International Conference on Economy, Management, and Business (IC-EMBus)
VOL. 1, 2023 p. Xx–xx
https://journal.trunojoyo.ac.id/icembus

How Does Green Credit Affect To Financial Performance Of Commercial Bank? Evidence From Bank In Indonesia

Badi'atul Ulwiyah[1], Muhammad Haidar Fikri K[2], Laelatul Maulida[3], Mahirun[4]
[1,2.3] Magister Managemen, Universitas Pekalongan
[4]Universitas Pekalongan

INFO ARTIKEL

Keywords:

Green Credit, Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), Non Performing Loan (NPL), Return on Assets (ROA), Sustainable Finance.

Abstract

As a key component of the environmentally friendly financial system, the Indonesian government enthusiastically encourages commercial banks to emit environmentally friendly credit. This research is used to find out how green credit influences the financial performance of commercial banks. The evidence from banks in Indonesia using variables such as (Green Credit, CAR, NPL, LDR, NIM), as internal bank factors on Return on Assets (ROA) in Bank Indonesia. The current problem is whether this financing will also benefit banks if it is seen from financial performance reports or even vice versa. The population which is used is state-owned enterprises (BUMN) and the private banks which the financial reports and the sustainibility reports have been published to Bank Indonesia and the Financial Services Authority (OJK) in 2018-2022. For the sampling using the screening method, while the data used was secondary data obtained from the website each bank, OJK, and Bank Indonesia. The analytical method used in this research is panel data regression analysis. The research results show that the green credit and Loan to Deposit Ratio (LDR) variables do not have a significant effect on Return On Assets (ROA). Capital Adequacy Ratio (CAR), Non Performing Loans (NPL) have a significant negative effect on Return on Assets (ROA), Net Interest Margin (NIM) have a significant positive effect on Return on Assets (ROA). Even though green credit has no effect on Return on Assets (ROA), but the bank needs to pay attention to the criteria of companies that will apply for credit. If the bank is not selective, it will have an impact on the bank's bad credit, which will affect the bank's ability to manage profits and financial performanc

✉ Corresponden Author
(*) Author
Email:
badiatul.ulwiyah@gmail.com[1].

E-ISSN: 3026-0965

Introduction

The phenomenon of climate change and global warming conditions are environmental issues that have become the center of world attention today. As a result of inefficient economic activities, this poses a risk to global conditions such as climate change and environmental conditions that are getting worse. In dealing with these environmental problems, an international meeting was formed in Paris attended by 197 countries in 2015. This meeting was stated in the Nationally Determined Contribution (NDC). The result of the NDC is that each country must reduce greenhouse gas emissions or what is usually called Greenhouse Gas (GHG) by 29% by 2030 and with international assistance by 41%. Responding to the results of the meeting and seeing the impact of climate change, the Indonesian government has formulated the steps that will be taken. One of them is that the Financial Services Authority (OJK) issued climate improvement regulations by supporting sustainable finance and a green taxonomy. This sustainable finance is environmental, governance (ESG) and social oriented. Sustainable finance or what is commonly known as Sustainable Finance is something that must be implemented and is intended for all institutions, issuers and public companies. The sustainable finance regulations are listed in (POJK) No.51/POJK.03/2017. Apart from that, the regulation made is POJK No.60/POJK.04/2017 which contains the development of securities used for environmentally friendly financing activities. This was issued by the OJK with the aim of building awareness, especially in the financial services industry, in implementing Sustainable Financing. OJK provisions also aim to guide financial services and other industries in determining products, activities or services that fulfil environmentally friendly criteria.

There are several criteria outlined in regulation POJK) No.51/POJK.03/2017. One of them is for commercial banks that have a minimum capital of Rp. 5 trillion is required to implement sustainable finance starting January 1, 2019. The situation is different if a commercial bank with capital below Rp. 5 trillion is required to implement starting January 1, 2020 (Siber et al., 2023). By requiring Sustainable Financing reporting, banking financial services activities implement Green Banking. Green banking is a form of activity with the aim of preserving the environment and natural resources in order to avoid the climate phenomenon that the world is so afraid of (X. Zhang et al., 2022). One form of green banking implemented by banking financial services is issuing or distributing credit products that focus on the sustainable sector to reduce GHG emissions. This credit financing is called Green Credit. Green Credit has actually been implemented for a long time in various large countries such as China, Japan, Pakistan, Malaysia (Yuliana, 2023). In fact, China's industrial bank became a pioneer bank in implementing the Equator Principles, making it a world standard for addressing environmental and social issues. This situation makes banks have a very important role because the distribution of funds can influence the sector to obtain financing.

The main focus of the green credit distribution is credit distribution aimed at companies or communities that will carry out environmentally friendly development or other activities related to pollution control and prevention. With the issuance of Green Credit financing in Indonesian banking, this is still a polemic regarding whether business actors are committed to reducing GHG emissions and whether this financing will also benefit banks if seen from financial performance reports. Because basically banks also have to see whether environmentally friendly credit (green credit) will generate profits so that green credit will become an important business source. Apart from that, banks need to get definite answers regarding the

explicit benefits so that they can motivate banks to aim for sustainability in disbursing loans (Chen et al., 2018).

There is Gab research among previous researchers, namely that green financing has a negative effect on financial performance, one of which is credit risk (Umar et al., 2021). Environmentally friendly credit distribution practices actually have an impact on hampering bank financial performance (Mathuva & Kiweu, 2016; Scholtens & Dam, 2007). From several stuSIBERSIdies, it can be concluded that green credit only increases operational costs which resulting in a decrease in operations so that the existence of green credit will not increase profitability. Apart from that, according to research conducted in Indonesia, green credit does not have a significant effect on bank performance (Andaiyani et al., 2023). On the other hand, Green Credit can actually improve bank financial performance (Lian et al., 2022; Weber, 2017). Green credit policies can affect corporate cash (yuan dan gao, 2022), and can influence corporate social responsibility (CSR) on bank performance (Luo et al., 2021). Green credit will also reduce bank credit risk and improve the quality of its assets (Cui et al., 2018; Guan et al., 2017).

Looking at the results of several studies which suggest that green credit has a positive effect on bank financial performance. This shows that environmentally friendly credit (green credit) is able to improve and help improve bank financial performance. This can be seen from the bank's net interest income from green credit distribution. Therefore, this is an important thing to study, especially in Indonesian banking. Why is that, because Indonesia has justha implemented a green financing policy and not many banks have implemented this policy. So it is hoped that this research can become a benchmark for banks, both large and developing banks, to be able to implement or take steps in dealing with new policies related to sustainable finance. Therefore, development with an environmentally friendly concept must be considered and the economic benefits obtained from environmentally friendly credit must be studied. The financial performance in this research is based on the bank's rate of return on assets (ROA) and is influenced by other supporting variables such as Net Interst Margin (NIM), Capital Adequacy Ratio (CAR), Loan To Deposit (LDR), (NPL). Of the large number of banks in Indonesia, researchers focused on conventional banks, both state-owned and private. This is because most of the banks that have implemented green credit financing are conventional banks.

Theory dan Perkembangan Hipotesis

Green Credit or environmentally friendly credit must be distributed because banks must fulfil social responsibilities, but banks also run while making profits. If the bank gets better, it will strengthen the ties of cooperation between various parties and of course benefit investors. So in this case it refers to signalling theory and several other theories such as competitive strategy theory, environmental risk management and stakeholder theory. However, if the bank fulfils its obligations under state regulations or policies then this process can refer to legitimacy theory. This legitimacy theory encourages banks to strengthen the benefits they will obtain and improve the company's reputation (Wright & Rwabizambuga, 2006).

Based on legitimacy theory, a company or organization must consider various sources such as the environment so that the organization can survive and survive. In this way, organizations need to adjust policies and performance, where this aims to gain recognition of the legitimacy of operating within environmental ties and social norms (de Villiers & van Staden, 2006). Basically, companies that consider environmental and social issues in their business practices will influence company performance, this is explained in IST (Wood & Jones, 1995). Where IST is the development of relationships between stakeholders with mutual trust and high

levels of information sharing, it will also produce high financial performance if the company has achieved competitive advantages such as sustainable communal relationships with stakeholders. Companies that fulfill social responsibilities will result in banks getting good financial performance (Nguyen et al., 2022). The relationship between green credit and stakeholder theory is that environmentally friendly loans are measured as an ethical business strategy between the borrowing company, government institutions and the community, so that by including climate change factors in the business model it will produce a lot of economic value. In this case the bank considers various stakeholders so as to improve its reputation and good image in the eyes of stakeholders. This also relies on environmental risk management theory. If the country wants to progress in terms of climate improvement, the country must test the strategies that will be implemented.

Furthermore, competitive theory explains that environmentally friendly credit will help banks to take advantage of the benefits presented by green economic growth, expand new shares to gain profit growth and gain competitive advantage (Hart, 1995). Especially in the banking world, formulating a competitive strategy is something that must be done. Seeing these obligations, banks or companies will gain a competitive advantage where a bank's market competitiveness becomes increasingly stringent (Chih et al., 2010). One of the factors banks need to achieve a competitive advantage is to strengthen the bank's foundation and maintain good communication with customers, making customers loyal. Therefore, the form of competitive strategy is to continue to innovate and release products in accordance with policy developments made by the country. So with the existence of Green credit it will increase the bank's opportunities to expand its assets. The name of this strategy is Porter's Competitive Positioning theory. This theory was developed by Porter 1980. This theory states that competitive advantage can only be achieved through continuous innovation. This research also focuses on signal theory where companies can show their potential by improving their good image and reputation. Banks comply with environmental regulations so that this implementation provides a positive signal to all society (Yao et al., 2021).

Green Credit on financial performance

The definition of green credit according to POJK No.51/POJK.05/2017 is a financing or credit product distributed by banks to environmentally friendly business activities (KUBL). The calculation of green credit is seen from the percentage of environmentally friendly credit to total credit (et al., 2022; Siber et al., 2023). The existence of green financing or credit also supports efforts to reduce a low-carbon environment and is expected to help banks improve financial performance. In addition, green credit is issued by banks with the aim is to help various companies who want to carry out environmentally friendly development. With the implementation of new policies regarding sustainability financial reports, the proportion of green credit will have a significant effect on the ratios of bank financial performance reports, one of which is the effect on the rate of return on assets (ROA). This is supported by research (Cui et al., 2018; Guan et al., 2017; Lian et al., 2022; Song et al., 2019). In fact, previous research has shown that there is a positive relationship between green credit and net interest margin so that it can be concluded that green credit policies can affect profitability.

As a form of understanding, green credit not only has a positive effect on the environment but also reduces credit risk and even has a positive effect on bank financial performance. So that the distribution of green credit is more than the total loan portfolio, it will reduce the credit risk ratio (NPL). If the portion of environmentally friendly loans increases, it will help reduce credit risk and increase financial system

stability. Case studies of large Chinese banks show that profitable large-scale banks actually distribute a lot of environmentally friendly loans and this does not affect the risks that can hinder the bank's financial performance (Yin et al., 2021). However, green credit will have different effects on city and regional commercial banks where distribution actually increases credit risk. This is due to a lack of access to information and expertise in evaluating disbursed credit (Chang, n.d.; Zhou et al., 2022). If credit risk cannot be handled properly, the distribution of green credit will actually reduce the value of the bank's financial performance. Thus, the researcher formulated the first hypothesis, namely:

H1: Green Credit has a significant positive effect on ROA.

Financial Performance

Financial performance as the dependent variable in this research is measured by Return on Assets (ROA). Previous research also used this variable as a benchmark (Djalilov & Piesse, 2016; Y. Zhang, 2018). ROA is calculated by comparing net profit to total assets. Financial performance is not far from the term profitability. Profitability is a profit generated by a company in a certain period (Alifah, 2014). Profitability shows the company's growth, the higher the value, the higher the bank's value and ultimately this will affect the price of the company's shares and bonds. If the stock price is relatively good and the profit level generated is large then this will be in line with signal theory. Where the signal theory gives a signal to shareholders that an increase in company profits shows that the company has the ability to grow higher (Sulistyanto, 2015). Meanwhile, according to signal theory is a theory used to convey information which is a signal, so that management can determine how the company can generate high profits (Gaver1993). Therefore, by issuing green credit, this can provide a positive signal to investors if green credit also has a positive effect on profitability.

As for profitability can be measured using various ratios, one of which is Return On Assets (ROA). ROA is used to find out how conventional banks improve management performance using asset or asset selection so that turnover is better and generates profits (Prihadi, 2019). Meanwhile, according to (Kasmir 2008) ROA is a ratio used to measure how high management's ability is to obtain profitability efficiently. The calculation of ROA in financial reports is by measuring the comparison between the company's net profit and assets and shareholder equity (Darmawan, 2020).

Variable control

Adequacy Ratio (CAR), Non Performing Loan (NPL), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM). CAR/Capital Adequacy Ratio is capital that shows the bank's ability to provide funds for business development purposes and accommodate the risk of loss of funds caused by bank operational activities. The CAR/Capital Adequacy Ratio shows the extent to which the decline in bank assets can still be covered by the bank's available equity. The higher the CAR/Capital Adequacy Ratio, the better the condition of a bank (Rohimah, 2021). CAR is a bank performance ratio to measure the adequacy of capital owned by the bank to support assets that contain or produce risk, for example credit provided (dewi, 2017). The CAR calculation is bank capital compared to ATMR.

According to the Buffer Theory of Capital Adequacy, banks may choose to withhold excess capital to reduce the likelihood of falling below statutory capital requirements, especially if their capital adequacy ratios are highly volatile. In the

event that the value of bank assets is lower than its total liabilities, the bank becomes bankrupt and equity holders tend to choose to default on bank obligations(Maulana et al., 2021). CAR is a ratio that shows the bank's ability to manage its assets to develop the company and is able to bear all the burdens of the bank's operational activities. Banks that have high capital tend to show high profitability. This opinion is supported by (putri warsa & mustanda, 2016).

CAR is a capital ratio that shows the bank's ability to provide funds for business development purposes and accommodate possible risks of loss that may occur in the bank's operational activities (Fauziah, 2021). Bank capital is funds invested by the owner in the context of establishing a business entity intended to finance bank business activities, this capital is measured using CAR which is the capital adequacy ratio, capital provisions which are the ratio of capital to risk-weighted assets, with a minimum requirement of 8%. The CAR measurement unit is in the form of a percentage (%) shown in financial reports in the Banking Sector on the Indonesia Stock Exchange. The calculation of a bank's minimum capital adequacy is based on Risk Weighted Assets (RWA). In accordance with the CAR ratio assessment based on Bank Indonesia Regulation No. 15/12/PBI/2013 for a minimum CAR value of 8%. If the CAR is too high, it can be said that the bank will not be able to utilize capital optimally so that the bank's profitability will weaken.

Non-Performing Loans (NPL) is considered as a ratio to see the extent of total non-performing loans in a bank (Athanasoglou et al,. 2005). As for the comparison between non-performing loans and total credit. NPL is also interpreted as a ratio used to measure the ability bank in covering the risk of failure to repay credit by debtors (Rohimah, 2021). This ratio shows that the ability of bank management in managing credit problems given by the bank. So the higher this ratio, the worse the quality of bank credit will be, causing the number of problem loans tobe greater, so the possibility of a bank being in a problematic condition is greater. This calculation can be formulated as follows (Kembuan et al., 2018:194): total non-performing loans to total loans disbursed. Non Performing Loans (NPL)) is the ratio of bad credit to total loans and advances. It is one of the main indicators of credit risk and a measure of credit quality and it shows the proportion of total loans and advances that are in default or more than 90 days past due (fauziah, 2021). According to Suhardjono (2003 in a bank's balance sheet, most of the assets are in the form of credit, and most of the bank's income is indirectly obtained from credit interest. On average, credit distributed to the public reaches 60% - 70% of total bank assets. This shows that providing credit is the backbone of a bank's survival.

Financial companies have long used the non-performing loan (NPL) ratio as a performance indicator. The level of outstanding loans as a proportion of overall loans deemed to be 'non-performing' once they reach three months from maturity (Epure & Lafuente, 2015) is seen as an indicator of the loan performance of a financial institution's loan portfolio. The NPL value cannot be more than 5%, this is important to determine the minimum reserve for the write-off of productive assets provided by the bank to cover potential losses.

The LDR ratio in banking always exists, especially when banks obtain capital or funds from third parties. This ratio aims to measure the percentage of the amountof credit given to the amount of third party funds and own capital used (Kasmir, 2010). As a form of effort to maintain liquidity levels, Bank Indonesia has implemented a standard LDR value of between 78-92 percent, this is summarized inBank Indonesia regulation no. 15/15/PBI/2013. From the percentage assessment criteria, the bank is considered very good, healthy and able to produce various benefits from its efforts to distribute credit. Based on a Bank Indonesia circular, the LDR formula is the ratio of credit to third party capital funds. LDR states the extent of the bank's ability to repay funds withdrawn by depositors by relying on the credit

that has been provided as a source of liquidity. In short, LDR is how credit distribution can balance the bank's obligations to fulfill third parties who want to withdraw funds that have been used by the bank for credit activities. From various statements and LDR criteria, it can be concluded that the higher the LDR ratio, the lower the liquidity capacity (Dikson Silitonga, 2022). If the NPL ratio is high, it will have a negative impact on bank profitability because bank assets show a low value (Song et al., 2019).

LDR is closely related to liquidity, therefore many previous studies have formulated the results that the LDR ratio has a positive effect on ROA (Adhista Setyarini, 2020, Setya et al., 2021). However, LDR also has an insignificant negative effect on ROA (Wildan and Indah, 2018). From various existing gap research, it can be concluded that if a bank has a high LDR ratio, the bank is considered to have low liquidity capabilities. However, if the ratio value is small, the bank is considered less effective in distributing credit so that the bank will earn little profit (Susarmawanti, 2017).

Net Interest Margin (NIM) is used to measure the bank's ability to manage productive assets to generate net interest income. The NIM must be above 2% to be said to be good, the higher the NIM value shows the increasingly effective placement of productive assets in the form of credit. Based on Bank Indonesia Circular Letter No. 13/24/DPNP dated 25 October 2011, the amount of Net Interest Margin (NIM) can be seen through interest income divided by productive assets multiplied by one hundred (Wenno et al., n.d.).

From several explanations, the researcher formulated a hypothesis as following:

H1: Green Credit has a significant positive effect on ROA.

H2: CAR has a significant positive effect on ROA

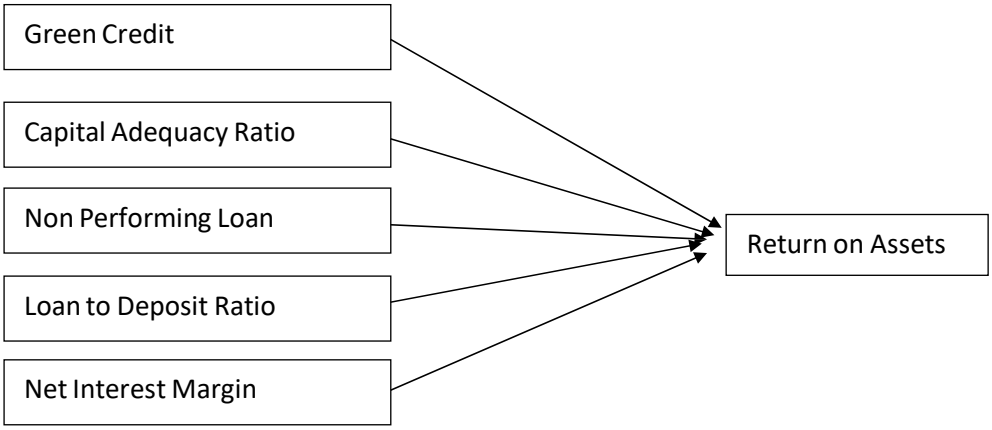
H3: NPL has a significant positive effect on ROA

H4: LDR has a significant positive effect on ROA

H5: NIM has a significant positive effect on ROA

This research model can be described as follows:

Figure 1. Empirical research mode



RESEARCH METHODS

The research method used in this research is a quantitative method. Quantitative research is a research method using numerical data, based on concrete data and analysis using statistical data which aims to test the relationship between variables to produce a conclusion (Creswell, 2014).The population used in this research is conventional banks that have reported their sustainability since 2018. This research uses purposive sampling with a screening method, selecting samples according to the conditions or criteria chosen and eliminating samples that are not appropriate. Samples were selected based on the following criteria:

1. The samples taken in this research are conventional banking companiesthat have reported their sustainability since 2018.
2. The published sustainability report has consistent information for the 2018-2022 period.
3. The published annual report is available in full for the 2018-2022 period.
4. The published annual report has consistent information (GREEN CREDIT,CAR, NPL, LDR, NIM and ROA) for the 2018-2022 period.

Based on the sample criteria that have been determined, the sample used in this research is 9 conventional banks in the 2018-2022 period. Secondary data is the type of data used in this research. The data used are company annual reports and sustainability reports from 2018 to 2022. Data was obtained through the Financial Services Authority or www.ojk.go.id or related company pages.

The analytical method used in this research is panel data regression analysis using data processing tools using Eviews. Panel data is a combination of time series and cross-section. According to (Basuki & prawoto, 2017). the use of panel data in observations has several advantages. First, sections are more flexible because they provide more data, resulting in a greater degree of freedom. Second, combining time series and cross-section data can overcome problems that arise when there are omitted variable problems. The advantages of panel data regression are; First, panel data can explain individual heterogeneity by explicitly considering individual-specific variables. Second, the ability to control for this heterogeneity makes panel data useful for testing and building more complex behavioral models. Third, the panel data method is useful for dynamic adjustment studies, because it is based on repeated cross-sectional observations (time series). Fourth, a larger number of observations produces more informative and diverse data, less collinearity between data (multico) and higher degrees of freedom (df), resulting in more efficient estimation results. Finally, panel data can minimize bias that can be caused by aggregating individual data (Basuki & Prawoto, 2017). The independent variables in this research are GREEN CREDIT, CAR, NPL, LDR, NIM.

This research uses Eviews12 which requires paying attention to several estimates of the regression model used. There are three approaches that can be used in the panel data regression model estimation method, namely: Common Effect Model, Fixed Effect Model, and Random Effect Model. After that, test the selection of the best model. There are three estimation techniques in panel data, namely common effects, fixed effects, and random effects. To find out which model to use, you need to run a model selection test. The selection of the model to be used in a study must be strictly based on statistical considerations. According to Widarjono (2007) in Basuki & Prawoto (2017) there are three methods used to select panel data regression models: Chow Test, Hausman Test, and Lagrange Multiplier Test. There are 3 hypothesis tests used by researchers, namely: Determination Coefficient Analysis, Simultaneous Significance Test (F Test), and Partial Test (T Test).

RESULT

Before carrying out a hypothesis test, the first step is to see which test is good to use.

Table 1. Test Results

Effects Test		Statistic	d.f	Prob	Result
Effects Test	cross-section F	3.785681	(8,31)	0.0034	Prob value is 0.0002 <0.05, so the FEM model was selected.
	cross-section Chi-square	30.669988	8	0.0002	
Test Summary					
	cross-section random	7.905806	5	0.1615	Prob value is 0.1615>0.05, so the REM model was selected.
Uji LM		cross-section	time	both	
	breusch-pagan	0.1143	0.02563	0.0518	Prob value is 0.1143>0.05, so the CEM model was selected.

Source: data is processed eviews12

Based on Table 1, so it can be seen the CEM model was selected. Then based on these three tests, the CEM test is the best to use for the next stage.

The Result of Classic Assumption Test

The classical assumption test is a regression requirement for research. The classical assumption tests that researchers use are the multicollinearity test and the heteroscedasticity test. The selected model is CEM, so the classical assumption test must be carried out but using multicollinearity and heteroscedasticity tests (Yuliadi, 2014; Napitulu et al, 2021).

Table 4. multicolliniearity Test Results

GC	CAR	LDR	NIM	LDR
1	0.067204	-0.154048	0.405414	0.309232
0.067204	1	-0.2544	0.177109	-0.2454
-0.154048	-0.2544	1	-0.327418	-0.181776
0.309232	-0.2454	-0.181776	-0.137692	1

Source: data is processed eviews12

Table 5. Heteroscedasticity test result

variabel	coofficient	std. Error	t-statistic	Prob
C	0.009100	0.006152	1.479273	0.147100
GC	0.000231	0.003644	0.063381	0.949800
CAR	-0.009827	0.010650	-0.922761	0.361800
LDR	-0.001988	0.003262	-0.609463	0.545800
NIM	-0.043146	0.056370	-0.765406	0.448600
NPL	0.002623	0.061356	0.042748	0.966100

Source: data is processed eviews12

Based on table.4 The correlation coefficient for Green Credit and CAR is 0.067204<0.85, Green Credit and LDR is 0.154048<0.85, Green Credit and NIM is 0.405414<0.85, Green Credit and NPL is 0.309232<0.85. then it can be concluded that it is free from multicollinearity or passes the multicollinearity test (Napitupulu et al, 2021). Next, based on table.4 it can be seen that the probability values of all variables >0.05, so that there are no symptoms of heteroscedasticity or passing the heteroscedasticity test.

Hypothesis Test Results

Table 6. Hypotesis test result

variable	coefficient	std.erro	t-statistic	Prob
GC	-0.003205	0.008480	-0.377957	0.707500
CAR	-0.051990	0.024785	-2.097696	0.042500
LDR	-0.010080	0.007591	-1.327772	0.192000
NIM	0.670654	0.131186	5.112222	0.000000
NPL	-0.389608	0.142791	-2.728523	0.009500
C	0.021239	0.014316	1.483548	0.146000

Source: data is processed eviews12

Based on Table. 6 shows the following:

a. The results of the t test on the Green Credit variable (X1) obtained a calculated t value of 0.377957 < t table 2.016692 and a sig value of 0.7075 > 0.05, so Ha is rejected and Ho is accepted, meaning that the Green Credit variable has no effect on ROA.

b. The results of the t test on the CAR variable (X2) obtained a calculated t value of2.097696 > t table 2.016692 and a sig value of 0.0425 < 0.05, so Ha was accepted and Ho was rejected, meaning that the CAR variable had a significant negative effect on ROA.

c. The results of the t test on the NPL variable (X3) obtained a calculated t value of 2.728523 > t table 2.016692 and a sig value of 0.0095 < 0.05, so Ha was accepted and Ho was rejected, meaning that the NPL variable had a significant negative effecton ROA.

d. The results of the t test on the LDR variable (X4) obtained a calculated t value of1.327772 < t table 2.016692 and a sig value of 0.1920 > 0.05, so Ha is rejected andHo is accepted, meaning that the LDR variable has no effect on ROA.

e. The results of the t test on the NIM variable (X5) showed that the calculated t valuewas 5.112222 > t table 2.016692 and the sig value was 0.0000 < 0.05, so Ha was accepted and Ho was rejected, meaning that the NIM variable had a significant positive effect on ROA.

Table 7. Simultaneous & Coefficient of Determination test result

R-aquared	0.589848
Adjusted R-squared	0.537265
S.E ofregression	0.007488
sum squared resid	0.002186
log likelihood	159.620900
F-statistic	11.217360
Prob (F-statistic)	0.000001

Source: data is processed eviews12

Based on Table 7, it can be seen that the calculated F value is 11.21736 > F table 1.685735 and the sig value is 0.000001 < 0.05, so Ho is rejected and Ha is accepted. This means that the variables Green Credit, CAR, NPL, LDR and NIM together have an effect on ROA. Looking at Table 7, it can be seen that the adjusted R squared value is 0.589848 or 58.9848%, indicating that the Green Credit, CAR, NPL, LDR and NIM variables are able to explain the ROA variable of 58.9848%, while the rest is explained by other variables. not included in this research model.

DISCUSSION

Results of testing the effect of Green Credit on ROA

The test results found that green Green Credit had an insignificant negative relationship with ROA. In other words, banks issue financing or Green Credit but it will not affect ROA. This means that the level of credit distribution will not affect Return on Assets (ROA). These findings are in line with the results which say that green financing has a negative effect on financial performance (Hatmadi & Trihadmini, 2022; Umar et al., 2021). Environmentally friendly credit distribution practices have an insignificant impact on ROA and hamper bank financial performance (Mathuva & Kiweu, 2016; Scholtens & Dam, 2007), this is not in line

with research (Cui et al., 2018; Guan et al., 2017). Which states that Green Credit has a significant effect on ROA. In this case, the researchers concluded that green credit may not have a direct effect on ROA. If green credit is calculated from the percentage of green credit compared to total credit, then green credit may first affect credit risk, then if there is a credit ratio value that is not good it will affect ROA (Sriyono and Nabellah, 2022). This finding shows that if the bank expand total green credit, then bank profits will likely decline. In this way, banks only comply with regulations without paying attention to profitability.

Results of testing the effect of CAR on ROA

Our findings show that the CAR variable has a significant negative effect on ROA. This is in line with research (Maulana et al., 2021) that CAR has a significant negative effect on ROA, but is not in line with research (Fauziah, 2021). Whose results The research shows that CAR has a significant positive effect on ROA. In bank capital theory, Douglas states that bank capital functions as bank collateral to minimize the risk of bank assets. The results of this research show that the greater the capital, the probability of bank profit will increase and conversely, if the capital is small, the bank's profit level will also be small.

Results of testing the effect of NPL on ROA

Based on the test results in table 6, it can be seen that NPL has a significant negative effect on ROA. This is in line with research (Rohimah, 2021), (Nugroho, Mangantar, & Tulung, 2019), (Rembet et al., n.d.). That NPL has a significant negative effect on ROA, but it is not in line with research (Fauziah, 2021; Indrawan Sanny et al., 2020) whose research results show that NPL has a significant positive effect on ROA.

Results of testing the influence of LDR on ROA

The results of this study found that LDR did not have a significant effect on ROA. In this way, this research is in line with (Wildan and Indah, 2018) where LDR does not have a significant effect on ROA. However, this is not in line with research (Adhista Setyarini, 2020, Setya et al., 2021). This research tested conventional banks in Indonesia, but the sample selection was based on certain criteria so that only a small sample was obtained. Therefore, LDR here cannot describe all banks in Indonesia where LDR has no effect on ROA.

Results of testing the influence of NIM on ROA

The NIM variable has a significant positive effect on ROA. This is in line with research (Indrawan Sanny et al., 2020; Wenno et al., n.d.) (Wenno & Laili, 2019) and (Dewi & Sanny, 2020) that NIM has a significant positive effect on ROA. However, this is not in line with research (Rembet et al., n.d.) which states that NIM has no significant effect on ROA.

CONCLUSION

Based on new phenomena and policies issued by the OJK regarding climateimprovement regulations by supporting sustainable finance, many banks are being asked to contribute, one of which is by distributing green credit. This research was conducted on 9 conventional banks that have implemented sustainable reporting from 2018-2022. Conclusion ROA is significantly influenced by the CAR, NPL and NIM variables. However, the results show that banks distribute green credit but thishas no effect on ROA. Thus, the bank is only carrying out its obligation to participatein advancing the NDC plan where the country must reduce greenhouse gas emissions or what is usually called Greenhouse Gas (GHG). In this way, companies that take credit from banks will receive environmentally friendly development programs. Even though this green credit has no effect on ROA, banks need to pay attention to the criteria of companies that will apply for credit. If the bank is not selective, it will affect the bank's bad credit, which will affect the bank's ability to manage profits. Because NPL is closely related to ROA, many studies argue that NPL has a significant effect on ROA.

Apart from that, it is hoped that this green credit will also receive support from the government and OJK, such as banks receiving high incentives so that it can increase bank income and then increase the ROA value of banks in Indonesia (Nugraheni, Muharram, 2023). This research is limited by limited sustainable report data, where the bank reports that were available at the OJK in the year they started were varied, causing researchers to discard many samples of banks that did not meet the criteria. Apart from that, there is no definite report format for a sustainable report, so this is an obstacle for researchers in collecting green credit data. It is hoped that future research will also examine green credit in terms of credit risk by using global bank data and adding new variables as a form of update. Apart from that, future studies need to be carried out regarding the factors that underlie banks to continue to issue green credit, even though this research found that green credit has no effect on Return On Assets (ROA).

REFERENCE

17803-68679-2-PB (2). (n.d.).

Chang, X. (n.d.). *Research on the Influence of Green Credit on the Profitability of Chinese Commercial Banks*. https://doi.org/10.25236/iemb.2021.027

Chen, N., Huang, H. H., & Lin, C. H. (2018). Equator principles and bank liquidity. *International Review of Economics and Finance, 55,* 185–202. https://doi.org/10.1016/j.iref.2017.07.020

Creswell, J. W. (2014). *A Concise Introduction to Mixed Methods Research*. SAGE Publications. https://books.google.co.id/books?id=51UXBAAAQBAJ

Cui, Y., Geobey, S., Weber, O., & Lin, H. (2018). The impact of green lending on credit risk in China. *Sustainability (Switzerland)*, *10*(6). https://doi.org/10.3390/su10062008

de Villiers, C., & van Staden, C. J. (2006). Can less environmental disclosure have a legitimising effect? Evidence from Africa. *Accounting, Organizations and Society*, *31*(8), 763–781. https://doi.org/10.1016/j.aos.2006.03.001

Djalilov, K., & Piesse, J. (2016). Determinants of bank profitability in transition countries: What matters most? *Research in International Business and Finance, 38,* 69–82. https://doi.org/10.1016/j.ribaf.2016.03.01

Fauziah, H. (2021). Pengaruh NPL, CAR, dan BI Rate terhadap ROA pada Bank Badan Usaha Milik Negara The effect of NPL, CAR, and BI Rate on ROA in at state-owned enterprise bank. *Indonesian Journal of Economics and Management*, *1*(2), 352–365. www.ojk.go.id

gaver1993. (n.d.).

Guan, R., Zheng, H., Hu, J., Fang, Q., & Ren, R. (2017). The higher carbon intensityof loans, the higher non-performing loan ratio: The case of China. *Sustainability (Switzerland)*, *9*(4). https://doi.org/10.3390/su9040667

Hart, S. L. (1995). A NATURAL-RESOURCE-BASED VIEW OF THE FIRM. In *Managsmenl Review* (Vol. 20, Issue 4).

Hatmadi, F. A., & Trihadmini, N. (2022). PENGARUH GREEN FINANCING DAN FAKTOR SPESIFIK BANK TERHADAP RISIKO PERBANKAN DI INDONESIA. *J-REMA*, *1*(3), 13.

Indrawan Sanny, B., Kaniawati Dewi, R., & oleh Politeknik Dharma Patria Kebumen, D. (2020). *Jurnal E-Bis (Ekonomi-Bisnis) Pengaruh Net Interest Margin (NIM) Terhadap Return on Asset (ROA) Pada PT Bank Pembangunan Daerah Jawa Barat Dan Banten Tbk Periode 2013-2017*. *4*(1), 78–87. https://doi.org/10.37339/jurnal

Lian, Y., Gao, J., & Ye, T. (2022). How does green credit affect the financial performance of commercial banks? —— Evidence from China. *Journal of Cleaner Production*, *344*, 1 31069. https://doi.org/https://doi.org/10.1016/j.jclepro.2022.131069

Luo, S., Yu, S., & Zhou, G. (2021). Does green credit improve the core competenceof commercial banks? Based on quasi-natural experiments in China. *Energy Economics*, *100*. https://doi.org/10.1016/j.eneco.2021.105335

Manajemen Laba (Teori & Model Empiris). (n.d.). Grasindo. https://books.google.co.id/books?id=j4lzrAw1TGcC

Mathuva, D. M., & Kiweu, J. M. (2016). Cooperative social and environmental disclosure and financial performance of savings and credit cooperatives in Kenya. *Advances in Accounting*, *35*, 197–206. https://doi.org/10.1016/j.adiac.2016.09.002

Maulana, P., Dwita, S., Helmayunita, N., Akuntansi, J., Ekonomi, F., & Padang, U.

N. (2021). Pengaruh CAR, NPL, LDR dan BOPO terhadap Return On Assets (ROA) pada Bank Terdaftar di Bursa Efek Indonesia Tahun 2017-2019. In *Jurnal Eksplorasi Akuntansi* (Vol. 3, Issue 2). Online. http://jea.ppj.unp.ac.id/index.php/jea/index

Nguyen, C. T., Nguyen, L. T., & Nguyen, N. Q. (2022). Corporate social responsibility and financial performance: The case in Vietnam. *Cogent Economics and Finance*, *10*(1). https://doi.org/10.1080/23322039.2022.2075600

Prihadi, T. (2019). *Analisis Laporan Keuangan*. Gramedia Pustaka Utama. https://books.google.co.id/books?id=SC7GDwAAQBAJ

Rembet, W. E. C., Rembet, W. E. C., Baramuli, D. N., Ekonomi, F., Bisnis, D., Manajemen, J., Sam, U., & Manado, R. (n.d.). *LDR TERHADAP RETURN ONASSET (ROA) (STUDI PADA BANK UMUM SWASTA NASIONAL DEVISA YANG TERDAFTAR DI BEI)*.

Scholtens, B., & Dam, L. (2007). Cultural values and international differences in business ethics. *Journal of Business Ethics*, *75*(3), 273–284. https://doi.org/10.1007/s10551-006-9252-9

Siber, P., Internasional, C., Nugrahaeni, R., & Muharam, H. (2023). How to cite: Ressita Nugrahaeni, Harjum Muharam (2023) The Effect Of Green Credit andOther Determinants Of Credit Risk Commercial Bank THE EFFECT OF GREEN CREDIT AND OTHER DETERMINANTS OF CREDIT RI

Umar, M., Ji, X., Mirza, N., & Rahat, B. (2021). The impact of resource curse on banking efficiency: Evidence from twelve oil producing countries. *Resources Policy*, *72*. https://doi.org/10.1016/j.resourpol.2021.102080

Weber, O. (2017). Corporate sustainability and financial performance of Chinese banks. *Sustainability Accounting, Management and Policy Journal, 8*(3), 358– 385. https://doi.org/10.1108/SAMPJ-09-2016-0066

Wenno, M., Laili, A. S., Universitas, W., 2anna, P., & Laili, S. (n.d.). *Analisis Pengaruh CAR, NPL, NIM dan LDR terhadap Return on Asset (Studi Pada Bank Umum Konvensional yang Terdaftar di BEI)*.

Wood, D. J., & Jones, R. E. (1995). STAKEHOLDER

MISMATCHING: ATHEORETICAL PROBLEM IN EMPIRICAL RESEARCH ON CORPORATE SOCIAL PERFORMANCE. In *The International Journal of OrganizationalAnalysis* (Vol. 3, Issue 3).

Wright, C., & Rwabizambuga, A. (2006). Institutional Pressures, Corporate Reputation, and Voluntary Codes of Conduct: An Examination of the Equator Principles. In *Business and Society Review* (Vol. 111).

Yao, S., Pan, Y., Sensoy, A., Uddin, G. S., & Cheng, F. (2021). Green credit policy and firm performance: What we learn from China. *Energy Economics*, *101*. https://doi.org/10.1016/j.eneco.2021.105415

Yin, W., Zhu, Z., Kirkulak-Uludag, B., & Zhu, Y. (2021). The determinants of green credit and its impact on the performance of Chinese banks. *Journal of Cleaner Production*, *286*. https://doi.org/10.1016/j.jclepro.2020.124991

Zhang, X., Wang, Z., Zhong, X., Yang, S., & Siddik, A. B. (2022). Do Green Banking Activities Improve the Banks' Environmental Performance? The Mediating Effect of Green Financing. *Sustainability (Switzerland)*, *14*(2). https://doi.org/10.3390/su14020989

Zhang, Y. (2018). *Green Credit Rises the Financial Performance of Commercial Bank-A Case Study on Industrial Bank*.

Zhou, X. Y., Caldecott, B., Hoepner, A. G. F., & Wang, Y. (2022). Bank green lendingand credit risk: an empirical analysis of China's Green Credit Policy. *Business Strategy and the Environment*, *31*(4), 1623–1640. https://doi.org/10.1002/bse.2973