Analysis Of The Influence Of Green Banking And Operational Cost Efficiency On Return On Assets

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Abstract.

It is important for banking companies to implement the concept of green banking. This is because banking companies have an important role and contribution in providing credit funds and minimizing the negative impact on the environment from the company's operational activities. One of the ways banking implements green banking is with online banking facilities, internet banking, mobile banking, green loans and others. This method is considered effective in reducing the number of energy use and paper use in its operations. With this concept, companies can achieve operational cost efficiency. The application of this concept will lead to an increase in the bank's reputation and positive image in the eyes of investors and the public so that it can increase the number of investors and earn profits. The approach used in this study is a quantitative approach, using secondary data derived from 2 reports, namely financial statements and sustainability reports. The population in this study is 57 companies and the total sample was 40 companies. The data testing method uses classical assumption test, T test and F test. The result of this study based on T test that green banking has a positive effect on return on assets and operational costs to operating income (BOPO) has a negative effect on return on assets. Based on the F test that green banking and operational costs (BOPO) to operational income influences return on assets.

Keywords: Green Banking, Return On Assets (ROA), BOPO, and National Private Commercial Banks

I.   INTRODUCTION

Technological advances and information today cannot be separated from people's lives. The development of technology in the direction of all-digital is increasingly rapid accompanied by a new lifestyle that is all-online (Nikijuluw et al., 2020). Banking as a company that serves the community in practice also follows technological developments where we can feel the impact of the convenience of technological developments. One of the positive impacts is the existence of online services issued by banks such as online banking, internet banking, mobile banking, green checking accounts, green loans and others. In addition to making it easier for customers or the community, the existence of the online service is also able to reduce the number of carbon emissions caused by community mobilization. With all-online services, customers or the public can make transactions from home without the need to go out using vehicles that can cause pollution.The issue of pollution and destruction of nature is becoming a hot issue that is being discussed. Now the government is trying to deal with the climate crisis. One of these efforts is by issuing policies on the green economy. The definition of a green economy is an economy that does not harm the environment. Based on the Financial Services Authority Regulation Number 51/POJK.03/2017 concerning the implementation of sustainable finance for financial service institutions, issuers, and public companies, banking sector companies are required to implement the concept of green economy or green banking. Green banking is a corporate social responsibility to the environment and society.

The basic principle of green banking is an effort to optimize banks' risk management capabilities, especially related to the environment, and encourage banks to increase their environmentally friendly financing portfolios such as energy efficiency, renewable energy, environmentally friendly transportation, organic agriculture, eco-tourism and various eco-label products (Nurmalia, 2021).Based on data from the Central Statistics Agency (2022), it shows that the growth of green banking at the beginning of 2022 is quite good. This is due to the policy support of the government and the Financial Services Authority (OJK) in providing green incentives to debtors that reduce carbon emissions. These efforts are in the form of easing loan times, reducing interest rates and adding credit facilities for debtors who are included in the green sector

(Kompas.com). The application of green banking in banking companies tends to be able to have a positive impact on the company. (Asfahaliza & Anggraeni, 2022) revealed that the reputation and positive image of banks in the eyes of the public and investors has increased with the implementation of the concept of green banking, so that it can increase the number of investors.Research on green banking on return on assets has been carried out a lot, but based on empirical evidence that links the value of green banking with return on assets, it shows different results, including (D. Anggraini et al., 2020) green banking shows a significant negative influence on ROA.

Meanwhile, according to (Asfahaliza & Anggraeni, 2022) green banking has a positive and significant effect on ROA. This is because with the concept of green banking, the company will save the use of paper, electricity, water and energy so that it can reduce the company's operational costs. Operational costs are costs incurred by banks to keep operational activities running smoothly. One of the bank's activities is to collect and distribute to third parties. So that interest income and interest costs are components of the dominance of banking costs and operating income.It is important for investors to analyze operational costs against the company's operating income whether it is efficient or not. A business is said to be economically efficient if it is able to save production costs to maximize profits or profits. The BOPO ratio is a ratio used to measure the efficiency of banking operational costs. The lower the BOPO ratio, the more it increases the company's profits, and vice versa. So it can be said that BOPO is negatively related to bank profitability (Mustika et al., 2023). Based on the background that has been described, and the differences in the results of previous studies, researchers are interested in conducting further research to prove the influence of green banking and BOPO on return on assets. The subjects in this study are national private banking companies listed on the Indonesia Stock Exchange for the 2022-2023 period.

II.   METHODS

Types and Approaches

The approach used in this study is a quantitative approach, using secondary data from 2 reports, namely financial statements and sustainability reports. Financial statements can be downloaded at www.idx.co.id while sustainability reports come from the website of each Company. The object of this research is green banking, BOPO and return on assets. Green banking and BOPO are independent variables while return on assets is a dependent variable. The subject of this study is a national private bank company listed on the IDX for the 2022-2023 period.

Population and Sample

The population of this study is national private conventional bank companies listed on the IDX for the 2022-2023 period with a total of 57 companies. The purposive sampling technique was used in this study to select the sample used. After the elimination of several criteria, there were 20 companies used as samples in this study with a research year of 2 years, so that 20 x 2 obtained 40 data used dalam penelitian ini.

Table 2. Sample Selection Procedure

No	Criterion	Qty
1	Data on national private bank companies listed on the IDX in 2022-2023	57
2	Companies that are inconsistent in presenting financial reports and Sustainability Report Consistently for the 2022-2023 Period	(28)
	A company that consistently presents Financial Statements and Sustainability Reports for the period 2022-2023	29
3	Companies that did not earn profits during the 2022-2023 period	(9)
	Companies that make a profit during the 2022-2023 period and at the same time as a research sample	20

Data Testing Methods

The method of testing data using classical assumption tests. The classical assumption test is a regression analysis that must be met so that the resulting regression equation will be valid if used to predict a problem. Assumption testing was carried out to find out whether the results of regression estimates were free from heterokedaness symptoms, multicollinearity symptoms and autocorrelation symptoms.

Data Analysis Methods

The T Test and F Test were used in this study to determine the influence of independent variables on dependent variables.

III.   RESULT AND DISCUSSION
Classic Assumption Test Normality Test

The data normality test is a data distribution test that will be analyzed, whether the distribution is below the normal curve or not. The approach used to test the normality of the data in this study is the One-Sample Kolmogorov-Smirnov method, which based on this method is residual with normal distribution if the significance value is more than 0.05 (sig ≥0.05).

Table 3. Results of the Normality Test
One-Sample Kolmogorov-Smirnov Test

|		Unstandardized Residual
N		40
Normal Parameters[a,b]	Mean	0
	Std. Deviation	1
Most Extreme Differences	Absolute	.136
	Positive	.136
	Negative	-.085
Kolmogorov-Smirnov Z		.862
Asymp. Sig. (2-tailed)		.447
Monte Carlo Sig. (2-tailed)	Sig.	.411[c]
	99% Confidence Interval Lower Bound	.398
	Upper Bound	.423

a. Test distribution is Normal.

b. User-Specified

c. Based on 10000 sampled tables with starting seed 2000000.

Based on table 3, it can be seen that the Kolmogorov-Smirnov/Test statistical value is 0.862 with a significant level of 0.447. In the table, the significant value is 0.447 > 0.05, so it can be concluded that the data is normally distributed and can be used for research.

Heteroscedasticity Test

Heteroscedasticity is a residual variant that is not the same across all observations within the regression model. Good regression should not occur heteroscedasticity. The method used for the heteroscedasticity test in the study is the graph method (scatter plot). Based on the regression graph method, heteroscedasticity occurs if the results of the points form a certain pattern, but on the other hand, regression does not occur heteroscedasticity if the dots spread above and below the number 0 on the Y axis.

Fig 1. Heteroscedasticity Test
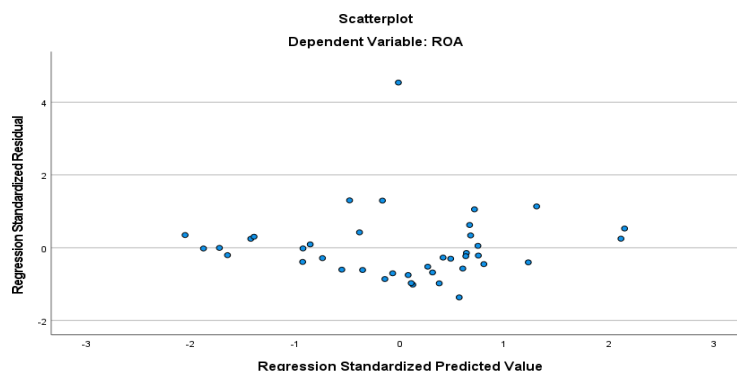
Based on Figure 1, it shows that the dots do not form a clear pattern, and the dots spread above and below the number 0 on the Y-axis. Figure 1 shows that there is no heteroscenidactivity problem in the regression model and is suitable for predicting dependent variables with the influence of independent variables.

Uji Autokorelasi

Autocorrelation is a correlation between observation members, arranged by time or place. A good regression is one that is free of autocorrelation. The method used in this study is the Durbin-Watson method. The autocorrelation test with durbin-watson is said to be free of autocorrelation if $-2 \leq DW \leq 2$. A good regression is one that does not autocorrelation.

Table 4. Autocorrelation Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.489[a]	.239	.198	1.20847	1.301

a. Predictors: (Constant), BOPO, GBD

b. Dependent Variable: ROA

Based on table 4, the DW value is calculated as 1,301. then $-2 \leq 1{,}301 \leq 2$, so it can be said that regression does not autocorrelation.

Multicollinearity Test

The multicollinearity test aims to test whether the regression model finds a correlation between independent variables. A good regression model is one in which no perfect or near-perfect correlation occurs between its independent variables. The method used to test multicollinearity is with the Variance Inflation Factor (VIF) value. The regression model is said to have no multicollinearity if the results of the calculation of the VIF value < 10.

Table 5 . Multicollinearity Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.500	1.001		1.498	.143		
	GBD	.018	.013	.199	1.363	.181	.962	1.039
	BOPO	-.030	.011	-.410	-2.802	.008	.962	1.039

Based on the results of table 5, it shows that the VIF value of the green banking variable is 1,039 and the BOPO variable is 1,039. The VIF value of the two variables is <10 or no independent variable has a VIF above 10, so it is concluded that the regression model does not have multicollinearity between independent variables in the regression model used.

Hypothesis Testing Test T

The T test is used to test the hypothesis of the influence of individual independent variables on dependent variables. In determining this test is carried out by looking at T from the calculation and table, if the specified calculation T is not as large as the T of the table, then the independent variable is declared to have no effect on the dependent variable. If the calculated T value obtained is greater than the T of the table, the independent variable tested can be concluded to have a partial influence on the dependent variable. In addition, in determining this test, it can also be seen from the significance value obtained. If the significance value obtained is below 0.05, it can be concluded that the independent variable has an influence on the dependent variable. Based on table 5, the results of the T Test calculate the green banking variable is 1.363 while the t-value of the table is 1.686. The t-value calculated < the table (1.363 < 1.686) is a significant value of 0.181 (0.181 > 0.05). This result means that green banking has a significant effect on return on assets. Then H1 is accepted or has a significant effect. Meanwhile, the t-calculated result for the BOPO variable is -2,802. The t-value calculated < t table (-2.802 < -1686) is a significant value of 0.008 (0.008 < 0.05). This result means that BOPO has a significant negative effect on the return on assets. So H2 is accepted or has a significant negative effect on return on assets.

Test F

The statistical test F is used for hypothesis testing of all independent variables included in the influential model together (simultaneously). In this study, the F significance test was carried out to test the variables of green banking and operational cost efficiency (BOPO) against the variable of return on assets.

Table 6. Test Results F

ANOVAª

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.996	2	8.498	5.819	.006ᵇ
	Residual	54.035	37	1.460		
	Total	71.031	39			

a. Dependent Variable: ROA

b. Predictors: (Constant), BOPO, GBD

Based on the results of the F test in table 6, the F calculation is 5.819 and the ROA value (sig) is 0.006, while the F value of the table is 4.105. The F value is calculated > F table (5,819 > 4,105). The sig value (0.006 < 0.05) can be concluded that green banking and operational cost efficiency (BOPO) have a significant effect on return on assets. So H3 in this study which states that green banking and operating cost efficiency have a simultaneous effect on return on assets is accepted.

Discussion

The Effect of Green Banking on ROA

Green banking is a concept of financing or credit for banking products and services that prioritize aspects of sustainability both environmental, economic, technological and socio-cultural at the same time. The result of this study is that green banking has an effect on return on assets. This supports the stakeholder theory that is the basis for this research. Stakeholder theory reveals matters related to the interests of various parties. Where the company does not only operate for its own interests. Rather, it must pay attention to the benefits for stakeholders or the community.

Based on the results of this study, it was found that green banking partially had a significant positive effect on ROA. Green banking has a significant effect on return on assets, allegedly with the implementation of green banking, the bank's positive image will increase and new customers will be increasingly interested in banks that consider the concept of green banking when formulating their operational policies. In addition, by implementing green banking, banks are able to increase the efficiency of bank activities, minimize manual errors and minimize fraud. The better the level of green banking implemented, the higher the company's profits, and vice versa. The results of this study are in line with the research (Mustika et al., 2023), (Ria et al., 2023), (Asfahaliza & Anggraeni, 2022), (La Difa et al., 2022) which found that green banking has a significant positive effect on return on assets.

Effect of BOPO on ROA

BOPO is the ratio of operating expenses to the company's operating income. The lower the BOPO value, the more the company is able to manage resources optimally. So that operating income is able to cover the operational costs borne by the company.The results of the study found that BOPO had a significant negative effect on ROA. The decline in profitability (ROA) is influenced by operational costs which have an impact on the decline in the bank's pre-tax profit, so in other words the BOPO level determines how well the bank manages its operational activities. The results of this study are in line with research (La Difa et al., 2022), (Amalia et al., 2022) and (Wahyudi, 2020) which found that BOPO has a negative effect on return on assets.

IV. CONCLUSION

Green banking and operational cost efficiency on return on assets, the researcher concluded that partially green banking has a significant effect on return on assets, while operational cost efficiency partially has a significant negative effect on return on assets. Meanwhile, simultaneously green banking and operational cost efficiency affect the return on assets of national private commercial bank companies in

Indonesia in 2022-2023. The suggestion that the researcher proposes for the next research is to expand the scope of the research by adding independent variables with a longer research time span, so that it is expected to produce better research considering that in this study the researcher only used 2 periods from 2022-2023.

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