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THE INFLUENCE OF BOPO (OPERATING EXPENSES AND OPERATING INCOME) ON *RETURN ON ASSETS* (ROA) AT PT. BANK MEGA TBK

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ABSTRACT

The title of this Final Report is "The Influence of BOPO (Operating Expenses and Operating Income) on Return On Assets (ROA) at PT Bank Mega Tbk". The purpose of this Final Report was to determine the effect of BOPO on ROA at PT Bank Mega Tbk for the 2018 - 2022 period for 60 months. The data used in this Final Report is secondary data, obtained from the Profit and Loss Report and Financial Position Report for the monthly period of PT Bank Mega Tbk from 2018 - 2022. The data collection technique used is documentation. Data processing was performed using simple linear regression analysis. The results of this Final Report indicate that the effect of BOPO on ROA at PT Bank Mega Tbk for the 2018-2022 period has a negative relationship with a correlation coefficient of 0.469 and a determination of 0.220. This figure shows that BOPO has a 22% effect on ROA and 78% is influenced by other factors, such as interest rates, loans extended.

INTRODUCTION

Bank performance is very important as a tool to evaluate bank operations and determine management plans and strategic analysis. There are several indicators that can be used to assess bank performance. The financial statements of the bank in question are one of the main indicators used as a basis for assessment. These financial statements are used to calculate a number of financial ratios that are commonly used to assess the health level of banks. The results of financial statement analysis will help understand various important relationships and trends, which can provide a basis for consideration of the likelihood of future success. (Sunyanto and Samani, 2014).

The company can measure the success or achievement of management that is sensitive to any influence of financial circumstances in utilizing its assets to generate profits. The measurement of this success is known as *Return on Assets* (ROA). According to Bank Indonesia circular number 13/30/DPNP dated December 16, 2011, the ability of a bank's management to generate profits from the management of its assets is known as ROA. The higher the ROA of a bank, the more efficient it is because increased profits have an impact on asset growth or higher ROA, the greater the level of profit earned by a bank, the better its position in the use of assets. Of all the assets used to operate, a positive ROA indicates that the total assets used to operate, the company has the ability to generate profits for the company. Conversely, if the ROA is negative due to the company's profit in a loss or loss condition, this indicates that the invested capital as a whole is not able to generate profits.
BOPO (Operating Expenses and Operating Income), which comprises the income ratio, is a tool that can be used to measure return on assets (ROA). The success of a bank is based on a quantitative assessment of the bank's profitability, which can be measured using the BOPO ratio. The BOPO ratio, also known as the efficiency ratio, is used to measure the ability of bank management to manage operating costs. The smaller this ratio, the more efficient the operating costs incurred by the bank. The ideal BOPO ratio ranges from 70%-80% (Kasir, 2020).

The results of research conducted Lestari and Manda (2021) stated that the BOPO variable has a negative effect on the ROA variable. This research is in line with research conducted by Fernando and Dewi (2019) and Khasimah, Nani, and Ashsifa (2020) get the result that BOPO affects ROA in a negative direction. This shows that the level of efficiency of the company's operations affects the income, or "earning", it generates. According to the coefficient of the BOPO variable is negative, any increase in the value of BOPO will reduce the value of ROA, This condition is due to the fact that if the bank's operating costs increase without being offset by its operating income, profit before tax will fall, which in turn will reduce *Return On Assets* (ROA). Meanwhile, according to Rohimah (2021), Rahman and Pratiwi (2020) It also shows that a high BOPO ratio indicates that bank management uses existing resources less efficiently. As a result, profit before tax decreases, which in turn reduces ROA. Based on PT Bank Mega Tbk data, the BOPO and ROA ratios experience ups and downs with the following description:

Table 1 Data on BOPO and ROA Ratios at PT Bank Mega Tbk 2018-2022

Year	**BOPO (%)**	**ROA (%)**
2018	77,78%	2.47%
2019	74,10%	2,90%
2020	65,94%	3,64%
2021	56,06%	4,22%
2022	56,76%	4,00%

Source: www.bankmega.com, (2023)

In 2022, Bank Mega's operating expenses reached 16.70 Trillion while operating income was 5 Trillion. The purpose of this study was to determine the effect of BOPO on ROA at PT Bank Mega Tbk for the period 2018 – 2022.

OVERVIEW

A. Definition of Bank

The definition of a bank according to Law No. 10 of 1998 article 1 paragraph 2 is a business entity that collects funds from the public in the form of deposits and then provides these funds to the public in the form of credit or other means to improve the quality of life of the community. The main activity of banks is to accept demand deposits, savings, and deposits; then, banks are also known as places to borrow money; and are also known as places to exchange money, move money, or receive various kinds of payments and deposits, such as taxes, electricity, water, and others. (Hery, 2019:2).

B. Definition of Financial Statements

According to Munawir, (2019) Financial reports and company activities can be communicated with parties with an interest in the data or activities through financial reports resulting from the accounting process. Financial statements usually consist of a Balance Sheet and Calculation of Lab Loss and Changes in Capital. The balance sheet shows the total assets, debts, and capital of a company as of a certain date, while the profit and loss account, also known as the income statement, shows the results that have been achieved by the company as well as the costs incurred during a certain period. The Statement of Changes in Capital shows the sources and uses or reasons why the company has a change in capital.

C. Financial Ratio

According to Munawir, (2019) Financial ratios show the relationship or mathematical balance between some numbers and other numbers. By using analytical tools such as these ratios, you can explain the financial condition of a company, especially when the ratios are compared with commonly used comparative ratios. According to Samryn, (2011), financial ratio analysis is a way of making comparisons of company financial data more meaningful. Financial ratios form the basis for answering some important questions about the financial health of a company.

D. Definition of Operating Expenses to Operating Income

According to Pandia and Frianto, (2012) BOPO is an efficiency ratio used to measure the ability of bank management to offset operating costs against operating income. The smaller this ratio, the more efficient the operating costs incurred by the bank, so the greater the possibility of a bank being in crisis conditions. According to Malayu S.P Hasibuan (2017: 101) states "Operating Costs to Operating Income (BOPO) is a comparison or ratio of operating costs in the last 12 months to operating income in the same period". The formula for the ratio of Operating Costs to Operating Income (BOPO) is:

$$BOPO = \frac{Biayaoperasional}{PendapatanOperasional} x100\%$$

Table 2 BOPO Rating Criteria

Rating	Description	Criteria
1	Very healthy	BOPO < 83%
2	Healthy	83% ≤ BOPO < 85%
3	Healthy enough	85% ≤ BOPO < 87%
4	Less healthy	87% ≤ BOPO < 89%
5	Unhealthy	89% ≥ BOPO

Source: SE BI NO. 13/24/DPNP in 2011

E. Definition of Return On Assets (ROA)

Definition of *Return on Assets* (ROA) according to Pandia and Frianto, (2012) is a ratio that shows the ratio between profit (before tax) and total bank assets. This ratio shows how effectively the bank manages its assets. To calculate the ROA ratio, use the following formula:

$$ROA = \frac{Labasebelumpajak}{TotalAset} x100\%$$

Table 3 ROA Rating Criteria

Rating	Description	Criteria
1	Very healthy	ROA > 1.5%
2	Healthy	1.25% < ROA ≤ 1.5%
3	Healthy enough	0.5% < ROA ≤ 1.25%
4	Less healthy	0% < ROA ≤ 0.5%
5	Unhealthy	ROA ≤ 0%

Source: SE BI NO. 13/24/DPNP in 2011

RESEARCH METHODS

The data and information needed in this study are secondary data taken from the financial statements of PT Bank Mega Tbk. This research was conducted using a quantitative approach by taking monthly data from 2018-2022. The analytical tool used in this research is simple linear regression.

RESULTS AND DISCUSSION

Table 4 Monthly BOPO and ROA Ratios at PT Bank Mega Tbk for the period 2018-2022 (In Percent)

Month. Year	BOPO					ROA				
	2018	**2019**	**2020**	**2021**	**2022**	**2018**	**2019**	**2020**	**2021**	**2022**
January	83,01	70,99	79,19	64,85	79,13	0,14	0,27	0,25	0,26	0,13
February	83,72	74,27	76,56	65,48	72,86	0,28	0,47	0,47	0,49	0,34
March	80,34	72,24	70,56	61,03	64,72	0,50	0,72	3,31	0,83	0,77
April	79,59	72,58	67,25	62,33	66,58	0,72	0,99	1,04	1,10	1,01
May	78,95	70,19	70,19	63,41	65,91	0,93	1,21	1,21	1,31	1,14
June	81,37	74,98	70,39	62,10	67,40	1,03	1,33	1,47	1,67	1,61
July	80,37	75,28	71,25	61,19	62,02	1,32	1,58	1,65	2,05	1,80
August	80,13	75,23	67,90	61,45	60,66	1,54	1,75	1,94	2,26	2,24
Septem ber	43,27	74,87	71,04	60,29	59,22	1,80	1,97	2,13	2,62	2,61
October	78,02	74,76	70,01	58,86	59.32	2,11	2,15	2,49	2,99	2,84
Novemb er	78,19	75,13	69,39	57,08	58,73	2,25	2,39	2,78	3,51	3,15
Decemb er	77,65	73,87	65,98	56,20	63,53	2,40	2,49	3,31	3,73	3,47
Average	77,05	73,70	70,81	61,19	65,52	1,25	1,44	1,84	1,90	1,76

Source: Data processed, (2023)

1) **Classical Assumption Test**

Normality Test

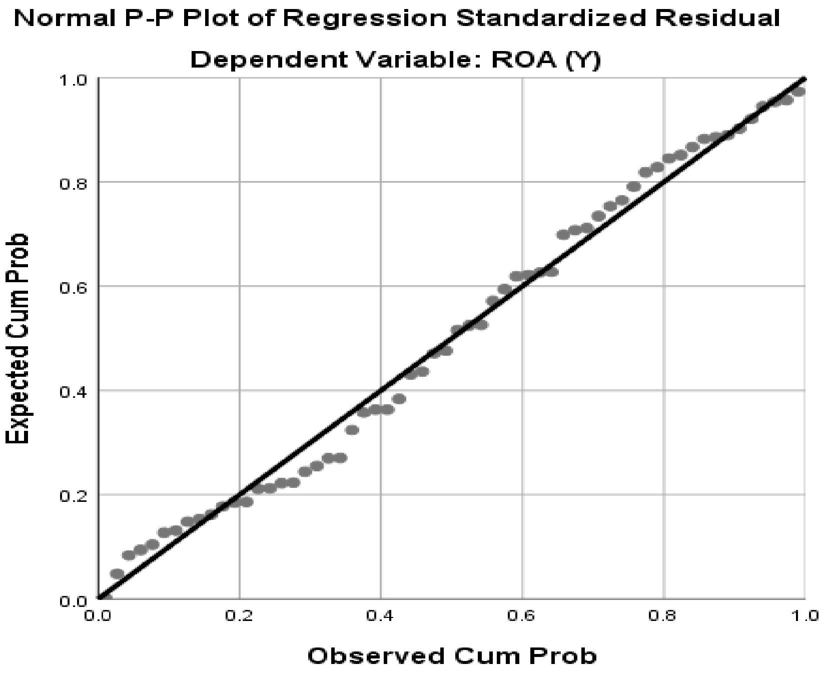

Figure 4.2 Zresid Normal P-P Plot
Source: IBM SPSS *Statistics* 25 (2023)

From Figure 4.2 the results of the normality test can be seen that the points spread around the line and follow the diagonal line, so the residual value is normal, so it can be concluded that the data processed is normally distributed data so that the normality test is fulfilled.

a) Heteroscedasticity Test

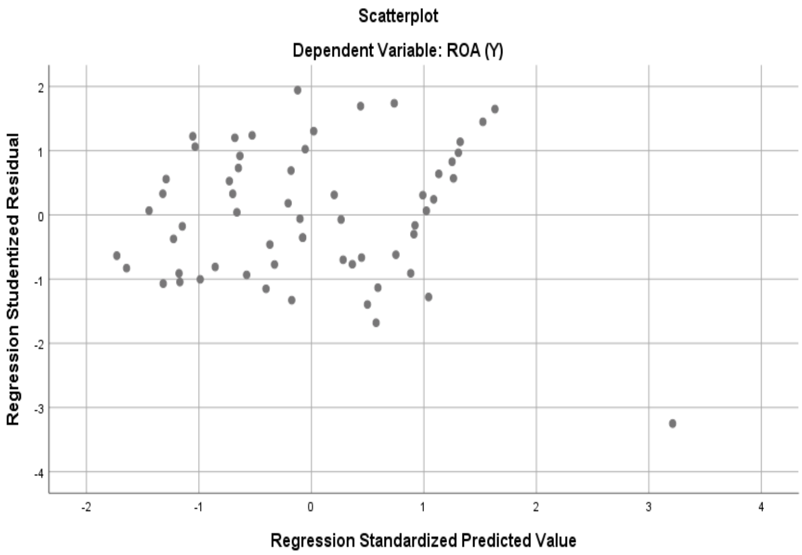

Figure 4.3 Scatter Plot
Source: IBM SPSS *Statistics* 25 (2023)

Based on Figure 4.3 of the Heteroscedaticity Test results above, it can be seen that the dots do not form a certain pattern or the dots spread above and below zero, so it can be concluded that in this study the regression model used does not experience Heteroscedaticity.

b) Multicollinearity Test

Table 4.12 Coefficients Table (Multicollinearity)

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	BOPO (X)	1.000	1.000
a. Dependent Variable: ROA (Y)			

Source: IBM SPSS *Statistics* 25 (2023)

From Table 4.12, the results of the multicollinearity test above can be concluded that the calculation of the *Tolerance* value of the independent variable (BOPO) shows a number of 1.000> 0.10. The VIF of the independent variable above shows a number of 1,000 where the value is smaller than the VIF level of 10.00 or 1,000 <10.00. With this explanation, it shows that this regression model is suitable for use because there are no variables that experience multicollinearity.

c) Autocorrelation Test

Table 4.13 Model Summary Table (Autocorrelation)

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.469[a]	.220	.154	93.06135	1.278
a. Predictors: (Constant), BOPO (X)					
b. Dependent Variable: ROA (Y)					

Source: IBM SPSS *Statistics* 25 (2023)

Based on table 4.13, the Durbin Watson test results show that the Durbin watson (d) statistic is the critical value of d_L and du for the value a = 5% k (number of independent variables) = 1 and n (number of months) = 60. Then the value of d_L=1.5485 and du=1.6162 is obtained. So the value of 4-du = 4-1.5485 and the value of 4-d_L = 2.4515. If entered into the criteria d (1,278) < d_L (2,4515) or d (1,278) < 4-d_L (2,4515) then autocorrelation is positive.

2) **Regression Analysis Results**

a) Simple Linear Regression Analysis

Table 5 Anova Table

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	101326.962	1	101326.962	11.700	.001[b]
	Residuals	502304.022	58	8660.414		
	Total	603630.983	59			
a. Dependent Variable: ROA (Y)						
b. Predictors: (Constant), BOPO (X)						

Source: IBM SPSS *Statistics* 25 (2023)

The Anova table above shows that the significant value is 0.001 <0.05, so Ho is rejected. At PT Bank Mega Tbk, it can be concluded that BOPO (Operating Costs and Operating Income) and ROA (Return On Assets) have a significant correlation.

Table 6Table of Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.520	103.656		4.910	.000
	BOPO (X)	-.056	.015	-.469	-3.421	.001
a. Dependent Variable: ROA (Y)						

Source: IBM SPSS *Statistics* 25 (2023)

Based on the coefficients table, the constant value is 5.520, while the regression coefficient value is -0.056, so the equation can be written as follows: Y=5.520 - 0.056x, where Y is *Return On Assets* (ROA) and X is Operating Expenses and Operating Income (BOPO).

b) Correlation Coefficient

Table 7 *Model Summary* Table

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.469[a]	.220	.154	93.06135
a. Predictors: (Constant), BOPO (X)				

Source: IBM SPSS *Statistics* 25 (2023)

Based on the Model Summary table, the correlation coefficient value is 0.469, which indicates the strength of the relationship between variables X and Y. Therefore, the R value of 0.469 is a fairly good category value. (Hair et al, 2013).

c) Coefficient of Determination

Model Summary table, the value of R Square, or the coefficient of determination, is 0.220 or 22%, which shows the strength of the influence between variables X and Y. Therefore, it can be said that R Square of 0.220 or 22% is a weak category. (Hair et al, 2013).

d) Partial Test (t Test)

Table 8 Coefficient Table (t test)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.520	103.656		4.910	.000
	BOPO (X)	-.056	.015	-.469	-3.421	.001
a. Dependent Variable: ROA (Y)						

Source: IBM SPSS *Statistics* 25 (2023)

The hypothesis in this study was tested using a partial test. This test is carried out by looking at the significant level and t_{tabel}. T_{tabel} seen in the statistical table at a significant level of 0.05 with degrees of freedom df = n-2 or 60 - 2 = 58, the results are obtained from t_{tabel} amounting to 1672. Based on the t value calculated from the regression results, it is known that the value of t_{hitung} amounting to 3.421.

Discussion

The Effect of BOPO (Operating Expenses and Operating Income) on ROA *(Return On Assets)*

Simple linear regression analysis is used to evaluate the relationship between BOPO (Operating Expenses and Operating Income) and Return on Assets (ROA). BOPO is the independent variable (X), and ROA is the dependent variable (Y). From the discussion above, the ROA equation is 5.520 < 0.056 BOPO, with a negative regression coefficient indicating that X and Y have an opposite relationship. This means that if the BOPO ratio increases, ROA will decrease, or every 1 point addition to X (BOPO) can reduce Y (ROA) by 0.056 points, and vice versa, every 1 point reduction in X (BOPO) can increase Y (ROA) by 0.056 points. Simple correlation coefficient analysis is needed to determine how much influence X has on Y. The result is r = 0.469, which shows how much the relationship between the BOPO and ROA variables obtained by PT Bank Mega Tbk during the 2018-2022 period.

The coefficient of determination is 0.220 or 22%. This means that 22% of PT Bank Mega Tbk's ROA is influenced by the BOPO ratio with a weak influence category. While the remaining 78% is influenced by other factors outside the BOPO variable.

Based on the results of the t test (partial), it can be seen that the results of testing the hypothesis of the influence of BOPO show a value of t_{hitung}amounting to 3.421> t_{tabel} 1,672 with a significant level of 0.001. This means that the significant level is smaller than 0.05, which means that Ho is rejected and Ha is accepted, which means that BOPO (Operating Expenses and Operating Income) has a negative and significant effect on ROA *(Return On Assets)*.

This means that BOPO has a negative effect, if an increase in the BOPO ratio shows that banks cannot reduce operating costs or increase revenue, which means they are inefficient in managing their business. Any increase in bank operating costs that is not followed by an increase in operating income will result in lower pre-tax profits and a decrease in ROA. Conversely, if the BOPO ratio decreases and ROA increases, it shows that the bank is more efficient, because the increase in profit affects the growth of assets owned, the greater the ROA, the greater the level of profit achieved by a bank and the better the bank's position in terms of asset use, (SE BI NO.13/30DPNP Dated December 16, 2011).

So based on the description above, it can be formulated that BOPO has a negative effect on ROA, the higher the BOPO value, the lower the ROA value. Conversely, the lower the BOPO value, the higher the ROA value. Based on SE BI NO. 13/24 / DPNP in 2011 the criteria for healthy or efficient BOPO are BOPO < 83% and healthy or efficient ROA criteria ROA> 1.5%. So the bank is said to be healthy or efficient if the value of the BOPO ratio is getting smaller, meaning that the more efficient the bank is in operating, and the greater ROA shows the better the bank's ability to generate profits. the more efficient a bank is, the performance increases, the improved bank performance will increase public confidence in the bank. (Lestari & Manda, 2021).

The results of this study support research conducted by Fernando and Dewi (2019)which shows that BOPO (Operating Expenses and Operating Income) has a negative and significant effect on ROA *(Return On Assets)*. However, the results of this study contradict research conducted by Rohimah (2021) from the results of his research which shows that BOPO (Operating Expenses and Operating Income) has no effect on ROA *(Return On Assets)*.

CONCLUSIONS

Based on the results of the research and discussion described in the previous chapter, it is concluded that BOPO (Operating Expenses and Operating Income) has a negative and significant effect on ROA *(Return On Assets)*. This can be seen from the simple linear regression equation ROA = 5.520- 0.056 BOPO and a correlation coefficient of 0.469. and determination of 22%. Partially, the t value of BOPO 3.421 (sig. 0.001) means that BOPO (Operating Expenses and Operating Income) has a significant effect on ROA *(Return On Assets)*. Based on SE BI NO. 13/24 / DPNP in 2011 the criteria for healthy or efficient BOPO are BOPO < 83% and healthy or efficient ROA criteria ROA> 1.5%. So the results of this study show that the average BOPO < 83% and ROA> 1.5% states that PT Bank Mega Tbk's BOPO in 2018-2022 is efficient on ROA.

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