E-ISSN: 2963-3699
P-ISSN: 2964-0121
Homepage: Homepage: https://return.publikasikupublisher.com

The Effect of Carbon Emission Disclosure and Environmental Information Disclosure on Company Value With Commissioner Size as Moderation

Fiona Wiryawan
Faculty of Economics and Business, Universitas Trisakti, Jakarta, Indonesia
fionawiryawan99@gmail.com

ABSTRACT

This research aims to determine the effect of disclosure of carbon emissions and environmental information on firm value with board size as a moderating variable. Disclosure of carbon emissions is a form of corporate transparency to shareholders in the context of overcoming global warming and climate change. This is also believed to increase the value of the company in the long term. The population used in this study are non-financial companies at LQ 45 which are listed on the Indonesia Stock Exchange in the period August 2022 to January 2023. This research method is quantitative using purposive sampling. Based on analysis data, the disclosure of carbon emissions and the disclosure of environmental information have significant positive results on the value of the company. On the other hand, the size of the board of commissioners is still unable to moderate the disclosure of carbon emissuons and disclosure of environmental information on the value of the company.

Keywords: *Firm's Value; Carbon Emission Disclosure; Environment Disclosure; Size of The Board of Commissioners; Board Of Commissioners Gender Diversity*

INTRODUCTION

In recent years, global warming has become an important topic of conversation in several companies, because it is associated with climate change which has a significant impact on increasing greenhouse gas emissions. This can be reflected in NASA's statement through *kompas.com* that compares Earth's average surface temperature in 2022 with 2015 (Sakharina et al., 2022). 2022 is the fifth hottest on record and continues the long-term warming trend. In 2022, temperatures on Earth reached 1.6 degrees Fahrenheit, or 0.89 degrees Celsius, above the average for NASA's base period. The results show that Earth's temperature in 2022 is about 2 degrees Fahrenheit, or 1.11 degrees Celsius, warmer than the average of the late 19th century. In addition to climate change, the issue of environmental damage is also one of the negative impacts that occur from the company's operational activities. So that makes the company need to have controls related to sustainable environmental sustainability. It also requires issuers to submit reports on social and environmental responsibility activities in annual reports or sustainability reports, this aims to inform the public about environmental sustainability that has been carried out by the company in carrying out its operational activities. Disclosure of carbon emissions is a form of transparency to shareholders regarding the company's efforts to overcome climate change and global warming, in order to maintain the company's image and value. The more points expressed by the company, it will have a positive effect on the value of the company, because the market is increasingly considering in predicting the sustainability of the company. Disclosure of environmental information is currently also one of the benchmarks for achieving environmental performance improvement, this is reflected in the growth of investment in companies that are socially and environmentally responsible because it can provide attractive investment possibilities. The thing that distinguishes this study from previous studies where adding moderation variables is the size of the board of commissioners, besides that this study also adds variables of gender diversity of commissioners and company size as control variables.

Theoretical and development framework

The theory of legitimacy according to Suchman (Suchman, 1995) in Rismawati (2021) legitimacy is the expectation of a company's actions in accordance with the system of norms and values prevailing in society. This theory arises with the hope of harmony, harmony and balance, so that legitimacy is considered important for the company because it is one of the strategic factors for the sustainability of the company in the future. According (Santoso et al., 2021), legitimacy theory makes norms that develop in society can be used as a basis for companies to carry out business operations that are accepted by the community and maintain their existence. According to Borghei-Ghomi and Leung, (Borghei-Ghomi & Leung, 2013) an effective approach to convey information regarding the company's activities and actions in terms of environmental, social and other corporate issues is through information disclosure. The information that can be conveyed is how the company regulates and estimates the greenhouse gas emissions produced, so that the company can gain legitimacy from the surrounding community. Based on this explanation, the disclosure is a form of action taken by the company to get recognition from the public in order to be able to adjust business processes to the rules or norms that apply in society in the future (Agustia et al., 2019).

Hypothesis Development

Currently, the disclosure of carbon emissions made by companies is one of the indicators of consideration for investors to invest. Because carbon emission disclosure information can be used to predict company sustainability, where the higher the disclosure of carbon emissions made by the company will provide a positive response for investors, it also has an impact on increasing company value. In addition, research conducted by Cahyani (2022) explained that carbon emission disclosure has a positive effect on the value of manufacturing companies in the basic industrial and chemical sectors of the IDX for the 2019-2021 period. Supported by Aryo and Bambang's (Permana & Tjahjadi, 2020) research which explains that higher carbon emission control will create better value for companies and increase the reputation of environmentally responsible companies in exercising their legitimacy. Thus, the hypothesis formed is:

H_1 = Disclosure of carbon emissions positively affects company value

Disclosure of environmental information is one of the consistency carried out by the company towards environmental concern so that it can build trust in the community in corporate social responsibility. This is in line with research conducted by Asrizon et al, (Asrizon et al., 2021) that environmental disclosure has a positive and significant effect on the value of non-manufacturing companies listed on the IDX. This is because companies that voluntarily disclose environmental costs generated by their operational activities can improve the company's image in the future which will also affect the increase in company value conducted by (Rusmana & Purnaman, 2020). Referring to research conducted by (Permana & Tjahjadi, 2020), where companies voluntarily disclose environmental information that has been carried out in order to disclose environmental protection in carrying out their business operations. This is also considered to avoid negative reactions that arise in the market, if the company has bad environmental aspects and does not carry out the principle of legitimacy condsucted by Permana and Tjahjadi (2020). Thus, the hypothesis formed is:

H_2 = Disclosure of environmental information has a *positive* effect on company value

Sometimes management has more internal company information than holders, so there is an information asymmetry between the two parties. This refers to Law No. 40 of 2007 related to the board of commissioners which is a party capable of supervising and providing advice to the board of directors. The size of the board of commissioners in the company is getting bigger, it is expected to be more effective in carrying out its supervisory duties. Disclosure of carbon emissions is one proof of management's accountability to the board of commissioners regarding the company's seriousness in responding to environmental issues, especially related to carbon emissions. This is in line with research conducted by (Liao et al., 2015) and (Yunus et al., 2016) showing that the greater the proportion of commissioners in a company, it is proven that it has a significant influence on companies in disclosing carbon emissions. In line with research conducted by (Jannah & Muid, 2014) which confirms that the larger size of the board of commissioners in the company can create greater pressure on the company's management to disclose it. Thus, the hypothesis formed is:

H_3 = The size of the board of commissioners reinforces the effect of carbon emission disclosure on company value

The Board of Commissioners within the company can provide direction and input to management when the company's management does not carry out positive activities such as disclosure of environmental costs that can increase the legitimacy of the community according to (Rahmawati et al., 2017). In this case, the commissioner is expected to maximize the creation of a balance of interests of various parties. So this is in line with research conducted by Herdi and NR (Herdi & NR, 2020) which explains that the improvement that occurs in the composition of the board of commissioners in the company structure will make the company more concerned about the disclosure of sustainability reports related to the environment. Thus, the hypothesis formed is:

H_4 = The size of the board of commissioners reinforces the effect of environmental information disclosure on company value.

RESEARCH METHOD

The type of research conducted is quantitative research with research variables on carbon emission disclosure, disclosure of environmental information, size of the board of commissioners and company value which is secondary data (Sekaran & Bougie, 2016). The analysis used in this study is a non-financial company listed on LQ 45 on the Indonesia Stock Exchange with a data period of August 2022 to January 2023, sampling is carried out using *purposive sampling* so that the selection of samples based on certain goals and targets is not random. The sample used in this study amounted to 30 companies that met the criteria for reporting financial statements and sustainability reports that presented information related to carbon emission disclosure, environmental information disclosure, board of commissioners size, board of commissioners diversity and company size.

Table 1 Sampling Process

No.	Sample Explanation	Number of Samples
1.	Companies Listed on LQ-45 Indonesia Stock Exchange for the Period August 2022 – January 2023	45
2.	Companies that do not publish a complete Annual Report	(10)
3.	Companies That Do Not Disclose Carbon Emissions and Environmental Information in the Annual Report or Sustainability Report	(5)
Number of companies included in the sample		30
Number of Years of Observation		5
The amount of final data used in the study		150

Source: Data Processing Results, 2023

Operational Definition and Variable Measurement

Dependent Variables

Company Value

Company value which is something that needs to be considered by company management because it is one of the benchmarks for the company's success which is assessed from the company's stock price. This study is measured using Tobin's Q raiso, which is a ratio that is generally used for company value as a form of value of tangible assets and intangible assets, according to Hardiyansah *et al.*, (Hardiyansah et al., 2021).

Independent Variables

Carbon Emissions Disclosure

Disclosure of carbon emissions is a voluntary disclosure made by companies related to handling global warming issues. According to Choi *et al*., (Choi et al., 2013) stated in this case the disclosure of carbon emissions is carried out using the *scoring method* against the carbon emission disclosure index that has been carried out by the company in the annual report. The maximum score achieved is eighteen points and by drinking the score is 0 points. If the company successfully discloses an item in the report, it will be given 1 point for each disclosure. If the company can disclose everything, it will be given a score of 18, and then added in its entirety from the score received.

Table 2 Carbon Emission Disclosure Checklist

Category	Item	Information	Score
Climate Change: Risk of Opportunity	CC1	Assessment/description of risks (specific and general rules/regulations) related to climate change and actions taken to manage those risks.	
	CC2	Current (and future) assessment/description of the financial, business, and opportunity implications of climate change	
Greenhouse Gas Emissions (GHG)	GHG1	Description of the methodology used to calculate greenhouse gas emissions (e.g. GHG protocol or ISO).	
	GHG2	The existence of external verification of the quantity of GHG emissions by whom and on what basis.	
	GHG3	Total emisi gas rumah kaca (metrik CO2 -e) yang dihasilkan.	
	GHG4	Disclosure of scopes 1 and 2, or 3 of direct GHG emissions.	
	GHG5	Disclosure of GHG emissions by origin or source (e.g. coal, electricity, etc.).	
	GHG6	Disclosure of GHG emissions by facility or segment level.	
	GHG7	Comparison of GHG emissions with previous years.	
Energy	EC1	Jumlah energi yang dikonsumsi	

Consumption (EC)		(misalnya tera-joule atau peta-joule).
	EC2	Calculation of energy used from renewable resources
	EC3	Disclosures by type, facility, or segment.
Reduction and Cost (RC)	RC1	Details of plans or strategies to reduce GHG emissions
	RC2	A breakdown of current GHG emission reduction target levels and emission reduction targets.
	RC3	Emissions reductions and costs or savings achieved today as a result of emissions reduction plans.
	RC4	Future emission costs are taken into account in the planning of 94 capital expenditure (capital expenditure planning).
Accountability of Emissions Carbon (AEC)	ACC1	Indication that the board committee (or other executive body) has responsibility for actions related to climate change
	ACC2	Description of the mechanism by which the board (or other executive body) reviews corporate developments related to climate change

Source: Choi et al., (Choi et al., 2013)

Disclosure of Environmental Information

Disclosure of environmental information carried out by companies can build public trust in corporate social responsibility, this makes disclosure of environmental costs can improve the company's reputation in the future (Hadi, 2011).

Moderation Variables

Size of the Board of Commissioners

According to Widyati, this variable is measured using indicators of the proportion of the number of board of commissioners in the company (Widyati, 2013).

Control Variables

Company Size

This study calculates the size of the company based on the natural logarithm of the total assets owned by the company. According to research conducted by Diana & Osesoga (Diana & Osesoga, 2020), using this formula can determine the size of a company.

Gender Diversity Commissioner

To measure the *variable gender diversity*, using the Blau heterogeneity index based on research owned by Kılıç & Kuzey (Kılıç & Kuzey, 2019). The Blau Index has the advantage of considering not one, but all categories. So as to divide the percentage of members of the board of commissioners with female gender to the total gender of men and women in the members of the board of commissioners.

Table 3 Variable Measurement

Variable	Indicator	Measurement Scale
Company Value (Y)	$\text{Tobin's Q} = \frac{\text{Total Market Value} + \text{Total Liabilities}}{\text{Total Assets}}$	Ratio Scale
Size of the Board of Commissioners (Z)	$\frac{\text{Number of Independent Commissioners}}{\text{Number of Board of Commissioners Members}}$	Ratio Scale
Carbon Emission Disclosure (X_1)	$\frac{\text{Total Items Disclosed}}{\text{Total Overall Items}} \times 100\%$	Ratio Scale
Disclosure of Environmental Information (X_2)	$\frac{\text{Total Items Disclosed}}{\text{Total Overall Items}} \times 100\%$	Ratio Scale
Gender Diversity Commissioner (C_1)	$\frac{\text{Number of Female commissioners}}{\text{Total members of the Board of Commissioners}}$	Ratio Scale
Company Size (C_2)	Ln (Total Assets)	Ratio Scale

Source: Previous Research

RESULT AND DISCUSSION

Statistik Deskriptif

According to Ghozali (Ghozali, 2019) in descriptive statistical tests can be seen from the average (mean), middle value (median), values that often appear (mode), standard deviation, maximum value, and minimum value.

Table 4 Statistik Deskriptif

Variable		Mean	Std. Dev.	Min	Max	Observations
np	overall	1.7982	1.265196	.38	6.96	N = 150
	between		1.14691	.508	5.868	n = 30
	within		.5662439	-.2418	3.9122	T = 5
pek	overall	.9005333	.1129161	.74	1.04	N = 150
	between		.0581412	.81	1.01	n = 30
	within		.0972646	.6765334	1.090533	T = 5
pil	overall	.7902	.0508514	.7	.88	N = 150
	between		.0261368	.726	.844	n = 30
	within		.0438301	.7002	.8802	T = 5
udk	overall	6.08	1.463287	4	10	N = 150
	between		1.349943	4	10	n = 30
	within		.606453	2.88	7.88	T = 5
kgk	overall	.7666667	.4243695	0	1	N = 150
	between		.1582955	.4	1	n = 30
	within		.3945943	-.0333333	1.366667	T = 5
up	overall	31.47627	.9482612	29.26	33.66	N = 150
	between		.9299004	29.444	33.522	n = 30
	within		.2402052	30.74427	32.66427	T = 5

Source: Data processed by researchers (Stata-15)

The number of samples taken in this study amounted to 30 companies from diverse industrial sectors, these companies were listed in the LQ 45 greeting period from August 2022 to January 2023 on the Indonesia Stock Exchange for 5 years. The results of descriptive statistics can be seen in table 4 above. The dependent variable is that the company's value has the lowest value of 0.38 obtained at PT Adaro Energy Tbk in 2020 and the highest value of 6.96

at PT Mitra Keluarga Karyasehat Tbk with an average of 1.79 and a standard deviation of 1.26. Furthermore, the first independent variable is the disclosure of carbon emissions with a minimum value of 0.74 obtained by PT Telkom Indonesia (Persero) Tbk in 2018, where the highest value was 1.04 at PT Chandra Asri Petrochemical Tbk in 2020. The average produced in this variable is 0.90 and the standard deviation is 0.11. While the next independent variable, environmental information disclosure, resulted in the lowest value of 0.70 at PT Barito Pacific Tbk in 2020 and the highest value of 0.88 at PT Charoen Pokphand Indonesia Tbk in 2019. The size of the board of commissioners on the moderation variable has the lowest result of 4 and the highest value of 10, where the average is 5 and the standard deviation is 1.46. In the control variable, namely the diversity of the board of commissioners has the lowest value of 0 and the highest of 1, where the resulting average is 0.76 and the standard deviation is 0.42. In the last control variable, the size of the company has a minimum yield of 29.26 and the highest value of 33.66, where the average is 31.47 and the standard deviation is 0.94.

Table 5 Test the hypothesis

Source	SS	df	MS
Model	64.8633269	5	12.9726654
Residual	173.644082	144	1.20586168
Total	238.507409	149	1.60072086

Number of obs	=	150
F(5, 144)	=	10.76
Prob > F	=	0.0000
R-squared	=	0.2720
Adj R-squared	=	0.2467
Root MSE	=	1.0981

np	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pek	1.603341	.8149418	1.97	0.051	-.0074525	3.214135
pil	3.577197	1.773421	2.02	0.046	.0718964	7.082497
udk	.082237	.0670921	1.23	0.222	-.0503756	.2148496
kgk	.1593926	.2140567	0.74	0.458	-.2637065	.5824917
up	-.7007271	.1049664	-6.68	0.000	-.9082011	-.4932531
_cons	18.96171	3.484491	5.44	0.000	12.07435	25.84907

Source: Data processed by researchers (Stata-15)

Based on the hypothesis testing carried out, which can be seen in table 5 which explains that there are 150 observations with the results of the F-count value of 10.76 which reflects that the research model is good because the results have exceeded 2.10. It can also explain that overall carbon emission disclosure variables and environmental information disclosure variables are worth testing against company value. In table 4 can also be known the results of Prob > F of 0.0000 which explains that this study as a whole has a dependent variable, namely the disclosure of carbon emissions and the disclosure of environmental information which is very significant to the independent variable, namely the value of the company because the results are below the limit of 0.5 or 5%.

Table 6 Classical Assumption Test

Variable	VIF	1/VIF
up	1.22	0.816873
udk	1.19	0.839671
pek	1.05	0.955754
kgk	1.02	0.980766
pil	1.00	0.995134
Mean	1.10	

Source: Data processed by researchers (Stata-15)

Table 6 can explain that the *tolerance* value in the variables of company size, board ofcommissioners size, carbon emission disclosure, board of commissioners diversity, and disclosure of environmental information has a result greater than 0.1 and a VIF value greater than 10. This can explain that there is a relationship between independent variables and avoided this study has been free from symptoms of multicollinearity.

Discussion

Carbon Emission Disclosure Positively Affects Company Value

Based on the results of hypothesis testing in table 5, it can be seen that the variable of carbon emission disclosure produces a positive value of 1.97 which explains that the variable has a significant positive effect on the value of the company because it has exceeded the minimum limit set at 1.96. This is in line with research conducted by Aryo and Bambang (2020) which states that carbon emission disclosure has a significant influence on the value of companies in Indonesia. Investors are believed to react positively to carbon emission disclosures because they consider carbon emission disclosures to be used as risk evaluation and consideration in making investment decisions. Voluntary disclosure of carbon emissions by the company can signal to investors that the company is trying to explain transparently the environmental performance it has done according to (Jaggi et al., 2017).

Disclosure of Environmental Information Positively Affects Company Value

Based on table 5, it can be seen that the environmental information disclosure variable produces a positive value of 2.02 which exceeds the minimum limit to be considered significant which is 1.96. So that these results can explain that the disclosure of environmental information has a significant positive effect on the value of the company. This is also in line with research conducted by (Setiadi & Agustina, 2020) which explains that shareholders need information about the evaluation that has been carried out by the company, one of which is related to environmental responsibility. This encourages issuers to disclose environmental information that has been carried out on the negative impacts generated on the company's operational activities according to (Zanra et al., 2020). The more information the company discloses, the more it encourages investors to help work with the company conducted by (Putri & Muid, 2017).

The size of the Board of Commissioners strengthens the effect of carbon emission disclosure on company value

The results obtained in table 5 explain that the size of the board of commissioners cannot strengthen the effect of carbon emission disclosure on company value. This is reflected in the results of the hypothesis test which resulted in a positive value of 1.23 which has not exceeded the minimum limit of 1.96, the results can also explain that the number of boards of commissioners contained in the company may not necessarily be able to carry out effective supervision to encourage companies to disclose carbon emissions transparently. This is in line with research researched by (Prayanthi & Laurens, 2020) which states that the size of the board of commissioners in companies does not affect the disclosure of carbon emissions, because of the tendency of the board of commissioners to assume that if they do not disclose carbon emissions completely, they will not harm the company.

The size of the Board of Commissioners strengthens the effect of environmental information disclosure on company value

The results obtained in table 5 explain that the size of the board of commissioners cannot strengthen the effect of environmental information disclosure on company value. This is reflected in the results of the hypothesis test which resulted in a positive value of 1.23 which has not exceeded the minimum limit of 1.96, where the board of commissioners at a company does not fully support the disclosure of environmental information it does. This is due to the assumption of the board of commissioners which states that the disclosure of environmental information carried out will not provide monetary benefits or even harm to the company. In addition, the board of commissioners at the company still feels that the disclosure of environmental information has not been fully effective as a signal to capital market participants.

Gender Diversity of the Board of Commissioners and Company Size to Company Value

The control variable in this study is the gender diversity of the board of commissioners and the size of the company, where based on hypothesis testing in table 5 it is known that the gender diversity variable of the board of commissioners has a positive result of 0.74. This result does not exceed the minimum limit considered significant at 1.96, so that it can explain that the gender diversity of the board of commissioners cannot control the disclosure of carbon emissions and disclosure of environmental information on company value. This is different from the variable company size which has a negative result of 6.68, so it can explain that the larger company size may not necessarily be able to control the disclosure of carbon emissions and the disclosure of environmental information on company value. Although it has a significant effect on the value of the company, the variable size of the company is inversely proportional to the value of the company.

CONCLUSION

Based on the analysis and discussion above, it can be concluded that the issue of global warming is an important topic of discussion among investors today in making decisions to invest. Although the government has made efforts to formulate regulations in order to make it easier for companies to make disclosures related to environmental issues transparently, there are still some companies that have not fully voluntarily made disclosures related to environmental issues. Based on the results of the test above, a conclusion can be drawn that the disclosure of carbon emissions and the disclosure of environmental information have significant positive results on the value of the company. Although the size of the board of commissioners is still unable to moderate the disclosure of carbon emissions and disclosure of environmental information on the value of the company. The limitation of this study is the use of samples consisting of diverse companies, so that in future studies it can expand to industrial sectors that have environmental sensitivity so that the variables tested can have a significant effect. Furthermore, this research still only focuses on carbon emission disclosure and environmental information disclosure, for future researchers may be able to expand to environmentally related certifications such as ISO 14001.

REFERENCES

Agustia, D., Sawarjuwono, T., & Dianawati, W. (2019). The Mediating Effect of Environmental Management accounting on Green Innovation : Firm Value Relationship. *International Journal of Energy Economics and Policy*, *9*(2), 299–306. Google Scholar

Asrizon, R., Asmeri, R., & Yuli, A. (2021). Pengaruh Kinerja Lingkungan dan Pengungkapan Lingkungan Terhadap Nilai Perusahaan (Studi Empiris pada Perusahaan Non Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode Tahun 2015-2017). *Pareso Jurnal (Jurnal Pengembangan Ilmu Akuntansi & Keuangan)*, *3*(2). Google Scholar

Borghei-Ghomi, Z., & Leung, P. (2013). An Empirical Analysis of the Determinants of Greenhouse Gas Voluntary Disclosure in Australia. *Accounting and Finance Research*, *2*(1), 110–127. https://doi.org/10.5430/afr.v2n1p110 Google Scholar

Choi, B. B., Lee, D., & Psaros, J. (2013). An analysis of Australian company carbon emission disclosures. *Pacific Accounting Review*, *25*(1), 58–79. https://doi.org/10.1108/01140581311318968 Google Scholar

Diana, L., & Osesoga, M. S. (2020). Pengaruh Likuiditas, Solvabilitas, Manajemen, dan Ukuran Perusahaan terhadap Kinerja Keuangan. *Urnal Akuntansi Kontemporer*, *12*(1), 20–34.

Ghozali, I. (2019). *Multivariate Analysis Applications*. Universitas Diponegoro. Google Scholar

Hadi, N. (2011). *Corporate Social Responsibility*. Graha Ilmu. Google Scholar

Hardiyansah, M., Agustin, A. T., & Purnamawati, I. (2021). The Effect of Carbon Emission Disclosure on Firm Value: Environmental Performance and Industrial Type. *Journal of Asian Finance, Economics and Business*, *8*(1), 123–133. Google Scholar

Herdi, F., & NR, E. (2020). Pengaruh Profitabilitas, Leverage, Dan Komposisi Dewan Komisaris Independen Terhadap Pengungkapan Corporate Social Responsibility. *Jurnal Eksplorasi Akuntansi*, *2*(1), 2428–2444. https://doi.org/10.24036/jea.v2i1.221 Google Scholar

Jaggi, B., Allini, A., Macchioni, R., & Zampella, A. (2017). Do investors find carbon information useful? Evidence from Italian firms. *Review of Quantitative Finance and Accounting*. https://doi.org/10.1007/s11156-017-0653-x Google Scholar

Jannah, R., & Muid, D. (2014). Analysis of the factors that influence carbon emission disclosure in companies in Indonesia. *Diponegoro Journal of Accounting*, *3*(2), 1–11. Google Scholar

Kılıç, M., & Kuzey, C. (2019). The effect of corporate governance on carbon emission disclosures. *International Journal of Climate Change Strategies and Management*, *11*(1), 35–53. https://doi.org/10.1108/IJCCSM-07-2017-0144 Google Scholar

Liao, L., Luo, L., & Tang, Q. (2015). Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *The British Accounting Review*, *47*(4), 409–424. https://doi.org/10.1016/j.bar.2014.01.002 Google Scholar

Permana, A. B. S., & Tjahjadi, B. (2020). Pengaruh Pengungkapan Lingkungan dan Karbon terhadap Nilai Perusahaan. *E-Jurnal Akuntansi*, *30*(4), 932. https://doi.org/10.24843/EJA.2020.v30.i04.p11 Google Scholar

Prayanthi, I., & Laurens, C. N. (2020). Pengaruh Dewan Direksi, Komisaris Independen, dan Komite Audit Terhadap Kinerja Keuangan pada Sektor Makanan dan Minuman. *Klabat Journal of Management*, *1*(1), 66. https://doi.org/10.60090/kjm.v1i1.450.66-89 Google Scholar

Putri, R. K., & Muid, D. (2017). Pengaruh Good Corporate Governance terhadap Kinerja Perusahaan. *Diponegoro Journal of Accounting*, *6*(3), 84–92. https://ejournal3.undip.ac.id/index.php/accounting/article/view/18224 Google Scholar

Rahmawati, I., Rikumahu, B., & Dillak, V. J. (2017). Pengaruh Dewan Direksi, Dewan Komisaris, Komite Audit Dan Corporate Social Responsibility Terhadap Kinerja Keuangan Perusahaan. *JAE: Jurnal Akuntansi Dan Ekonomi*, *2*(2), 54. https://doi.org/10.29407/jae.v2i2.866 Google Scholar

Rusmana, O., & Purnaman, S. M. N. (2020). Pengaruh Pengungkapan Emisi Karbon dan Kinerja Lingkungan terhadap Nilai Perusahaan. *Jurnal Akuntansi Bisnis Dan Akuntansi*, *22*(1). Google Scholar

Sakharina, I. K., Patittingi, F., Halim, H., Napang, M., Sumardi, J., Inggit, A. B., & Hendrapati, M. (2022). Sinking or Not? An Indonesian Approach to Prevent the Rise of Sea Levels due to Global Warming. *ASEAN International Law*, 649–665. Google Scholar

Santoso, E. B., Ismawati, A. F., & Laturette, K. (2021). *Tinjauan Tanggung Jawab Sosial Perusahaan : Studi di Malaysia*. CV. Budi Utama. Google Scholar

Setiadi, I., & Agustina, Y. (2020). Pengungkapan Lingkungan, Profitabilitas dan Nilai Perusahaan. *Kompartemen: Jurnal Ilmiah Akuntansi*, *17*(2). https://doi.org/10.30595/kompartemen.v17i2.5807 Google Scholar

Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *Academy of Management Review*, *20*(3), 571–610. https://doi.org/10.5465/amr.1995.9508080331 Google Scholar

Widyati, M. F. (2013). Pengaruh Dewan Direksi, Komisaris Independen, Komite Audit, Kepemilikan Manajerial dan Kepemilikan Institusional Terhadap Kinerja Keuangan. Jurnal Ilmu Ekonomi (JIE), 1(1), . *Jurnal Ilmu Manajemen*, *1*(1), 234–249. Google Scholar

Yunus, S., Elijido-Ten, E., & Abhayawansa, S. (2016). Determinants of carbon management strategy adoption. *Managerial Auditing Journal*, *31*(2), 156–179. https://doi.org/10.1108/MAJ-09-2014-1087 Google Scholar

Zanra, S. W., Tanjung, A. R., & Silfi, A. (2020). The Effect of Good Corporate Governance Mechanism, Company Size, Leverage and Profitability for Carbon Emission Disclosure with Environment Performance as Moderating Variables. Bilancia: Jurnal Ilmiah Akuntansi. *Bilancia : Jurnal Ilmiah Akuntansi*, *4*(2), 148–164. Google Scholar