

Environmental performance and carbon emission disclosure: the moderating role of financial distress

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Abstract

This research aims to analyze and test the influence of government ownership, institutional ownership, foreign ownership and environmental performance on carbon emissions disclosure with the moderating variable financial distress in energy sector companies listed on the Indonesia Stock Exchange (BEI) in 2017-2021. The type of research used is associative quantitative with a sample of 45 companies from a population of 76 energy sector companies listed on the Indonesia Stock Exchange (BEI) in 2017-2021. The analysis technique used in this research is moderated regression analysis with a significance level of 5%. The results of this study show that ownership and institutional ownership partially have no effect on carbon emissions coverage, foreign ownership and environmental performance partially influence carbon emissions coverage, financial difficulties can moderate ownership on carbon emissions coverage, and financial difficulties cannot moderate institutions. ownership, device ownership and environmental performance on carbon emissions.

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1. Introduction

Climate change caused by global warming has become a major concern worldwide, with extreme temperatures triggering numerous natural disasters. Indonesia, one of the world's largest carbon emitters, ranked fourth in terms of carbon emissions in 2019 (Climate Watch, 2020). The main sectors contributing to greenhouse gas (GHG) emissions in Indonesia include the energy sector (34%), forestry (25%), peat fires (25%), waste (7%), agriculture (6%), and forestry and other land use sectors (3%) (Ministry of Environment, 2020). In

this context, carbon emission disclosure is crucial for identifying and managing emission sources and their impact on climate change.

Indonesia's efforts to reduce carbon emissions include the enactment of Law No. 6 of 1994. Furthermore, Law No. 40 of 2007, Article 74, stipulates that companies operating in and/or related to natural resources are required to implement social and environmental responsibilities. However, many companies ignore this obligation. This is the reason the government, through the Financial Services Authority (OJK), issued Financial Services Authority Regulation No. 51/POJK.-

03/2017 on the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies. One of the topics discussed in the report is the obligation to prepare sustainability reports. Several companies meeting established criteria are required by the Financial Services Authority (OJK) to prepare sustainability reports to accompany their annual reports (Ika et al., 2022; Zainul et al., 2023).

Disclosure of carbon emissions (Almaeda et al., 2023) is a form of company contribution to environmental change, particularly global warming, which is reported in the annual report and/or sustainability report. Environmental disclosure is regulated in the Statement of Financial Accounting Standards. (PSAK) No. 1 (Revised 2019) in paragraph 14. However, because it is still voluntary, many companies ignore it, even though it will increase capital costs (Bolton & Kacperczyk, 2021).

Carbon emissions by companies in Indonesia remain very low. This creates a gap phenomenon where the energy sector is the largest contributor to national greenhouse gas (GHG) emissions, at 34%, yet related disclosures (sustainability reports) covering carbon emissions are still very low (Halimah & Yanto, 2018; Fajarini et al., 2025). This reflects that companies in Indonesia, particularly those in the energy sector, have not yet fully complied with government policies established through Article 74 of Law No. 40 of 2007 and the Financial Services Authority Regulation. No. 51/POJK.03/2017 on the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies.

Several studies related to transparency in disclosing carbon emissions have a positive impact on corporate environmental performance and reduce financial risk. Carbon emissions disclosure is positively related to corporate environmental performance (García-Sánchez et al., 2022). Carbon emissions disclosure improves environmental accountability and reduces financial risk (Siddique et al., 2021; Wahyuningrum et al., 2025; and Gündüz & Gündüz, 2025).

Institutional ownership is the ownership of shares in a company by financial institutions such as insurance companies, banks, securities firms, and other institutional owners (Cahyaningsih et al., 2022; Dinaroe & Shabrina, 2023). Because the funds invested are third party funds, institutional shareholders will demand that the company comply with all provisions set by the regulator, one of which is related to the implementation and disclosure of sustainability reports as regulated in the

Financial Services Authority Regulation. No. 51/POJK.03/2017 The hope is that the company can send a signal to stakeholders, which will increase share prices, avoid regulatory sanctions, and maintain corporate sustainability. Institutional share ownership has an impact on carbon emissions disclosure. However, this is inconsistent with research conducted (Akhiroh & Kiswanto, 2016; Wahyuningrum et al., 2024).

The government is the party capable of encouraging companies to disclose sustainability reports. State-owned companies are expected to be the driving force behind sustainability reporting. Government-owned companies are often associated with higher levels of compliance. Finding research shows that government ownership has a positive effect on sustainability reporting disclosure (Gunawan & Meiranto, 2020; Acar et al., 2021; Octavio & Wicaksono, 2025). However, research findings by Setiany et al. (2022) shows that government ownership does not affect the disclosure of sustainable reports.

To maintain the sustainability of their investments in Indonesia, foreign shareholders are expected to play a significant role in encouraging companies to disclose sustainability reports. This is in line with research conducted by Nazari et al., (2015); Lasmy et al. (2019); Liou et al. (2023). However but not in line with the research conducted by Harymawan et al. (2020). Environmental performance is a factor that influences carbon emission disclosure (Eleftheriadis & Anagnostopoulou, 2014; Cahyaningsih et al., 2022; Daradkeh et al., 2023; Bose et al., 2024). According to the Ministry of Environment and Forestry, companies targeted for PROPER are those with a significant environmental impact, listed on the stock exchange, export-oriented products, or products utilized by the wider community. Companies with good environmental performance will promote sustainable development, fulfill stakeholder commitments to environmental conservation, comply with environmental laws and regulations, and reduce the negative impacts of their activities on the environment. Furthermore, companies with red and black PROPER ratings will receive written warnings and sanctions from the Ministry of Environment and Forestry. Therefore, companies with good environmental performance will strive to communicate their achievements through sustainability reporting, hoping to improve their image and boost market performance. This is in line with research conducted by Braam et al.

(2016); Akhiroh & Kiswanto (2016); Wibowo et al. (2023).

Financial distress is a variable that moderates the influence of government ownership, institutional ownership, foreign ownership and environmental performance on carbon emission disclosure (Safiullah et al., 2022; Fan et al., 2024; and Qiang et al., 2025). Financial difficulties are a condition that indicates a stage of decline in a company's financial condition that occurs before liquidation or bankruptcy occurs (Putri et al., 2018; Ifada & Indriastuti, 2021; Viana et al., 2022). Relationship between government ownership variables (Ghachem et al., 2022), institutional ownership, foreign ownership (Wulan, 2022) and environmental performance as described above is expected to decline in impact if the company experiences financial difficulties (Fibriani et al., 2022). Therefore, companies experiencing financial distress will place greater emphasis on improving their financial performance due to the numerous incentives that encourage them to prioritize financial performance.

This research contributes to the understanding of the factors influencing carbon emissions in the energy sector, particularly in the context of companies listed on the Indonesia Stock Exchange (IDX). This study aims to determine the financial condition of companies that influence the relationship between government, institutional, and foreign ownership, environmental performance, and carbon emission disclosure. This study also analyzes corporate decision-making, where external factors such as market conditions and internal factors such as company finances can influence each other.

2. Hypothesis Development

Government ownership is often associated with higher compliance with environmental standards, as governments have a vested interest in promoting transparency and environmental responsibility. Government-owned companies tend to face greater pressure to comply with environmental regulations and demonstrate a commitment to carbon emissions management. Ownership and Disclosure Theory suggests that government-owned companies are more likely to provide better environmental disclosure due to stricter regulations and the need to enhance their public reputation. Research by Gunawan & Meiranto (2020); Acar et al. (2021); Octavio & Wicaksono

(2025) shows that shows that government ownership has a positive effect on carbon emission disclosure.

H₁: Government ownership influences carbon emissions disclosure.

Companies with a majority of shares owned by financial institutions demonstrate high institutional ownership. Institutions can exercise control and oversight over company activities. In modern business, institutional investors focus not only on a company's financial performance but also on encouraging management to implement good corporate governance. Institutional investors can encourage companies to disclose sustainability information. This disclosure is a form of corporate responsibility. Institutional ownership influences disclosure of sustainability reports (Zaid et al., 2020; Sakawa et al., 2021; Cohen et al., 2023; Ellili, 2023).

H₂: Institutional ownership influences carbon emissions disclosure.

Foreign investors are often seen as having a commitment to a company, not only in terms of performance but also in terms of good corporate governance. Foreign investors tend to provide significant incentives for management to commit to compliance with applicable regulations. Disclosure of sustainability information by management is one form of good corporate governance. Foreign ownership has a positive effect on sustainability disclosure (Mardini & Elleuch Lahyani, 2021; Wulan, 2022; Döring et al., 2023; and Bedi & Singh, 2025)

H₃: Foreign ownership influences carbon emissions disclosure.

Disclosure of carbon emissions is part of environmental disclosure. Legitimacy theory demonstrates the social relationship between companies and society, where companies require public recognition of their existence. Therefore, companies must carry out social responsibilities as a form of corporate legitimacy. Environmental responsibility is one form of corporate social responsibility. Companies with good environmental performance will strive to demonstrate compliance with norms and social responsibilities. Companies with good environmental performance tend to communicate with the public through carbon emission disclosure. This is done by companies in an effort to gain public legitimacy. Environmental performance has a positive effect on carbon emi-

ssion disclosure (van de Burgwal & Vieira, 2014; Loftus, 2014; Malarvizhi & Matta, 2016; Ahmadi & Bouri, 2017; Ifada et al., 2021).

H₄: Environmental performance influences carbon emissions disclosure.

H₅: Financial distress can moderate the relationship between government ownership and carbon emission disclosure.

H₆: Financial distress moderates the relationship between institutional ownership and carbon emission disclosure.

H₇: Financial distress moderates the relationship between foreign ownership and carbon emission disclosure.

H₈: Financial distress moderates the relationship between environmental performance and carbon emission disclosure.

3. Methods

The research method used in this study is quantitative associative to determine the effect of government ownership, institutional ownership, foreign ownership and environmental performance on carbon emission disclosure with moderating variables on financial distress. The population used in this study is the annual financial reports of the engineering and energy sectors listed on the Indonesia Stock Exchange (IDX) from 2017 to 2021, namely 76 companies or a population (N) of 380. Energy sector companies that have never been frozen and changed sectors during the 2017-2021 period.

Carbon emission disclosure is part of corporate social responsibility (CSR) techniques and is presented in annual reports or sustainability reporting. Carbon emission disclosure also describes techniques for reducing carbon emissions, such as calculating energy expenditure, environmental costs, and regulations. In this study, carbon emission disclosure was measured using content analysis from the Global Reporting Initiative (GRI). This was done by comparing the total disclosed items with the maximum total items that can be disclosed. Carbon emission disclosure in Amaliyah & Solikhah (2019) uses disclosure items from the Global Reporting Initiative (GRI). Systematically, it can be formulated as follows:

$$CED = \frac{\text{Total Score Obtained by the Company}}{\text{Maximum Total Items Poured (7) Items}} \times 100\%$$

Government ownership is the number of technical shares owned by the government over all outstanding shares. Public ownership is equi-

valent to government ownership, which describes the percentage of total share capital owned by the public to the total outstanding shares. The government ownership structure can be measured based on the proportion of shares owned by the government, which can be formulated as:

$$\text{Government Ownership} = \frac{\text{Government Share Ownership}}{\text{Total Outstanding Shares}} \times 100\%$$

Institutional ownership is the percentage of shares owned by institutional shareholders such as mutual funds, engineering and securities, insurance and engineering, financial institutions, and others. Institutional ownership is the percentage of outstanding shares owned by institutional shareholders at the end of the year:

$$\text{Institutional Ownership} = \frac{\text{Institutional Share Ownershi}}{\text{Total Outstanding Shares}} \times 100\%$$

Foreign ownership is the proportion of technical common stock owned by individuals, legal entities, governments, and their foreign-owned parts. The ownership structure of a technique is a very important aspect in determining the performance of the technique and which will later affect the value of the technique. Two aspects that need to be considered in ownership are (1) concentration of ownership by outsiders (outsider ownership concentration) and (2) ownership of techniques and by managers (manager ownership). Foreign ownership is the percentage of ownership of technical shares by foreign investors. Systematically, measurement techniques and foreign ownership can be formulated as follows:

$$\text{Foreign Ownership} = \frac{\text{Share Ownership by Foreign Parties}}{\text{Total Outstanding Shares}} \times 100\%$$

Environmental performance is the technical capability to create a green and clean environment. In Indonesia, environmental performance can be measured using the Corporate Performance Rating Program in environmental management. PROPER is a policy technique implemented by the government through the Ministry of Environment (KLH) to encourage improved technical performance and environmental management through the dissemination of information on technical planning and environmental management performance. The Altman Z-Score method is the most appropriate and accurate method for predicting financial distress, which can be formulated as follows:

$$Z = 1.2 X_1 + 1.4 X_2 + 3.3 X_3 + 0.6 X_4 + 0.999 X_5$$

The data analysis tool in this study uses SmartPLS Version 3.0 software with the analysis technique used in this study being Partial Least Square (PLS).

4. Results

Descriptive Analysis

Based on Table 1, the average carbon emission disclosure is 42.54. This shows that the carbon emission disclosure of energy sector companies is still low. The standard deviation value of carbon emission disclosure is 30.63, meaning that carbon emission disclosure has low data variation or accurate data with the mean, 2) the standard deviation value of government ownership is 27.38, meaning that government ownership has high data variation or inaccurate data with the mean, 3) the standard deviation value of institutional ownership is 8.63, meaning that insti-

tutional ownership has low data variation or accurate data with the mean, 4) the average foreign ownership is 28.12 > 20.00, meaning that foreign ownership in energy sector companies has a significant influence. The standard deviation value of foreign ownership is 23.73, meaning that foreign ownership has low data variation or accurate data with the mean, 5) the average environmental performance is 3.87, meaning that the environmental performance of energy sector companies is in good condition. The standard deviation value of environmental performance is 3.87, which means that environmental performance has low data variation or accurate data with the mean, and 6) the average financial difficulty is 1.90, which means that energy sector companies as a whole are in the gray area. The standard deviation value of financial difficulty is 1.31, which means that financial difficulty has low data variation or accurate data with the mean.

Table 1. Descriptive Analysis

	Min	Max	Mean	St. Deviation
Carbon Emission Disclosure	0.00	100.00	42.54	30.63
Government Ownership	0.00	79.43	15.11	27.38
Institutional Ownership	0.32	37.78	9.00	8.63
Foreign Ownership	2.67	87.08	28.12	23.73
Environmental Performance	0.00	5.00	3.87	1.00
Financial Distress	-0.17	5.10	1.90	1.31

Structural Measurement Evaluation (Inner Model)

The R-square value for the carbon emissions disclosure variable is 0.454, indicating it falls into the weak category. The R-square value for carbon emissions disclosure is 0.454, or 45.4%, indicating that the carbon emissions disclosure variable can be explained by government ownership, institutional ownership, foreign ownership, and environmental performance, as well as the moderating variable financial distress, amounting to 45.4%. The remaining 54.6% can be explained by other variables not included in this study.

The path coefficient estimation test results for each variable show a path coefficient value >0, indicating a positive relationship between each variable and the carbon emissions disclosure variable. Therefore, it can be concluded that this study yields good observations because it has predictive relevance but relatively little for endogenous variables. The quality index test results are obtained by multiplying the root mean of the extracted variance (AVE) of 1.000 by the root mean of

the r-square value of 0.454. The goodness of fit (GoF) calculation above yields a value of 0.674. Therefore, it can be concluded that the model has a high goodness of fit (GoF), and the higher the goodness of fit (GoF), the more accurately it describes the research sample.

Booststrapping, Direct Effect

The results of direct hypothesis testing (*direct effect*) in this research are as table 2. Government ownership has a t-value of 0.544, where $t\text{-value} < t\text{-table}$ or $0.544 < 1.96$ and a significance value of $0.547 > 0.05$. Therefore, the H_1 hypothesis is rejected. This indicates that government ownership has no effect on carbon emission disclosure. Institutional ownership has a t-count of 0.116, where $t\text{-count} < t\text{-table}$ or $0.116 < 1.96$ and a significance value of $0.908 > 0.05$. Therefore, H_2 is rejected, which means that institutional ownership does not have an effect on carbon emission disclosure. The significance value of foreign ownership on carbon emission disclosure is 0.045. This indicates that foreign ownership has a positive ef-

fect on carbon emission disclosure. Therefore, H₃ is accepted, meaning that foreign ownership has an effect on carbon emission disclosure. Environmental Performance has a t-value of 2.688, where the t-value is greater than the t-table or

2.688 > 1.96 and a significant value of 0.007 < 0.05. Therefore, H₄ is accepted, meaning that environmental performance influences carbon emission disclosure.

Table 2. Direct Effect Based on Path Coefficient

	T Statistics (O/STDEV)	P Values
Government Ownership → Carbon Emission Disclosure	0.544	0.547
Institutional Ownership → Carbon Emission Disclosure	0.116	0.908
Foreign Ownership → Carbon Emission Disclosure	2.002	0.045
Environmental Performance → Carbon Emission Disclosure	2.688	0.007

Moderating Effect Test

The results of the hypothesis test of the moderation effect in this study are presented in Table 3. Government ownership has a t-count value of 2.570, where the t-count value < t-table or 2.570 > 1.96 and a significance value of 0.010 < 0.05. Then H₅ is accepted which means financial distress can moderate the relationship between government ownership and carbon emission disclosure. Based on the results of the fifth hypothesis test, it can be concluded that financial distress can moderate the relationship between government ownership and carbon emission disclosure. This is evidenced by the t-count value < t-table or 2.570 > 1.96 and a significance value of 0.010 < 0.05. Institutional ownership has a t-value of 0.065, where the t-value is < t-table or 0.065 <

1.96, and a significance value of 0.948 > 0.05. Therefore, H₆ is rejected, meaning financial distress cannot moderate the relationship between institutional ownership and carbon emission disclosure. Foreign ownership has a t-count of 1.074, where t-count < t-table or 1.074 < 1.96 and a significance value of 0.283 > 0.05. Therefore, H₇ is rejected, which means that financial distress cannot moderate the relationship between foreign ownership and carbon emission disclosure. Environmental performance has a t-count of 1.548, where t-count < t-table or 1.548 < 1.96 and a significance value of 0.122 > 0.05. Then H₈ is rejected, which means that financial distress cannot moderate the relationship between environmental performance and carbon emission disclosure.

Table 3. Moderating Effect, based on Path Coefficient

	T Statistics (O/STDEV)	P Values
Government Ownership: Financial Distress -> Carbon Emission Disclosure	2.570	0.010
Institutional Ownership: Financial Distress -> Carbon Emission Disclosure	0.065	0.948
Foreign Ownership: Financial Distress -> Carbon Emission Disclosure	1.074	0.283
Environmental Performance: Financial Distress -> Carbon Emission Disclosure	1.548	0.122

5. Discussion

The results of the study indicate that government ownership has no effect on carbon emission disclosure. This indicates that the size of government ownership has not been able to encourage management to disclose carbon emissions. The average percentage of government share ownership in energy sector companies listed on the Indonesia Stock Exchange (IDX) is only 15.11%. Financial Services Authority Regulation No. 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies does not encourage companies to disclose their carbon emissions information more widely, as it is

essentially voluntary. Government policies related to carbon emissions have not yet been able to encourage companies to disclose carbon emissions. This indicates that companies' willingness to disclose carbon emissions is still low. The results of the study are in line with research by Alfani & Diyanty (2020); Setiany, Zamzami, & Ahmad (2022); Dwicahyani, Ayu, & Budiasih (2025) where government ownership has no effect on carbon emissions disclosure. However, the findings of this study do not support the findings of other studies by Ina et al. (2024) where government ownership has a positive effect on carbon emissions disclosure.

The research results show that institutional ownership has no effect on carbon emission dis-

closure. Institutional ownership has not been able to influence management to provide sustainability information in the form of carbon emission announcements. This indicates that institutional investors have not been able to encourage company management to disclose carbon emissions. Environmental issues have not become a significant concern for company management. Factors that cause institutional ownership to not have strong pressure on carbon emission disclosure include: (1) The percentage of institutional ownership in energy sector companies listed on the Indonesia Stock Exchange (IDX) is only 9%; (2) The source of money invested by institutional shareholders comes from consumers/the public so that institutional shareholders will tend to be careful in encouraging companies to make decisions to disclose carbon emission information; (3) The process of preparing sustainability reports that include carbon emission disclosures and disseminating carbon emission information results in additional costs that burden the company. The results of this study strengthen the findings of the study by Muhammad & Aryani (2021). However, this study does not support the findings of study by Ghofur & Syafik (2025) where institutional ownership is able to encourage disclosure of carbon emissions. However, this study does not support the findings of study by Cohen et al. (2023) where institutional ownership is able to encourage disclosure of carbon emissions. However, the findings of this study do not support the findings of previous research by Fan et al. (2024); Oyerogba et al. (2025); Bedi & Singh (2025).

The results of the study on the influence of foreign ownership on carbon emission disclosure indicate that foreign ownership has a positive effect on carbon emission disclosure. This indicates that foreign shareholders play an important role in encouraging companies to disclose sustainability reports that include carbon emission disclosure. Factors that influence foreign ownership to encourage management to disclose carbon emissions include: (1) The percentage of foreign ownership in energy sector companies listed on the Indonesia Stock Exchange (IDX) is quite large, namely 29%, so it can provide stronger pressure on the company; (2) Foreign shareholders in Article 15 of Law of the Republic of Indonesia Number 25 of 2007 concerning Investment are required to carry out corporate social responsibility and if this is not fulfilled, they can be subject to administrative sanctions in the form of: (i) written war-

ning; (ii) restrictions on business activities; (iii) freezing of business activities and/or investment facilities; or (iv) revocation of business activities and/or investment facilities. Thus, to maintain the sustainability of their investments in Indonesia, foreign shareholders will give responsibility to company management to carry out corporate social responsibility and disclose sustainability reports as regulated in Financial Services Authority Regulation No. 51/POJK.03/2017. The findings of this study strengthen the findings of the previous study by Jung & Kim (2020); Kim, (2025). However, this study does not support the findings of research by Cahyaningsih & Rahmadiyah (2024).

The research findings indicate that environmental performance influences carbon emission disclosure. This suggests that environmental performance will encourage carbon emission disclosure because companies with good environmental performance will encourage the realization of sustainable development, fulfill stakeholder commitments in environmental conservation efforts, comply with environmental laws and regulations, and reduce the negative impacts of company activities on the environment. Furthermore, energy sector companies listed on the Indonesia Stock Exchange (IDX) are targeted PROPER participants, where companies with red and black PROPER ratings will be given written warnings and sanctions by the Ministry of Environment and Forestry. Therefore, companies will strive to maintain and even improve their environmental performance to avoid these sanctions. Another factor is that one of the PROPER assessment indicators is air pollution, so companies with good environmental performance must have a good carbon emission control mechanism that will be communicated through carbon emission disclosure. The results of this study are in line with research conducted by Prasetya & Yulianto (2018), but does not support the research findings by Akhiroh & Kiswanto (2016).

When the financial performance of energy sector companies listed on the Indonesia Stock Exchange (IDX) is in a healthy condition and there are no symptoms of financial distress, then government ownership can encourage company management through its position as a shareholder and also as a regulator with the regulations it issues without exception for companies to disclose sustainability reports which include carbon emission disclosure, one of which is in accordance with Financial Services Authority Regulation No.

51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies.

The health or otherwise of the financial performance of energy sector companies listed on the Indonesia Stock Exchange (IDX) will not affect foreign shareholders, where foreign shareholders still play an important role in encouraging companies to disclose sustainability reports (Sustainability Reports) which include disclosure of carbon emissions due to foreign shareholders in Article 15 of Law of the Republic of Indonesia Number 25 of 2007 concerning Investment are required to carry out corporate social responsibility and if not fulfilled can be subject to administrative sanctions in the form of: (1) written warnings; (2) restrictions on business activities; (3) freezing of business activities and/or investment facilities; or (4) revocation of business activities and/or investment facilities. Therefore, to maintain the sustainability of their investment in Indonesia, foreign shareholders will give responsibility to company management to carry out corporate social responsibility and disclose sustainability reports as regulated in Financial Services Authority Regulation No. 51/POJK.03/2017.

Where the financial performance of energy sector companies listed on the Indonesia Stock Exchange is healthy or not remains the target of PROPER participants, where companies with red and black PROPER ratings will be given written warnings and sanctions by the Ministry of Environment and Forestry. Therefore, companies must continue to maintain good environmental performance (PROPER blue/green/gold rating), companies with good environmental performance will encourage the realization of sustainable development, fulfill stakeholder commitments in environmental conservation efforts, comply with environmental laws and regulations and reduce the negative impact of company activities on the environment.

6. Conclusion and suggestions

The results show that government ownership and institutional ownership have no effect on carbon emissions disclosure. Foreign ownership and environmental performance have a positive effect on carbon emissions disclosure. Financial distress can support the influence of government ownership on carbon emissions disclosure when a company experiences financial distress. Financial distress moderates the effect of institutional ow-

nership, foreign ownership, and environmental performance on carbon emissions disclosure. This study's contribution is that financial distress moderates the effects of institutional ownership, foreign ownership, and environmental performance on carbon emissions disclosure, regardless of the company's financial condition. The implication of this study is the need to encourage companies to improve their environmental performance and carbon emissions disclosure.

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