tailed) < 0.05

H<sub>a</sub> : Residual data is normally distributed, if if the value of Asymp.Sig (2-tailed) > 0.05

**Table 4.** Result uji normality one-sample kolmogorov smirnov

One-Sample Kolmogorov-Smirnov Test		
Unstandardized Residual		
N		10
Mean		,0000000
Std. Deviation		,12685397
Most Extreme Differences	Absolute	,161
	Positive	,161
	Negative	-,104
Test Statistic		,161
Asymp. Sig. (2-tailed)		,200 <sup>c,d</sup>

a. Test distribution is Normal.  
b. Calculated from data.  
c. Lilliefors Significance Correction.  
d. This is a lower bound of the true significance.

The results of the test conducted by researchers using the Kolmogorov-Smirnov method resulted in an Asymp Sig value. (2-tailed) of .200. The value is in accordance with the normality test criteria with a value above the significance value of 0.05, so it can be concluded that the sample data is normal distribution.

**Multicollinearity Test**

Multicollinarity tests are performed to believe that between free variables do not have multicollinearity or have no correlation relationship between independent variables. A good regression model should not occur

correlations among independent variables. This test can be done by looking at the value of Tolerance Value and Variance Inflation Factor (VIF). As a prerequisite, the following:

- a. If the VIF value > 10 and the tolerance value < 0.1 then there are symptoms of multicollinearity
- b. If the VIF value < 10 and the tolerance value > 0.1 then there are no symptoms of multicollinearity

The test results using SPSS Version 26 are as Table 5.

**Table 5.** Result multicollinearity test

Model	Coefficients <sup>a</sup>	
	Collinearity Statistics	
	Tolerance	VIF
1 CAR	,352	2,838
NPL	,114	8,785
BOPO	,148	6,759

a. Dependent Variable: ROA

Based on the results of multicollinearity testing in the table above obtained a variable tolerance value of CAR of 0.352, NPL of 0.114 and BOPO of 0.148. This indicates that in this regression model is free from multicollinearity or there are no symptoms of multicollinearity because the tolerance value is above 0.1 and the VIF value is below 10.

**Autocorrelation Test**

This research used Run Test to ensuring no autocorrelation. Run Test is a non-parametric statistic that can also be used to residual whether there is a high correlation between residuals. If there is no correlation relationship, it is said that the residual is random or random Ghozali (2016: 116).

The results of the Run Test can be viewed in the table as Table 6.

**Table 6.** Result run test

Runs Test	
	Unstandardized Residual
Test Value <sup>a</sup>	,01339
Cases < Test Value	5
Cases >= Test Value	5
Total Cases	10
Number of Runs	7
Z	,335
Asymp. Sig. (2-tailed)	,737

a. Median  
 H0 : Symptoms of autocorrelation , if if the value of Asymp.Sig (2-tailed) < 0.05  
 Ha : No symptoms of autocorrelation, if if the value of Asymp.Sig (2-tailed) > 0.05

Run Test results show that the value of Asymp. Sig. (2-tailed) 0.737 > 0.05, it can be concluded that there are no symptoms of autocorrelation, so linear regression analysis can be continued.

**Heteroskedasticity Test**

Heteroskedasticity testing is intended to test whether in a regression model residual variance inequality occurs. One way to detect the absence of heteroskedasticity is with the Glejser test where the results of this test can be seen whether in regression models there is a variant inequality from one residual observation to another observation.

The provisions occur and there is no disruption of heteroskedasticity is as follows:

- a. If an independent variable (X) has a significance value (Sig.) < 0.05, then there is disruption of heteroscedasticity.
- b. If an independent variable (X) has a significance value (Sig.) > 0.05, then there is no disruption of heteroscedasticity.

The results of the heteroskedasticity test are as Table 7.

**Table 7.** Result heteroskedasticity test with glejser test

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig
1	(Constant)	-,370	,278		-1,333	,231
	CAR	,001	,012	,038	,072	,945
	NPL	-,131	,072	-1,656	-1,803	,121
	BOPO	,013	,006	1,681	2,087	,082

a. Dependent Variable: RES2

Based on the test results in the table above, the glejser test model on the variable CAR (X1) obtained a probability significance value (Sig.) of 0.945, the variable NPL (X2) obtained a probability value of significance (Sig.) of 0.121 and the variable BOPO (X3) obtained a probability value of significance (Sig.) of 0.082 where all significance values (Sig.) > 0.05.

Thus regression model in this data there is no disruption of heteroskedasticity, so this regression model is worth using as research data.

**Statistical Analysis Test**

**Multiple Linear Regeresi Test**

Multiple linier regresi analysis will be done if the number of independent variables is at least 2". The following is a double linear regression test of Capital Adequacy Ratio, Non Performing Loan and Operating Expenses of Operating Income against Return On Asset using SPSS 26 software.

Based on the results of the regression calculation analysis in the table above, it can be obtained the regression equation  $ROA = 6.779 + 0.016(CAR) - 0.008(NPL) - 0.072(BOPO)$ . If PT. Bank Mandiri (Persero) Tbk increase CAR, reduce NPL and BOPO will influence to increase ROA.

**Partial Test (t Test)**

The variable hypothesis testing of Capital Adequacy Ratio (X1), Non Performing Loan (X2) and Operating Income Operating Expense (X3) to Return On Asset (Y) is conducted with a t test (partial test). In this study used the significance criteria of 5% (0.05) by comparing the values t calculated with t tables, namely as follows:

- Based on the values t count and t calculate and t table:
- If the value t calculates < t table then H0 is accepted, Ha is rejected (has no influence)
  - If the value t calculates > t table then H0 is rejected, Ha is accepted (influential)

**Table 8.** Result multiple linear regeresi test

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig
1	(Constant)	6,779	,739		9,168	,000
	CAR	,016	,031	,080	,521	,621
	NPL	-,008	,193	-,011	-,040	,969
	BOPO	-,072	,017	-1,022	-4,332	,005

a. Dependent Variable: ROA

Based on the value of significance with 0.05 with the following provisions:

- a. If the sig value. > 0.05, then H0 is accepted, Ha is rejected
- b. If the sig value. < 0.05, then H0 is rejected, Ha is accepted

As for determining the magnitude of the value t the table is searched with, using the following formula:

$$t \text{ tabel} = t_{\alpha, df} \text{ (Taraf Alpha} \times \text{Degree of Freedom)}$$

$$\alpha = 5\%$$

$$df = (n-k-1), \text{ where } n = \text{many observations while } k = \text{number of independent variables.}$$

As for the results of data processing using the SPSS Version 26 program, with the following results Table 9.

was rejected and Ha1 accepted. This means that partially Operating Expenses (BOPO) partially has significant influence on the return on asset (ROA).

**Simultaneous Test (F Test)**

For testing the influence of variable Capital Adequacy Ratio (CAR), Non Performing Loan (NPL) and Operating Expenses (BOPO) simultaneously or jointly on Return On Asset (ROA) is conducted with statistical test F (simultaneous test) with a significance of 5%. In this study used the significance criterion of 5% (0.05) which is to compare the value of F calculate with F table with the following provisions:

- a. If the value F calculates < F of the table then

**Table 9.** Result hypothesis test (t test) variable capital adequacy ratio (X<sub>1</sub>), non performing loan (X<sub>2</sub>), operating income operating expenses (X<sub>3</sub>) to return on asset (Y)

Coefficients <sup>a</sup>						
Model	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta	t	Sig.	
1	(Constant)	6,779	,739		9,168	,000
	CAR	,016	,031	,080	,521	,621
	NPL	-,008	,193	-,011	-,040	,969
	BOPO	-,072	,017	-1,022	-4,332	,005

a. Dependent Variable: ROA

Based on the output results of SPSS 26 in Table 9 above it is known that the value of t calculated by -2,633 and the result of the value t of the table can be searched in the statistical table at significance 0.05/2 = 0.025 (two-sided test) and df = n-k-1 = 10-3-1 = 6 then can be obtained table t value of 2.447. Then it can be known t calculate < t table and also reinforced by a significant value > from a significant level of 0.05 thus H01 was accepted and Ha1 rejected. This means that partially the Variable Capital Adequacy Ratio (CAR) and Non Performing Loan (NPL) have not significant influence on the return on asset (ROA).

Operating Expenses (BOPO) has t calculate > t table and also reinforced by a significant value < from a significant level of 0.05 thus H01

- H0 is accepted, Ha is rejected (has no influence
- b. If the value F calculates > F of the table then H0 is rejected, Ha is accepted (affects)

Based on the significance of SPSS output results

- a. If sig value. > 0.05 then H0 is accepted, Ha is rejected
- b. If the sig.< value is 0.05 then H0 is rejected, Ha is accepted

To determine the magnitude of the F table is sought with the provisions dk numerator = k and dk denominator = n-k-1 where k = the number of independent variables, then in this case k = 3 and n-k-1 = 10-3-1 = 6 obtained F table is 4.76. The hypothesis is as follows:

- a. H0 : β1 = β2 = β3 = 0 There is no simultaneous significant influence of Capital

Adequacy Ratio, Non Performing Loan and Operating Income Operating Expenses on Return On Asset.

**Coefficient Determination Test (Adjusted R2)**  
Coefficient determinant test (Adjusted R2) is intended to determine the percentage

**Table 10.** Result hypothesis test (F test) capital adequacy ratio ( $X_1$ ), non performing loan ( $X_2$ ), operating income operating expenses ( $X_3$ ) to return on asset (Y)

Model	Sum of Squares	ANOVAS <sup>a</sup>			Sig.
		df	Mean Square	F	
1 Regression	2,785	3	,928	38,460	,000 <sup>b</sup>
Residual	,145	6	,024		
Total	2,930	9			

a. Dependent Variable: ROA

b. Predictors: (Constant), BOPO, CAR, NPL

b.  $H_a : \beta_1 = \beta_2 = \beta_3 \neq 0$  There is simultaneous significant influence of Capital Adequacy Ratio, Non Performing Loan and Operating Income Operating Expenses on Return On Asset.

Based on the output results of SPSS 26 in Table 10 obtained the value F calculated 38,460, for F tables with a significance level of 0.05, dk numerator  $k = 3$ , and dk denominator  $= n - k - 1 = 10 - 3 - 1 = 6$ , obtained F table is 4.76. So that the value F calculates the  $> F$  table ( $38,460 > 4.76$ ) with a significant value of  $0.000^b <$  from a significant level of 0.05 thus  $H_0$  is rejected and  $H_a$  is accepted. This means that simultaneously independent variables capital adequacy ratio (CAR), non performing loan (NPL) and operating expenses operating income (BOPO) significantly affect the dependent variable return on asset (ROA).

of strength of relationship strength between independent variables to dependent variables both partially and simultaneously.

Based on the results of the test in the Table 11, obtained the coefficient of determination of 0.397 can be concluded that the variable Capital Adequacy Ratio affects the Return on Asset variable by 39.7% while the rest of the amount  $(100 - 39.7\%) = 60.3\%$  influenced by other factors.

Based on the test results in the Table 12, obtained a coefficient of determination of 0.767, it can be concluded that the Non Performing Loan variable affects the Return on Asset variable by 76.7% while the rest of the  $(100 - 76.7\%) = 23.3\%$  is influenced by other factors.

**Table 11.** Results of partial coefficient of determination analysis between capital adequacy ratio ( $X_1$ ) to return on asset (Y)

Model	R	Model Summary		
		R Square	Adjusted R Square	Std. Error of the Estimate
1	,681 <sup>a</sup>	,464	,397	,44298

a. Predictors: (Constant), CAR

Source: Output SPSS 26.

**Table 12.** Results of partial coefficient of determination analysis between non performing loan ( $X_2$ )

Model	R	Model Summary		
		R Square	Adjusted R Square	Std. Error of the Estimate
1	,890 <sup>a</sup>	,793	,767	,27566

a. Predictors: (Constant), NPL

**Table 13.** Results of partial coefficient of determination analysis between operating expenses operating income ( $X_3$ ) to return on asset (Y)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,971 <sup>a</sup>	,943	,936	,14412

a. Predictors: (Constant), BOPO

Based on the results of the test in Table 13, obtained a coefficient of determination of 0.936, it can be concluded that the variable Operating Expenses of Operating Income affects the Return on Asset variable by 93.6% while the rest of the amount (100-93.6%) = 6.4% is influenced by other factors.

Based on Table 14, it can be known that the Value of Adjusted R-square is 0.926 meaning that the variation of all variables independent Capital Adequacy Ratio (CAR), Non Performing Loan (NPL) and Operating Expenses Operating Income (BOPO) can affect variables dependent Return On Asset (ROA) of 0.926 (92.60%) has a strong correlation. While the rest of the (100 - 92.60%) = 7.4% was influenced by other variables outside the study.

2.447 and also reinforced by a significant value 0.621 > from a significant level of 0.05.

The results of this study support research conducted by Amira Sutra Dewi, et al (2017), Nani Mulyani and Erick Agustinus (2021) who stated that variable capital adequacy ratio (CAR) had no significant influence on return on assets. But not in line with the research conducted by I Gusti Ayu Dwi Ambarawati & Nyoman Abundanti (2018), Daniel Nugroho, et al (2019) which stated that the CAR ratio had significant influence on ROA.

#### **Influence of Non Performing Loans (NPL) on Return on Assets (ROA)**

The greater the NPL level indicates that the bank is unprofessional in its credit management, while providing an indication that the level of

**Table 14.** Result of simultan coefficient determination test capital adequacy ratio ( $X_1$ ), non performing loan ( $X_2$ ), operating income operating expenses ( $X_3$ ) to return on asset (Y)

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,975 <sup>a</sup>	,951	,926	,15536	1,620

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

b. Dependent Variable: ROA

## **DISCUSSION**

### **Influence of Capital Adequacy Ratio (CAR) on Return on Asset (ROA)**

The higher the CAR, the better the bank's ability to bear the risk of any risky financing. If the value of CAR is high then the bank is able to finance operational activities and contribute considerable to profitability. So CAR has a positive influence on profitability. The results of hypothesis testing using SPSS Version 26 showed that the CAR variable had an insignificant positive influence on ROA in PT. Bank Mandiri (Persero) Tbk. It can be known t calculate 0.521 < t table

risk on lending to banks is quite high in line with the high NPL faced by banks. The results of hypothesis testing using SPSS Version 26 showed that the NPL variable had an insignificant positive influence on ROA in PT. Bank Mandiri (Persero) Tbk. It can be known t calculate -0.40 < t table 2.447 and also reinforced by a significant value 0.969 > from a significant level of 0.05.

The results of this study support research conducted by Habibah S. Fauziyyah & Nurismalatri (2021) which states that the NPL ratio had no influence significant on ROA. But it is not in line with the research conducted by Nurul

Khotimah, et al (2020), Ida Ayu Adiatmayani Peling & Ida Bagus Panji Sedana (2018) who stated that the NPL ratio had significant influence on ROA.

### **Influence of Operating Expenses on Operating Income (BOPO) on Return on Asset (ROA)**

Operating Expenses Operating Income (BOPO) is often called the efficiency ratio used to measure a bank's management ability to control operating expenses to operating income. The higher the BOPO, the smaller the ROA. This means reflecting the bank's lack of ability to reduce operating costs and increase its operating income which can lead to losses because the bank is less efficient in managing its business, so the bank's financial performance decreases. The results of hypothesis testing using SPSS Version 26 showed that the BOPO variable had an significant negative influence on ROA in PT. Bank Mandiri (Persero) Tbk. It can be known t calculate  $-4.332 > t$  table 2.447 and also reinforced by a significant value  $0.005 <$  from a significant level of 0.05.

The results of this study support research conducted by Nadi Hernadi Moorcy, et al (2020), Muhammad Ali & R. Roosaleh Laksono T.Y (2017), Jordi Suwandi & Hening widi Oetomo (2017) which states that the bopo ratio had significant influence on ROA. But not in line with research conducted with Daniel Nugroho, et al (2019), Nani Mulyani & Erick Augustine (2021) which states that the BOPO ratio had no significant influence on ROA.

### **Influence of Capital Adequacy Ratio (CAR), Non Performing Loan (NPL) and Operating Expenses on Operating Income (BOPO) on Return on Asset (ROA)**

The results of hypothesis testing using SPSS Version 26 showed that variable Capital Adequacy Ratio (CAR), Non performing Loan (NPL) and Operating Income Operating Expenses (BOPO) had a significant influence on Return On Asset (ROA) in PT. Bank Mandiri (Persero) Tbk. with a calculated F value of 38,460 > from the table F value of 4.76 with a significant  $0.000b < 0.05$ . The results showed that variable Capital Adequacy

Ratio (CAR), Non performing Loan (NPL) and Operating Income Operating Expenses (BOPO) had a significant influence on Return On Asset (ROA) in PT. Bank Mandiri (Persero) Tbk.

The coefficient of determination of 92.6% which means ROA can be explained by CAR, NPL and BOPO the remaining 7.4% is influenced by other variables outside of this study. This is similar to research conducted by Jordi Suwandi & Hening Widi Oetomo (2017), Amira Sutra Dewi (2017) which states that simultaneously the ratio of CAR, NPL and BOPO has a significant influence on ROA.

### **CONCLUSION**

Result of this research, The partial test (t test) have Capital Adequacy Ratio and Non Performing Loan have not a significant influence on Return On Assets and Operational Cost of Operating Income has a significant influence on Return On Assets. But base on simultan (F test) shows that the Capital Adequacy Ratio, Non Performing Loan and Operational Cost of Operating Income have a significant influence on Return On Assets. This is reinforced by the value of R Square of 0.926 so that the three variables Capital Adequacy Ratio (X1), Non Performing Loan (X2) and Operating Expenses (X3) have an influence of 92.60% on Return on Asset (Y).

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