The Effect of PROPER Rating and Good Corporate Governance on Carbon Emission Disclosure

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Abstract

Purpose: This study seeks to investigate the impact of PROPER rating, an independent board of commissioners, and the audit committee on the disclosure of carbon emissions.

Methodology : The chosen method for sample selection is purposive sampling, comprising companies not involved in the financial sector that are listed on the Indonesia Stock Exchange from 2020 to 2022, amounting to 516 companies. The data undergoes classical assumption tests and multiple linear regression analysis through the application of IBM SPSS 25. Hypotheses in this study are examined through the F-test and t-test.

Results: In summary, the findings of this research indicate that the PROPER rating, company age, and company size have been demonstrated to have an impact on a company's disclosure of carbon emissions. Conversely, factors such as the independent board of commissioners, audit committee, profitability, and leverage do not exert influence on a company's carbon emissions disclosure.

Applications/Originality/Value: The occurrence of global warming has led to climate change and a persistent annual increase in temperature. The challenge of addressing global warming has become a focal point of extensive discussions worldwide. This heightened awareness is driving governments to formulate policies aimed at tackling global warming. Consequently, this research is anticipated to serve as a guide for policymakers in establishing regulations that consider the environmental impact while also addressing economic interests.

Introduction

The topic of global warming is currently a matter of widespread discussion in various regions around the world (Kilic & Kuzey, 2018). Global warming causes an increase in the earth's temperature for a long time and the sun's heat cannot be reflected back because it is held by a layer of gas from the greenhouse effect (Permatasari & Khoirunnisa, 2020). As per the World Resources Institute (WRI), Indonesia, in the year 2022, generated 691.97 million tons of CO2, positioning the country as the sixth-largest contributor globally. Indonesia's total emissions for that year amounted to 10.55 billion tons of CO2, representing 30.69% of the overall global emissions. On the other hand, China is the country with the largest emission, reaching 10.55 billion tons of Co2 or equivalent to 30.69% of total global emissions. Based on the Climate Transparency Report (2020), Indonesia will continue to strive to reduce greenhouse gas emissions through the NDC project with a target of 29-41% by 2030.

Carbon emission is an issue that causes much concern in the field of resources and environment (Aji et al., 2023). To address this issue, governments and international organizations have issued various policies and regulations aimed at reducing carbon emissions. The Kyoto Protocol is a global accord designed to regulate greenhouse gas emissions, representing a collective commitment to environmental responsibility (Suryani & Wijayati, 2019). Since then, several countries have ratified it into law, one of which is Indonesia, which has passed Law No.17/2004 to reduce Greenhouse Gas (GHG) emissions (Kholmi et al., 2020). Furthermore, the government issued Presidential Regulation Number 61 of 2011, which delineates the National Action Plan for Mitigating Greenhouse Gas Emissions, and concurrently, Presidential Regulation Number 71 of 2011. Article 4 of Presidential Regulation No. 61/2011 highlights the engagement of businesses in efforts directed at mitigating greenhouse gas emissions (GHG).

However, none of the existing regulations regulate the obligation of companies to account for and report their carbon emissions to the public. Companies in Indonesia seldom engage in the practice of disclosing carbon emissions, primarily due to its voluntary nature (Prasetya & Yulianto, 2018). According to findings by Desy Nur (2018), among the 91 companies engaged in manufacturing and mining that are officially listed on the Indonesia Stock Exchange., a mere 30 companies choose to disclose information regarding their carbon emissions.

The increase in temperature in the world caused by climate change has urged companies to become more carbon-friendly. In this case, companies play an important role in efforts to reduce carbon emissions (Darus et al., 2020). As

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producers and economic entities, companies have a significant role in managing their carbon emissions. Revealing carbon emissions represents a form of responsibility for a company's actions in addressing climate change. Companies emitting greenhouse gases may encounter challenges such as rising operational expenses, reduced demand, damage to reputation, legal challenges, and the imposition of fines and penalties (Aji et al., 2023). In legitimacy theory, companies will ensure that their operations can be legitimized by outsiders and do not deviate from existing standards in society. By including environmental responsibilities in the annual report, it is anticipated that the company can establish legitimacy by showcasing its commitment to nature and environmental concerns (Kholmi et al., 2020).

The Ministry of Environment and Forestry has established a program known as the Company Performance Rating Assessment Program (PROPER). This program has been developed since 1995 and aims to encourage companies to implement good control over their environment so that it is not polluted and damaged by the activities carried out by the company. The government expects each company to improve its environmental management performance by conducting carbon emission disclosure. In addition to government involvement, the disclosure of carbon emissions is undeniably linked to the corporate governance of the company. The Good Corporate Governance (GCG) mechanism mentions and regulates transparency, responsibility and accountability issues, as well as the role of stakeholders in handling company problems. Companies that have strong GCG practices tend to be better able to incorporate environmental elements into their policies and strategies (Eka Chandra Pramuditya & Budiasih, 2020).

Research specifically examining the disclosure of carbon emissions has yielded varied outcomes. Prasetya & Yulianto (2018) discovered that the decision of companies to disclose carbon emissions can be influenced by their PROPER rating. Conversely, Majid & Ghozali (2015) concluded that the disclosure of carbon emissions is not affected by PROPER ratings. Pramuditya & Budiasih (2020) was noted that the existence of an independent board of commissioners does not impact the disclosure of carbon emissions, whereas the audit committee has a favorable effect. Conversely, in their research, Sari & Susanto (2021) discovered that both the independent board of commissioners and the audit committee do not exert any influence on the disclosure of carbon emissions.

Theoretical Riview

Legitimacy Theory

Conceptually, legitimacy theory can be described as a "social agreement" or contract between a company and the broader community in its surroundings (Choi et al., 2013). Legitimacy theory makes companies part of society and therefore must pay attention to social and community norms when operating. Every company needs legitimacy, because the legitimacy provided by society is a strategic key to the company's future progress. According to legitimacy theory, a company's survival is contingent on the community's awareness that its operations align with the prevailing societal values (Dewi & Aldhani, 2021). Companies are motivated to fulfill social and environmental responsibilities when they gain legitimacy from society. When a company discloses its carbon emissions, it is viewed as environmentally responsible, fostering ongoing support from the community as long as its actions do not harm society.

Stakeholder Theory

A company's business operations are not exclusively for its own advantage; instead, it should also generate benefits for its stakeholders (Chariri dalam Dewi & Aldhani, 2021). Companies have multiple strategies to garner support from stakeholders, and one of these approaches involves making environmental disclosures concerning carbon emissions. Pressure from stakeholders will force management to make more disclosures (Kilic & Kuzey, 2018). By disclosing carbon emissions, a company demonstrates a commitment not only to its operational activities but also to environmental responsibility, thereby attracting stakeholders.

Triple Bottom Line Theory

The triple bottom line theory presents a concept referred to as 3P, encompassing people, planet, and profit. If the company wants to continue its survival in the long term, the company must be guided by the 3Ps (Tajuddin et al., 2023). First, People or society where the company must pay attention to its existence because the company needs community support to survive and develop. The company must acknowledge that its operational activities will inevitably affect society, prompting the need for the company to engage in activities as a demonstration of responsibility. Second, Planet or environment, in this case the company carries out its operational activities must not damage environmental resources. This relates to more efficient use of resources. Thirdly, profitability or profit stands as the primary objective for the company. However, in this context, profit also pertains to the company's procurement and sourcing of raw materials, establishing reliable transactions with the goal of consistently preserving the environment (Dewi & Aldhani, 2021).

Carbon Emission Disclosure

Carbon emissions refer to gases discharged when carbon-containing compounds undergo combustion. For example, CO_2 signifies the emissions produced when substances such as gasoline, diesel, wood, leaves, LPG gas, and other hydrocarbon-containing fuels undergo combustion (Dewi & Aldhani, 2021). These activities lead to environmental pollution, including climate change and air pollution. Given these circumstances, it is anticipated that companies will play a role in safeguarding the environment by revealing activities contributing to climate change, with carbon emissions disclosure being one aspect. Regulations govern environmental disclosure, such as PSAK No. 1 (revised 2009) established by IAI. Carbon emission disclosure is among the environmental disclosures specified in the additional reports outlined in PSAK.

PROPER Rating

PROPER is a government program related to the evaluation of a company's environmental performance. A high PROPER score means that the company has good environmental performance. The aim of this initiative is to encourage companies to implement efficient environmental management systems, enhancing efficiency in the reduction of waste (Dewi & Aldhani, 2021). The assessment of this program is classified into five tiers: gold, green, blue, red, and black. The government expects that companies will improve their environmental management performance by consistently disclosing carbon emissions through participation in this initiative.

Dewi & Aldhani (2021) discovered that companies with elevated PROPER ratings exhibit more robust carbon emissions disclosure compared to companies with lower PROPER ratings. The PROPER rating is considered capable of triggering the company to disclose its carbon emissions more broadly. A company tends to make more carbon emission disclosures as its PROPER rating increases.

H$_1$: PROPER rating has a favorable influence on the disclosure of carbon emissions

Good Corporate Governance

Good corporate governance entails a structure of guidelines that supervise the interactions among shareholders, management, creditors, government, employees, and the interests of various stakeholders. (Mujiati & Linuha, 2023). The elements of effective corporate governance encompass 1) transparency, 2) accountability, 3) responsibility, 4) independence, and 5) fairness and equality. (Tampubolon dalam Khairunnisa et al., 2023).

Effective corporate governance is a framework that supervises, directs, and monitors the business control procedures with the aim of enhancing shareholder value. It also serves as a means of addressing the needs of stakeholders, employees, and the local community. The indicators or components of effective corporate governance include institutional ownership, managerial ownership, the board of directors, the board of commissioners, and the audit committee (Adnyani et al., 2020).

In Roberts' stakeholder theory (1992), the board of commissioners is a stakeholder because they are a group that has the power to influence the outcome of the company's goals. Fitriana & Prastiwi state that the presence of independent commissioners can pressure management with a supervisory function, so that it can encourage directors to disclose issues of public interest such as carbon emissions (Eka Chandra Pramuditya & Budiasih, 2020). In the research of Zanra et al. (2020), Independent commissioners exert a beneficial impact on the disclosure of carbon emissions.

H$_2$: Independent board of commissioners has a favorable influence on the disclosure of carbon emissions

Roberts (1992) says that stakeholders in stakeholder theory are groups of people who have the ability to influence company goals. The guidelines on Good Corporate Governance, released by the National Committee on Governance Policy in 2006, emphasize that the audit committee is considered a stakeholder due to its role in supporting the responsibilities of company commissioners in internal oversight. Rafifah & Ratmono state that this is in accordance with agency theory that tighter supervision can reduce manipulation and lack of disclosure. (Eka Chandra Pramuditya & Budiasih, 2020). Based on research conducted by Akhiroh & Kiswanto (2016), and Pramuditya & Budiasih (2020) found that the audit committee exerts a beneficial impact on the disclosure of carbon emissions.

H$_3$: Audit committee has a favourable influence on the disclosure of carbon emissions

Research Methods

Population and Research Sample

In this research, the authors selected a sample of non-financial company that were publicly listed on the Indonesia Stock Exchange from 2020 to 2022. There are 516 companies to be tested. The sampling method employed in this study was purposive sampling, where specific criteria were considered and aligned with the research objectives. The research sample criteria are:

1. A company not involved in the financial sector that is listed on the Indonesia Stock Exchange from 2020 to 2022.
2. Companies that provide annual reports and other essential data for this study, which includes financial statements.

Data Collection Technique

Researchers use secondary data, namely data that already exists and then collected by researchers. In this case, researchers obtained information from annual reports or annual reports published by companies included in the research sample. This annual report can be obtained from either the Indonesia Stock Exchange (IDX) website or the individual website of each company.

Operational Definition

In this study, the variable being investigated as the dependent factor is the revelation of carbon emissions. The measurement of the variable for carbon emission disclosure aligns with the methodology employed by Darus et al. (2020), utilizing a scoring system ranging from 0 to 4 to assess the quality of disclosed information. A score of "4" is assigned for the disclosure of quantitative carbon information with a monetary value, while a score of "3" is designated for quantitatively disclosed carbon information without a monetary value. A score of "2" is given for specific but non-quantitative carbon information, and a score of "1" is assigned for general carbon information disclosure. In cases where no information is provided, a score of "0" is recorded.

The variables considered as independent factors in this study include PROPER rating, independent board of commissioners and audit committee. PROPER rating is an assessment conducted by the government on the Company's environmental management. The PROPER rating, serving as an independent variable in this study, is assessed by referencing the color level achieved by the company (Dewi & Aldhani, 2021). A gold PROPER rating for the company corresponds to a score of "5," a green rating corresponds to a score of "4," a blue rating corresponds to a score of "3," a red rating corresponds to a score of "2," and a black rating corresponds to a score of "1", while for companies that are not included in the PROPER rating will get a score of "0". The calculation of the independent board of commissioners variable involves determining the percentage ratio between independent commissioners and the overall members of the company's board of commissioners. This calculation refers to the research of Nainggolan & Rohman (2015) with the following formula :

$$Independent\ Board\ Commissioner = \frac{\sum independent\ commissioner}{\sum board\ of\ commissioner\ members}\ x\ 100\% \tag{1}$$

The measurement of the audit committee variable involves assessing the total number of members in a company's audit committee. This calculation refers to the research of Niza & Ratmono (2019).

This study incorporates control variables, including the age of the company, its size, profitability, and leverage. The company age variable is measured by looking for information related to the year of establishment of a company in the annual report minus the sample year used in the study (Astuti & Erawati, 2018). The measurement of the company size variable involves taking the natural logarithm of the total assets of the company (Kholmi et al., 2020). The company's total assets can be seen through the consolidated financial statements contained in the annual report.

$$Company\ Size = ln\ ln\ (total\ assets) \tag{2}$$

The measurement of profitability variables can take various forms; however, in this study, the authors utilized Return on Assets (ROA) as a metric. This involves comparing the net profit generated by the company with its total assets (Kholmi et al., 2020).

$$ROA = \frac{net\ profit}{total\ assets} \tag{3}$$

The leverage variable is used to see how much debt a company has against its equity. Leverage is assessed by comparing the total debt to the total equity of the company. (Sutama & Lisa, 2018).

$$Leverage = \frac{total\ debt}{total\ equity} \tag{4}$$

Data Analysis Techniques

In this study, the utilized data analysis techniques include the classical assumption test and the multiple linear regression analysis test, employing the designated regression model:

$$CED = \alpha + \beta_1 PRP + \beta_2 IBC + \beta_3 ADC + \beta_4 AGE + \beta_5 CMS + \beta_6 PRF + \beta_7 LEV + \varepsilon \tag{5}$$

CED   = *Carbon emission disclosure*
PRP   = PROPER *rating*
IBC   = Independent Board Commissioner
ADC   = Audit Committe
AGE   = Company Age
CMS   = Company Size
PRF   = Profitability
LEV   = Leverage
α   = Constant
β   = Regression Coefficient
ε   = Standard Error

Research Results

Based on the sampling that has been done, 516 companies were obtained as samples in this study. So that there are 1142 observation data. Prior to performing the multiple linear analysis test, a classical assumption test is conducted. This test encompasses assessments for normality, multicollinearity, autocorrelation, and heteroscedasticity.

Normality Test

Table 1. Normality test results

		Unstandardized Residual
N		1144
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.03031320
Most Extreme Differences	Absolute	.258
	Positive	.258
	Negative	-.145
Test Statistic		.258
Asymp. Sig. (2-tailed)		.000[c]

The normality test is employed to assess whether the observed data follows a normal distribution or not (Mardiatmoko, 2020). Normal distribution will produce a good regression model, so the data meets the assumption of normality (Ghozali, 2009). The outcomes of the normality test in Table 1 were obtained using the Kolmogorov-Smirnov Test. The SPSS output indicates that the Asymp. Sig. (2-tailed) value is 0.000. This suggests that the Asymp. Sig. (2-tailed) value is below 0.005 (significance level). Consequently, it can be inferred that the data does not follow a normal distribution. In addressing this, the author applies the Central Limit Theorem (CLT) assumption, which asserts that data is considered normally distributed when the sample size exceeds 30.

Multikolinearity Test

Table 2. Multicollinearity test results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	PROPER rating	.884	1.131
	Independent Board Commisioner	.992	1.008
	Audit Committe	.910	1.099
	Company Age	.918	1.089
	Company Size	.806	1.241
	Profitability	.990	1.010
	Leverage	.995	1.005

The multicollinearity test is employed to examine whether the regression model has detected an issue with multicollinearity. Multicollinearity arises when there is a "perfect" linear relationship among some or all of the variables in the regression model (Gujarati, 2009). The outcomes of the multicollinearity test, as presented in Table 2, were derived from the tolerance and VIF tests. According to the SPSS output, all independent variables exhibit VIF values ≤ 10 and tolerance values ≥ 0.10. Hence, it can be deduced that there is no indication of multicollinearity among the independent variables in the regression model.

Autocorrelation Test

Table 3. Autocorrelation test results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.377[a]	.142	.137	.030406	1.869

Autocorrelation is manifested when the regression model shows a correlation between residuals in a specific period 't' and those in the previous period, 't-1' (Mardiatmoko, 2020). In the context of time series analysis, this autocorrelation can help to understand whether there are recurring patterns or relationships in the data. The outcomes of the autocorrelation test, as indicated in Table 3, were obtained through the Durbin-Watson test. According to Santoso (2014), if the number of Durbin-Watson between -2 and 2, the data does not occur autocorrelation. According to the SPSS output, the Durbin-

Watson value is 1.869. This falls within the range of -2 to 2 (-2 < 1.869 < 2). Therefore, it can be deduced that there is no evidence of autocorrelation.

Heteroscedasticity Test

Table 4. Heteroscedasticity test results

Model	Sig.
(Constant)	.000
PROPER rating	.000
Independent Board Commisioner	.778
Audit Committe	.413
Company Age	.003
Company Size	.000
Profitability	.702
Leverage	.253

Heteroscedasticity is a situation characterized by unequal variance among the residuals for all observations within the regression model (Mardiatmoko, 2020). To identify the existence of heteroscedasticity, one can examine the significance value. If the significance value is greater than 0.05, it indicates the absence of heteroscedasticity in the multiple linear regression model (Ghozali, 2009)**.** The SPSS output results indicate that the PROPER rating, company age, and company size variables have significance values < 0.05, leading to the conclusion that the regression model exhibits heteroscedasticity. Therefore, this becomes one of the limitations in this study.

t-Test

Table 5. t-test results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.377[a]	.142	.137	.030406

The t-test or hypothesis test is employed to assess the impact of each independent variable on the dependent variable (Mardiatmoko, 2020). The presented table displays the coefficients of determination R square (R^2) and Adjusted R Square (Adj. R^2). The Adjusted R^2 value is 0.137, indicating that 13.7% of the variation in the Carbon Emission Disclosure variable can be explained by the Proper rating variable, Independent Board of Commissioners, Audit Committee, Company Size, Profitability, Leverage, and Company Age. The remaining 86.3% is attributed to factors not incorporated into the model.

F-Test

Table 6. F-test results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.174	7	.025	26.891	.000[b]
	Residual	1.050	1136	.001		
	Total	1.224	1143			

The model's feasibility test, referred to as the F-test, is utilized to assess whether the combined independent variables have a substantial impact on the dependent variable (Mardiatmoko, 2020). The presented table indicates the significance value of goodness of fit (Sig. F), with a value of 0.000 ($< \alpha = 5\%$). This implies that the Proper rating variable, Independent Board of Commissioners, Audit Committee, Company Size, Profitability, Leverage, and Company Age collectively and simultaneously influence the Carbon Emission Disclosure variable.

Multiple Linear Regression Test

Table 7. Multiple linear regression test results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.040	.010		-4.155	.000
	PROPER rating	.007	.001	.258	8.844	.000
	Independent Board Commisioner	.002	.008	.006	.233	.816
	Audit Committe	.001	.003	.009	.325	.746
	Company Age	.000	.000	.064	2.220	.027

Company Size	.003	.001	.178	5.798	.000
Profitability	2.945E-6	.000	.010	.376	.707
Leverage	-4.948E-5	.000	-.012	-.449	.654

Derived from the presented table, the regression equation is as follows:

$$CED = -0,040 + 0,007\,PRP + 0,002\,IBC + 0,001\,ADC + 0,00\,AGE + 0,003\,CMS + 2.945^{E-6}\,PRF - 4.948^{E-5}\,LEV + \varepsilon \quad (6)$$

The above regression model yields a constant value of -0.040. This implies that if all independent variables remain constant or have a value of 0, the carbon emission disclosure variable will remain at -0.040. The Proper rating variable has a coefficient of 0.007, indicating that for every 1-point increase in the PROPER rating, the carbon emission disclosure variable is expected to increase by 0.007 points. The Independent Board of Commissioners has a coefficient of 0.002, meaning that a 1-point increase in the independent board of commissioners variable is associated with a 0.002-point increase in the carbon emission disclosure variable. The audit committee variable has a coefficient of 0.001, indicating that a 1-point increase in the audit committee variable corresponds to a 0.001-point increase in the carbon emission disclosure variable. Company age has a coefficient of 0.00, suggesting that a 1-point increase in the company age variable leads to a 0.00-point change in the carbon emission disclosure variable. The company size variable has a coefficient of 0.003, indicating that a 1-point increase in the company size variable is associated with a 0.003-point increase in the carbon emission disclosure variable. Profitability has a coefficient of 2.945^{e-6}, signifying that a 1-point increase in profitability corresponds to a $2,945^{e-6}$-point increase in the carbon emission disclosure variable. Leverage has a coefficient of -4.948^{e-5}, implying that a 1-point increase in the leverage variable is associated with a decrease of -4.948^{e-5} points in the carbon emission disclosure variable.

Referring to Table 7, it is evident that the significance values for PROPER rating, company age, and company size are 0.000, 0.027, and 0.000, respectively. This indicates that the significance values for the PROPER rating variable, company age, and company size are all <0.05, suggesting that these variables (PROPER rating, company age, and company size) have a significant impact on carbon emission disclosure. Conversely, the significance values for the independent board of commissioners, audit committee, profitability, and leverage are 0.816, 0.746, 0.707, and 0.654, respectively. These values > 0.05 imply that the variables of the independent board of commissioners, audit committee, profitability, and leverage do not have a significant effect on carbon emission disclosure.

Discussion

The analysis conducted reveals a notable influence of PROPER rating on the disclosure of carbon emissions, according to the findings. This result is in accordance with the investigation undertaken by Dewi & Aldhani (2021), which claims a favorable association between PROPER rating and the disclosure of carbon emissions. The study suggests that a higher PROPER rating motivates companies to disclose their environmental aspects more comprehensively. Companies with favorable PROPER ratings are inclined to provide more extensive information regarding their carbon emissions. These findings are consistent with both legitimacy theory and stakeholder theory. According to legitimacy theory, companies with a favorable PROPER rating are more likely to disclose carbon emissions, enhancing their image in the community and gaining legitimacy. Additionally, stakeholder theory posits that carbon emission disclosure serves as a means of transparency towards stakeholders, contributing to improved corporate practices.

On the other hand, the research results indicate that the independent board of commissioners does not have a significant effect on carbon emission disclosure, aligning with the findings of Eka Chandra Pramuditya & Budiasih (2020). The study suggests that the relatively low average percentage of independent board members compared to the total board diminishes their dominant influence on the company. Since independent board members are external to the company, their limited time for supervision may result in less attention to community-related issues, including those related to climate change.

The study also found that the audit committee does not significantly impact carbon emission disclosure, consistent with the research by Sari & Susanto (2021). Given that carbon emission disclosure in Indonesia is voluntary, the presence or absence of an audit committee does not influence disclosure practices. This finding contrasts with stakeholder theory, which emphasizes the importance of companies disclosing information transparently to stakeholders.

Regarding the control variables, the study indicates that company age and size influence carbon emission disclosure, while profitability and leverage do not. This aligns with the research conducted by Prasetya & Yulianto (2018), which suggests that companies with high profitability and low debt levels do not guarantee a commitment to carbon emission disclosure.

Conclusion

This research aims to evaluate how PROPER rating, board of commissioners, and audit committee influence the disclosure of carbon emissions in non-financial firms listed on the Indonesia Stock Exchange between 2020 and 2022. Grounded in the assumptions of legitimacy theory, stakeholder theory, and triple bottom line theory, the researchers aim to build upon existing literature. The main results indicate a significant impact of PROPER rating on the disclosure of

carbon emissions. However, there is no observable effect on carbon emission disclosure from the variables of an independent board of commissioners and audit committee. This suggests that companies with higher PROPER ratings are more inclined to provide more comprehensive disclosures of carbon emissions. The study acknowledges certain limitations, including the restricted representation of companies in the PROPER rating, the non-passing result of the heteroscedasticity test, and the study's focus solely on the independent board of commissioners and the audit committee. Future research could address these limitations by exploring alternative measures related to good corporate governance. For companies, it is advised to consistently disclose carbon emissions as an expression of corporate commitment to environmental concerns, contributing to the maintenance of the company's reputation and public trust. Moreover, the revelation of carbon emissions functions as a mechanism for transparency to stakeholders.

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