THE EFFECT OF GREEN CREDIT AND OTHER DETERMINANTS OF CREDIT RISK COMMERCIAL BANK IN INDONESIA

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Abstract
In order to achieve the Notionally Determined Contribution (NDC) target through reducing greenhouse gas emissions, the Government of Indonesia is trying to develop sustainable finance. Commercial Banks as a financial service institution are required to implement sustainable finance, among others by reporting loans that meet the criteria for Environmentally Friendly Business Activities (KUBL). Credit risk is one of the main risks for banks. Research on the effect of lending that meets KUBL or green loan criteria on bank credit risk as reflected in NPLs has never been carried out. In this study, we analyze the effect of green loans, and the influence of other variables, namely bank performance variables (LDR, CAR, ROA, NIM) and bank size on credit risk of commercial banks in Indonesia. This study uses annual available data from 107 commercial banks in Indonesia for the period from 2019 to 2021. Based on the results of this study, the effect of green loans on NPL is not significant because the percentage of green loans is relatively low compared to the total bank credit portfolio in Indonesia. For this reason, various incentives are needed from both the Authority and the Government to encourage commercial banks to increase green loans.Meanwhilebank performance variables, namely LDR, CAR, NIM and bank size have a significant influence on the credit risk of commercial banks in Indonesia. Bank performance variables namely LDR, CAR have a positive effect on bank NPLs, the NIM ratio and bank size have a negative effect on bank NPLs.

INTRODUCTION

The phenomenon of climate change and global warming has caused the earth's temperature to increase. This condition causes various natural disasters such as floods, heat waves, dry seasons, and forest fires, as well as various other natural disasters. In order to overcome the problems of climate change and global warming, around 197 countries made an agreement known as the*Paris Agreement*through planning*Nationally

Determined Contribution(NDC). The goal is to reduce greenhouse gas (GHG) emissions by 29% from the projection*Greenhouse Gas Protocol*(GHG) with their own efforts and 49% with international assistance.

Data from the World Research Institute (WRI) shows that Indonesia is in 8th place as the country that contributes the most GHG emissions in 2018. Most of these GHG emissions come from the energy and agriculture sectors, respectively 71% and 12%. In order to reduce GHG emissions, the Government of Indonesia is making efforts to develop sustainable finance or sustainable finance. This is in accordance with the mandate in Article 28H, and Article 33 paragraphs 3 and 4 of the 1945 Constitution of the Republic of Indonesia which states that "The state is obliged to guarantee that every citizen has the right to obtain a proper environment, and the national economy is organized according to principles, among others sustainability and does not cause adverse impact on the environment".

The Indonesian government is supported by the Financial Services Authority (OJK) to develop sustainable finance. As an implementation, OJK issues a guideline that provides an overview of plans or strategies to be implemented in order to realize the Indonesian government's targets as stated in the NDC. As a first step, OJK issued a regulation requiring financial service institutions, issuers and public companies to apply sustainable finance principles in carrying out their business activities, namely OJK Regulation (POJK) No.51/POJK.03/2017. In addition, OJK also issued POJK 60/POJK.04/2017 which regulates the development of securities used to finance environmentally friendly activities. These provisions were issued by the OJK in order to build awareness of sustainable finance, especially in the financial services industry. The aim is to provide guidelines for the financial services sector and issuers to determine whether an activity, product or service meets green criteria or not. These guidelines can be used as a basis for ministries and agencies in providing incentives and disincentives.

Based on POJK No.51/POJK.03/2017, commercial banks with core capital of IDR 5 trillion or more are required to implement sustainable finance from 1 January 2019. Meanwhile, commercial banks with core capital below IDR 5 trillion are required to implement sustainable finance since 1 January 2020. In order to implement sustainable finance, commercial banks are required to prepare an action plan which is submitted to OJK at the end of the year known as the Sustainable Finance Action Plan (RAKB). RAKB includes things that will be carried out in order to produce financial products and or services that meet the principles of sustainable finance accompanied by a time limit for its implementation. In addition, commercial banks are required to prepare sustainable reports. The report is published to the public and also submitted to OJK.The percentage comparison between KUBL credit and total credit is defined as green credit.

This green credit distribution is carried out in the framework of Indonesia's commitment to reduce GHG emissions. The hope is that this green credit distribution can reduce the risk of bad credit in Indonesia. However, is Indonesia (business actors) committed to reducing GHG emissions? Data from OJK (2022) shows that green credit is experiencing fluctuating movements. Green credit was 18.65% in June 2019, then

rose to 19.89% in December 2021. The NPL ratio increased from 2.5% in June 2019 to 3.0% in December 2021. Based on this, it can be concluded that the trend of increasing percentage of green credit is in line with the increase in the NPL ratio, the tendency of increasing CAR is in line with the increase in the NPL ratio, and the tendency of decreasing LDR, ROA and NIM while the NPL ratio tends to increase.

Several empirical studies have been carried out regarding this*sustainable finance*and reducing GHG emissions.Bello et al. (2018)found that optimal use of electricity can reduce GHG emissions.An et al. (2021)stated that carbon pricing can help reduce GHG emissions. In addition, research is also conducted on the performance of green investment where green investment has a positive impact on companies (Umar et al., (2021b);Robinson et al., 2018;Anderloni & Signs, 2017;Tang & Zhang, 2020). According toTrinks et al. (2020), lower carbon emissions can increase resource efficiency which will support financial performance.Velte et al. (2020)states that carbon performance leads to lower information asymmetry thereby increasing firm value.Gallego-Álvarez et al. (2015)stressed that efforts to achieve low carbon targets can improve company performance.Chebotareva et al. (2020)states that a sustainable business will have a high rate of return thus lowering potential losses due to business failure.Omar et al. (2021a)states that green credit or financing has a negative correlation with credit risk. This means that the higher the percentage of green credit, the lower the credit risk.Guan et al. (2017)AndCui et al. (2018)stated that extending green credit would lower a bank's credit risk and improve its asset quality. Lian et al. (2022) stated that green credit can improve the financial performance of commercial banks through improving the rate of return on productive assets.

Meanwhile, research on green credit or low-carbon credit on the credit risk of financial institutions in the European zone was carried out by(Umar, Ji, Mirza, & Naqvi, 2021)with the conclusion that green credit or financing is negatively correlated with credit risk. The research was conducted on 134 financial institutions in 19 Eurozone countries in the period 2011 to 2020 on a quarterly basis. To measure credit risk, researchers use 2 (two) approaches, namely the Probability Default (PD) of assessing bank assets using the Morton model and the Credit Infection Ratio (CIR), which is a comparison of non-performing loans to total credit. Furthermore, two regression panels were obtained with the dependent variable PD and CIR. Each of these dependent variables is influenced by independent variables consisting of the percentage of low-carbon credit to total credit, interest difference, efficiency (ROA), liquidity (LDR), size or total assets, capital adequacy ratio (CAR), standard deviation of interest rates , GDP growth and money supply growth. From the results of data processing, the following conclusions are obtained:

a. The higher the percentage of carbon neutral credits, the lower the credit risk. This can happen because a business that focuses on carbon neutral will have low volatility in income and cash flow thereby increasing the capacity to pay credit installments.

b. The greater the difference in interest earned by a bank, the lower the credit risk. This is because banks that have a large interest difference make them more careful in extending credit so that the quality of credit is getting better.

c. Efficiency also has a negative correlation with credit risk. Banks that invest more in earning assets will have a lower probability of default or CIR.

d. *Size* and CAR has a negative correlation with the probability of default and CIR. This is because large banks and strong capital have an advantage in facing the risk of failure.

e. GDP growth and money supply are negatively correlated when associated with bank credit risk. GDP growth and a higher money supply indicate a higher ability to pay debtors so that credit risk is lower.

Other researchers namely Guan et al., (2017) conducted research on 16 commercial banks in China in the period 2007 to 2014 to determine the impact of low-carbon credit to commercial banks on credit risk. To describe green credit behavior, researchers use the Carbon Intensity of Loans (CIL) indicator. CIL is the average carbon dioxide emission resulting from production activities whose funding sources come from commercial bank loans. The lower the CIL, the lower the carbon dioxide emissions resulting from production activities so that the greener the bank credit. The conclusion from this research is that the higher the level of carbon emissions, the higher the level of credit risk.

In addition, researchers Cui et al., (2018) conducted research on the impact of green credit on bank credit risk in China. This study used data from 24 banks in China from 2009 to 2015. The results of this study are that the higher the distribution of green loans, the lower the credit risk or NPL. This study also measures the effect of bank performance variables, including ROA and bank size on NPL. As for the results of this study, ROA has a significant negative impact on NPL and bank size has a significant positive impact on NPL. Including research by Yong Hui Lian (2022) conducting research on how green credit can affect the financial performance of commercial banks in China. This study aims to examine the impact of green credit on commercial bank performance by sampling 34 commercial banks in China in the period 2007 to 2017 using a fixed effect model. The result of this study is that the rate of return on earning assets as measured by ROA and interest margins as measured by the net interest margin (NIM) of banks increases as the proportion of green loans increases compared to all loans extended. This research on the impact of green credit on the performance of commercial banks uses the basis of 3 (three) theories, namely competitive strategy theory, shareholder theory and environmental risk management theory. The competitive strategy theory states that green credit helps commercial banks to take advantage of opportunities that arise due to green economic growth so that banks gain a competitive advantage (Hart, 1995). Stakeholder theory suggests that green credit enables commercial banks to build a green reputation in terms of environmental protection thereby gaining support from stakeholders (Bai et al., 2013). Environmental risk management theory states that green credit helps commercial banks to manage environmental risks and reduce costs incurred. Legal sanctions and social impacts related to environmental problems can result in losses (Labbat and White, 2002). The model used is a regression model. The dependent variable is ROA to describe the bank's profitability in a comprehensive manner and NIM to describe the main source of bank

income. The independent variables are Green Loan (GL) or green credit which is the proportion of green credit compared to total credit and the Green Development Index (GD) which describes the level of green development in an area. The index is obtained from the China Green Development Index Report prepared by the National Bureau of Statistics of China, which evaluates green development in a regional area both from the aspects of economic structure, natural resources, social life and environmental policies. The conclusions of this study are: The independent variables are Green Loan (GL) or green credit which is the proportion of green credit compared to total credit and the Green Development Index (GD) which describes the level of green development in an area. The index is obtained from the China Green Development Index Report prepared by the National Bureau of Statistics of China, which evaluates green development in a regional area both from the aspects of economic structure, natural resources, social life and environmental policies. The conclusions of this study are: The independent variables are Green Loan (GL) or green credit which is the proportion of green credit compared to total credit and the Green Development Index (GD) which describes the level of green development in an area. The index is obtained from the China Green Development Index Report prepared by the National Bureau of Statistics of China, which evaluates green development in a regional area both from the aspects of economic structure, natural resources, social life and environmental policies. The conclusions of this study are: natural resources, social life and environmental policy. The conclusions of this study are: natural resources, social life and environmental policies. The conclusions of this study are:

a. The higher the proportion of green credit to total credit, the higher the bank's ROA and NIM or have a positive correlation.
b. The higher the GDI, the higher the ROA and NIM or positively correlated. This shows that the higher the level of green development, the higher the demand for green credit, which has an impact on profitability.

To the author's knowledge, studies on the impact of green credit or environmentally friendly credit on the credit risk of commercial banks in Indonesia have never been carried out. Generally, studies in Indonesia on this topic do not use green credit. Like study by Kusuma & Haryanto (2016) analyze the effect of bank performance variables (capital adequacy ratio or CAR, return on assets or ROA, operational spending on operating income or BOPO, and loan to deposits ratio or LDR), credit growth, and credit quality on bank credit risk or non-performing loans (NPLs). The study used 12 commercial banks from 2013 to 2015. The results of the study found that bank performance and credit growth had a negative effect on NPL. For credit quality variables that are proxied by Loan Loss Provisions, this variable has a positive effect on NPL.Then there is Barus & Erick (2016) who analyzethe effect of CAR, BOPO, Bank Indonesia Certificate Interest Rate (SBI), inflation rate, and bank size on bank credit risk. Their study used 99 commercial banks from 2010 to 2013. The results of their study found that the variables LDR, net interest margin (NIM), BOPO, SBI interest rates and bank size had a positive effect on NPL. Meanwhile, the inflation rate has a negative effect on NPL. Based on these matters, this study aims to analyze the

effect of green credit and other determinants on the credit risk of commercial banks in Indonesia.

METHOD

This study uses secondary data obtained from the financial reports of commercial banks of 107 commercial banks for the period 2019 – 2021. These financial reports are in the form of sustainability reports, annual reports and publication reports, as well as Indonesian Banking Statistics published by OJK. In this study, bank credit risk is proxied by NPL. NPL is expressed as a percentage as a comparison between non-current loans to total loans. Total non-current loans are the sum of loans with substandard, doubtful and loss qualities in accordance with POJK provisions No.40/POJK.03/2019 concerning Asset Quality Rating for Commercial Banks. NPL data for commercial banks is obtained from the annual reports of each commercial bank.

The definition of green credit is based on POJK No.51/POJK.05/2017 namely credit or financing extended by banks to Environmentally Friendly Business Activities (KUBL). In this study, green credits are expressed as a percentage of total credits. Green loans for commercial banks with a core capital of IDR 5 trillion or more and for foreign banks are based on the sustainability report data of each bank. This is because banks in this category are required to implement sustainable finance since 2019 and are required to submit sustainability reports since December 2019. Meanwhile, green loans for commercial banks with core capital below IDR 5 trillion, especially in 2019 are based on published report data for each bank and or annual report in the form of MSME credit which is the largest component of green credit.

Commercial bank performance variables which are determinants of bank NPL include LDR, CAR, ROA, NIM, and bank size. LDR is the ratio between total credit and total third party funds (DPK). Total credit is all credit or financing disbursed by banks, except for loans to other banks. Total DPK is the total demand deposits, savings and time deposits from third parties collected by banks, except for loans received from other banks. LDR describes the intermediary function of a bank. LDR data is obtained from the annual reports of each commercial bank.

CAR is the ratio between total capital and risk-weighted assets (RWA) for market risk, operational risk and credit risk in accordance with SEOJK No. 9/SEOJK.03/2020. Each bank is required to meet CAR in accordance with its risk profile. In addition, banks are required to form additional capital as a buffer in accordance with predetermined criteria. CAR data is obtained from the annual reports of each commercial bank.

ROA is the ratio between profit before tax and the average total assets of the bank. ROA is used to determine the efficiency level of a bank in managing assets. ROA data is obtained from the annual reports of each commercial bank.

NIM is the ratio between a bank's net interest income to the average earning assets that generate interest. Net interest income is interest income minus annualized interest expenses. Earning assets that are calculated here are assets that generate interest but do

not include LC, stand by LC, issuance of guarantees, and undrawn credit facilities. NIM data is obtained from the annual reports of each commercial bank.

Bank size is used to measure the size of the bank as assessed from the bank's total assets. Data on total bank assets is obtained from the annual reports of each commercial bank. Table 1 presents all the data and their sources used in this study.

Table 1
Data, Sources, and Definitions

Variable	Definition	Source
NPLs	Percentage of the ratio between total non-performing loans and total loans disbursed.	Annual report
Green Credit (KH)	Percentage of the ratio between credit for the purpose of Environmentally Friendly Business Activities (KUBL) and total credit.	*Sustainability Report*
LDR	Percentage of the ratio between total loans and total Third Party Funds (DPK).	Annual report
CAR	Percentage of the ratio between total capital owned and Risk Weighted Assets (RWA).	Annual report
ROA	Percentage of the ratio between profit before tax and average total assets.	Annual report
NIM	Percentage of the ratio between net interest income and average earning assets.	Annual report
Bank Size (UB)	Company size (total assets) is the size of a company	Annual report

Estimation Method

Labbat & White (2002) stated that banks that provide credit to environmentally friendly companies can reduce credit risk. Therefore, one of the factors that affect the level of credit risk is environmentally friendly credit or green credit. In addition to green credit,Kusuma & Haryanto (2016)AndBarus & Erick (2016) state that credit risk is influenced by bank performance such as CAR, ROA, BOPO, LDR, and bank size. To analyze the determinants of bank credit risk, the specification of the empirical model in this study is stated as follows:

$$NPL_{it} = \beta_0 + \beta_1 KH_{it} + \sum_{j=2}^{n} \beta_j Z_{it} + \varepsilon_{it} \quad \text{...} (1)$$

where is bank credit risk, is green credit, and is a vector of bank performance variables including CAR, ROA, BOPO, LDR, and bank size. The and notation denotes the intercept/constant and the slope parameter, respectively. Then, the notations i and t

respectively represent the cross-section and time in this study where the cross-section is a commercial bank of 107 banks while the time is the period 2019-2021. Finally, the symbol is the error term. Except for the bank size variable, which is expressed in logarithmic form, all variables in this study are expressed in percentage form. $NPL_{it}KH_{it}Z_{it}\beta_0\beta_j\varepsilon_{it}$

All variables in the specification of the empirical model in equation (1) are hypothesized to be negative except LDR. The higher the percentage of green credit to total credit, the lower the credit risk disbursed by the bank, as well as the bank's performance variables except LDR.

To achieve the objective of this study, equation (1) is estimated using panel data method. The panel data model consists of three (3) types, namely pooled least squares (PLS), fixed effect (FE), and random effect (RE). In choosing the type of panel data model, this study uses three types of statistical tests. These tests include (1) Chow test to select a panel data model between PLS and FE, (2) Breusch Pagan-Lagrange Multiplier (BPLM) test to select a panel data model between PLS and RE, and (3) Hausman test to select panel data model between RE and FE. For the robustness test, this study uses the robust or generalized least squares (GLS) option in estimating the panel data model.

RESULTS AND DISCUSSION

Descriptive analysis of each variable in this study is presented in full in Table 2.

Table 2
Descriptive Analysis

Variable	Observation	Means	std. dev.	Min	Max
NPLs	321	3,268	3,457	0	42.35
KH	321	17,837	18,532	0	100.00
LDR	321	2945,338	36279,250	0	506600.00
CAR	321	36,958	58,946	10.01	820.90
ROA	321	1,450	5,692	-15.89	81.00
NIM	321	4,708	3,127	-3.52	31,33
UB	321	10.102	1,469	6,57	14.36

Source: the results of the author's processing

The number of observations used in this study were 321 observations. The NPL variable has an average value of 3.27% with a standard deviation of 3.46% where the lowest and highest NPL values are respectively 0% and 42.35%. The Green Credit variable has an average value of 17.84% with a standard deviation of 18.53%. The lowest Green Credit score is 0% while the highest is 100%. The LDR variable has an average value of 2,945.34% with a standard deviation of 36,279.25%. The lowest LDR value is 0% and the highest LDR value is 506.6%. The CAR variable has an average value of 36.96% with a standard deviation of 58.95%, the lowest and highest CAR values are respectively 10.01% and 820.9%. The ROA variable has an average of 1.45% with a standard deviation of 5.7%, the lowest ROA value is -15, 9% and the highest

ROA value is 81%. The NIM variable has an average of 4.71% with a standard deviation of 3.13% where the lowest NIM value is -3.5% and the highest reaches 31.3%. The bank size variable was recorded at 10.1 with a standard deviation of 1.47. The lowest bank size is 6.57 while the highest is 14.36.

Based on statistical tests, namely the Chow test, BPLM test, and Hausman test, the panel data model used in this study is the FE data panel model. For the robustness test and handling violations of classical assumptions in the FE panel data model, estimation of the FE panel data model is carried out using the GLS estimation method. The estimation results of the FE data panel model with the GLS method are presented in Table 3.

Table 3
Estimation results of the FE data panel model with the GLS method

Var. dependent:	Independent Variable Coefficient:					
	KH	LDR	CAR	ROA	NIM	UB
NPLs	0.0312	0.00002*	0.0062**	-0.0298	-0.5748*	-3.7306*

Note: *, **, *** are significant at the 1, 5, and 10% level of significance, respectively

Table 3 shows that there are four independent variables that significantly influence bank credit risk, namely LDR, CAR, NIM, and bank size. However, green credit and ROA do not significantly affect bank credit risk. LDR and CAR variables have a positive correlation with NPL. This is not in accordance with the hypothesis proposed in this study. However, the sign of the NIM variable and bank size are in accordance with the hypothesis.

Green credit has a positive correlation with NPL, but not significant. This is consistent with the phenomenon that occurs where green credit is dominated by MSME credit with an average of 75.35% of total green credit in the 2019-2021 period. This condition tends to increase in line with rising NPLs. In addition, the percentage of green credit is still relatively low with an average of 17.83% of total credit. The results of this study contradict the previous studies, vizGuan et al. (2017) AndCui et al. (2018). The higher the green credit, the lower the bank's credit risk.

The LDR variable has a positive and significant effect on NPL with a coefficient value of 0.00002. An increase in LDR by 1% will increase credit risk by 0.00002%. Banks that are able to channel funds in the form of credit optimally are reflected in a high LDR ratio. The greater the credit given, the greater the risk of the debtor failing to pay. The higher the LDR, the higher the credit risk. The results of this study are in line with several previous studies such as:Rabbani & Rahadian (2022),Barus & Erick (2016), and Adisaputra (2012).

CAR has a positive effect on NPL significantly with a coefficient value of0.0062. Based on POJK No.12/POJK.03/2020 concerning Consolidation of Commercial Banks, commercial banks other than banks owned by the Regional Government are required to comply with the minimum core capital requirement of IDR 3 trillion in stages, namely IDR 1 trillion on 31 December 2020, IDR 2 trillion on 31 December 2021, and IDR 3

trillion on December 31, 2022. Meanwhile, Regional Government-owned banks are required to meet the minimum core capital on December 31, 2024. Banking data shows that most KBMI 1 and 2 banks experienced a significant increase in CAR in order to comply with minimum core capital requirements. The results of the study show that the positive effect of CAR on NPL contradicts the moral hazard hypothesis theory introduced byBerger & DeYoung (1997). Bank management with minimal capital will tend to do things that are high risk, including lending. Disbursing credit that is not prudent will lead to a high potential for default or default. The results of this study are not in line with the studyNaili & Lahrichi (2022)AndOmar et al. (2021a)that the CAR ratio has a negative correlation with NPL.However, this study is in line with previous studies, vizFitriyanti (2016)who found that CAR has a positive and significant effect on NPL. This is because the higher the CAR, the bank can increase lending which will result in an increase in credit risk.

NIM has a significant negative effect on NPL with a coefficient ofnegative 0.5748. An increase in NIM by 1% will reduce credit risk by 0.5748%. NIM is used to determine the ability of a company to optimize the management of existing productive assets. The higher the NIM, the more optimal the bank is in placing productive assets in the form of credit. Conversely, when the NIM shows a low percentage, there will be a tendency for problem loans to emerge. The results of this study are in line with the results of previous studies such as Jayanti & Rapina (2022) which found a negative correlation between NIM and NPL variables.

Bank size has a significant negative effect on NPL with a coefficient ofnegative 3.7306. An increase in bank size by one point will reduce NPL by 3.73%. Banks with large assets have the ability to recruit qualified employees, have complete systems and procedures, have good information system technology so that they can support the data analysis process for prospective debtors. This can minimize the occurrence of default by the debtor. The results of this study are in line with several previous studies, such as Louzis et al. (2012), Naili & Lahrichi (2022), and Omar et al. (2021a). Their studies conclude that bank size has a negative influence on credit risk.

CONCLUSION

Credit risk is significantly influenced by bank performance variables, namely LDR, CAR, NIM and bank size. However, the green credit variable does not have a significant effect on credit risk. From the results of this study, it is necessary to have policies taken by banks, the government and the competent authorities to support the provision of green credit so that they have an impact on bank profitability. Banks must continue to increase green credit or environmentally sound credit.

Banks must improve compliance with environmentally sound credit reporting in accordance with applicable regulations and report on carbon reductions that have been made. This is to facilitate the competent authorities in making policies including policies on providing incentives. Currently, the OJK is developing a green taxonomy

that can later help banks to be more rigid in reporting green-minded credit and connected to bank monthly reports.

In order to support the achievement of Indonesia's NDC target, namely reducing emissions by 29% by 2024, the Government needs to encourage the banking industry to be able to increase its role in distributing environmentally sound credit. Likewise, industries other than banking.To encourage banks to extend green credit, OJK can provide various incentives, such as OJK policies regarding the percentage value of risk-weighted assets for electricity-based loans.

The research conducted has limitations, namely:
1. not all banks report in detail environmentally sound credit or green credit in accordance with POJK No. 61/POJK/2017 so the reporting format is very diverse.
2. POJK Provisions No. POJK No. 61/POJK/2017 has only come into effect since 2019 causing the data obtained to be not long enough. A longer reporting period is needed in order to get a more accurate modeling.
3. The sustainable financial reporting system has not been automated so that it takes a relatively long time to obtain environmentally sound credit data or green credit.
4. Efforts need to be made to ensure that loans reported by banks as environmentally sound loans are in accordance with predetermined criteria and have a positive impact on the environment.
5. Twelve criteria for environmentally sound activities are not linked to the code for the type of credit listed in the bank's monthly report.
6. The research carried out has only considered bank internal factors in the form of bank performance and size on credit risk or has not considered bank external factors, including Bank Indonesia's benchmark interest rate, stock prices, exchange rates.

For the future agenda, it would be very interesting to do research on:
1. Factors that encourage banks to increase environmentally sound credit or green credit.
2. The influence of bank external factors includes BI reference rates, stock prices and exchange rate fluctuations on bank credit risk.

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