The Effect of Implementation of Green Banking, Corporate Social Responsibility on the Value of Banking Companies Registered with the OJK Period 2017-2021

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Abstract. The study aims to determine the effect of Green Banking Implementation, disclosure of corporate social responsibility (CSR) on firm value in banking companies listed in OJK. The study measures the implementation of Green Banking by calculating the ratio of the company's public information disclosures related to Green Banking indicators to the indicators based on GBDI. Similarly, the measurement of Corporate Social Responsibility disclosure is based on the ratio of the company's public information disclosures to the indicators based on GRI-G4. The measurement of Firm Value is done using the Tobin's Q model. This study focused on the population of banks that were listed on the Financial Services Authority between 2017 and 2021.The research sample data was gathered by employing the purposive sampling approach, resulting in a sample size of 12 companies.Analyzing panel data regression models using Eviews 12 using the data approach. The findings indicate that: 1) Green Banking has a somewhat detrimental impact on Firm Value; 2) Corporate Social Responsibility has no partial impact on Firm Value; 3) The combined influence of Green Banking and Corporate Social Responsibility affects Firm Value. For future researchers, it is hoped that this research can be used as a source of reference and new information to enable future researchers with the same research topic. And future researchers can add other variables besides the Green Banking and Corporate Social Responsibility variables

**Keywords:** Green Banking, Corporate Social Responsibility, Firm Value

1 Introduction

The company's value serves as an indicator for investors based on the facts communicated by the company. When the information is favorable, investors interpret it as a positive signal, and conversely, when the information is unfavorable, investors interpret it as a negative signal. This indicates that the company's valuation may be either higher or lower than its true value. An elevated corporate valuation will undoubtedly lead to a rise in share prices. Put simply, when the share prices of a company rise or when a company has a high share price, it suggests that

the company has a high value. Consequently, the company's worth can lead to financial success for shareholders, as seen by the rise in share prices. The subsequent data represents the valuation of general banking sector corporations that have been officially registered with the OJK from 2017 to 2021.

Figure 1. Banking Sector Company Value 2017 – 2021

Source: www.ojk.go.id (Data processed by researchers in 2023)
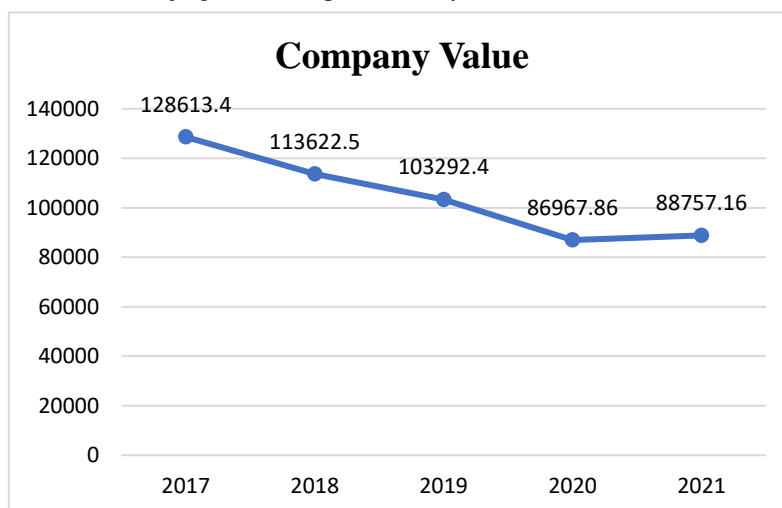
According to graph 1.1, the average company value of banking businesses at OJK from 2017 to 2021, based on data from multiple commercial banks, indicates that the company value of each banking company is still experiencing fluctuations. There was a decline in value from 2017 to 2018, with a fall of 128613.4 in 2017 to 113622.5 in 2018. In 2019, the value of the company rose to 103292.4, but it declined in 2020 to 86967.86. However, there was a tiny increase in 2021 to 88757.16. This indicates that the market evaluates the company more negatively when its value is lower.

Literature Review

The value of the company

As per [1], company value refers to the amount that potential purchasers are willing to pay in the event of the company being sold. A high corporate valuation is indicative of strong company performance. The worth of a company is determined by stock market indicators, which are impacted by investment opportunities.

This study employs Tobin's Q as a metric to assess the value of a firm. Tobin's Q compares the market value of a company with its asset replacement value, which is the value of the company's assets listed on the financial market. A corporation with a high Tobin's Q, where q > 1.00, signifies a superior investment opportunity with significant growth potential. It also suggests that the company's management is proficient in effectively utilizing its assets.

$$Q = \frac{(MVE + DEBT)}{TA}$$

Information :
Q   = Company Value
MVE   = Closing Price xshares outstanding (Market Value of Equity)
DEBT   = TotalDebt
TA   = TotalAssets

Green Banking

Green banking, as defined by [2], refers to the provision of environmentally sustainable funding. Green banking refers to the bank's commitment to the welfare of the environment while providing funding for businesses. Green banking is crucial for achieving a sustainable and beneficial outcome from economic endeavors.

The measurement of green banking disclosure in this study was determined by quantifying the number of reported green banking disclosure items by the bank and comparing it to the predicted number of disclosure items. A score of 1 is assigned to the corporation if it reveals the item, while a score of 0 is assigned if the company does not disclose the information. The green banking indicators presented in the company's annual report are calculated using the formula employed in the studies conducted by [3] as follows :

$$GBD = (N + in)$$

Information:
GBD   = Green banking disclosure
N   = Number of expected green banking indicators
in   = 1if express and 0 otherwise

Corporate Social Responsibility

CSR, often known as corporate social responsibility, refers to the role of businesses to support sustainable economic growth by collaborating with their employees, employee families, and local communities to enhance the overall quality of life.The measuring of Corporate Social Responsibility is conducted using the Corporate Social Responsibility Index (CSRI) which is based on GRI version 4.

This index number is determined by evaluating six performance indicators that encompass a total of 91 elements. The calculation of CSRI employs a dichotomous method, where CSR elements are assigned a score of 1 if they are disclosed and a score of 0 if they are not disclosed. Subsequently, the scores for each item are aggregated to generate an overarching score for each organization.

The formula for calculating Corporate Social Responsibility Index (CSRI) disclosure (Fiona, 2020) is as follows :

$$CSRI_j = \frac{\Sigma X_{ij}}{n_j}$$

Information :
CSRIj   = Corporate Social Responsibility Indexcompany j
ΣXij   = Total number of CSR disclosures by the company
nj   = Number of items for company I, $n \leq 91$

2. Method

This study employs quantitative research methods. Quantitative data refers to a research approach that relies on positivistic principles and involves the use of numerical data. This data is assessed using statistical analysis as a means of testing and is directly tied to the research problem at hand, ultimately leading to a conclusive outcome. This study investigates the correlation between the independent factors, specifically Green Banking and Corporate Social Responsibility, and the dependent variable, which is Company Value.

2.1 Research Population and Sample

A population refers to a broad area that encompasses things or subjects with specific numbers and characteristics that researchers designate for study and subsequent analysis. The research sample consists of 107 general banking businesses that were registered with the OJK throughout the timeframe of 2017-2021.

[4] define a sample as a tiny subset of a population that is selected using predetermined techniques in order to serve as a representative of the entire population. When the population is extensive, researchers may be unable to comprehensively study every aspect of it. Researchers have the ability to utilize samples extracted from a population consisting of 12 general banking businesses in the OJK for the period of 2017-2021.

2.2 Sampling Techniques

As stated by [5], the sampling technique refers to a method used for selecting a subset of individuals or items from a larger population for research purposes. Sampling techniques can be categorized into two main groups: probability sampling and non-probability sampling.The author employed a non-probabilistic sampling technique. Non-probabilistic sampling, as defined by [6], is a technique that does not offer equal chances for every element or member of the population to be chosen as a sample.The sampling strategy employed in this research is specifically the purposive sampling technique, which is a non-probabilistic method. Purposive sampling, as defined by [7], is a method used to choose samples based on specific criteria or considerations.The rationale behind employing a purposive sampling strategy is that not all samples possess the predetermined criteria set by the researcher.

Through the analysis of samples, researchers can derive generalizable findings applicable to the entire research population. This study used a sample approach known as purposive sampling.

2.3 Data collection technique

This research utilizes secondary data. Secondary data refers to information that is gathered or acquired by researchers from pre-existing sources[8]. Documents were used to collect secondary data for this investigation.

The research employs secondary data as its source, specifically audited business financial records that are publicly available on the official website of the Financial Services Authority, www.ojk.go.id, as well as books and prior research publications.

3. Results and Discussion

3.1 Descriptive Statistical Analysis

Table 1. Descriptive Statistics

	NP	GB	CSR
Mean	104250.7	0.462698	0.170696
Median	85364.84	0.476190	0.142857
Maximum	398226.7	0.904762	0.274725
Minimum	78.89456	0.190476	0.076923
Std. Dev.	112029.7	0.157835	0.059280
Skewness	1.111189	0.169598	0.508228
Kurtosis	3.425121	2.826747	1.811828
Jarque-Bera	12.79922	0.362677	6.112336
Probability	0.001662	0.834153	0.047068
Sum	6255040.	27.76190	10.24176
Sum Sq. Dev.	7.40E+11	1.469803	0.207334
Observations	60	60	60

Source: Eviews 12.0 processed data, 2023

According to the descriptive statistical test results table, it is evident that the study consisted of 60 samples. The sample was obtained from 12 banking institutions under the supervision of the OJK over a period of 5 years, specifically from 2017 to 2021.

First point.The mean value is the arithmetic average, calculated by summing all the data and dividing it by the total number of data points. The variable with the highest mean value was Company Value, which was 104250.7.

On the other hand, CSR had the lowest mean value of 0.170696.The median is the central value of a dataset that has been arranged in ascending order. The variable "Company Value" had the highest median value of 85364.84, while the variable "CSR" had the lowest median value of 0.142857.

The maximum is the highest value in the data. The Company Value variable produced the highest maximum value of 398226.7, which was attributed to the company Bank Rakyat Indonesia (Persero) Tbk. On the other hand, the CSR variable from the Bank Pan Indonesia company achieved the lowest maximum value of 0.274725. Bank Negara Indonesia Tbk got the highest Maximum value of 0.904762 for the Green Banking variable.

The minimum is the lowest value in a set of data. The Bank CIM Niaga company generated the biggest minimum value of 78.89456, which was produced by Company Value. On the other hand, Bank OCBC NISP achieved the lowest minimum value of 0.076923 through CSR. On the other hand, the variable "Green Banking" has a value of 0.190476, which is associated with the company Bank Tabungan Negara Tbk. The standard deviation for this variable is denoted as MarkStd. The Company Value variable has the highest standard deviation of 112029.7, indicating that it has a greater level of risk for experiencing changes compared to other variables such as Green Banking (0.157835) and CSR (0.059280). The CSR variable with the lowest standard deviation suggests that it remained very stable throughout the research period, without experiencing significant fluctuations.

Table 2. Commond Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	55458.30	54589.31	1.015919	0.3140
GB	-61011.66	94952.20	-0.642551	0.5231
CSR	451225.5	252812.9	1.784820	0.0796
R-squared	0.053383	Mean dependent var		104250.7
Adjusted R-squared	0.020169	S.D. dependent var		112029.7
S.E. of regression	110894.2	Akaike info criterion		26.11925
Sum squared resid	7.01E+11	Schwarz criterion		26.22397
Log likelihood	-780.5774	Hannan-Quinn criter.		26.16021
F-statistic	1.607218	Durbin-Watson stat		0.138444
Prob(F-statistic)	0.209395			

Source: Eviews 12.0 processed data, 2023

Table 3. Fixed Effect Model.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	143719.5	25103.94	5.724979	0.0000
GB	-91380.93	29513.07	-3.096287	0.0033
CSR	16479.23	114261.8	0.144223	0.8860

Effects Specification				

Cross-section fixed (dummy variables)

R-squared	0.947252	Mean dependent var		104250.7
Adjusted R-squared	0.932346	S.D. dependent var		112029.7
S.E. of regression	29139.45	Akaike info criterion		23.59854
Sum squared resid	3.91E+10	Schwarz criterion		24.08722
Log likelihood	-693.9561	Hannan-Quinn criter.		23.78969
F-statistic	63.54452	Durbin-Watson stat		1.566527
Prob(F-statistic)	0.000000			

Source: Eviews 12.0 processed data, 2023

Table 4. Random Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	139995.9	42304.20	3.309266	0.0016
GB	-89697.43	29402.41	-3.050683	0.0035
CSR	33730.50	112729.5	0.299216	0.7659

Effects Specification			S.D.	Rho
Cross-section random			118829.1	0.9433
Idiosyncratic random			29139.45	0.0567

Weighted Statistics				
R-squared	0.146834	Mean dependent var		11364.66
Adjusted R-squared	0.116899	S.D. dependent var		30696.64
S.E. of regression	28846.70	Sum squared resid		4.74E+10
F-statistic	4.904998	Durbin-Watson stat		1.293182
Prob(F-statistic)	0.010826			

Unweighted Statistics				
R-squared	-0.001845	Mean dependent var		104250.7
Sum squared resid	7.42E+11	Durbin-Watson stat		0.082681

Source: Eviews 12.0 processed data, 2023

Table 5. Uji Chow

Redundant Fixed Effects Tests
Equation: FEM
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	70.865862	(11,46)	0.0000
Cross-section Chi-square	173.242651	11	0.0000

Source: Eviews 12.0 processed data, 2023

The Chow test calculation indicates that the probability value for Cross-section F is 0.0000, which is less than the significance level α (0.000 < 0.05). This implies that the probability value for Cross-section F and Chi-square cross-section is statistically significant. If Ha is accepted, it can be inferred that the Fixed Effect Model (FEM) is more appropriate to utilize compared to the Common Effects Model (CEM).

Table 6. Uji Hausman Test

Correlated Random Effects - Hausman Test
Equation: REM
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.860452	2	0.6504

Source: Eviews 12.0 processed data, 2023

According to the information provided in table 4, the random Cross-section Probability (Prob) value is 0.4171. This value is more than the significance level α (0.05), indicating that the Random Effect Model (REM) is the appropriate model to choose.

Table 7. Lagrange Multiplier Test

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided
    (all others) alternatives

| | Test Hypothesis | | |
	Cross-section	Time	Both
Breusch-Pagan	91.51230 (0.0000)	2.160245 (0.1416)	93.67255 (0.0000)
Honda	9.566206 (0.0000)	-1.469777 (0.9292)	5.725040 (0.0000)
King-Wu	9.566206 (0.0000)	-1.469777 (0.9292)	3.681326 (0.0001)
Standardized Honda	10.48140 (0.0000)	-1.286818 (0.9009)	3.549599 (0.0002)
Standardized King-Wu	10.48140 (0.0000)	-1.286818 (0.9009)	1.491459 (0.0679)
Gourieroux, et al.	--	--	91.51230 (0.0000)

Based on the Lagrange Multiplier Test calculation, the Breush-pagan Cross-section Probability value is 0.0000, which is less than α (0.05). Therefore, we may infer that the Random Effect Model (REM) is the chosen model.

Table 8. Coefficient of Determination Test Results (R^2)

Weighted Statistics			
R-squared	0.146834	Mean dependent var	11364.66
Adjusted R-squared	0.116899	S.D. dependent var	30696.64
S.E. of regression	28846.70	Sum squared resid	4.74E+10
F-statistic	4.904998	Durbin-Watson stat	1.293182
Prob(F-statistic)	0.010826		

Source: Eviews 12.0 processed data, 2023

Based on the table above, it explains that the Adjusted-R-Square value is 0.116899 or 11%. This means that the Company Value variable can be explained by other variables, such as Green Banking and Independent Corporate Social Responsibility by 11%, while the remaining 89% is explained by other factors not explained in this research.

Table 9. F Test Result

Weighted Statistics			
R-squared	0.146834	Mean dependent var	11364.66
Adjusted R-squared	0.116899	S.D. dependent var	30696.64
S.E. of regression	28846.70	Sum squared resid	4.74E+10
F-statistic	4.904998	Durbin-Watson stat	1.293182
Prob(F-statistic)	0.010826		

Source: Eviews 12.0 processed data, 2023

According to the data in table 4.22, the F-statistic value is 4.904998. Comparatively, the F table value with a significance level of 5%, degrees of freedom df1 (k-1) = 2, and df2 (60 - 2) = 58 is 3.16. Therefore, the F-statistic value of 2.019494 is greater than the critical F table value of 3.61. Additionally, the probability value of the F-statistic is 0.010826, which is less than the significance level of 0.05. As a result, the null hypothesis (H0) is rejected, and the alternative hypothesis (H1) is accepted. This indicates that both the Green Banking and Corporate Social Responsibility variables have a simultaneous influence on Company Value.

Table 10. T Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	139995.9	42304.20	3.309266	0.0016
GB	-89697.43	29402.41	-3.050683	0.0035
CSR	33730.50	112729.5	0.299216	0.7659

Source: Eviews 12.0 processed data, 2023

Based on the table above, it shows that:

The t-statistic value for Green Banking is -3.050683. The t-table, with a significance level of α = 5% and degrees of freedom (df) of (60 - 2) = 58, yielded a t-table value of 2.00172. The t-statistic for Green Banking is -3.050683, which is greater than the t-table value of 2.00172. Additionally, the probability value is 0.0035, which is less than the significance level of 0.05. Therefore, based on the results, we can infer that H0 is supported while H1 is rejected, indicating that the Green Banking variable (X1) has a partly negative impact on the Company Value variable.

The t-statistic score for Corporate Social Responsibility is 0.299216. The t-table, with a significance level of α = 5% and degrees of freedom (df) of (60 - 2) = 58, yielded a t-table value of 2.00172. The t-statistic for Corporate Social Responsibility is 0.299216, which is less than the critical t-value of 2.00172. Additionally, the probability value is 0.7659, which is greater than the significance level of 0.05. Therefore, based on the acceptance of H0 and rejection of H1, it may be inferred that the coefficient of the Corporate Social Responsibility variable (X1) has a partial lack of influence on the Company Value variable.

4. Conclusion

The t-statistic value for Green Banking is -3.050683, while the t-table value at a significance level of α = 5% and degrees of freedom (df) = 58 is 2.00172. The t-statistic for Green Banking is -3.050683, which is greater than the t-table value of 2.00172. Additionally, the probability value is 0.0035, which is less than the significance level of 0.05. Therefore, based on the results, we can infer that H0 is supported while H1 is rejected, indicating that the Green Banking variable (X1) has a partly negative impact on the Company Value variable. The objective of this research is to establish the validity (acceptance) of H1.

The t-statistic value for Corporate Social Responsibility is 0.299216. The t-table value for a significance level of α = 5% and degrees of freedom (df) = 58 is 2.00172. The t-statistic for Corporate Social Responsibility is 0.299216, which is less than the critical value of 2.00172 from the t-table. Additionally, the probability value is 0.7659, which is greater than the significance level of 0.05. Therefore, based on the results, we may accept the null hypothesis (H0) and reject the alternative hypothesis (H1), indicating that the coefficient of the Corporate Social Responsibility variable (X1) does not have a significant impact on the Company Value variable. The hypothesis H2 in the investigation was not substantiated (rejected).

According to the data in table 4.22, the F-statistic value is 4.904998. Comparatively, the F table value with a significance level of 5%, degrees of freedom df1 (k-1) = 2, and df2 (60 - 2) = 58 is 3.16. Therefore, the F-statistic (2.019494) is more than the F table value (3.61) and the Prob (F-statistic) value is 0.010826, which is less than 0.05. As a result, the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. This implies that both the Green Banking and Corporate Social Responsibility variables have a simultaneous influence on Company Value. The acceptance of H3 was demonstrated in this investigation.

This research is intended to serve as a valuable reference and source of new knowledge for future academics who are exploring the same issue. In addition to the Green Banking and Corporate Social Responsibility variables, future researchers have the ability to incorporate additional variables.

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