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THE IMPACT OF GREEN ACCOUNTING AND ENVIRONMENTAL PERFORMANCE ON FINANCIAL PERFORMANCE AND CORPORATE GOVERNANCE AS A MODERATING VARIABLE IN ENERGY COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE 2020-2024

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ABSTRACT

This research aims to 1) determine the effect of green accounting and environmental performance on the performance of energy companies listed on the Indonesia Stock Exchange from 2020 to 2024. 2) To find out the effect of governance in moderating green accounting and environmental performance on the performance of energy companies listed on the Indonesia Stock Exchange from 2020 to 2024. The research method uses descriptive quantitative analysis with secondary data. The analysis tool for this research is conducted using the PLS (Partial Least Squares) approach with an outer model and inner model measurement using Smart PLS 3 software. The results of the research show that green accounting and environmental performance have an impact on the financial performance of energy companies listed on the Indonesia Stock Exchange from 2020 to 2024. Meanwhile, governance does not affect financial performance in energy companies listed on the Indonesia Stock Exchange from 2020 to 2024. Governance does not moderate the influence of Green accounting and environmental performance on financial performance in energy companies listed on the Indonesia Stock Exchange from 2020 to 2024.

Keywords: green accounting, environmental performance, governance, and corporate performance

1   INTRODUCTION

The energy industry is a major contributor to the economy in Indonesia. However, in reality, as explained by Sigit Reliantoro, the Secretary of the Directorate General of Environmental Control, the understanding of energy companies regarding a good and healthy environment is still relatively low (Purnama and Wardani, 2022). Environmental issues are one of the topics widely discussed in various countries. Currently, almost all countries are starting to pay significant attention to the issue of environmental degradation (Bahri, 2019). Various environmental problems currently being faced include global warming, carbon emissions, greenhouse gas emissions, and industrial waste. On the other hand, the increase in the number of industries correlates with the scale of environmental damage. This is because industrial activities produce very hazardous waste and remnants of production raw materials (Akbar and Donoriyanto, 2023).

This environmental pollution case is not only revealed in terms of the living environment but can also be viewed from various aspects, such as the aspect of environmental accounting reporting, because fundamentally the government has enacted Law No. 40 of 2007 concerning limited liability companies, particularly in articles 66 and 74 regarding social and environmental responsibility. The implementation of green accounting in companies can improve environmental performance which ultimately leads to an increase in financial performance with environmental benefits that can be managed and preserved well in accordance with government regulations. Current development is directed towards development that balances environmental, economic, and social aspects or sustainable development (Amaliyah and Solikhah, 2019).

A company is one form of organization that conducts activities using natural resources. Profit-oriented companies will strive to utilize available resources to the maximum extent to obtain profits for their survival. This activity impacts environmental issues, thus it is essential for a company to incorporate environmental cost factors in maximizing the potential for environmental sustainability. The environment is a social responsibility of the company in addition to activities aimed at obtaining profits (Ikhsan, 2017)..

Viewed from the context of economic and financial activities, environmental maintenance in companies is carried out in the reporting of environmental cost accounting. This reflects the company's concern and social responsibility towards the environment by allocating part of its finances for environmental control. Law Number 23 of 1997 on Environmental Management states: "Environmental pollution is the entry or incorporation of living organisms, substances, energy, and/or other components into the environment by human activities, causing a decrease in its quality to a certain level that makes the environment unable to function according to its purpose (Andreas, 2016).

The use of environmental accounting concepts by companies can enhance their ability to minimize environmental issues they face. Many large industrial and service companies are now implementing environmental accounting to improve the efficiency of environmental management by assessing environmental activities from the perspective of costs and benefits or effects. As times change, companies can no longer just focus on profit; there are three criteria for a company's success: Economic, social, and environmental. Therefore, sustainable companies pursue not only financial profits and increased shareholder value but ideally achieve this through a broad framework encompassing economic, social, environmental, and ethical values. The Triple Bottom Line concept implies that companies should prioritize the interests of stakeholders (all parties affected or involved in the activities conducted by the company) over shareholders. The Triple Bottom Line concept is summarized into three parts: profit - how the company generates financial gain, people - how the company brings benefits to workers, laborers, and the community, and planet - how the company strives to create a business that is in harmony with nature and minimizes negative impacts on the environment (Andreas, 2018).

Environmental accounting has become a concern for accountants, the concept of environmental accounting has actually developed since the 1970s in Europe and has increased in the 1990s in Indonesia. Environmental accounting is a term associated with policies to incorporate environmental costs into corporate accounting practices or government systems. Companies must also include environmental costs as a responsibility in preserving environmental sustainability (Suwardjono, 2019).

Environmental costs are costs incurred due to the deterioration of environmental quality as a result of corporate activities. Environmental costs must be presented separately from financial statements, so companies must create specific environmental cost reports to provide relevant information for both the company and external parties as guidelines in decision-making regarding the existing environmental impacts. Environmental cost accounting is a planned cost

accounting strategy that is not centered on accounting for environmental maintenance costs, but rather minimizes the potential environmental impacts that may occur. Therefore, in the process of allocating environmental costs, it should be systematically organized and presented correctly and accurately. The following are the stages of environmental cost location: (1) Identification, (2) Measurement, (3) Recognition, (4) Presentation, (5) Disclosure (Andreas, 2018).

Environmental performance is a measurable outcome of an environmental management system, which is related to the control of environmental aspects. Environmental performance shows the result of the interaction of a company/organization with its surrounding environment. To measure a company's environmental performance, the Indonesian government through the Ministry of Environment and Forestry has created the Corporate Performance Rating Management Program in Environmental Management (PROPER) with the aim of improving corporate environmental management performance according to the regulations set forth in the laws (Aqila, 2020).

The Company Performance Rating Assessment Program is called PROPER in Environmental Management. The history of PROPER began in 1998 when the government launched PROKASIH (Clean Love Program), which is the forerunner of PROPER and was established based on the Decree of the Minister of Environment Number 35 of 1995. PROPER assessment also serves as an environmental tool that can encourage businesses to comply with environmental regulations, implement resource use efficiency, empower communities, and innovate in environmental management (PROPER Publication, 2015). The PROPER ratings given to companies consist of five categories: Gold, Green, Blue, Red, and Black.

Financial performance measured through profitability is a ratio that measures the return level of a business on all existing assets. This ratio reflects the efficiency of the funds used in the company. Return On Assets (ROA) is chosen because it is an indicator of a company's success in managing the wealth it owns, so that an increase in return on assets (ROA) reflects the company's performance in managing its wealth, thus being able to generate profits or earnings (Sagoro, 2017)..

The energy sector consists of companies that produce products and services related to the extraction of non-renewable energy. Profit revenues are influenced by world commodities, such as: energy, oil, natural gas, and coal. The energy sector is one of the main industrial sectors in the global economic order. In most cases, the energy sector makes a dominant contribution to the economic development of both developed and developing countries, including Indonesia. This is what enables the energy sector to attract national and international investors. The emergence of various issues in the energy field, such as excessive exploitation of nature not accompanied by efforts to restore the environment, like waste or factory pollution, can lead to negative impacts on the natural environment.

Companies need a system to guide performance and determine policies related to their business, which is why corporate governance is necessary. The future performance of the company will benefit from the establishment of corporate governance. Generally, corporate governance reflects the company's responsibility to the surrounding community, thus the existence of the company is expected to contribute to the welfare of the community and the sustainability of the surrounding environment. According to Ainy and Barokah (2019), businesses with effective governance will operate more efficiently because their operations are closely monitored. The appointment of the company's board of directors requires careful selection so that once appointed, individuals possess the integrity to develop the business and prioritize reporting on environmental performance.. This is very important to be implemented because every company policy greatly depends on the company leadership; with a leader who has integrity, the company will have good governance.

The implementation of corporate governance will be realized through shareholders who participate in appointing the board of directors and the board of commissioners at the General Meeting of Shareholders. The authority and obligation to ensure the company's sustainability in the future rests with the board of directors and the board of commissioners. According to Hariati and Rihatiningtyas (2015), the proportion of independent commissioners positively affects environmental performance, thus corporate governance will encourage environmental performance. The implementation of the functions and obligations of independent commissioners while maintaining independence that does not specifically favor majority shareholders but encompasses all minority shareholders is an attitude that independent commissioners must possess.

The improvement of environmental performance will be a fundamental factor that will directly drive the company's value. Therefore, agency theory explains that any form of fraud committed by agents will affect the company's value. The

actions that must be taken to minimize fraud are through supervision (monitoring) by realizing good corporate governance. With corporate governance, all forms of company performance reports will be more transparent, and this information can be trusted, thereby encouraging an increase in company value. The company's responsibility to society and the environment will be reflected in the performance reports it presents. The company's business growth will drive an increase in the production activities of the company's goods, which will cause environmental damage if the production process does not involve proper waste treatment during waste disposal.

There are several differing opinions where research conducted by Hannisa Rahmadani Hapsari, Bambang Setyobudi Irianto, and Hijro Rokhayati (2021) found that environmental costs have a positive impact on profitability and environmental performance. Research conducted by Rifli Saputra, Monang Situmorang, and Haqi Fadillah (2022) found that environmental performance, environmental costs, and environmental disclosure affect profitability. Research conducted by Bella Gita Aditya (2020) found that environmental costs have a significant negative impact on the level of profitability. From the research conducted by Rizka Dwi Ayunin Tisna (2020), it was found that simultaneously, the environmental performance variable and environmental cost have a significant effect on profitability. Partial testing shows that the environmental performance variable does not affect profitability, while the environmental cost variable has a significant negative effect on the profitability of manufacturing companies. From the research conducted by Shella Gilby Sapulette (2021), it was found that the green accounting variable does not affect company value, while the environmental performance variable has a significant effect on the company value variable.

With the existence of established waste disposal procedures based on the principle of caution in waste processing and disposal, the purpose of creating an Environmental Impact Assessment (AMDAL) can be perfectly achieved. However, in practice, the use of AMDAL in companies is still massive and challenging to implement, as companies that comply with AMDAL usage tend to face increased costs for waste processing, prompting them to avoid proper waste disposal practices. Compliance and realization of AMDAL are expressions of the company's commitment to social and environmental concerns. The increased obligations of companies towards environmental sustainability are a driving factor in enhancing the company's financial performance, as it fosters a positive perception from the public regarding the company's responsibility towards the environment.

The company's performance will be driven by positive public opinion, which will make it easier for the public to accept the company's products and encourage an increase in sales. Financial performance, measured through profitability, will improve along with the increase in sales over time. The company's value will also rise if everything goes well. To support investors' interest in investing their funds in the company, important aspects of evaluation include increasing the company's value, good corporate governance, and environmental responsibility.

This study contributes to the sustainability and accounting literature by focusing on energy companies, an environmentally sensitive sector that remains relatively underexplored in green accounting research. It provides contextual novelty by examining the post-pandemic period (2020–2024), during which sustainability disclosure and corporate governance practices have evolved in response to regulatory and stakeholder pressures. Importantly, the study offers a theoretical contribution by showing that corporate governance does not moderate the relationship between green accounting, environmental performance, and financial performance, thereby challenging the prevailing assumption that governance mechanisms uniformly strengthen ESG–performance linkages..

2   LITERATURE REVIEW

2.1   Green Accounting

The concept of green accounting in a company highly depends on the characteristics of understanding environmental issues. Understanding environmental issues will guide the company in its policies, especially regarding environmental safety. According to Andreas (2018), green accounting is an accounting effort to connect the environmental budgeting side with business operating funds. Green accounting can enhance environmental performance, control costs, invest in environmentally friendly technology, and promote environmentally friendly product processes.

2.2   Corporate governance

Corporate governance is a set of rules that defines the relationships among shareholders, managers, creditors, the government, employees, and both internal and external stakeholders in relation to their rights and responsibilities (Bahri,

S, 2019). The OECD (Organisation for Economic Cooperation and Development) defines corporate governance as the processes and structures for managing company operations, as well as the values underpinning good corporate governance while considering the needs of stakeholders, and the narrow relationship between shareholders, the board of directors, and the board of commissioners to achieve a company's goals. This enables the company to comply with applicable regulations that support its sustainability (Simon, Putri, and Rosel, 2023).

2.3   Environmental Performance

The concept of environmental performance refers to the amount of environmental damage caused by business activities. Environmental performance is how a company performs in contributing to the preservation of the environment. Environmental performance is evaluated in the form of rankings by an agency, namely the Ministry of Environment, assessed through the PROPER rating (Ikhsan, Arfan, 2017). The environmental performance of companies is evaluated based on the assessment criteria issued by the Ministry of Forestry and Environment (KKLH). The Program for Environmental Management Performance Rating (PROPER) conducted by the Ministry aims to assess and rank companies' compliance in carrying out their environmental performance (Ikhsan, Arfan, 2017).

2.4   Conceptual Framework and Theoretical Framework

This study integrates stakeholder, legitimacy, and agency theories to explain the relationships among green accounting, environmental performance, corporate governance, and financial performance. Green accounting enhances transparency in environmental cost reporting and reflects corporate responsibility, which strengthens stakeholder trust and corporate legitimacy. Improved trust from stakeholders, including investors and regulators, can positively influence a firm's reputation and market acceptance, thereby enhancing financial performance. From an agency theory perspective, corporate governance functions as a monitoring mechanism that reduces managerial opportunism and ensures that sustainability practices are implemented effectively rather than symbolically. Accordingly, corporate governance is expected to moderate the relationship between green accounting, environmental performance, and financial performance by influencing the credibility and effectiveness of sustainability implementation; however, in highly regulated sectors such as energy, this moderating role may be less pronounced due to strong external regulatory enforcement.

2.5   Financial Performance

According to Kasmir (2018), profitability is the ability of a company to generate profits in terms of sales, total assets, and private equity. A company with high profits indicates good performance and vice versa. To increase profits, companies can effectively and efficiently manage their resources. According to Kasmir (2018), the profitability ratio is a ratio used to assess a company's ability to seek profits. This ratio also benefits the level of management effectiveness of a company. Essentially, the use of this ratio indicates the efficiency of the company.

3   METHODOLOGY

Quantitative research methods can be interpreted as research methods based on positivist philosophy, used to study a specific population or sample, collecting data using research instruments, with data analysis being quantitative/statistical, aimed at testing the hypotheses that have been established (Ghozali, 2018). The object of this research is energy sector companies listed on the Indonesia Stock Exchange during the period 2020-2024. The analyzed data includes the companies' sustainability reports, financial statements obtained from the official website of the Indonesia Stock Exchange and also from the companies' official websites. Of the 51 companies studied, there are 23 companies that can be selected as samples for this research.

Data analysis was conducted using the Partial Least Square (PLS) method. PLS is a multivariate statistical technique that compares multiple dependent variables and multiple independent variables. PLS is one of the variant-based SEM statistical methods designed to solve multiple regression when specific problems occur in the data, such as small sample sizes, the presence of missing data, and multicollinearity (Ghozali, 2016).

The selection of the PLS method is based on the consideration that this study involves three latent variables formed with formative indicators and creates moderating effects. The formative model assumes that the construct or latent

variable influences the indicators, where the direction of causality is from the construct to the indicators or manifest (Ghozali, 2016). Furthermore, Ghozali states that the formative model assumes that the indicators affect the construction, where the direction of causality is from the indicators to the construct (Ghozali, 2016). The PLS approach shifts the analysis of parameter estimation model measurement to relevant prediction measurement. Thus, the focus of the analysis shifts from merely estimating and interpreting significant parameters to the validity and accuracy of predictions.

This research uses Partial Least Squares (PLS) as the analysis technique. PLS is a Structural Equation Modelling (SEM) model with a variance-based approach. According to Ghozali (2016), PLS is an alternative approach that shifts from the covariance-based Structural Equation Model (SEM) to a variance-based approach. Partial Least Squares (PLS) is a robust analysis method that does not rely on many assumptions. The approach in Partial Least Squares does not assume specific types of data. It can be nominal, categorical, ordinal, interval, or ratio. Data analysis is performed using Smart PLS software that utilises the bootstrapping method or random duplication. This PLS technique is divided into two stages: 1) Measurement model test, to examine the validity and reliability of each indicator's design. 2) Structural model test, to determine whether there is an influence between variables among constructs.

4   FINDINGS AND DISCUSSION

4.1 Results of PLS-SEM Analysis

**Testing the Measurement Model or Outer Model**
The test of this measurement model is carried out to ensure that the measurement used is appropriate or suitable to be used as a measure (valid and reliable).

Validity Test
Convergent validity is an indicator measured based on the correlation between the component score or item score with the construct value, thus creating a loading factor value. The desired value is considered high if the correlation is > 0.70 (Ghozali, 2016). Below is an image of the results of the SEM PLS model calculation.

Figure 1
PLS Model 1 Initial Research Model
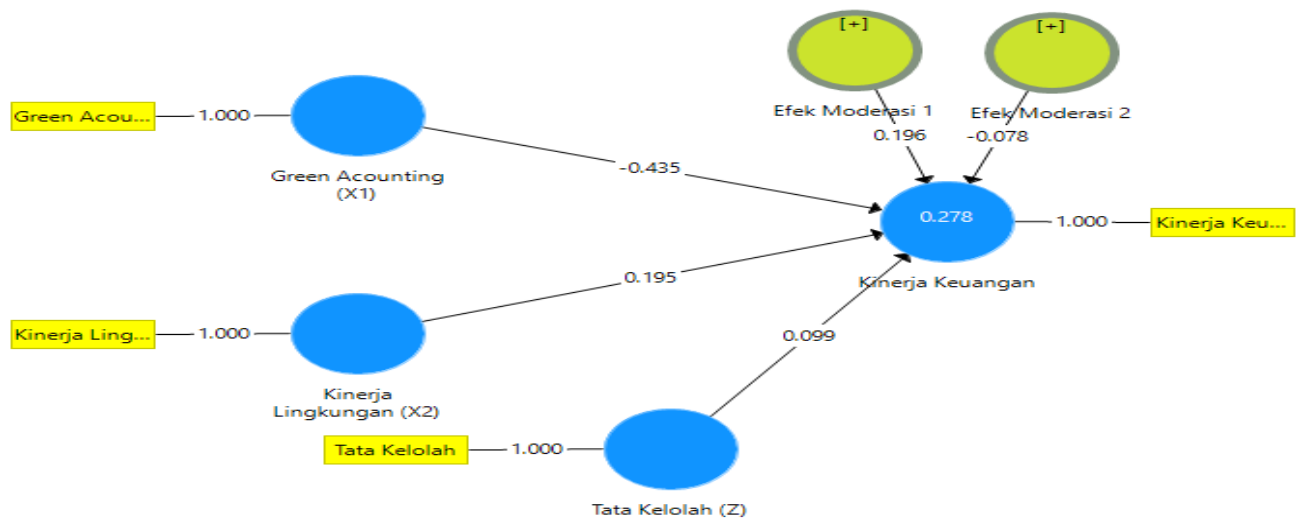
Description
X1 = Green Accounting
X2 = Environmental Performance
Z = Governance
Y = Financial Performance
Source: Data processed, 2025

Based on Figure 1, the results of the calculations on the initial research model using Smart PLS 3 application, here are the loading factor values from the first calculation.:

Table 1
Loading Factor Value

Matrix	Moderation Effect 1	Moderation Effect 2	X_1	X_2	Y	Z
X_1			1.000			
X_2				1.000		
Y					1.000	
Z						1.000
X_1*Z	1.007					
X_2*Z		0.785				

Source: Data processed, 2025

Based on Table 1, the results of the preliminary research model calculations can be seen. From the figures and tables, several loading factor values are greater than the 0.70 threshold used for loading factors. The Green Accounting variable (X1) is categorized as passed because its loading factor value is 1.000 > 0.70. The Environmental Performance variable (X2) is categorized as passed because its loading factor value is 1.000 > 0.70. The Financial Performance variable (Y) is categorized as passed because its loading factor value is 1.000 > 0.70. The Governance variable (Z) is categorized as passed because its loading factor value is 1.000 > 0.70. Meanwhile, for Moderation Effect 1, which is Green Accounting * Governance (X1*Z), it is categorized as passed because its loading factor value is 1.007 > 0.70. Additionally, for Moderation Effect 2, which is Environmental Performance * Governance (X2*Z), it is categorized as passed because its loading factor value is 0.785 > 0.70. so that the loading factor values for each variable on Green accounting variable (X1), Environmental Performance (X2), Financial Performance (Y), and Governance (Z) in the above model are categorized as valid.

Test Average Variance Extracted

To assess Discriminant Validity, we can look at the Average Variance Extracted (AVE) method for each latent variable. If the square root of the AVE for each construct is greater than the correlation between two constructs in the model, then the model's identification is more valid. In this study, the AVE values for each construct are shown in the following images and tables:

Table 2
Average Variance Extracted (AVE) value

Variable	Average Variance Extracted (AVE)
Moderation Effect 1	1.000
Moderation Effect 2	1.000
Green accounting (X_1)	1.000
Environmental Performance (X_2)	1.000
Financial Performance (Y)	1.000
Governance (Z)	1.000

Source: Data processed, 2025

Table 2 shows that the AVE value of each construct is greater than 0.50. Therefore, there is no problem with the convergent validity of the tested model, and this research model has good Discriminant Validity.

Test Discriminant Validity

Discriminant Validity is a measurement model with reflective indicators that is evaluated based on cross-loading measurements with constructs. If the correlation of the construct with the element to be measured is greater than the size of other constructs, this indicates that the block measurement is better than other block measurements. The following table shows the results of Discriminant Validity using cross-loading scores.

Table 3

Discriminant Validity Value

Matrix	Moderation Effect 1	Moderation Effect 2	X_1	X_2	Y	Z
X_1	0.193	-0.021	**1.000**	-0.087	-0.431	-0.187
X_2	-0.017	-0.328	-0.087	**1.000**	0.243	-0.061
Y	0.111	-0.072	-0.431	0.243	**1.000**	0.165
Z	0.066	0.264	-0.187	-0.061	0.165	**1.000**
X_1*Z	**1.007**	0.088	0.193	-0.017	0.111	0.066
X_2*Z	0.088	**0.785**	-0.021	-0.328	-0.072	0.264

Source: Data processed, 2025

The cross loading results in Table 3 indicate that the loading values of each indicator aregreater than the cross loading values. Based on the table above, it can be seen that the cross loading values of each indicator with its variable are greater than those of other variables, thus it can be concluded that the discriminant validity is stated to be good.

Reliability Test

Reliability is an index that indicates the extent to which a measurement can be trusted or relied upon. This test is used to estimate the consistency of respondents in answering questionnaires. The alpha coefficient or Cronbach's Alpha and composite reliability are used to measure the level of reliability of research variables. A variable can be said to be reliable if it has a Composite Reliability value greater than 0.7 (Ghozali & Latan, 2015).

Composite Reliability Test

The output results of SmartPLS for Composite Reliability are shown in the table below.:

Table 4

Composite Reliability Value

Variable	Composite Reliability
Moderation Effect 1	1.000
Moderation Effect 2	1.000
Green accounting (X_1)	1.000
Environmental Performance (X_2)	1.000
Financial Performance (Y)	1.000
Governance (Z)	1.000

Source: Data processed, 2025

Based on Table 4, it shows that the composite reliability value is greater than 0.7, meaning that the reliability in this study is met or stated as reliable.

Cronbach's Alpha Test

The output results of SmartPLS for Cronbach's Alpha are shown in the table below:

Table 5

Cronbach's Alpha value

Variable	Cronbach's Alpha
Moderation Effect 1	1.000
Moderation Effect 2	1.000
Green accounting (X_1)	1.000
Environmental Performance (X_2)	1.000
Financial Performance (Y)	1.000
Governance (Z)	1.000

Source: Data processed, 2025

Based on table 5, it shows that the Cronbach's Alpha values for each latent variable are all greater than 0.70. A construct is stated to be reliable if the Cronbach's Alpha value is greater than 0.70. Therefore, it indicates that all constructs have good reliability in accordance with the minimum required value.

Testing the Structural Model or Inner Model
After testing the measurement model (outer model), the next step is to test the structural model (inner model), which includes R-Squared test, Q-square test, and t-test.

Test of Coefficient of Determination (R^2)
The R^2 value is used to see how much the variability of the dependent variable can be explained by the independent variable.

Table 6
R-Square value

	R Square	R Square Adjusted
Y	0.278	0.245

Source: Data processed, 2025

Table 6 shows that the Green accounting variable (X1) and Environmental Performance (X2) have an influence of 0.278 or 27.80% on the Financial Performance variable (Y). Meanwhile, the remaining 72.20% is influenced by variables not included in this study. Based on this, the calculation results for R2 indicate that R2 is considered weak.

Bootsrapping
The next step is to estimate the path coefficients, which are the estimated values for the path relationships in the structural model obtained using the Bootstrapping method. This test aims to minimize issues with the research data. If the P-values are less than the established significance level (P < 0.05), the relationships between the variables can be considered significant. The results of the test using the bootstrapping method from the PLS SEM analysis are as follows:

Table 7
Bootsrapping Value

Variable	T Statistics	P Values
Moderation Effect 1 -> Financial Performance (Y)	1.335	0.182
Moderation Effect 2 -> Financial Performance (Y)	0.720	0.472
Green accounting (X₁) -> Financial Performance (Y)	3.237	0.001
Environmental Performance (X₂) -> Financial Performance (Y)	2.711	0.007
Governance (Z) -> Financial Performance (Y)	1.007	0.315

Source: Data processed, 2025

Based on table 7, it can be explained as follows: 1) Moderation Effect 1, which is the Governance variable as a moderating variable, is not significant to the Green accounting variable towards Financial Performance with a p-value of 0.182 > 0.05. 2) Moderation Effect 2, which is the Governance variable as a moderating variable, is not significant to the Environmental Performance variable towards Financial Performance with a p-value of 0.472 > 0.05. 3) The Green accounting variable is significant to the Financial Performance variable with a p-value of 0.001 < 0.05. 4) The Environmental Performance variable is significant to the Financial Performance variable with a p-value of 0.007 < 0.05. 5) The Governance variable is not significant to the Financial Performance variable with a p-value of 0.315 > 0.05.

Figure 2
Bootstrapping
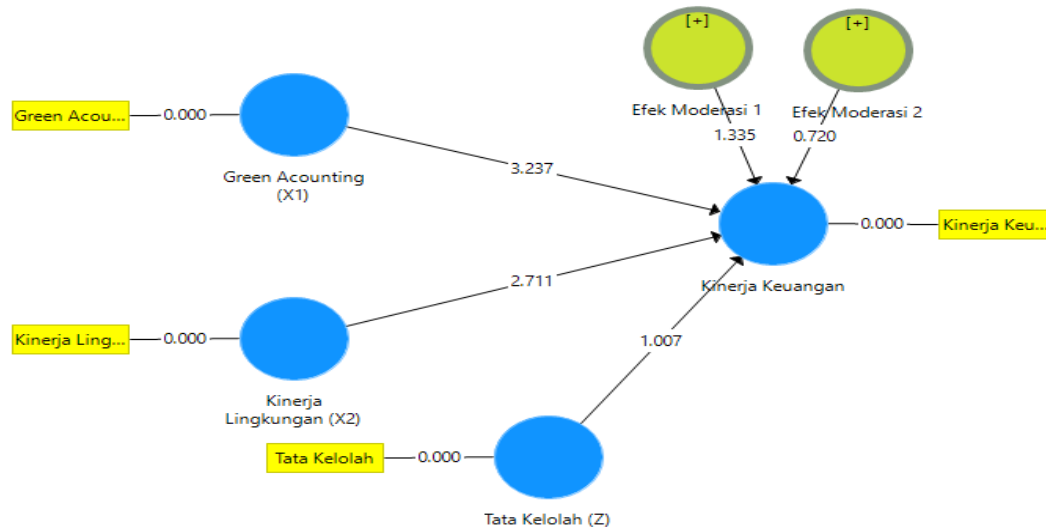
Remarks
X1 = Green Accounting
X2 = Environmental Performance
Z = Governance
Y = Financial Performance, Predictive Relevance Test (Q^2)

The Q^2 test value of the structural model is assessed by testing the Q^2 value (Predictive Relevance). The value in Q^2 can be used to measure how well the observations produced by the model and its parameter estimates perform. A Q^2 value greater than zero indicates that the model is good, and a Q^2 value better than 0 indicates that the model does not have Predictive Relevance.

Table 8
Construct Crossvalidated Redundancy

	SSO	SSE	Q² (=1-SSE/SSO)
Moderation Effect 1	115,000	115,000	
Moderation Effect 2	115,000	115,000	
Green accounting (X1)	115,000	115,000	
Financial Performance	115,000	89,975	0,218
Environmental Performance (X2)_	115,000	115,000	
Governance (Z)	115,000	115,000	

Source: Data processed, 2025

Based on table 8, it shows that the Q^2 value of the endogenous variable of business success is greater, namely 0.218 > 0, so the predictions made are considered fairly accurate.

4.2 Hypothesis Testing

Hypothesis testing by looking at the calculated path coefficient values in the Inner Model test. It is said that the hypothesis is accepted if the t-statistic value is greater than t-table 1.661 (α 5%), which means that if the t-statistic value for each hypothesis is higher, it is accepted or can be proven valid. The following are the path coefficient results:

Table 9
Path Coefficients

	Original Sample (O)	Sample Average(M)	Standard Deviation (STDEV)	T Statistics(| O/STDEV |)	P Values
Moderation Effect 1 -> Financial Performance	0,196	0,196	0,147	1,335	**0,182**
Moderation Effect 2 -> Financial Performance	-0,078	-0,073	0,108	0,720	**0,472**
Green accounting (X1) -> Financial Performance	-0,435	-0,454	0,134	3,237	**0,001**
Environmental Performance (X2)_ -> Financial Performance	0,195	0,189	0,072	2,711	**0,007**
Governance (Z) -> Financial Performance	0,099	0,095	0,098	1,007	**0,315**

Source: Data processed, 2025

Table 9 shows that the P-values for each variable, the researchers will test the formulated hypotheses. 1) Based on the table above, the t-statistic has a higher value of 3.237 > 1.661 and a p-value of 0.001 < 0.05. Therefore, Green accounting has a significant impact on Financial Performance in energy companies listed on the Indonesia Stock Exchange for 2020-2024. 2) Based on the table above, the t-statistic has a higher value of 2.711 > 1.661 and a p-value of 0.007 < 0.05. Therefore, Environmental Performance significantly affects Financial Performance in energy companies listed on the Indonesia Stock Exchange for 2020-2024. 3) Based on the table above, the t-statistic has a lower value of 1.007 < 1.661 and a p-value of 0.315 > 0.05. Therefore, Governance does not have a significant effect on the value of companies in the energy sector listed on the Indonesia Stock Exchange from 2020 to 2024. 4) Based on the table above, the t-statistic has a lower value of 1.335 < 1.661 and a p-value of 0.182 > 0.05. Therefore, Governance is unable to moderate the effect of Green accounting on Financial Performance in energy companies listed on the Indonesia Stock Exchange from 2020 to 2024. 5) Based on the table above, the t-statistic has a lower value of 0.720 < 1.661 and a p-value of 0.472 > 0.05. Therefore, Governance is unable to moderate the effect of Environmental Performance on Financial Performance in energy companies listed on the Indonesia Stock Exchange from 2020 to 2024.

4.2.1 The influence of green accounting on financial performance in energy companies listed on the Indonesia Stock Exchange 2020-2024

Based on the research results, it shows that the variable of green accounting has an impact on Financial Performance. This means that the application of the principles of green accounting can enhance a company's performance. In other words, green accounting practices within a company affect the magnitude of the company's performance value because green accounting not only focuses on annual financial reports but also considers the environmental impact of operational activities in implementing sustainability reporting. By implementing aspects of sustainability and environmental responsibility, companies can reduce costs, improve efficiency, and attract investors who care about the environment. Additionally, companies that adopt green accounting often gain a better reputation in the market, which in turn can increase revenue and profitability.

This research aligns with the results obtained by Putri et al. (2019), who conducted a study showing that green accounting significantly impacts profitability. Companies that implement green accounting require a dedicated allocation of environmental costs. Environmental costs are a future investment. The implementation of green accounting can provide social legitimacy and an assessment of a company's environmentally friendly products, thereby enhancing the company's

reputation. Research by Angelina and Nursasi (2022) suggests that the implementation of green accounting has a positive impact on financial performance because it reflects the company's business ethics and increases social trust from stakeholders, thus sending a positive signal to the community and impacting the company's financial performance. This contrasts with research by Gine Das Prana (2021), which found that green accounting did not have a significant partial effect on financial performance. This could be because the implementation of green accounting only impacts reporting related to sustainability reports and has not significantly impacted the continuity of financial performance.

Based on previous research, it can be concluded that the influence of the application of green accounting on the company's financial performance has a significant influence, so the more the company applies green accounting, which is indicated by the number of environmental accounting disclosures, it will spur an increase in the company's environmental performance, which will have an impact on increasing the company's financial performance.

4.2.2 The Influence of Environmental Performance on Financial Performance in Energy Companies Listed on the Indonesia Stock Exchange 2020-2024

The research results indicate that Environmental Performance influences Financial Performance. This means that the better a company's Environmental Performance, the higher its Financial Performance. This means that a company's Environmental Performance influences its performance because companies that manage their environmental impacts well tend to have higher efficiency and reduce legal and reputational risks. Furthermore, companies that prioritise Environmental Performance can attract investors who are more aware of sustainability issues, potentially increasing sales. Good practices in Environmental Performance, such as waste reduction, efficient resource use, and the implementation of environmentally friendly technologies, not only have a positive impact on the environment but can also reduce operational costs. Therefore, companies committed to good Environmental Performance will be more competitive in the market, which positively impacts their Financial Performance.

This research aligns with the results obtained by Qiang et al. (2024), who showed that Environmental Performance has a significant effect on Financial Performance, as corporate pollution prevention is positively related to future Financial Performance and the environment, and that it has a positive impact on future finances. According to Syahrina N Dewi (2019), previous research on Environmental Performance affects Financial Performance. This means that the PROPER obtained by a company can directly affect the company's Financial Performance, both as seen from ROA. However, there are different or inconsistent research results with other research conducted by Asnita (2022) regarding the Effect of Environmental Performance on Company Value with Environmental Information Disclosure as an Intervening Variable, which found that Environmental Performance has no effect on Company Value.

Based on previous research, it can be concluded that the influence of Environmental Performance on a company's Financial Performance is significant, so the better the company's Environmental Performance, the more it will spur an increase in the company's Financial Performance.

4.2.3 The Influence of Governance on Financial Performance in Energy Companies Listed on the Indonesia Stock Exchange 2020-2024

Based on the research results, it shows that the corporate governance variable has no effect on financial performance. This means that good or bad corporate governance practices do not have a significant impact on company performance because various other factors may be more dominant in influencing financial performance results. Some of the causal factors are that the company has stronger external factors, such as market conditions, competition, or macroeconomic factors that dominate financial performance. In addition, there are other indicators of performance that are more relevant to investors, so the influence of governance becomes less visible.

Although corporate governance does not have a direct impact, good governance practices remain important for other aspects, such as reputation, stakeholder satisfaction, and long-term risk mitigation. In other words, while it does not directly improve financial performance, good corporate governance can contribute to a company's long-term stability and sustainability.

This research aligns with that of Omar & Lahboub (2024), who stated that governance has no significant impact on a company's financial performance. However, this research differs from that of Liem & Nguyen (2024), who stated that governance does influence financial performance. The difference in results between these two studies could be due to

various factors: governance is more important due to high levels of regulation or public attention, while in other industries, operational or external factors may be more influential.

Based on previous research, it is concluded that governance has no significant impact on a company's financial performance. Therefore, whether a company has good or bad governance, it will not significantly improve its financial performance.

4.2.4 Corporate governance moderates the influence of green accounting on financial performance in energy companies listed on the Indonesia Stock Exchange 2020-2024

The research results indicate that corporate governance does not moderate the effect of green accounting on financial performance. This means that corporate governance does not significantly strengthen or weaken the relationship between green accounting and corporate performance. This means that good or poor corporate governance does not moderate the effect of green accounting on corporate performance, as other factors play a more significant role in determining the effectiveness of green accounting practices in improving financial performance. One reason for this is that implementing green accounting can provide significant direct benefits, independent of corporate governance practices. For example, companies that implement green accounting can reduce operational costs and increase resource efficiency, regardless of the quality of their governance. Furthermore, other variables, such as corporate culture, management commitment, or market conditions, may mediate the relationship between green accounting and financial performance. Therefore, while corporate governance is important for corporate sustainability and ethics, it does not always serve as a strengthening factor in the relationship between green accounting practices and financial performance..

The results of this study align with those of Kamila (2022), who stated that good corporate governance does not enhance the influence of environmental performance on financial performance. However, these findings differ from those of Herawati (2019), who revealed that good corporate governance can moderate the influence of green accounting on financial performance. Similarly, research by Vivianita and Nafasati (2020) also indicates that good corporate governance enhances the influence of green accounting on financial performance. According to Simon, Putri, and Rosel (2022), good corporate governance enhances the influence of green accounting on financial performance because optimal governance allows companies to improve their environmental performance, thereby increasing their value. This is in line with the belief that good corporate governance enhances environmental performance on financial performance.

Based on previous research, it is concluded that good corporate governance does not significantly moderate the influence of green accounting on financial performance. Therefore, regardless of the size of the company, good corporate governance will not significantly improve its financial performance.

4.2.5 Corporate governance moderates the influence of Environmental Performance on Financial Performance in energy companies listed on the Indonesia Stock Exchange 2020-2024

The research results indicate that corporate governance does not moderate the effect of environmental performance on financial performance. This means that corporate governance does not significantly strengthen or weaken the relationship between environmental performance and corporate performance. This means that good or poor corporate governance does not moderate the magnitude of the influence of environmental performance on corporate performance, as other factors play a more significant role in determining how effectively environmental performance impacts financial performance. One reason is that environmental performance can provide significant direct benefits, such as cost reductions and increased efficiency, regardless of corporate governance practices. For example, companies with strong environmental performance can attract investors who are more aware of sustainability issues, which can have a direct positive impact on earnings, regardless of the quality of corporate governance. Furthermore, other variables, such as technological innovation, market awareness, or broader economic conditions, may be more influential in mediating the relationship between environmental performance and financial performance. Thus, while corporate governance is important for risk and reputation management, it does not always serve as a strengthening factor in the relationship between environmental performance and financial performance.

The results of this study are in line with those conducted by Kamila (2022), who stated that good corporate governance does not strengthen the influence of environmental performance on financial performance. However, the results of this study differ from those conducted by Simon, Putri, and Rosel (2022), who stated that good corporate governance strengthens the influence of environmental performance on financial performance. Good corporate governance will encourage transparency from management, one of which is the disclosure of environmental performance.

Companies with good transparency tend to have easily traded shares due to high investor interest in the company. According to research by Kristiani and Werastuti (2020), good corporate governance strengthens the influence of environmental performance on financial performance. Good corporate governance will encourage transparency from management, one of which is the disclosure of environmental performance. Based on previous research, it is concluded that corporate governance does not significantly moderate the influence of environmental performance on financial performance. Therefore, the size of the company has good corporate governance, it will not spur an increase in the company's financial performance.

5   CONCLUSION

The conclusions drawn indicate that green accounting has an impact on Financial Performance in energy companies listed on the Indonesia Stock Exchange from 2020 to 2024. Environmental Performance affects Financial Performance in energy companies listed on the Indonesia Stock Exchange from 2020 to 2024. Governance has no effect on Financial Performance in energy companies listed on the Indonesia Stock Exchange from 2020 to 2024. Governance does not moderate the effect of Green accounting on Financial Performance in energy companies listed on the Indonesia Stock Exchange from 2020 to 2024. Governance does not moderate the effect of Environmental Performance on Financial Performance in energy companies listed on the Indonesia Stock Exchange from 2020 to 2024.

6   ACKNOWLEDGEMENT

7   CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in the paper.

8   AUTHOR CONTRIBUTION STATEMENT

Author Leony Veronica 1- contributed to the conceptualisation, research design, and writing of the original draft.
Author's Yuliusman 2- was responsible for data collection, analysis, and validation of the results.
Author's Eko Prasetyo 3- provided supervision, critical review, and editing of the final manuscript.
All authors have read and approved the final version of the manuscript.

9   ETHICS STATEMENT

This research was conducted in accordance with the ethical standards of **Jambi University** and adhered to the principles outlined in the Declaration of Helsinki. Ethical approval was obtained from the [**Institutional Ethics Committee/Review Board**] under reference number [**Approval Number, if applicable**]. All participants were informed about the purpose of the study and provided written informed consent prior to participation. Participants' privacy and confidentiality were strictly maintained, and data collected were used solely for academic purposes.

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