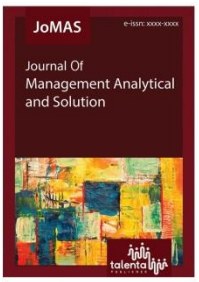
Journal Of Management Analytical and Solution



Analysis of Green Banking Sustainability And Financial Performance Implementation Towards Profitability of Banking Listed On The Indonesia Stock Exchange In 2012-2018

Christy Siahaan [*1], Amlys Syahputra Silalahi[2], Syahyunan[3], Aryanti Sariartha Sianipar[4]
[1,2,3,4] Department of Management, Faculty of Economics and Business, Universitas Sumatera Utara, Medan,20115, Indonesia
christynatalia@usu.ac.id

ABSTRACT

This study aims to determine the impact of green banking and financial performance on bank profitability. Green banking in this study is divided into two dimensions, namely, non-cash transactions (e-banking) and green banking policies. The financial performance in this study is the size of the bank, capital adequacy, non-performing loans, bank efficiency and bank liquidity level. The population in this study was 43 banking sector companies listed on the Indonesia Stock Exchange for the 2012-2018 period. The samples in this study were 9 selected banks using the purposive sampling method. The analysis method in this study is panel data regression analysis. The results show that Non-Cash Transactions, Capital Adequacy, Non-Performing Loans and Liquidity Levels of banks each have a negative and insignificant effect on the bank's profitability. Green banking policy has a positive and insignificant effect. Bank Size and Bank Efficiency each negatively and significantly affect the bank's profitability.

Keywords: Non-cash transactions; green banking; capital adequacy; non-performing loans; bank efficiency; bank liquidity level; bank profitability.

INTRODUCTION

Green Banking is a new issue in the financial world. This is a form of banking taking into account social and environmental impacts. Where the main motive is to protect and preserve the environment. Banks located in foreign countries, such as Bangladesh and Kenya are taking green banking very seriously. Some banks such as those in Kenya have introduced official Environmental and Social (E&S) risk policies to regulate lending activities in 1997. They also signed the Equator's Principle (EP), and moved forward in building bank performance to measure the social and economic impact of lending, reduce annual paper consumption from full-time employees and continue to reduce energy and water consumption, etc. (Sinha, 2013). Today, looking at the profitability of banks through the issue of green banking, it can be seen from the daily operational activities carried out by banks. Daily operations in this context refer to the daily operations that banks carry out in their daily performance and change their practices in a more environmentally friendly direction in accordance with the

Journal Of Management Analitycal and Solution (JoMAS) Vol. 1, No. 1, 2021 | 1 – 12

concepts applied by green banking. Green banking practices recommend that in terms of banking operations it is much better to implement online banking, mobile banking and green cards whose materials can be recycled again so that they are more paperless (Nath, N, & A, 2014). In this study, green banking policy was analyzed through a component of using paper that is more paperless in office operations. Banking. According to (Sari, 2017), green banking policy is an idea that makes the company not only responsible in terms of finances, but also its impact on the social and environmental around the company so that the company can grow sustainably. Gosshling S & Voucht (2019) said that green banking policy can be viewed as an obligation of the business world to be accountable to all stakeholders, not just to one of the stakeholders.

LITERATURE REVIEW

Profitability

According to Alifah (2014) profitability is the profit generated through its business activities in a certain period. Profitability is the profit that banks get from the activities carried out by the bank, ranging from investment, lending and others. Profitability is very important for companies including banking, because profitability indicates the growth of an institution, and describes the value of that company or banking. The higher the profitability, the higher the value of the bank. The value of the bank will affect the price of the stock, or its bonds. According to Prasanjaya A, A.Yogi, & Ramantha (2013) in their research which mentioned that it is very important to measure the level of profitability because to guarantee that the profit has been achieved or not has been targeted for a specified period.

Daily Operations

Daily operations in this context refer to the daily operations that banks carry out in their daily performance and change their practices in a more environmentally friendly direction accordingly with the concept applied by green banking. Green banking practices recommend that in terms of banking operations, it is much better to implement online banking, mobile banking and green cards whose materials can be recycled again so that they are more paperless (Nath, et. Al., 2014).

Bank Size

The size of the company in this study is seen based on the size of the total assets owned by the company. Assets are an important component of a company (Nazir et. Al., 2009). Larger banks have more profitable asset sizes than banks with small asset sizes, because larger bank sizes have a higher level of efficiency (Kosmidou, et. al., 2008).

Bank Size = LnTotalSize

Green Banking Policy

In the green banking policy, the company's operational activities are as minimal as possible in carrying out daily banking operations to be more paperless. This is intended, with more paperless activities to encourage Indonesian banks to better understand and participate in efforts to implement Green Economic policies through Green Banking activities in banks that are being promoted by Bank Indonesia.

Capital Adequacy

Capital is one of the important things in developing a business, be it through investment, funding or providing loans to business actors. CAR is one of the the main proxy in the capitalization of the bank. CAR is a bank's performance ratio for measuring adequacy capital owned by banks to support assets that contain or generate risks (Dendawijaya, 2001).

$$\textbf{CAR} = \frac{\boldsymbol{Modal\ (Modal\ Inti + Modal\ Pelengkap)}}{\boldsymbol{Aktiva\ Tertimbang\ menurut\ risiko}}\ \textbf{x 100\%}$$

Journal Homepage: https://talenta.usu.ac.id/jomas

Journal Of Management Analitycal and Solution (JoMAS) Vol. 1, No. 1, 2021 | 1 – 12

Non-Performing Loans

Credit risk is a risk that occurs due to the failure of the opponent's choice in fulfilling its obligations (Rizal, 2007). According to (Siamat, 2004) credit risk is the risk posed due to the customer's inability to return the loan amount and interest that has been assigned banks based on a predetermined time. According to Yogianta (2013), NPL describes credit risk, where if the NPL is lower, the lower the credit risk faced by the bank. However, when non-performing loans get higher, it tends to reduce banking profitability due to bad interest income.

$$\textbf{NPL} = \frac{\textbf{Kredit Bermasalah}}{\textbf{Total Kredit}} \textbf{ x 100\%}$$

Bank Efficiency

The bank's ability to reduce costs in making a profit from its business activities is called cost efficiency. If the efficiency of the bank is getting higher the feeding indicates the cost that issued banks in their operational activities are getting lower and lower, so the profitability of the bank will increase. In this study, bank efficiency is described where the costs incurred by banks in carrying out its activities is measured by the ratio of operating expenses to operating income (BOPO). The BOPO ratio is often referred to as the efficiency ratio used to measure the ability of bank management to control operational costs against operating income.

$$\textbf{BOPO} = \frac{\textbf{Beban Operasional}}{\textbf{Pendapatan Operasional}} \textbf{ x 100\%}$$

Loan to Deposit Ratio (LDR)

Loan to Deposit Ratio is a ratio used to measure the composition of the amount of credit provided compared to the amount of public funds and own capital used (Kasmir, 2010). The LDR states how far the bank is able to repay depositors' withdrawals by relying on the credit provided as its source of liquidity. To maintain the level of liquidity, Bank Indonesia sets the LDR value standard at 78-92 percent in Bank Indonesia Regulation No. 15/15/PBI/2013, if the LDR level is in that range, the bank is considered healthy. The higher the LDR indicates the riskier the liquidity condition of the bank, on the contrary, the lower the LDR indicates the lack of effectiveness of the bank in disbursing credit. The Loan To Deposit Ratio ratio can be formulated as follows:

$$\textbf{LDR} = \frac{\textbf{Jumlah Kredit}}{\textbf{Total Dana Diterima}} \textbf{ x 100\%}$$

METHODS

The population in this study was 43 banks listed on the Indonesia Stock Exchange and Bank Indonesia for the 2012-2018 period. The sample in this study was 9 banks that met the criteria. The operational definitions of variables in this study include:

1. Dependent variables are variables that are influenced or become a result, due to the presence of free variables. The dependent variable in this study is the profitability of the bank.
2. Independent variables are variables that affect or are the cause of changes or the emergence of dependent (bound) variables. Independent variables in this study are daily operations of green banking, green banking policy, bank size, capital adequacy, credit problematic, bank efficiency and liquidity.

Journal Of Management Analitycal and Solution (JoMAS) Vol. 1, No. 1, 2021 | 1 – 12

The type of data in this study is secondary data obtained from the company's financial statements downloaded from the Indonesia Stock Exchange website and the official website of each bank. The data obtained are quantitative data. The nature of this data is data pooling or combined model, which is a combination of time-series data and cross section data. The data collection method in this study was carried out through literature studies and documentation studies, namely collecting financial statements of each banking company listed on the Indonesia Stock Exchange and Bank Indonesia in 2012-2018. The analysis technique used in this study is panel data regression analysis.

RESULT

Descriptive Analysis

Table 1. **Descriptive Statistical Results**

Variable	Minimun	Maximun	Mean	Std.Deviasi
ROA (Y)	0.000800	0.055000	0.022968	0.013510
TNT	979415.0	7.90E+08	99151833	1.57E+08
KGB	1005000.	40168509	13649937	10363789
TA	333304.0	1.30E+09	3.29E+08	3.82E+08
CAR	0.113500	0.297200	0.182743	0.031479
NPL	0.113500	0.061100	0.024235	0.012647
BOPO	0.582000	0.997700	0.783000	0.122028
LDR	0.353000	1.030700	0.865329	0.098736

A total of 9 companies were finally studied in the study due to banks that did not display complete reports and had not carried out green banking policies. The companies included in this study are: Bank Mandiri, Bank BNI, Bank BCA, Bank BRI, Bank BJB, Bank BRI Syariah, Bank OCBC NISP, Bank CIMB Niaga, Bank Artha Graha Internasional. The following is a descriptive analysis obtained from Table 1:

1. The variable ROA (Y) has a minimum value of ROA is 0.000800 owned by PT Bank BRI Syariah, while the maximum value of ROA is 0.55000 owned by PT. Bank Mandiri. The average ROA is 0.022968 with a standard deviation of 0.013510.
2. Variable Non-Cash Transaction (TNT) has a minimum value of TNT is 979415.0 owned by PT. OCBC NISP, while the maximum value of TNT is 7.90E+08 owned by PT. Bank Mandiri. The average TNT is 99151833 with a standard deviation of 1.57E+08.
3. The Green Banking Policy Variable (KGB) has a minimum value of the KGB is 1005000 owned by PT. Bank Jawa Banten, while the maximum value of the KGB is 40168509 obtained from PT. Bank Central Asia. The kgb average is 13649937, with a standard deviation 10363789.
4. The variable Total Asset has a minimum value of Total Assets is 333304.0 million owned by PT. Bank Artha Graha Internasional, while the maximum value of Total Assets is 1.30E+08million obtained from PT. Bank Mandiri. Average Total Assets is 3.29 E+08 million, with a standard deviation of 3.82E+08 million.
5. The variable Capital Adequacy Ratio (CAR) has a minumum value of CAR is 0.113500 percent obtained from PT. Bank Negara Indonesia, while the maximum value of CAR is0.297200 percent obtained from PT. Bank CIMB Niaga.Average CAR is 0.182743 percent, with a standard deviation of 0.031479 percent.
6. Variable Non Performing Loan (NPL) has a minimum value of NPL is 0.113500 percent owned by PT. Bank Rakyat Indonesia, while the maximum value of NPL is 0.061100 percent obtained from PT. Bank Central Asia. The average NPL is 0.024235 percent, with a standard deviation of 0.012647 percent.
7. The BOPO variable has a minimum value of BOPO is 0.582000 percent obtained from PT. Bank OCBC NISP, while the maximum value of BOPO is 0.997700 percent obtained from

Journal Of Management Analitycal and Solution (JoMAS) Vol. 1, No. 1, 2021 | 1 – 12

PT. Bank Mandiri. The average BOPO is 0.783000 percent, with a standard deviation0.098736 percent.

8. The variable Loan to Deposit Ratio has a minimum value of LDR is 0.3530000 percent owned by PT. Bank Artha Graha Internasioal, while the maximum value of LDR is1.030700 percent obtained from PT. Bank Jawa Banten. The average LDR is 0.865329 percent,with a standard deviation of 0.098736 percent.

Panel Data Regression Analysis

Panel data regression analysis was used to determine the effect between the variables of Non-Cash Transactions (X1, Green Banking Policy (X2), Bank Size (X3), CAR (X4), NPL (X5), BOPO (X6) and LDR (X7) on ROA (Y) in banking companies listed on the Indonesia Stock Exchange and Bank Indonesia. This panel data regression test was performed to find the relationship between independent variables and dependent variables. Table 2 presents the values of the regression coefficient, the statistical value of F, the statistical value of t, and the coefficient of determination (R2)

Table 2. **Statistical Value of Coefficient of Determination Test (R2), Test t, and Test F**

Dependent Variable: ROA
Method: Panel EGLS (Cross-section weights)
Date: 02/10/20 Time: 21:02
Sample: 2012 2018
Periods included: 7
Cross-sections included: 9
Total panel (balanced) observations: 63
Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.095619	0.005787	16.52408	0.0000
TRANSAKSI_NON_TUNAI	-5.71E-13	2.31E-12	-0.246920	0.8060
KGB	2.47E-11	5.57E-11	0.442815	0.6599
TA	-1.06E-11	2.37E-12	-4.479632	0.0000
CAR	-0.007225	0.008161	-0.885286	0.3805
NPL	0.007106	0.029888	0.237748	0.8131
BOPO	-0.086762	0.006437	-13.47883	0.0000
LDR	-0.000404	0.002889	-0.139805	0.8894

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

R-squared	0.987860	Mean dependent var	0.026304
Adjusted R-squared	0.983986	S.D. dependent var	0.017886
S.E. of regression	0.002067	Sum squared resid	0.000201
F-statistic	254.9677	Durbin-Watson stat	1.906808
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.981507	Mean dependent var	0.022968
Sum squared resid	0.000209	Durbin-Watson stat	1.801308

Based on Table 2, it can be known the regression equation of the panel data used as follows:

Y = 0.09 – 5.71E-13X1 + 2.47E-11X2 - 1.06E-11X3 – 0.007X4 + 0.007X5 – 0.004X6 – 0.086X7

From the equation can be described as follows:

1. Constant (β0) = 0.095619 It indicates the degree of the constant, where if the variable OperationalDaily (X1), Green Banking Policy (X2), Bank Size (X3), Capital Adequacy Ratio (X4), Non Performing Loan (X5), Operating Expenditure to Operating Income (X6), Loan to

Deposit Ratio (X7) is 0, then the Return on Asset (Y) will remain at 0.095619, assuming other variables remain.

2. Non-Cash Transaction Coefficient (β1) = -5.71E-13 < 0. This shows that the Non Cash Transaction variable (X1) negatively affects ROA. If the Cashless Transaction variable is increased, then the Return On Asset will decrease assuming other variables remain, and vice versa.
3. Coefficient KGB (β2) = 2.47E-11 > 0. This shows that the KGB variable (X2) positively affects the Return on Assets. If the KGB variable is increased, then the Return On Asset will increase assuming other variables are fixed, and vice versa
4. Coefficient TA (β3) = -1.06E-11 < 0. This shows that the variable TA (X3) negatively affects the Return On Asset. If the variable TA is increased, then the Return on Asset will decrease assuming other variables remain, and vice versa.
5. CAR coefficient (β4) = -0.007225 < 0. This suggests that the variable CAR (X4) negatively affects ROA. If the CAR variable is increased, then the ROA will decrease byThe assumptions of other variables remain, and vice versa.
6. NPL coefficient (β5) = 0.007106 > 0. This suggests that the variable NPL (X5) positively affects ROA. If the NPL variable is increased, then the ROA will increase assuming the other variables remain, and vice versa.
7. BOPO coefficient (β) = -0.000404 < 0. This suggests that the BOPO variable (X6) negatively affects ROA. If the BOPO variable is increased, then the ROA will decrease assuming other variables remain, and vice versa.
8. LDR coefficient (β7) = -0.086762 < 0. This suggests that the LDR variable (X7) negatively affects ROA. If the LDR variable is increased, then the ROA will decrease by The assumptions of other variables remain, and vice versa.

Coefficient of Determination Test (R2)

The results of the Coefficient of Determination Test (R2) are known that the value of Adjusted R-Square is 0.983986, meaning that 98.3986 percent of the Return On Asset (ROA) variable can be explained by the variable Daily Operations, Green Banking Policy, Bank Size, Capital Adequacy Ratio, Non Performing Loan, Operating Expenses to Operating Income and Loan to Deposit Ratio. As for the rest, 1.0614 percent can be explained by other factors that cannot be explained in this research.

Unison Effect Significance Test (F Test)

Based on Table 4.7, it is known that the calculated F value (254.9677) > F table (2.0582) and the Probability value (0.000000) < 0.05. Then it can be concluded Non-Cash Transactions, Green Banking Policy, Total Asset, Capital Adequacy Ratio, Non Performing Loan, Operating Cost of Operating Income, Loan to Deposit Ratio to Return On Asset.

Partial Test (t-test)

Based on Table 2, the results of the partial significance test can be drawn, namely:

1. It is known that the value of the TNT coefficient is -5.71E-13, which is negative with a calculation (- 0.246920) < ttabel (2.262157) and Prob (0.8060) > . This means that TNT has a negative and insignificant effect on ROA. Based on the above results, the value of the TNT coefficient of -5.71E-13 means that every increase in TNT of Rp.1,000,000,-, then ROA will decrease insignificantly by -5.71E-13 percent., and vice versa.
2. It is known that the value of the KGB coefficient is 2.47E-11, which is a positive value with a calculation (0.442815) > ttabel (2.262157) and Prob (0.6599) > α (0.05). This means that the KGB has a positive and insignificant effect on ROA. Based on the above results, the value of the KGB coefficient of 2.47E-11 means that every KGB increase of 1 RIM, the ROA will increase insignificantly by 2.47E-11 percent., and vice versa.
3. It is known that the value of the coefficient of TA is -1.06E-11, that is, it is negative with a calculation (- 4.479632) < ttabel (2.262157) and Prob (0.0000) < α (0.05). This means that TA has a negative and significant effect on ROA.Based on the above results, the value of the TA

coefficient of - 1.06E-11 means that every increase in TA of 1 Million, then ROA will decrease significantly by -1.06E-11 percent, and vice versa

4. It is known that the value of the CAR coefficient is -0.007225, which is negative with the calculation (- 0.885286) < ttabel (2.262157) and Prob (0.3805) > α (0,05). This means that CAR has a negative and insignificant effect on ROA. Based on the above results, the value of the CAR coefficient of -0.007225 means that every time the CAR increases by 1 percent, the ROA will decrease insignificantly by -0.007225 percent, and vice versa.
5. It is known that the value of the NPL coefficient is 0.007106, which is a positive value with a calculation (0.237748) > ttabel (2.262157) and Prob (0.8131) > α (0.05). This means that NPL has a positive and insignificant effect on ROA. Based on the above results, the value of the NPL coefficient is 0.007106 meaning that every NPL increase of 1 percent, the ROA will increase insignificantly by 0.007106 percent, and vice versa.
6. It is known that the value of the BOPO coefficient is -0.08675, which is negative with a calculation (- 13.47883) < ttabel (2.262157) and Prob (0.000) < α (0.05). This means that BOPO has a negative and significant effect on ROA. Based on the above results, the value of the BOPO coefficient of - 0.08675 means that every increase in BOPO by 1 percent, the ROA will decrease significantly by -0.08675 percent, and vice versa
7. It is known that the value of the LDR coefficient is -0.000404, which is negative with the calculation (- 0.139805) < ttabel (2.262157) and Prob (0.8894) > α (0,05). This means LDR is influential negative and insignificant to ROA. Based on the above results, the value of the LDR coefficient of -0.086762 means that every increase in LDR is 1 percent, then ROA decreases insignificantly by -0.86762 percent, and vice versa

DISCUSSION

H1: Effect of TNT on ROA

Based on the results of the research conducted, the value of the TNT coefficient is -5.71E-13, which is a negative value with a calculation (-0.246920) < ttabel (2.262157) and Prob (0.8060) >. This means TNT negatively and insignificantly affect ROA. Development of non-cash transactions in Indonesia is now more lively. It can be seen from the increasing types of non-cash payments that have been issued and the increasing value of transactions in the last four years (2014-2017). The convenience provided by non-cash financing facilities can increase consumption, which has the potential to encourage economic growth. According to Prayudi (in Diyanti, 2012) the large number of loans does not increase the NPL ratio possible because the loans disbursed by banks are more selective by looking at the quality of prospective debtors (criterion 5C) so as to reduce the risk of bad debts. This research is in line with research conducted by Kharawish HA & AL Sa'Di NM (2011) and Acharya S & Locke S (2016). However, the results of this study are not in line with the research conducted by Rauf and Qiang (2014).

H2: Effect of KGB on ROA

Based on the results of the research conducted, the KGB coefficient value is 2.47E-11, which is a positive value with a calculation (0.442815) > ttabel (2.262157) and Prob (0.6599) > α (0.05). From these results, the larger the KGB, the greater the company's tendency to increase ROA and the smaller the KGB, the smaller the company's tendency to increase ROA. Green banking's daily operations have a significant and positive effect on the bank's profitability. This shows that banks that implement green banking by utilizing technological advances in their activities can become more efficient, where energy use becomes less and more paperless. So that the burden that will reduce the bank's income decreases and the bank's profit will increase. The results of this study are in line with the research conducted by 0yewole et. Al (2013), Margaretha (2015) . However, the results of this study are not in line with the research conducted by Nurdin & Diana (2016), Kurniawati, Sahroni and Dedeh (2018) and Rohani & Elizar (2018).

Journal Of Management Analitycal and Solution (JoMAS) Vol. 1, No. 1, 2021 | 1 – 12

H3: Effect of Bank Size on ROA

Based on the results of research that has been carried out, the value of the TA coefficient is -1.06E-11, which is a negative value with a calculation (-4.479632) < ttabel (2.262157) and Prob (0.0000) < α (0.05). From these results then show that the larger the TA of a company, the smaller the tendency of the company to increase ROA and the smaller the TA of a the company will then have a greater tendency for the company to increase ROA. According to Machfud (1994) that company size is a scale where it can be classified as a small size company according to various ways, including: total assets, log size, stock market value, and miscellaneous. Basically, the size of the company is only divided into 3 categories, namely large companies (large firm), medium size companies and small firms. The determination of this size is based on the company's total assets. Companies that have large assets have the opportunity to get a bigger profit. The results of this study are consistent with the results research of Deelchand and Padgett (2009) and Anom Purbawangsa (2015), Manuaba (2012), and Raj Bhattarai (2016) and Antonio, Ponce (2013). However, the results of this study are not in line with the research conducted by Baskara and Kadek (2019) and Filzah, Ridwan & Anan (2016).

H4: The Effect of CAR on Bank Profitability

Based on research that has been carried out, the value of the CAR coefficient is -0.007225, which is a negative value with a calculation (-0.885286) < ttabel (2.262157) and Prob (0.3805) > α (0.05). From these results, the greater the value of CAR, the smaller the company's tendency to increase ROA and the smaller the value of CAR, the greater the company's tendency to increase ROA. The insignificance of CAR is due to BI regulations that require banks to maintain CAR with a minimum provision of 8%. High CAR, if not balanced with good investment and disbursement of funds, CAR will not have much effect on profitability. A good CAR ratio must be above the minimum requirement of 8%. However, conditions where the CAR ratio is too high are also not good for banks. This is because the CAR is too high, for example, 100%, indicating that the bank does not rotate funds from other parties. Banks that do not disburse their funds will suffer losses. Too high a CAR indicates that the capital owned by the bank is too large, reflecting that the bank is less efficient in disbursing its funds. Bank Indonesia should review and establish the latest regulations related to CAR so that banks have a reference to what is the ideal highest point for the CAR ratio. The results of this study are in line with research conducted by Defri (2012), Hutagalung, et al. (2013) and Wicaksono (2016) and Yogianta (2013). However, this research is not in line with the research conducted by Prastiyaningtyas (2010) and Alifah (2014).

H5: The Effect of NPLs on Bank Profitability

Based on research that has been carried out, the NPL coefficient value is 0.007106, which is a positive value with a calculation (0.237748) > ttabel (2.262157) and Prob (0.8131) > α (0.05). From these results, the greater the NPL value, the smaller the company's tendency to increase ROA and the smaller the NPL value, the greater the company's tendency to increase ROA. Currently, the NPL level of banking companies is still relatively low. Poor credit quality will increase risk, especially if lending is done by not using the principle of prudence and expansion in lending that is less controlled so that banks will bear greater risk as well. The risk is in the form of difficulty in returning credit by debtors, which if the amount is large enough can affect banking performance. This is in line with research conducted by Raharjo et al. (2014), Sri (2017) and Joy, Sri & Natalia (2019). . However, these results are different from the research conducted by Wicaksono (2016), Sedana & Ida (2018) and Yusriani (2018).

H6: Effect of BOPO on Bank Profitability

Based on the results of research that has been carried out, the value of the BOPO coefficient is -0.08675, which is a negative value with a calculation (-13.47883) < ttabel (2.262157) and Prob (0.000) < α (0.05). From these results, it shows that the larger the BOPO of a company, the smaller the tendency of the company to increase ROA and the smaller the BOPO of a company, the greater the tendency of the company to increase ROA. BOPO has a negative effect, meaning that if BOPO increases which means efficiency decreases, then profitability (ROA) will decrease. The more

efficient a bank is, the performance increases. The bank's improved performance will increase public confidence in the bank. Increasing public trust can increase the amount of deposits collected by a bank, besides that people are also encouraged to use bank services and products such as loans or credit. High deposits and public contribution to bank products are expected to increase profitability. Bank Indonesia has set the best figure for the BOPO ratio, which is below 85%, because if the BOPO ratio exceeds 85% to close to 100%, the bank can be categorized as inefficient in carrying out its operations. This is in line with the research conducted by Alifah (2014), Sumiati (2009), Prastiyaningtyas (2010), Hutagalung, et al. (2013) and Wicaksono (2016). However, the results of this study are different from the research conducted by Pratiwi (2014), Yusriani (2018) and Bambang & Joko (2009).

H7 : The Effect of LDR on Profitability

Based on the research that has been carried out, the value of the LDR coefficient is -0.000404, which is a negative value with a calculation (-0.139805) < ttabel (2.262157) and Prob (0.8894) > α (0.05). From the results the greater the LDR value, the smaller the tendency of the company to increase ROA and the smaller the LDR value, the greater the tendency companies to increase ROA. LDR is the ratio between the credit given to customers compared to the funds that come in from the community. Bank Indonesia has determined that the lower limit of LDR is 78% and the tolerable upper limit is 92%. To maintain the LDR ratio, banks must always maintain or increase the amount of credit given to the community, in addition to collecting funds from the community. Conditions where banks cannot channel credit to the public, this will affect the profitability of the bank. The distribution of large amounts of loans has the potential to increase the number of bad loans which can have an impact on reducing profits, besides that if the credit can be channeled effectively, it will bring profit to the bank. A high LDR will have two impacts, namely if credit is channeled effectively, it will bring profit, while if credit expansion is less controlled and less carefully channeled, it will pose greater risk. This condition causes an insignificant LDR effect on the bank's profitability. This is in line with research conducted by Putri (2015), Bilian and Purwanto (2017), Prastiyaningtyas (2010), Hutagalung, et al. (2013) and Wicaksono (2016). However, the results of this study are not in line with the research conducted by Pertiwi (2014) and Sedana & Ida (2018).

CONCLUSION

Based on data analysis and discussion of the results of research that has been carried out, the following conclusions can be drawn: Based on data analysis and discussion of research results that have been carried out, the following conclusions can be drawn:

1. Non-Cash Transactions (TNT), Green Banking Policy (KGB), Total Assets (TA), Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Operating Expenses to Operational Opinions (BOPO), Loan to Deposit Ratio (LDR) simultaneously has a significant effect on Return on Assets in banks listed on the Indonesia Stock Exchange for the period 2012-2018.
2. Non-Cash Transactions partially negatively and insignificantly affect the ROA on Banks listed on the Indonesia Stock Exchange for the period 2012-2018.
3. Green banking policy partially has a positive and insignificant effect on ROA in Banks listed on the Indonesia Stock Exchange for the period 2012-2018.
4. Total Assets partially negatively and significantly affect the ROA in banks listed on the Indonesia Stock Exchange for the 2012-2018 period.
5. CAR partially negatively and insignificantly affects ROA in Banks that listed on the Indonesia Stock Exchange for the period 2012-2018.
6. NPL partially negatively and insignificantly affects the ROA in banks listed on the Indonesia Stock Exchange for the period 2012-2018.
7. BOPO partially negatively and significantly affects the ROA in banks listed on the Indonesia Stock Exchange for the period 2012-2018
8. LDR partially negatively and insignificantly affects ROA in Banking which was listed on the Indonesia Stock Exchange for the period 2012-2018.

REFERENCE

Acharya S, & Locke S. (2016). Green Banking And Banks Performance In India. . *InternationalConference On Green Banking For Green Industry and Green*, 0-14.

Andreas HH, Sucahyo US, & Elisabeth D. (2015). Corporate Social Responsibility Dan Profitabilitas.*Jurnal Manajemen*, Vol 14, 119-136. Ayuning, F. (2014). Inisiasi Praktek Perbankan Hijau Pada Bank BUMN. *Jurnal Manajemen Dan Akuntansi*, 45.

Bahl. (2012). The Role of Green Banking in Sustainable Growth. *International Journal of Marketing, Financial Service & Management Research*, Vol.3, 3-45.

Bai, Y. (2012). Financing a Green Future An examination of China's banking sector for green finance. *IIIEE Theses*. Bank, I. (2014). Menuju Green Banking Berkelanjutan. *Responsi Bank Indonesia*.

Bank, W. G. (2016). Greening the Banking System - Experiences from the Sustainable Banking Network (SBN). *International Finance Coproration*.

Bessong K, & Tappang A. (2012). Social Responsibility Cost and Its Influence on the Nigerian Bank.*International Journal of Financial Research,*, Vol 2, 33-45.

Bihari. (2011). Green banking – socially Responsible banking in India. India Banker,. 32-37.

Chandra, & Sudeepta. (2014). The relationship between pollution control record Sand financial indicators revisited. *The Accounting Review*, Vol. 55, No. 1, pp.168–177. Dahlan, S. (2001). *Manajemen Lembaga Keuangan*. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.

Dahlan, S. (2005). *Manajemen Lembaga Keuangan Kebijakan Moneter dan Perbankan.* Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.

Damayanti. (2014). Analisis Kinerja Keuangan Terhadap Profitabilitas Perbankan. *Jurnal Manajemen Dan Perbanjan* . Defri. (2012). Pengaruh Capital Adequacy Ratio, Likuiditas Dan Efisiensi Operasional Terhadap Profitabilitas Perusahaan Perbankan Yang Terdaftar Di Bursa Efek Indonesia. *Thesis Fakultas Ekonomi Universitas Negeri Padang*.

Dewi L, Herawati N T, Erni L G, & Sulindawati. (2015). Analisis Pengaruh NIM,BOPO, LDR, dan NPL Terhadap Profitabilitas. *e-Journal S1 Ak. Universitas Pendidikan Ganesha*, Volume 3.

Dharwal, & Agarwal. (2013). Green banking: An innovative initiative for sustainable development. *ACCMAN Institute of Management Article, 2(3)*.

Dietrich, Andreas, & Gabrielle Wanzeried. (2009). What Determines The Profitability Of Commercial Banks? New Evidence From Switzerland. *SRSN*.

Dr.Sumanto, M. (2014). *Statistika Deskriptif Untuk Mahasiswa, Dosen dan Umum.* Yogyakarta: CAPS. E, D., T, H. N., & Sulindawati. (2015). Analisis Pengaruh NIM,BOPO, LDR, dan NPL Terhadap Profitabilitas. *E-Journal S1 Ak. Universitas Pendidikan Ganesha*, Volume 3.

Egan, R., & Prawoto, H. (2013). Pengaruh Internet Banking Terhadap Kinerja Perbankan di Indonesia (Studi Empiris Pada Bank Yang Listing Di BEI). *Jurnal Akuntansi Bisnis*, Vol. XI No. 22.

Fajari, & Sunarto. (2017). Pengaruh CAR, LDR, NPL Dan BOPO Terhadap Profitabilitas Bank (Studi Kasus Perbankan Yang Terdaftar Di Bursa Efek Indonesia 2011-2015). *Proceeding Sendi_U*, 853-862.

Ghozali, I. (2013). *Aplikasi Analisis Multivariete*. Semarang: Badan Penerbit Universitas Diponegoro.Gittman, & Zutter. (2015). *Principle of Managerial Finance 13th Edition.* Pearson.

Gosshling S, & Voucht. (2019). How to Face Green Banking In This Era? A Empirical Study in India Bank. *Journal Of Management And Finance*, Vol 4 (Issue 3), 125-200.

Hossain, D. M., & Tarique, K. M. (2016). Disclosure of Green Banking Issues in The Annual Report : A study on Bangladeshi Bank. *Journal Finance and Management*.

Inge, E. (2015). Pengaruh Kebijakan E-Banking Pada ROA Bank BUMS Dan BUMNM. *Jurnal Perbankan dan Akuntansi*, 23-30.

Islam, M.S, & P.C, Daas. (2013). Green Banking Practices in Bangladesh. *Journal of Business Management*, 8 (3) : 39-44 .

Kharawish HA, & AL Sa'Di NM. (2011). The Impact of E-Banking on Bank Profitability:Evidence From Jordan. *Middle Eastern Finance and Economics*, (ISSUE 13),142-158.

Khoirunnisa. (2019). Pengaruh CAR, NPL, BOPO Terhadap ROA Perbankan Yang Terdaftar Di Bursa Efek Indonesia Tahun 2011-2018. *Journal Of Finance And Management*. Lukman, D. (2001). *Manajemen Perbankan.* Jakarta: Ghalia Indonesia.

Manuaba. (2012). Pengaruh Capital Adequacy Ratio,Non Performing Loan, Ukuran Perusahaan dan Struktur Kepemilikan Terhadap Profitabilitas Bank Yang Terdaftar Di BEI 2008 - 2011. *E-Jurnal Akuntansi Universitas Udayana*, 1 (1).

Mukrahomam, W. (2018). Pengaruh E-Banking Pada Profitabiltas Bank BUMN. *Universitas Indonesia, Jurnal*, 45-68.

Nath , N, N., & A, G. (2014). Green Banking Practices-A Review. *International Journal of Research in Business and Management*, Vol 2(Issue 4), 46-61.

Nistantya D, S. (2010). Pengaruh Corporate Social Responsibility Terhadap Profitabilitas. *Fakultas Ekonomi Universitas Sebelas Maret Surakarta*, 1-15.

Nusantara A, B. (2009). Analisis Pengaruh NPL, CAR, LDR, dan BOPO Terhadap Profitabilitas Bank. *Universitas Diponegoro*.

Oyewole, M, A., El-Maude, J, G., Arikpo, & I, A. (2013). E-banking and Bank Performance: Evidence from Nigeria. *International Journal of Scientific Engineering and Technology*, Vol 2(Issue 8), 766-771.

Prasanjaya A, A.Yogi, & Ramantha, I. W. (2013). Analisis Pengaruh Rasio CAR, BOPO,LDR Dan Ukuran Perusahaan Terhadap Profitabilitas Bank Yang Terdaftar Di BEI. *E-Jurnal Akuntansi Universitas Udayana*, 4 (1), 230-245.

Priyanto, F. (2015). Kebijakan Branchless Banking Pada Perbankan Indonesia, Studi Komparatif. *Universitas Gajah Mada*.

Ragupathi M, & Sujatha S. (2015). Green banking initiatives of commercial banks in India. *International Research Journal of Business and Management*, 8(2), 74-81.

Raharjo, Setiaji, & Syamsudin. (2014). Pengaruh Rasio CAR, NPL, LDR,BOPO, dan NIM terhadap Kinerja Bank Umum Di Indonesia. *BTPN Solo*, 7-12.

Rajput, Aurora, & Khanna. (2013). An Empirical Study of Impact of Environmental Performance on Financial Performance in Indian Banking Sector. . *International Journal of Business and Management Invention*, Vol 2 (Issue 9), 19-24.

Ramilla, & Gurusamy. (2015). Impact of Green Banking Initiatives Adopted by Public. *Journal of Management Research*, Vol 5(Issue 2), 60-68.

Rayu, W. (2018). Pengaruh Green Economic Dalam Kajian Perbankan Indonesia. *Jurnal Ilmu Ekonomi* , Vol 2: 76-90.

Rizal. (2015). Analisis Kinerja Keuangan Terhadap Profitabilitas Perbankan Yang Terdaftar Di Bursa Efek Indonesia Tahun 2011-2014. *Jurnal Akuntansi Dan Manajemen*.

Sari. (2017). Kebijakan Green Banking Dalam Perbankan Indonesia. *Jurnal Manajemen Dan Perbankan*, Vol 2 (Issue 3), 17-28.

Seftianne. (2013). Pengaruh Size, NIM, LDR dan BOPO Terhadap ROA. *Jurnal Manajemen*.

Sinha, A. (2013). Green Banking. *Institution for Development and Research in Banking Technology*. India.

Sugiyono. (2012). *Metode Penelitian Kualitatif, Kuantitatif dan R&D*. Bandung: Alfabeta. Sumiati. (2009). Analisis Pengaruh CAR, NPL, LDR, NIM, dan BOPO Terhadap Tingkat Profitabilitas (ROA) Pada Bank Muamalat. *Fakultas Ekonomi Dan Sosial Universitas Padjajaran*, 113.

Sundas, R., Qiang, F., & Sajid, K. U. (2014). Electronic Debit Card Used and Their Impact on Profitability of Pakistan Banking Sector. *European Journal Of Business and Management*, Vol 6, no 4.

Syahnaz, M. (2018). Kebijakan Green Economic Dan Green Building Pada Arsitektur Perbankan Indonesia. *Journal Of Finance And Management*, Vol 3 (Issue 8), 65-80.

Wardana, Wisnu Kadek, & Sri Harta Mimba. (2014). Tingkat Perputaran Kas, Efektivitas Pengelolaan Hutang Dan Tingkat Kredit Yang Disalurkan Pada Profitabilitas BPR Di Kabupaten Buleleng. *E-Jurnal Akuntansi Universitas Udayana*, 390 - 399.

Yapto, M. (2017). Analisis Green Economic Pada Era Industri 4.0. *Jurnal Ilmu Ekonomi Dan Perbankan*, 35-60.

Yogi. (2013). Pengaruh Bank Size Dan Kecukupan Modal Terhadap Profitabilitas Perbankan. *Jurnal Akuntansi Dan Manajemen*.

Yogianta CW, E. (2013). Analisis Pengaruh CAR, NIM, LDR, NPL Dan BOPO Terhadap Profitabilitas. *Jurnal Bisnis Strategi*, Vol 2, 94-111.

Yusriani. (2018). Pengaruh CAR,NPL, BOPO dan LDR terhadap Profitabilitas Pada Bank Umum Milik Negara Persero Yang Terdaftar Di BEI. *Jurnal Riset Edisi XXV*, Vol 004, No 002