Influence of Green Banking and Financial Performance Implementation to Profitability Levels in Conventional Banking Financial Companies Listed On the Indonesian Stock Exchange Period 2020

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Received: 02-12-2023 Reviewed: 03-12-2023 Accepted: 17-12-2023

Abstract

The interesting talks in the company in Indonesia is about social and environmental issues. This event corresponds to the publication of Presidential Regulation No. 92 of 2020 pertaining to the Ministry of Environment and Forestry. As a result, having complete and accurate environmental information will lead to better environmental performance. In this situation, financial services firms such as banks can help to realize a green environment by channeling financing to environmentally friendly and sustainable businesses. The purpose of this study was to analyze the effect of Green Banking and Financial Performance on the Level of Profitability in Conventional Bank Sector Financial Companies Listed on the Indonesia Stock Exchange (IDX) for the 2020-2022 term. For a total sample of 21 enterprises, this study used the purposive sampling method and secondary data in the form of financial statements. SPSS 24.0 was used to analyze the data using the multiple linear regression analysis approach. The findings revealed that Green Accounting has a marginally (Test t) insignificant influence on Return On Asset (ROA). Return On Asset (ROA) is influenced by Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), BOPO, and Loan to Deposit Asset Ratio (LDR).

Keywords: Green Banking, Financial Performance, Return On Assets (ROA).

Introduction

Banking is not directly involved in the environmental damage that often occurs in Indonesia. However, banking cannot be separated from the issue of increasing environmental degradation. By providing loans or financing to their customers, banks can trigger activities that have an impact on the environment (Responsi Bank, 2014). Quoted from the website...
www.bi.go.id, the results of the Bank Indonesia Banking survey indicate that new lending in the first quarter of 2023 grew positively with a weighted net balance (SBT) value of new loans of 63.7%. (Bank Response, 2014)

Therefore, banks are also indirectly involved in environmental issues. To be able to minimize environmental damage, sanctions are needed that directly target the funding structure of the business activities of environmental polluters and the way that can be done to do this is to make it difficult or prevent polluters from obtaining financing facilities from banking institutions.

Banks are profit-oriented institutions while the environment is a system that has no financial value. Although banking and the environment are in two different worlds, both have the same interests, namely sustainability or social responsibility, so that commitment and cooperation are needed in achieving these interests by integrating aspects of environmental and social management that can be stated in the financial statements using the concept of green banking.

Green Banking is translated as an effort by banks to prioritize the fulfillment of sustainability in lending or operational activities. Some banks have tried to make an early selection of the financing proposed by prospective debtors. Banks have the full right to reduce financing or not, depending on the extent to which the activities to be financed with bank loans have an impact on the environment (Responsi Bank, 2014).

Regarding profitability in the application of green banking, research on the effect of the application of green banking on profitability in banks has been widely carried out in developed countries but is still a new issue and has not been widely carried out in Indonesia, so this research needs to be done to be able to provide results in the form of knowledge about the benefits of implementing green banking, especially the author wants to know how much influence the application of green banking has on profitability (ROA).

In the banking sector, profitability is used to measure the performance of the bank. Profitability is the bank's main defense against unexpected losses, such as strengthening the capital position and increasing the future profitability of retained earnings investments. The better the profitability ratio, the better it illustrates the ability of the company's high profitability. The level of bank profitability can indirectly describe the health of a bank. One of them is the implementation of green banking which can affect the profitability of a bank. The profitability of an entity cannot guarantee that the company's condition is healthy because it is not the scope of the external auditor's duties. However, the external auditor here acts more as an independent party who is considered competent to assess the profitability of the quality of financial statements presented by management (Friyanto, 2012).

Banking profitability through green banking issues can be seen from the operational activities carried out by banks. Banking operations in this study refer to daily operations carried out by banks in their daily performance and change their practices to a more environmentally friendly direction in accordance with the concept of green banking. Banks that apply green banking to their work activities will further utilize technological advances and the internet.
which are now growing rapidly so that banking activities that were once based on paper become paperless so that it is expected to reduce carbon footprint and carbon emission.

This study explores how much influence the application of green banking and financial performance has on the level of profitability in conventional bank sector financial companies listed on the IDX (Indonesia Stock Exchange) for the period 2020-2022. The objectives of this study are (a) to determine and analyze the effect of the application of green banking on the level of profitability in conventional bank sector financial companies listed on the IDX (Indonesia Stock Exchange) for the period 2020-2022 (b) to determine and analyze the effect of financial performance on the level of profitability in conventional bank sector financial companies listed on the IDX (Indonesia Stock Exchange) for the period 2020-2022 and (c) to determine and analyze the effect of the application of green banking and financial performance on the level of profitability in conventional bank sector financial companies listed on the IDX (Indonesia Stock Exchange) for the period 2020-2022.

**Literature Review**

According to (Anjas, 2021) and (Zhelyazkova & Kitanov, 2015) green banking is banking in all aspects of its business (deposit deposits, loan disbursements, leasing operations, mutual funds, etc.) that are oriented towards environmental conservation.

According to (Lako, 2019) the definition of green banking is: "green banking is a new concept or paradigm in the international banking industry that has been working for the past decade." (Bhardwaj & Malhotra, 2013) defines green banking as a bank's effort to realize a green industry and in the process of restoring nature and the environment. The calculation of green banking uses the green banking formula as follows:

\[
GB = \frac{Total \ Banks \ yang \ Menerapkan \ GB}{Fenerapan \ GB} \times 100\%
\]

Description:

GB = Green Banking

Total Banks Implementing GB = 21 out of 47 Conventional Banks. The implementation of GB refers to the Green Coins Rating indicator.

**Capital Adequacy Ratio (CAR)**

Banks that have a lot of capital are considered safer than banks that have little capital, this statement is in accordance with the statement from (Yogi Prasanjaya & Ramantha, 2013) which means, if there is a lot of capital in banking, the level of (external) financing is lower. The measurement of capital adequacy used in this study is the Capital Adequacy Ratio. The calculation of CAR is as follows (Ismail, 2018).
Non Performing Loan (NPL)

According to (Ismail, 2018) non-performing credit is a situation where the customer is unable to pay part or all of his obligations to the bank as agreed. NPL shows the ability of bank management to manage non-performing loans provided by the bank, meaning that the higher the NPL, the worse the credit quality of the bank which causes the number of non-performing loans to increase and the bank is in a greater problematic condition due to the level of bad credit returns (Lukman Dendawijaya, 2009). The NPL calculation formula is as follows:

\[ \text{NPL} = \frac{\text{Total Kredit Macet}}{\text{Total Kredit}} \times 100\% \]

Operating Expenses Operating Income (BOPO)

According to (Hasibuan, 2017) Operating Expenses Operating Income (BOPO) is the ratio of operating expenses to operating income (BOPO) formulated as a comparison or operating expenses to operating income in the same period. According to (Pandia, 2012) defines that the operating cost of operating income (BOPO) is a ratio that is often called the efficiency ratio is used to measure the ability of bank management to control operating costs against operating income. According to (Hasibuan, 2017) the formula for the ratio of operating costs to operating income (BOPO) is:

\[ \text{BOPO} = \frac{\text{Beban Operasional}}{\text{Pendapatan Operasional}} \times 100\% \]

Loan Deposit to Ratio (LDR)

Liquidity measurement in banks can be measured by the LDR ratio. According to (Martono, 2010) states that the Loan to Deposit Ratio is a ratio to determine the bank’s ability to repay obligations to customers who have invested their funds with credits that have been given to their debtors.

\[ \text{LDR} = \frac{\text{Total Kredit}}{\text{Total Penerimaan Dana}} \times 100\% \]

Research Method

The type of research used is quantitative research with a causality research approach, namely research that examines the cause-and-effect between variables. The population in this study were all conventional bank sector financial companies listed on the Indonesia Stock Exchange (IDX) in 2020-2022 with a population of 47 companies. While the sample in this study used a purposive sampling method, so that researchers could determine the sampling criteria for conventional bank sector financial companies with a total sample size of 21 companies. This is in accordance with (Sugiyono, 2013) (Sugiyono, n.d.) which states that
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purposive sampling is a sampling technique with certain considerations. In this research, the data source used is secondary data originating from the Indonesia Stock Exchange (IDX), namely in the form of the company's annual financial statements and sustainability reports available on each conventional bank's official website page.

The data collection method used in this research is the author collects research data from documents or information related to the research. The data was taken through the site (website) (Indonesia Stock Exchange, 2022) with the page www.idn.financials.com (Conventional Bank Sector Financial Companies, and from various sites (websites) of banks that became research samples.

According to (Sujarweni, 2017) quantitative research is a type of research that produces discoveries that can be achieved (obtained) using statistical procedures or other means of quantification (measurement). Causality research is research that aims to determine the cause-and-effect relationship between the independent variable and the dependent variable (Sugiyono, 2013). The data analysis technique uses multiple linear regression with the SPSS version 25 measuring tool. The data analysis technique of this study is that before testing the hypothesis using multiple linear regression analysis, a classical assumption test is previously carried out which includes normality test, autocorrelation test, heteroscedasticity test and multicollinearity test.

Result and Discussion

Multiple Linear Regression Analysis of the Results of the Calculated t Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
<th>Confidence Interval</th>
<th>DF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Constant</td>
<td>2.037</td>
<td>.195</td>
<td>11.031</td>
<td>.007</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Green Banking (X1)</td>
<td>-.283</td>
<td>.344</td>
<td>-1.224</td>
<td>.234</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Capital Adequacy Ratio (X2)</td>
<td>.512</td>
<td>.860</td>
<td>3.601</td>
<td>.027</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non Performing Loan (X3)</td>
<td>.195</td>
<td>.334</td>
<td>2.414</td>
<td>.021</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ROE (X4)</td>
<td>.105</td>
<td>.306</td>
<td>2.901</td>
<td>.004</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leverage Deposed Ratio (X5)</td>
<td>.100</td>
<td>.309</td>
<td>2.901</td>
<td>.004</td>
<td></td>
</tr>
</tbody>
</table>

Source: Data processing results SPSS version 24.0

The following regression equation is obtained as follows:

\[ Y = \alpha + b1X1 + b2X2 + b3X3 + b4X4 + b5X5 \]

Thus,

\[ Y = 2.207 - 0.283X1 + 0.512X2 + 0.196X3 + 0.105X4 + 0.100X5 \]

Description:

\[ Y = \text{ROA} \]
α 01 = Constant  
b1 - b3 = Regression coefficient  
X1 = Green Banking  
X2 = CAR  
X3 = NPL  
X4 = BOPO  
X5 = LDR

For further explanation of the results of the regression equation can be interpreted as follows:

1. The constant α shows a value of 2.207 with a positive value stating that ROA will be 2.207 if green banking, CAR, NPL, BOPO, and LDR are 0 (zero).
2. The green banking variable has a regression coefficient of -0.283 which is negative which states that if green banking is increased by 1 unit, then ROA will increase by -0.283 assuming CAR, NPL, BOPO, and LDR are 0 (zero) / constant.
3. The CAR variable has a regression coefficient of 0.512 with a positive value which states that if CAR is increased by 1 unit, ROA will increase by 0.512 assuming green banking, NPL, BOPO, and LDR are 0 (zero) / constant.
4. The NPL variable has a regression coefficient of 0.196 with a positive value, which states that if liquidity is increased by 1 unit, ROA will increase by 0.196 assuming green banking, CAR, BOPO, and LDR are 0 (zero) / constant.
5. The BOPO variable has a regression coefficient of 0.105 with a positive value, which states that if liquidity is increased by 1 unit, ROA will increase by 0.105 assuming green banking, CAR, NPL, and LDR are 0 (zero) / constant.
6. The LDR variable has a regression coefficient of 0.100 with a positive value which states that if liquidity is increased by 1 unit, ROA will increase by 0.100 assuming green banking, CAR, NPL, and BOPO are 0 (zero) / constant.

Furthermore, the analysis uses the t test. If t count > t table or the significant value of the t test <0.05, it is concluded that individually the independent variable has a significant effect on the dependent variable.

| Source: SPSS 24.0 calculation results |
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1. The t number (t-count) of the research Green Banking variable (X1) of 0.798 is greater than (t-table) of 2.131, so the result is H0 rejected and H1 accepted. That is, it is proven that there is no influence (linear relationship) between Green Banking (X1) and ROA (Y). And the magnitude of the influence of the Green Banking variable (X1) on ROA (Y) is -0.283 or -28.3% and is considered not significant. This is reflected in the variable significance number (X1) of 0.137 which is greater than <0.05 (or considered significant).

2. The t number (t-count) of the financial performance variable with the indicator
- The research CAR of 6.826 is greater than the t table of 2.131. That is, it is proven that there is an influence (linear relationship) between CAR and ROA (Y). And the magnitude of the influence of CAR on ROA (Y) is very large, namely 0.512 or 51.2% and is considered to have a significant influence. This is reflected in the significance of the Financial Performance indicator (CAR) of 0.006 which is smaller than <0.05 (or considered a significant influence).
- The research NPL of 3.146 is greater than the t table of 2.131. That is, it is proven that there is an influence (linear relationship) between NPL and ROA (Y). The magnitude of the influence of NPL on ROA (Y) is large, namely 0.196 or 19.6% and is considered significant. This is reflected in the significance of the Financial Performance indicator (NPL) of 0.004 which is smaller than 0.05 (or considered significant).
- The research BOPO of 2.863 is greater than the t table of 2.131. This means that there is an influence (linear relationship) between BOPO and ROA (Y). The magnitude of the influence of BOPO on ROA (Y) is large at 0.105 or 10.5% and is considered significant. This is reflected in the significance of the Financial Performance indicator (BOPO) of 0.012 which is smaller than 0.05 (or considered significant).
- The research LDR of 2.294 is greater than the t table of 2.131. That is, it is proven that there is an influence (linear relationship) between LDR and ROA (Y). The magnitude of the influence of LDR on ROA (Y) is large, namely 0.100 or 10% and is considered significant. This is reflected in the significance of the Financial Performance indicator (LDR) of 0.018 which is smaller than 0.05 (or considered significant).

To test whether there is a significant influence between the independent variables together on the dependent variable, the F test is used. The following are the results of multiple linear regression analysis between Green Banking (X1) and Financial Performance (X2) as measured by CAR, NPL, BOPO and LDR on ROA (Y) Conventional Bank Companies Listed on the Indonesia Stock Exchange for the Period 2020-2022.

Table 3 Test Results F count

<table>
<thead>
<tr>
<th>ANOVA*</th>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>17,499</td>
<td>5</td>
<td>3,509</td>
<td>3,509</td>
<td>9.019</td>
<td>.005*</td>
</tr>
<tr>
<td>Residual</td>
<td>52,392</td>
<td>57</td>
<td>.919</td>
<td>.919</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>69,891</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Return on Asset (Y)
b. Predictors: (Constituents Lenders to Deposits Ratio (x5), Green Banking (x1), Capital Adequacy Ratio (x2), Non Performing Loan (x3), BOPO (x4))

Source: Data processing results SPSS version 24.0
Based on the table above, the F result is 3.808 while F is 2.90. Because F (3.808) > F (2.90), the null hypothesis which reads: there is no significant influence between Green Banking (X1), Financial Performance (X2) as measured by CAR, NPL, BOPO and LDR on ROA (Y) is rejected.

This means that the alternative hypothesis which reads: there is a significant influence between Green Banking (X1) and Financial Performance (X2) as measured by CAR, NPL, BOPO and LDR on ROA (Y) is accepted. So it can be concluded that ROA (Y) is influenced jointly (simultaneously) by Green Banking (X1), CAR (X2), NPL (X3), BOPO (X4) and LDR (X5).

Conclusion

1. The effect of Green Banking implementation (X1) on Profitability (Y)

   Based on testing the first research hypothesis, it shows that variable X1 has no effect and is significant on variable Y because the significance figure is 0.137 which is greater than 0.050. So that the first hypothesis which reads "green banking" has a positive and significant effect on the profitability of conventional banks listed on the IDX" can be rejected. From the regression equation Y = 2.207 - 0.283 X1, it can be seen that Green Banking has a negative effect on profitability. If Green Banking is higher, then profitability will be better. In addition, the results showed that the value of ß (beta) in the coefficients is -0.283 so it can be concluded that the independent variables in the equation model above can explain the influence of Green Banking variables on profitability by -28.3%. The results of this study are consistent and in accordance with previous research conducted by (Anggraini et al., 2020) which in the study showed that the implementation of green banking policies had no significant and negative effect on bank profitability. This study has in common using the independent variables green banking, CAR, NPL, BOPO and LDR and the independent variable profitability.

2. Effect of Financial Performance (X2) on Profitability (Y)

   Based on testing the second research hypothesis, it shows that X2 financial performance as measured by the CAR, NPL, BOPO, and LDR indicators is as follows:

   a. The Capital Adequacy Ratio (CAR) indicator has a positive and significant effect on variable Y because the significance figure is 0.006 which is smaller than 0.050. From the regression equation Y = 2.207 + 0.516 X2, it can be seen that CAR has a positive effect on profitability. If CAR is higher, then profitability will be better. In addition, the results showed that the value of ß (beta) in the coefficients is 0.516 so it can be concluded that the independent variables in the equation model above can explain the influence of the CAR variable on profitability by 51.6%. Thus it can be concluded that CAR has a significant effect on profitability. The CAR ratio shows how much the bank's capital needs are adequate and as a basis for assessing the prospects for continuing the bank's business. The greater the Capital Adequacy Ratio, the greater the resilience of the bank concerned in the face of depreciation in the value of bank assets arising from problem assets. The results of this study are in accordance with the results of previous
research conducted by (Nurmalia, 2021) where the results show that CAR has a positive effect on banking profitability.

b. The Non Performing Loan (NPL) indicator has a positive and significant effect on variable Y because the significance figure is 0.004 which is smaller than 0.050. From the regression equation $Y = 2.207 + 0.196 X_3$, it can be seen that NPL has a positive effect on profitability. If NPL is higher, then profitability will be better. In addition, the results showed that the $\beta$ (beta) value in the coefficients was 0.196 so it can be concluded that the independent variables in the equation model above can explain the influence of the NPL variable on profitability by 19.6%. Thus it can be concluded that NPL has a significant effect on profitability. The NPL ratio is a ratio used to measure the ability of bank management to manage non-performing loans provided by the bank. The smaller the NPL value indicates the effectiveness of the bank in channeling credit is getting better so that the turnover of money to generate profits will be higher. The results of this study are in accordance with the results of previous research conducted by (Widyastuti & Aini, 2021) where the results show that NPL has a positive effect on banking profitability.

c. The BOPO indicator has a positive and significant effect on variable Y because the significance figure is 0.012 which is smaller than 0.050. From the regression equation $Y = 2.207 + 0.105 X_4$, it can be seen that BOPO has a positive effect on profitability. If BOPO is higher, then profitability will be better. In addition, the results showed that the $\beta$ (beta) value in the coefficients was 0.105 so it can be concluded that the independent variables in the equation model above can explain the influence of the BOPO variable on profitability by 10.5%. The results of this study are not in accordance with the results of previous research conducted by Riana Nurmiradiyanti (2022) where the results showed that BOPO had a negative effect on banking profitability. This can be caused by differences, namely in researchers using Islamic banking registered with the OJK for the 2015-2021 period, but this study uses conventional banks on the IDX for the 2020-2022 period with a total of 21 samples of banking companies.

d. The Loan to Deposit Ratio (LDR) indicator has a positive and significant effect on variable Y because the significance figure is 0.018 which is smaller than 0.050. So that the second hypothesis which reads "LDR has a positive and significant effect on the profitability of conventional banks listed on the IDX" can be accepted. From the regression equation $Y = 2.207 + 0.100 X_5$, it can be seen that LDR has a positive effect on profitability. If LDR is higher, then profitability will be better. In addition, the results showed that the value of $\beta$ (beta) in the coefficients is 0.100 so it can be concluded that the independent variables in the equation model above can explain the influence of the LDR variable on profitability by 10%. Thus it can be concluded that LDR has a significant effect on profitability. The results of this study are in accordance with the results of previous research conducted by (Nurmiradiyanti, 2022) where the results show that LDR has a positive effect on banking profitability. According to the results of the hypothesis test of the Financial Performance variable as measured by the CAR, NPL, BOPO, LDR ratios, it can be concluded that the second hypothesis which reads
"Financial Performance has a positive and significant effect on the profitability of conventional banks listed on the IDX" can be accepted.

3. Effect of Green Banking Implementation (X1) and Financial Performance (X2) simultaneously on ROA (Y).

Based on testing the third research hypothesis simultaneously, it shows that the F count result is 3.808 while the F table is 2.90 because Fcount (3.808) > Ftable 2.90 with a significance level of 0.005 which is smaller than 0.05, it can be concluded that the Green Banking and Financial Performance variables (CAR, NPL, BOPO and LDR) simultaneously have a significant effect on ROA (Return on Asset) of conventional banking companies listed on the Indonesia Stock Exchange for the period 2020-2022.

From the regression equation \( Y = 2.207 - 0.283X_1 + 0.512X_2 + 0.196X_3 + 0.105X_4 + 0.100X_5 \) it can be seen that the five independent variables have a positive effect on the dependent variable. The results showed that the R-square value was 0.250, so it can be concluded that the independent variables in the equation model above can explain the dependent variable by 25%. This means that the simultaneous influence between the Green Banking (X1) and Financial Performance (CAR, NPL, BOPO and LDR) (X2) variables on Profitability (ROA) (Y) is 25%. The 75% may be other factors outside the research variables that are the focus of the object of research. It can be concluded that the Green Banking variable (X1), and Financial Performance (CAR, NPL, BOPO and LDR) (X2) simultaneously have a positive and significant effect on ROA (Return on Asset) (Y).

Based on the results of research and discussion that has been stated in the previous chapters, the following conclusions can be drawn:

a) It is proven that there is no partial influence (linear relationship) between the application of Green Banking (X1) with Profitability or Return on Assets (ROA) (Y).

b) It is proven that there is an influence (linear relationship) partially between Financial Performance (CAR, NPL, BOPO, LDR) (X2) with Profitability or Return on Assets (ROA) (Y).
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c) That the Green Banking (GB) variable (X1) and Financial Performance (CAR, NPL, BOPO, LDR) (X2) together or simultaneously proven to have a positive effect on Profitability or Return on Assets (ROA) in conventional banking companies listed on the Indonesia Stock Exchange in 2020-2022 with an influence of 51.6%

References


