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The Influence of Environmental Performance and Disclosure of Carbon Emissions on Firm Value (Study on Companies Listed on the BEI)

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A B S T R A C T
The objective of this study is to investigate the influence of environmental performance and carbon emission disclosure on firm value. The population of this study encompasses mining companies listed on the Indonesia Stock Exchange during the 2018-2022 period. Samples were chosen using purposive sampling, resulting in 70 observation samples. The analysis technique employed in this study utilizes a panel data regression model, with the Random Effect Model (REM) selected as the research model. The findings of this study indicate that environmental performance does not exert a significant impact on firm value, while carbon emission disclosure exhibits a significant positive influence on firm value.

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INTRODUCTION

In the application of financial performance as one form of stakeholder theory action, a company's environmental performance shows that the company is not only concerned with efforts to maximize profits, but also protects and provides benefits to stakeholders. As part of the company's efforts to manage, maintain, and improve environmental sustainability, environmental performance is also measured (Sawitri & Setiawan, 2019). Based on the legitimacy theory, it has been explained that environmental performance has the potential to increase the value of the company. A positive attitude towards the surrounding community will certainly arise from the existence of the company if it can provide a positive influence on the environment.

Environmental concerns are important because a company's reputation and future operations will be affected by the facts it discloses. In theory, financial reporting includes disclosure. Companies should disclose carbon emissions in their financial statements because it can be a very wise business decision to maintain the balance of the earth's biological system (Hilmi et al., 2020). Disclosure of Carbon Emission Calculation from industrial processes, establishment of systems and programs to reduce carbon emissions, setting reduction goals, and reporting program progress are all considered aspects of carbon emissions. It is expected that understanding the quantity of carbon emissions in the atmosphere as a result of industrial operations can reduce global warming (Exandy, 2017).

Financial Services Authority (OJK) Circular Letter Number 30/SEOJK.04/2016 mandates that listed companies include social and environmental responsibility reports in their annual reports or sustainability reports. Limited Liability Companies (PT) are required to disclose carbon emissions based on Law Number 40 of 2007 Article 66c which requires PTs to submit annual reports on their social and environmental responsibility activities. Investors' response to a company related to its stock price in the capital market can be seen from the company's value. Before deciding which investment to make, shareholders consider the company's value. The company's value can be used by shareholders to measure the progress and prosperity of the business. A high company value reflects the company's success in prospering its clients.

Study The Last Supper (2019) entitled "The effect of carbon emission disclosure and environmental performance on corporate value in industrial companies listed on the Indonesia Stock Exchange (IDX)" shows that companies that disclose carbon emissions transparently and show good environmental performance will receive higher corporate value. This is one of many studies that have been conducted in the past regarding the author's variables, but they still produce differences. This shows that stakeholders and investors are becoming more aware of environmental challenges and appreciate businesses that are dedicated to sustainability. The study "analysis of the effect of sustainability report disclosure, financial performance, and environmental performance on corporate value" by The Last Supper (2019) found no correlation between environmental performance and firm value.

The subjects of this study are mining companies listed on the Indonesia Stock Exchange (IDX), registered in PROPER, and have sustainability reports related to carbon disclosure for the period 2019–2023. Because the number of mining companies participating in PROPER increases almost every year, this growth is not balanced by an increase in the number of companies that have fully managed their environment in accordance with PROPER criteria and laws and regulations. The fact that the mining industry is one that actively produces carbon emissions is another factor in the decision to include mining companies in carbon emission disclosure.

LITERATURE REVIEW

Legitimacy Theory

Dowling and Pfeffer originally created the legitimacy theory in 1975. Legitimacy theory deals with how businesses and society interact socially. According to this thesis, if a business perceives that its values are aligned with the dominant value system in society, then the business will be able to survive (Dowling & Pfeffer, 1975). Companies take a number of steps to become more legitimate in society, such as publishing sustainability reports that reveal their carbon footprint. This legitimacy theory is also considered very important by a company because it is a success factor for the company's sustainability in the future. If a company can have a positive impact on the environment, then its existence will be received positively and of course can increase the company's value.

Stakeholder Theory

Edward Freeman originally created the stakeholder theory in 1984 to emphasize that businesses should provide information about their operations to all parties involved, including governments, shareholders, workers, communities, customers, suppliers, and others. This data may include business operations that directly affect individuals, such as sponsorships, safety incentives, and pollution.(Freeman & McVea, 2001). The operational actions of companies are not solely carried out for their own benefit, according to stakeholder theory.(Amaliyah & Solikhah, 2019). Therefore, the support provided by stakeholders to an organization has a significant impact on its sustainability.

Environmental Performance

Guidelines for the Assessment of Company Performance Ratings in Environmental Management (PROPER) Regulation of the Minister of State for the Environment Number 5 of 2011 is quoted in this evaluation (Sawitri & Setiawan, 2019). Aspects such as water control, air pollution, waste management, environmental impact analysis, and implementation of environmental management systems are among the evaluation metrics used in the Corporate Performance Rating Assessment in Environmental Management. According to The Last Supper (2019), the results of the PROPER assessment in assessing

environmental performance are reliable, trustworthy, verifiable, and difficult to imitate.

Table 1 PROPER Assessment Criteria

Criteria	Explanation
Gold	Stating environmental quality in the production or service process, conducting business that is moral and consistent with the community.
Green	Environmental management is carried out beyond legal requirements through environmental management systems, efficient use of resources, and appropriate social responsibility.
Blue	We implement environmentally friendly processing measures.environment required by law.
Red	Environmental management is not carried out in accordance with the requirements stipulated in the law.
Black	Intentionally committing an act or negligence that may result in environmental pollution or damage, or violating laws and regulations or failing to impose administrative sanctions.

Source: (Marlina, 2022)

Carbon Emissions Disclosure

An industry's carbon emissions are calculated and its reduction targets are determined through carbon emissions disclosure. Carbon emissions consist of carbon-related information found in an organization's annual report or sustainability report. Businesses can calculate carbon emissions from measurement procedures using these records, so that company management can decide on the best actions to reduce the amount of carbon emissions produced in the coming period and report it to the company (Rahmawati et al., 2022).

The UN passed Law No. 6 of 1994 on the United Nations Framework Convention on Climate Change, making it an international treaty, and the Kyoto Protocol, signed in Japan in December 1997, includes the calculation of carbon emissions. Our goal is to reduce carbon emissions. When carbon emissions begin to emerge, businesses can measure the amount of carbon emissions they produce or emit, set goals to reduce them, install monitoring systems, conduct regular audits, and report carbon emission records to internal and external stakeholders about their reduction initiatives and progress towards those goals (Marlina, 2022).

Table 2 Carbon Emissions Disclosure Checklist

Category	Item	Information
Climate change: Risks and opportunities	CC1	Assessment/description of risks (specific and general regulations/regulations) related to climate change and actions taken to manage these risks.
	CC2	Current (and future) assessment/description of the financial,

		business implications and opportunities of climate change.
Greenhouse Gas Emissions	GHG1	Description of the methodology used to calculate greenhouse gas emissions (e.g. GHG or ISO protocol).
	GHG2	The existence of external verification of the calculation of the quantity of GHG emissions by whom and on what basis.
	GHG3	Total greenhouse gas emissions (metric tons of C02 produced).
	GHG4	Disclosure of scope 1 and 2, or 3 direct GHG emissions.
	GHG5	Disclosure of GHG emissions based on origin or source (examples: coal, electricity, etc.).
	GHG6	Disclosure of GHG emissions by facility or segment level.
	GHG7	Comparison GHG emissions with previous years.
Nergy Consumption	EC1	Amount of energy consumed (e.g. Tera-joules or Peta-joules).
	EC2	Calculation of energy used from renewable resources.
	EC3	Disclosure by type, facility or segment.
SubtractionGreenhouse Gases and Costs	RC1	Details of the plan or strategy to reduce GHG emissions.
	RC2	Details of current GHG emission containment target levels and emission reduction targets.
	RC3	The emission reductions and costs or savings achieved to date as a result of the emission reduction plan.
	RC4	Future emission costs are taken into account in capital expenditure planning.
Carbon Emissions Accountability	ACC1	An indication that the board of directors (or other executive body) has responsibility for the actions taken.

Company Values

The reaction of shareholders to a company in terms of its stock price is known as the value of the company. A high value of the company increases shareholders' confidence in the company's prospects and ensures their wealth. Decisions about loans, investments, and asset management are all influenced by the market value of the stock, which in turn represents the wealth of the company and its shareholders (Mardiana & Wuryani, 2019).

Investment prospects have a significant impact on the value of the company determined by this stock market value indicator. If there is an investment opportunity, it can actively access the company's future development and expansion, which will increase the stock price. The company's value will also increase along with the increase in the stock price (Anpratama & Ethika, 2021).

According to the principles of the green accounting approach, businesses should consider social and environmental aspects in addition to profits. Companies must address social and environmental issues because they impact public and investor perceptions of their brands and their long-term viability (Noor & Ginting, 2022).

Tobin's Q, which establishes the responsibility of performance management to manage the company's assets, is one way to measure company performance. The state of the company's investment opportunities or prospective progress is described by the Tobin's Q value. The market value of all outstanding shares plus the market value of all liabilities equals the Tobin's Q value. Tobin's Q, which is based on the company's prospective market value, can be used to measure how well the company is performing in relation to the total number of shares invested in the value of production (Tobin, 1969).

Framework of Thought

The framework of thought in this study to determine environmental performance and carbon emission disclosure on company value, in the form of a matrix, is described in the flow below:

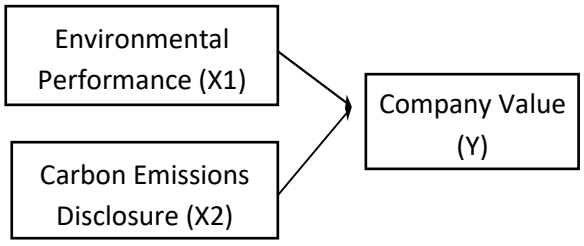

Figure 1 Framework of Thought

1. PROPER Environmental Performance Indicators
   The indicators used for environmental performance are using the PROPER proper rating calculated based on the scores obtained from the assessment of these aspects. The PROPER value categories are
   a. Gold: Environmental management performance exceeds regulations and demonstrates sustained efforts.
   b. Green: Environmental management performance complies with regulations and demonstrates sustainable efforts.
   c. Blue: Environmental management performance complies with regulations.
   d. Red: Environmental management performance does not comply with regulations.

e. Black: Company does not have environmental documents and/or is unwilling to be evaluated.

2. Carbon Emission Disclosure Indicators
Carbon emission disclosure indicators are used to measure the level of transparency of companies in reporting greenhouse gas (GHG) emissions. Usually, a carbon emission disclosure checklist is used to measure it. Here are some indicators commonly used in carbon emission disclosure checklists: First, the scope of Disclosure including: Emission limitations (Scope 1, 2, and 3), types of GHG emissions reported (CO2, CH4, N2O, etc.), and the methodology used to calculate emissions. Second, data quality including: Accuracy of emission data, completeness of emission data, and verification of emission data by third parties. Third, supporting information including emission reduction strategies and targets, investment in low-carbon technologies, and stakeholder engagement. Fourth, governance and transparency including: governance structure for emission management and transparency of emission information.

3. Company Value Indicator
Tobin's Q is used to calculate the value of a company. Tobin's Q is a metric that is often used to assess the value of a company. By definition, investors use Tobin's Q to determine whether a company's stock is overvalued or undervalued. A business with a high Q value may be considered attractive to buy, and a business with a low Q value may be considered attractive to buy because of its potential. Tobin's Q is used by policymakers to evaluate infrastructure investment and the overall state of the market. A bubble can be indicated by a high average Q value across the market, while underinvestment can be indicated by a low Q value in a particular sector. The best information is this ratio. The Tobin's Q ratio is calculated by dividing the total market capitalization value plus all debt components by the total assets of the company.

Hypothesis

1. The influence of environmental performance on company value

The company's approach to stakeholders through environmental performance involves environmental considerations. By showing that they are responsible for the impact of their business operations, environmental performance can also be defined as actions that demonstrate the company's identity and position.(Daromes & Kawilarang, 2020). Businesses are particularly influenced by environmental awareness and the green social movement. Stakeholders think that running a business now involves more than just making money. Furthermore, investors will consider investing if a company has a solid environmental policy as climate change has become a global issue that needs to be addressed.

Several studies have examined the relationship between environmental performance and firm value.Daromes (2020)concluded that

environmental performance significantly and positively affects firm value. In addition,Rahmadina et al., (2023)confirms that environmental performance affects the value of the company. This shows that companies must be responsible for the environment if they want to grow and be accepted, because the environment covers all aspects of human life. The hypothesis of this study, as explained earlier, is:

H1: It is suspected that Environmental Performance has a significant positive effect on Company Value.

2. The impact of carbon emission implementation on company value

One of the company's initiatives to fulfill its obligations to stakeholders and improve its environmental performance is the implementation of carbon emission reports. Carbon emissions require large companies to focus more on environmental performance. Therefore, the value of the company increases along with the size of the company that discloses its carbon emission reports. Disclosure of carbon emissions is intended to increase the value of the company by presenting a good corporate image to investors. This is also related to how the sustainability of the company will grow in the future.(Marlina, 2022).

Based on a number of studies on the impact of carbon emission disclosure on company value, including research conducted byThe Last Knight (2022)Research findings show that carbon emission disclosure has a positive and significant effect on company value. In addition,The Greatest Showman (2020)states that carbon emissions can increase company value.

This shows that the company's compliance with relevant regulations will be reflected in the transparency of information on carbon dioxide emission disclosure. As a result of their reaction, investors will increase the company's value. Based on this description, the research hypothesis is:

H2: It is suspected that Carbon Emission Disclosure has a significant positive effect on Company Value.

METHODOLOGY

The research design used in this study is quantitative. Since panel data regression analysis was tested using Eviews 12, the author used its assistance for all data presentation and analysis in this study. The population of this study consisted of 86 mining companies listed on the Indonesia Stock Exchange (IDX) in 2019 to 2023. Since mining is an industry that actively emits carbon emissions, this study focuses on mining companies listed on the Indonesia Stock Exchange (IDX). The sample size consisted of 14 mining companies that had a PROPER rating for the period 2019–2023, sustainability reports or websites related to carbon emission declarations, and complete annual reports available for 2019–2023.

Empirical and library research are strategies used to collect data for this study. Searching, understanding, and applying literature—such as journals, articles, and essays—on a subject or research is one way to conduct library research. On the other hand, empirical research can be conducted by collecting

information from mining sector companies through sustainability reports and annual reports for the period 2019–2023 from each company's website and the Indonesia Stock Exchange (www.idx.co.id).

Five colors representing the sequence of operational activities can be used to categorize the performance assessment of the Guidelines for Rating Company Performance in Environmental Management (PROPER). The color indicators used in the PROPER assessment of companies will make it easier to communicate information to stakeholders and evaluate the company's success in protecting and preserving the environment. The PROPER assessment table presented in the Guidelines for Rating Company Performance in Environmental Management (PROPER) is as follows:

Table 3 PROPER Assessment Criteria

Criteria	Information	Score
Gold	Very good	5
Green	Good	4
Blue	Currently	3
Red	Bad	2
Black	Very bad	1

Source : (Marlina, 2022)

Disclosure of carbon emissions by a company is known as carbon emissions(Marlina, 2022). To assign a score to each item on the carbon emissions disclosure checklist, a company's sustainability report measures its carbon emissions implementation using a dichotomous scale. The Carbon Emissions Disclosure Checklist has a maximum score of 18 and a minimum score of 0 for each disclosure item. Each point is worth 1. Consequently, the point score is 18 if a business fully discloses each point in its report. The point scores for each company are then summed. The following formula is used by businesses to calculate the carbon emissions disclosure checklist index:

$$\text{CED} = \text{X } 100 \frac{Jumlah\ skor\ yang\ diungkapkan}{Jumlah\ total\ maksimum\ skor}$$

Description: CED = Carbon Emission Disclosure (Oktavia, 2022)

The amount of a company's assets and liabilities, as well as the value of its outstanding shares, are all shown in its financial statements. The value of the company is a measure of the company's past and future performance. Tobin's Q is used to calculate the value of the company in this study. A popular metric for determining the value of a company is Tobin's Q. The best information is this ratio. Not only the company's common stock and equity are included in Tobin's Q; all components of the company's debt and equity are included, as are all of its assets (Tobin, 1969).

$$Tobin'sQ = X\ 100\frac{Total\ Market\ Value + Total\ Liabilities}{Total\ Aset}$$

Table 4 Summary of Operational Measurement of Variables

Variables	Measurement	Reference
Environmental Performance (X1)	Environmental performance measurement refers to the PROPER color assessment received by the company: 0 = No Participants 1 = Very Bad/Black 2 = Bad/Red	(Marlina, 2022)
EmissionCarbon (X2)	The number of scores revealed CED = $X\ 100\frac{Jumlah\ skor\ yang\ diungkapkan}{Jumlah\ total\ maksimum\ skor}$	(Oktavia, 2022)
Company Values (Y)	$Tobin's\ Q = X\ 100\ \frac{Total\ Market\ Value + Total\ Liabilities}{Total\ Aset}$	(Tobin, 1969)

RESEARCH RESULT

Descriptive Statistics

In analyzing data, descriptive statistics are used to characterize the information collected and make generalizable conclusions (Rahmanita, 2020). The mean, standard deviation, maximum, and minimum are examples of descriptive statistics.

Panel Regression Model Selection

Regression modeling estimation methods can be implemented using different approaches, including (Oktavia, 2022).

Common Effect Model

Common effects, also known as pooled least squares, is a very basic panel data model that combines time-series and cross-sectional data. This model assumes that the behavior of firm data is consistent across time periods and ignores individual and temporal variables. In this case, the Ordinary Least Square (OLS) method can be used for estimation.

Fixed Effect Model

The term Least Squares Dummy Variable (LSDV) approach is often used to describe fixed effects. It assumes that variation in the intercept can reduce individual differences. Fixed effects models investigate variation in labor-intensive culture, management, and work using dummy variable procedures to

obtain panel data estimates. However, the slope of each model is the same for all firms.

Random Effect Model

The error state of each company is contained in different slices known as Error Component Model (ECM), Generalized Least Square (GLS), or Random Effect. Random effects models have the advantage of eliminating heteroscedasticity. Three tests can be used to determine which model is best to use: (Oktavia, 2022)

Chow Test

The Chow test is a test conducted to determine whether the Fixed Effect (FE) or Common Effect (CE) model is the best model to use for panel data estimation. The hypothesis is:

H1: Fixed Effect (FE) Model is selected H0: Common Effect (CE) Model is selected

Comparison between $FStatistik$ And $Ftabel$ be the basis for rejecting the hypothesis. If $F\ Statistik > F\ tabel$, then the Fixed Effect model is the right model. The redundant fixed effect test, namely the chi-square probability value, can also validate the results of the Chow Test. 0.05 indicates that $H0$ is rejected if the Chi-Square probability value is less than 0.05.

Hausman Test

To determine whether the Fixed Effects or Random Effects model should be used, the Hausman test was performed. The Fixed Effects (FE) model was selected as the initial hypothesis. The Random Effects (RE) model was selected when$H0$ is used. The results of the Random Effects-Hausman Masu correlation test provide a basis for rejecting the hypothesis. The Fixed Effects (FE) model is the best model for panel regression if the p-value < 0.05 the table shows that$H0$ rejected.

Lagrange Multiplier Test

To determine which Random Effects and Fixed Effects model is better to use, the Lagrange Multiplier test is used. The first hypothesis is:

$H1$: Selected Random Effect Model (RE)

$H0$: Common Effect Model (PLS) selected

The Breusch-Pagan cross-sectional LM value indicates which model is selected. With an LM value of less than 0.05, the Random Effects Model is the most effective model because$H0$ rejected.

Classical Assumption Test

Statistical tests called "classical assumption tests" attempt to ensure that the data used in a study are neutral. To avoid testing for autocorrelation, these traditional hypothesis tests use panel data for survey data, which is a mixture of cross-sectional and time-series data.(Oktavia, 2022). Therefore, regarding the classical acceptance test in this study there are three:

Normality Test

The purpose of normality testing is to verify that the confounding variables or residuals in a regression approach have a normal distribution.(Oktavia, 2022). The Jarque-Bera test can be used to test for normality. Data is considered normally distributed if the JB value is greater than 0.05. Conversely, a JB value less than 0.05 indicates that the data is not regularly distributed.

Multicollinearity Test

To determine whether there is a relationship between causal factors, multicollinearity testing is used. According to good regression modeling, the independent variables are not correlated. The correlation coefficient of each independent variable can be used to verify the multicollinearity test. Multicollinearity does not exist if the correlation coefficient is less than 0.8, and vice versa.(Oktavia, 2022).

Heteroscedasticity Test

To find out whether the input variables are homogeneous (have the same variance), the heteroscedasticity test is used. This test is considered good if the regression modeling has a heteroscedasticity problem. The Glejser test, which regresses the absolute residual on the dependent variable, is one method for testing heteroscedasticity. Data is considered non-heteroscedastic if the profitability value is higher than 0.05. On the other hand, heteroscedasticity occurs if the profitability value is less than 0.05(Oktavia, 2022).

Panel Data Regression Analysis

Regression equations are used in panel data regression analysis to examine variables such as carbon emissions and environmental performance that impact firm value. The regression equation for panel data in question is:

$$FV = \alpha + \beta 1\ EP + \beta 2\ CE + €$$

Information :

α	= Constant
FV	= Company Value
$\beta 1 - \beta 2$	= Regression Coefficient
EP	= Environmental Performance
CE	= Carbon emission disclosure
€	= Error

Hypothesis Testing

t-test

The substantial relationship between the contribution of each independent variable to the explanation of the dependent variable is tested independently using the t-test. The calculated t-value and the table t-value are compared using the t-test. The criteria are applied when referring to the significant value, especially when the value is more than 0.05. This indicates that Ho is accepted, but Ho is rejected when the significance value is less than 0.05.

DISCUSSION

The Influence of Environmental Performance on Company Value

According to the first hypothesis of the study (H1), environmental performance significantly and negatively affects firm value; therefore, H1 is rejected. The effect of environmental performance on business value cannot be ascertained by this study. Since the public will only give a good review to a company if the company pays attention to its environmental management, this indicates that the legitimacy argument cannot be maintained. Since a company's ability to provide feedback or benefits to investors does not always correlate with its environmental performance, not all investors consider environmental performance when making investment decisions.

Rejecting environmental performance does not mean that companies do not value environmental performance. There are several observations, namely seventy, although there are several criteria that show a good relationship between environmental performance and company value, and mining companies generally get Blue and Gold PROPER. Based on the tabulation of average environmental performance data in this study, the majority of mining companies are fairly stable and consistently maintain the color level of the Performance Rating Improvement Program, although quite a few research observations show that several mining companies are still experiencing fluctuations or ups and downs in company value as measured by Tobins'Q shown in 2019–2023.

The Ministry of Environment and Forestry (KLHK) formed a company (PROPER). This means that in making investment decisions, investor perceptions may not fully take into account environmental variables. Lack of knowledge or guidance on the importance of PROPER performance for mining companies may be the cause.

The legitimacy theory stating that stakeholder perspectives can have a positive impact on the environment and, thus, have a positive impact on the existence of the company and, of course, increase its value, is not supported by the findings of this study. Since the PROPER assessment does not cover all aspects of the company's overall environmental performance, stakeholders in this study believe that environmental performance as measured by PROPER does not directly affect the environment.

This finding is consistent with research The Last Supper (2019) which reveals that the PROPER assessment of environmental performance has no influence on company value.

The Impact of Carbon Emission Disclosure on Company Value

The second hypothesis of this study (H2) is that carbon emission disclosure significantly and positively affects firm value; therefore, H2 is accepted. According to this finding, the perceived value of a firm among investors will increase in proportion to the number of carbon emission disclosure items it produces. According to this analysis, mining companies disclosed more carbon emissions between 2019 and 2023. This indicates that businesses are becoming more aware of the importance of disclosing data on their carbon emissions.

Between 2019 and 2023, the average carbon emission disclosure results of mining companies also increased. This indicates that the quality of disclosure of information related to corporate carbon emissions is improving.

The findings of this study are consistent with stakeholder theory, which states that businesses have obligations to a number of stakeholders other than their shareholders, including employees, clients, suppliers, local communities, and the environment. A company's efforts to fulfill its obligations to stakeholders, particularly those related to the environment, can be seen as transparent and accurate disclosure of carbon emissions. Businesses can increase shareholder trust and support by demonstrating their dedication to effective carbon emission control, which will ultimately increase the value of the company. According to legitimacy theory, businesses must win and maintain public acceptance in order to function and thrive. A company's efforts to demonstrate its dedication to social and environmental responsibility can be seen from its carbon emission disclosure. By demonstrating such dedication, the company can improve its reputation in the eyes of the wider community, which will increase the legitimacy and overall value of the company.

The findings of this study are in line with researchThe Last Supper (2019), who found that carbon emission disclosure has a significant and positive effect on company value, andNoor & Ginting (2022)who found that carbon emission disclosure has a significant and positive effect on value.

Based on the findings of the study, this report can help companies become more environmentally conscious. According to the second paragraph of PSAK No. 1 (as amended in 2009), this report can be used as a supplementary report that discloses the company's environmental awareness, which includes the company's strategy, governance, energy consumption, and greenhouse gas intensity, as well as climate change, greenhouse gas emission reduction targets, risks, and performance. This is a result of investors' perception that management can control how its operations affect the environment. This encouraging result also shows that management's dedication to corporate transparency will be reflected in market response.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of a study that looked at ten mining businesses between 2019 and 2023 to determine whether environmental performance and carbon emissions disclosure impacted company value. The following are conclusions about this study that can be drawn from the findings of the analysis above:

a. Corporate value (Y) is not positively and significantly affected by environmental performance measures (X). Although measured by PROPER Gold, it does not have a direct impact on how investors evaluate corporate value. This suggests that when making investment choices, investors may continue to place greater emphasis on financial considerations and industry prospects.
b. Corporate value (Y) is positively and significantly influenced by the carbon emission disclosure variable (X). This indicates a global shift towards a

low-carbon economy. As stakeholders and investors become more aware of the impacts of climate change, they are putting pressure on businesses to reduce their carbon emissions.

ADVANCED RESEARCH

Future research could explore the nuanced dynamics between environmental performance, carbon emission disclosures, and corporate value by integrating broader contextual factors such as regulatory frameworks, market sentiment, and stakeholder engagement. Examining the role of industry-specific characteristics, such as resource dependency or environmental risk exposure, may help clarify why environmental performance metrics like PROPER Gold do not directly influence corporate value. Moreover, longitudinal studies could investigate how evolving investor priorities, driven by global trends toward sustainability and low-carbon economies, gradually reshape the weight of non-financial factors in valuation models. By incorporating qualitative approaches, such as stakeholder interviews or case studies, researchers can also uncover the motivations behind investor behavior and their perception of environmental disclosures as a marker of corporate responsibility and future resilience. This research could inform strategies for aligning environmental and financial goals, enabling companies to enhance both sustainability and shareholder value.

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