

# GREEN ACCOUNTING AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE ON FIRM VALUE: EVIDENCE OF PROFITABILITY MEDIATION IN INDONESIAN ENERGY COMPANIES

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## Abstract

This study aims to analyze the effect of Green Accounting and Corporate Social Responsibility Disclosure (CSR D) on firm value, with profitability as a mediating variable, in energy sector companies listed on the Indonesia Stock Exchange during the 2018-2023 period. This study employs a quantitative approach using a sample of 13 companies selected through purposive sampling, resulting in 78 observations. Data were analyzed using panel data regression with the Random Effect Model (REM), and mediation was tested using the Sobel Test. The results show that Green Accounting has a positive and significant effect on profitability, whereas CSR D has no significant effect on profitability. Green Accounting and CSR D do not have a significant effect on firm value, while profitability has a positive and significant effect on firm value. The Sobel Test results indicate that profitability mediates the effect of Green Accounting on firm value but does not mediate the effect of CSR D on firm value. These findings show that the market responds more strongly to financial performance reflected in profitability than to sustainability information disclosed by companies. This study provides empirical evidence of the importance of profitability as a mechanism explaining the relationship between sustainability practices and firm value in the Indonesian energy sector.

Keywords: Green Accounting, Corporate Social Responsibility Disclosure, Profitability, Firm Value, Energy Sector.

## INTRODUCTION

Changes in the global business environment have encouraged companies to no longer focus solely on the achievement of economic profit, but also on the creation of sustainable value through the management of social and environmental aspects. The triple bottom line concept emphasizes that corporate success should be measured through a balance among economic, social, and environmental performance (Elkington, 1997). Along with this development, investor attention to sustainability practices has also increased. Investors no longer consider only financial information, but have begun to include Environmental, Social, and Governance (ESG) aspects as one basis for investment decision-making because ESG is considered capable of reflecting corporate resilience in facing long-term risks (Brooks & Oikonomou, 2018; Hartzmark & Sussman, 2019; Henderson, 2020). From the perspective of Stakeholder Theory, companies have responsibilities not only to shareholders, but also to all parties affected by their operational activities (Friedman & Miles, 2002, 2006; Parmar et al., 2010). Therefore, companies are required to manage and disclose the social and environmental impacts they generate as a form of accountability to stakeholders. This effort is increasingly important because a company's success in meeting stakeholder expectations can enhance legitimacy, reputation, and support for business continuity (Hadi, 2017; Lako, 2017). One sector facing the greatest sustainability pressure is the energy sector. The characteristics of an industry that relies on the utilization of natural resources make this sector have a much higher potential environmental impact than other sectors. In Indonesia, energy companies face stronger demands to implement sustainable business practices, especially after the enactment of Financial Services Authority Regulation No. 51/POJK.03/2017 concerning the implementation of sustainable finance (Otoritas Jasa Keuangan, 2017). This regulation encourages public companies to increase transparency through sustainability reporting and to strengthen corporate social and environmental responsibility.

# GREEN ACCOUNTING AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE ON FIRM VALUE: EVIDENCE OF PROFITABILITY MEDIATION IN INDONESIAN ENERGY COMPANIES

Bambang Hermawan

The business phenomenon shows a shift in market and stakeholder expectations toward energy sector companies. Investors, regulators, communities, and the international community no longer assess companies only on the basis of the amount of profit generated, but also on their ability to manage environmental and social impacts. This condition requires companies to allocate greater resources for environmental management, the development of environmentally friendly technology, emission control, and corporate social responsibility programs. On the other hand, companies are still required to maintain profitability and increase firm value. This situation creates a business dilemma regarding whether investment in environmental and social activities can create higher economic value or instead become an additional cost burden for companies (Aastvedt et al., 2021; Rounaghi, 2019). To respond to this challenge, many companies have begun to implement Green Accounting as part of their sustainability strategy. Green Accounting is an accounting system that integrates environmental costs and benefits into the processes of identification, measurement, recording, and corporate reporting so that environmental information can be used in managerial decision-making (Lako, 2017). The implementation of Green Accounting enables companies to manage resources more efficiently, reduce waste, and improve the effectiveness of environmental cost utilization (Egbunike & Okoro, 2018; Pratiwi et al., 2020). In addition, Green Accounting is also viewed as capable of encouraging green innovation and improving corporate competitiveness (Somjai et al., 2020; Yao, 2024).

A number of studies show that CSR disclosure can increase firm value. Hu et al. (2018) found that CSR activities generate positive responses from stakeholders, thereby increasing firm value. Kim et al. (2018) showed that companies with good CSR practices have higher market value than other companies. Similar results were found by Handayati et al. (2022), Hermawan et al. (2023), Machmudah et al. (2020), Riyadh et al. (2022), Tunpornchai and Hensawang (2018), and Yanto (2018), who concluded that CSR contributes to increasing firm value through enhanced stakeholder trust and corporate reputation. Nevertheless, data phenomena in energy sector companies indicate that increased sustainability activities are not always followed by an increase in firm value. During the 2018-2023 period, several energy companies disclosed broader environmental and social information through annual reports and sustainability reports, yet firm value measured using Price to Book Value (PBV) continued to show relatively high fluctuations. This condition indicates that the market does not necessarily respond directly to corporate sustainability activities. Investors tend to consider a company's ability to generate profit before appreciating the environmental and social activities carried out by the company.

Although the relationships among Green Accounting, CSR, profitability, and firm value have been widely examined, previous research findings remain inconsistent. Regarding the relationship between Green Accounting and firm value, Agustia et al. (2019), Astuti et al. (2020), Gantino et al. (2023), Sudimas et al. (2023), and Sukmadilaga et al. (2023) found a positive effect on firm value. Conversely, Amira and Siswanto (2022) found that the implementation of environmental accounting has no significant effect on firm value. Aastvedt et al. (2021) even showed that green innovation in oil and gas companies may suppress financial performance due to the high cost of environmental implementation. Another research gap is evident in the role of profitability as a mediating variable. Ekawati (2023), Machmudah et al. (2020), Nugroho (2023), and Susilawati et al. (2024) show that profitability may serve as a mechanism that bridges the relationship between sustainability activities and firm value. However, Sudimas et al. (2023) found that financial performance is unable to mediate the effect of Green Accounting on firm value. These differences indicate that the mechanism linking Green Accounting, Corporate Social Responsibility Disclosure, profitability, and firm value still requires further testing.

Based on the business phenomenon, data phenomenon, and inconsistent findings from previous studies, this study was conducted to analyze the effect of Green Accounting and Corporate Social Responsibility Disclosure on firm value with profitability as a mediating variable in energy sector companies listed on the Indonesia Stock Exchange during the 2018-2023 period. This study is expected to provide empirical evidence regarding the effectiveness of sustainability practices in creating firm value and to enrich the literature on sustainability accounting in the Indonesian energy sector.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### Stakeholder Theory

Stakeholder Theory explains that a company is not only responsible to shareholders, but also to all parties that have an interest in corporate activities, such as investors, the government, society, customers, employees, suppliers, and the surrounding environment (Friedman & Miles, 2002, 2006; Parmar et al., 2010). This theory emphasizes that corporate sustainability is highly determined by the company's ability to meet stakeholder expectations and interests. In the context of sustainability, companies that are able to manage environmental and social impacts properly will gain legitimacy, trust, and support from stakeholders. Such support can ultimately improve corporate reputation, strengthen competitive position, and create long-term economic value (Battilana et al., 2022; Brooks &

# GREEN ACCOUNTING AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE ON FIRM VALUE: EVIDENCE OF PROFITABILITY MEDIATION IN INDONESIAN ENERGY COMPANIES

Bambang Hermawan

Oikonomou, 2018; Henderson, 2020). Therefore, Green Accounting and Corporate Social Responsibility Disclosure (CSR) practices are viewed as forms of corporate responsibility implementation toward stakeholders that may improve financial performance and firm value.

## Firm Value

Firm value is investors' perception of the level of corporate success in managing resources and generating future profits. The higher the firm value, the greater investors' confidence in the company's prospects (Brigham & Houston, 2019). In this study, firm value is proxied by Price to Book Value (PBV). The PBV ratio shows the comparison between the market price of shares and the book value of the company. A high PBV reflects investor optimism regarding the company's ability to create future economic value (Brealey et al., 2008; Hery, 2016). According to signaling theory, information indicating corporate quality will be responded to by investors and reflected in stock prices. Therefore, sustainability activities such as Green Accounting and CSR disclosure are expected to enhance positive investor perceptions and thereby increase firm value (Brooks & Oikonomou, 2018; Hartzmark & Sussman, 2019).

## Green Accounting

Green Accounting is an accounting system that integrates environmental aspects into the processes of recognizing, measuring, recording, and reporting corporate activities. This concept enables companies to identify environmental costs arising from operational activities and use them as a basis for more efficient and sustainable decision-making (Lako, 2017; Rounaghi, 2019). The implementation of Green Accounting provides various benefits for companies, such as resource-use efficiency, reduced environmental costs, increased productivity, and stronger corporate reputation (Al-Mawali et al., 2018; Egbunike & Okoro, 2018). In addition, Green Accounting encourages environmentally friendly innovation that can improve corporate competitiveness in the long term (Somjai et al., 2020; Yao, 2024). Pratiwi et al. (2020) explain that Green Accounting supports corporate sustainability because it helps management understand the relationship between environmental activities and corporate economic performance. This finding is strengthened by Agustia et al. (2019), who found that environmental management accounting can increase firm value through green innovation as a form of sustainable value creation.

## Corporate Social Responsibility Disclosure (CSR)

Corporate Social Responsibility Disclosure (CSR) refers to the disclosure of information regarding social, economic, and environmental activities carried out by companies as a form of accountability to stakeholders (Gray et al., 1995; Hadi, 2017). CSR disclosure functions as a communication medium for companies to demonstrate concern for social and environmental issues. The broader the CSR disclosure carried out by a company, the greater the opportunity for the company to obtain social legitimacy and trust from investors and society (Karaman et al., 2018; Rossi & Luque-Vilchez, 2021). According to Nguyen and Nguyen (2023), social and environmental information disclosed by companies can reduce information asymmetry and improve investors' positive perceptions of corporate prospects. Huang et al. (2023) also found that CSR disclosure can improve investment efficiency by reducing agency costs and information asymmetry. Thus, CSR functions not only as a form of corporate social accountability, but also as a strategic instrument to improve corporate reputation and firm value.

## Profitability

Profitability is the company's ability to generate profit from all resources owned. Profitability ratios are often used as indicators of management success in managing corporate assets effectively and efficiently (Brigham & Houston, 2019; Hermawan et al., 2021). In this study, profitability is proxied by Return on Assets (ROA). ROA indicates the company's ability to generate profit from total assets used in operational activities. A higher ROA indicates better corporate effectiveness in managing assets to generate profit (Hery, 2016). Profitability is one of the indicators most closely considered by investors because it reflects the company's ability to create economic value. Machmudah et al. (2020) and Zhou et al. (2022) show that companies with higher profitability tend to have higher firm value than companies with lower profitability.

## RESEARCH METHOD

This study uses a quantitative approach with a causal research design that aims to analyze the effect of Green Accounting and Corporate Social Responsibility Disclosure (CSR) on firm value with profitability as a mediating variable. The quantitative approach is used because it can objectively test relationships among variables through statistical analysis based on numerical data (Sugiyono, 2019).

# GREEN ACCOUNTING AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE ON FIRM VALUE: EVIDENCE OF PROFITABILITY MEDIATION IN INDONESIAN ENERGY COMPANIES

Bambang Hermawan

The population of this study consists of all energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2018-2023 period. The sample was selected using purposive sampling with the following criteria: (1) energy sector companies listed consecutively on the IDX during the research period; (2) companies that published complete annual reports and/or sustainability reports; and (3) companies with the data required to measure all research variables. The data used are secondary data obtained from the official website of the Indonesia Stock Exchange, company annual reports, and company sustainability reports. To facilitate understanding of the concepts and measurement of the research variables, the operationalization of variables is presented in Table 1.

**Table 1. Operationalization of Concepts**

Variable	Proxy	Measurement	Reference
Firm Value (Y)	PBV	Market price per share / Book value per share	Brigham & Houston (2019)
Profitability (Z)	ROA	Net income / Total assets	Kasmir (2016)
Green Accounting (X1)	ISO 14001	Dummy (1 = has ISO 14001; 0 = does not have ISO 14001)	Gantino et al. (2023)
CSR (X2)	CSR Disclosure Index	Number of disclosed items / total GRI items	Gray et al. (1995); Global Reporting Initiative (2021)

Firm value is proxied by Price to Book Value (PBV) because it is able to describe the market's assessment of a company's book value (Brigham & Houston, 2019). Profitability is proxied by Return on Assets (ROA), which shows the company's ability to generate profit from all assets owned (Kasmir, 2016). Green Accounting is measured using a dummy variable based on ISO 14001 certification ownership, as used by Gantino et al. (2023), while Corporate Social Responsibility Disclosure (CSR) is measured using a CSR disclosure index based on the Global Reporting Initiative standards (Global Reporting Initiative, 2021).

Data analysis was carried out using panel data regression because this study combines time series data and cross-section data. The best model was selected through the Chow Test, Hausman Test, and Lagrange Multiplier Test. Hypothesis testing was conducted at a 5% significance level. To test the role of profitability as a mediating variable, the Sobel Test was used, as commonly applied in mediation research to test the significance of indirect effects between variables (Ghozali, 2021).

The research models are formulated as follows:

## Equation 1 (Mediation Model)

$$ROA = \alpha + \beta_1 GA + \beta_2 CSR + \varepsilon$$

## Equation 2 (Main Model)

$$PBV = \alpha + \beta_1 GA + \beta_2 CSR + \beta_3 ROA + \varepsilon$$

Notes:

PBV = Firm Value

ROA = Profitability

GA = Green Accounting

CSR = Corporate Social Responsibility Disclosure

$\alpha$  = Constant

$\beta$  = Regression coefficient

$\varepsilon$  = Error term

This method is used to obtain empirical evidence regarding the direct and indirect effects of Green Accounting and CSR on firm value through profitability in energy sector companies listed on the Indonesia Stock Exchange during the 2018-2023 period.

## RESEARCH FINDINGS

### Descriptive Statistics

Descriptive statistics are used to provide an overview of the characteristics of the research data before hypothesis testing is conducted. This analysis presents information on the minimum, maximum, mean, and standard

# GREEN ACCOUNTING AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE ON FIRM VALUE: EVIDENCE OF PROFITABILITY MEDIATION IN INDONESIAN ENERGY COMPANIES

Bambang Hermawan

deviation values of each research variable, namely Green Accounting, Corporate Social Responsibility Disclosure (CSR), profitability, and firm value. The descriptive statistics results are shown in Table 2.

**Table 2. Descriptive Statistics**

Variable	N	Minimum	Maximum	Mean	Std. Deviation
PBV	78	0.36	9.76	1.49	1.39
Green Accounting (BL)	78	0.00	1.00	0.64	0.48
CSR	78	0.13	0.99	0.52	0.23
ROA	78	-0.03	0.62	0.15	0.15

Based on Table 2, firm value proxied by Price to Book Value (PBV) has a mean value of 1.4946, with a minimum value of 0.3600 and a maximum value of 9.7600. The maximum value indicates that there are companies receiving very high market appreciation compared with their book value, while the minimum value reflects companies that still receive relatively low market valuation. The standard deviation of 1.3882 shows that the variation in firm value among the research samples is relatively high. The Green Accounting variable, measured using environmental cost disclosure, has a mean value of 0.6410. This value indicates that approximately 64.10% of company observations have disclosed environmental cost components in annual reports or sustainability reports. The standard deviation of 0.4828 shows a relatively low level of variation, indicating that Green Accounting data tend to be homogeneous.

The CSR variable has a mean value of 0.5210, or approximately 52.10% of the total disclosure items based on the GRI guidelines disclosed by the companies. The minimum value of 0.1320 and the maximum value of 0.9910 indicate differences in the level of CSR information openness among energy sector companies. The standard deviation of 0.2370 indicates that the dispersion of CSR data is moderate. Profitability proxied by Return on Assets (ROA) has a mean value of 0.1504, or 15.04%, with a minimum value of -0.0300 and a maximum value of 0.6200. These results indicate that most sample companies were able to generate profit from the assets they owned, although some companies still experienced less-than-optimal financial performance in certain periods. The standard deviation of 0.1503 shows relatively balanced profitability variation among companies.

Overall, the descriptive statistics show that the energy sector companies included in the sample have fairly diverse characteristics, especially in the variables of firm value and profitability. Meanwhile, Green Accounting and CSR show relatively good implementation and disclosure levels, as reflected in mean values above 50%. This condition indicates that energy sector companies have begun to integrate sustainability aspects into their business activities, although the level of implementation still varies across companies.

## Panel Data Regression Model Selection

Panel data regression model selection was conducted to obtain the estimator most appropriate to the characteristics of the research data. Consistent with the panel data approach, model selection was carried out through three stages: the Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test (Gujarati, 2006, 2021; Verbeek, 2017). The model selection results for both research equations are summarized in Table 3.

**Table 3. Panel Data Regression Model Selection Results**

Equation	Chow	Hausman	LM	Selected Model
Substructure 1	0.0000	0.4508	0.0000	REM
Substructure 2	0.0000	0.6901	0.0000	REM

Notes:

Chow Test: p-value < 0.05 means FEM is better than CEM.

Hausman Test: p-value > 0.05 means REM is better than FEM.

LM Test: p-value < 0.05 means REM is better than CEM.

Based on Table 3, the test results for both equations show a consistent pattern. The Chow Test probability value of 0.0000 (<0.05) indicates that the panel model is more appropriate than the Common Effect Model. Furthermore, the Hausman Test probability values of 0.4508 and 0.6901 (>0.05) indicate that the Random Effect Model is more appropriate than the Fixed Effect Model. These results are strengthened by the Lagrange Multiplier Test, which produced a probability value of 0.0000 (<0.05), indicating that the Random Effect Model is better than

# GREEN ACCOUNTING AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE ON FIRM VALUE: EVIDENCE OF PROFITABILITY MEDIATION IN INDONESIAN ENERGY COMPANIES

Bambang Hermawan

the Common Effect Model. Thus, the model used in all hypothesis testing in this study is the Random Effect Model (REM). These findings indicate that variations among energy sector companies are more appropriately represented through the Random Effect approach. Therefore, all hypothesis testing in this study is based on the estimation results of the Random Effect Model.

## Panel Data Regression Results

After the best model was determined using the Random Effect Model (REM), the next stage was to conduct panel data regression testing to determine the direction and significance of the effect of each research variable. The regression estimation results for the two research equations, covering the effect of Green Accounting and CSRD on profitability as well as the effect of Green Accounting, CSRD, and profitability on firm value, are presented in Table 4.

**Table 4. Panel Data Regression Results (Random Effect Model)**

Equation	Independent Variable	Coefficient	Probability	Result
Profitability (ROA)	Green Accounting	0.114603	0.0009	Significant (+)
Profitability (ROA)	CSRD	0.077245	0.1762	Not Significant
Firm Value (PBV)	Green Accounting	0.195604	0.5217	Not Significant
Firm Value (PBV)	CSRD	-0.700409	0.1635	Not Significant
Firm Value (PBV)	Profitability (ROA)	4.612419	0.0000	Significant (+)

Criterion: significant at  $\alpha = 5\%$  ( $p\text{-value} < 0.05$ ).

Based on Table 4, in the first model explaining profitability, Green Accounting has a coefficient of 0.114603 with a probability value of 0.0009 ( $<0.05$ ), indicating a positive and significant effect on profitability. Conversely, CSRD has a probability value of 0.1762 ( $>0.05$ ), indicating that it has no significant effect on profitability. In the second model explaining firm value, Green Accounting has a coefficient of 0.195604 with a probability value of 0.5217 ( $>0.05$ ), indicating that it has no significant effect on firm value. CSRD also has no significant effect on firm value, with a coefficient of -0.700409 and a probability value of 0.1635 ( $>0.05$ ). Meanwhile, profitability has a coefficient of 4.612419 with a probability value of 0.0000 ( $<0.05$ ), indicating that profitability has a positive and significant effect on firm value. Substantively, these results indicate that the market responds more strongly to financial performance reflected in profitability than to sustainability information derived from Green Accounting or CSR disclosure.

## Model Feasibility Test

In addition to testing the effect of each independent variable, this study also tested the feasibility of the regression models used. The model feasibility test aims to determine whether the independent variables simultaneously explain the variation in the dependent variable (Gujarati, 2006; Verbeek, 2017). Model feasibility can be seen through the Prob(F-statistic) and Adjusted R-Squared values. A model is declared feasible if the Prob(F-statistic) value is smaller than the significance level of 0.05.

**Table 5. Model Feasibility Test Results**

Equation	Dependent Variable	Adjusted R <sup>2</sup>	Prob(F-statistic)	Description
Model 1	Profitability (ROA)	0.204707	0.000069	Feasible
Model 2	Firm Value (PBV)	0.249769	0.000021	Feasible

Based on Table 5, the first model testing the effect of Green Accounting and Corporate Social Responsibility Disclosure on profitability has a Prob(F-statistic) value of 0.000069, which is smaller than 0.05. This result shows that Green Accounting and Corporate Social Responsibility Disclosure simultaneously affect profitability, so the

# GREEN ACCOUNTING AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE ON FIRM VALUE: EVIDENCE OF PROFITABILITY MEDIATION IN INDONESIAN ENERGY COMPANIES

Bambang Hermawan

model is declared feasible for use. The Adjusted R-Squared value of 0.204707 indicates that 20.47% of the variation in profitability can be explained by Green Accounting and Corporate Social Responsibility Disclosure, while the remaining 79.53% is explained by other factors outside the model. Meanwhile, the second model testing the effect of Green Accounting, Corporate Social Responsibility Disclosure, and profitability on firm value has a Prob(F-statistic) value of 0.000021, which is also smaller than 0.05. This result indicates that the three independent variables simultaneously explain changes in firm value, so the model is declared feasible for use. The Adjusted R-Squared value of 0.249769 indicates that 24.98% of the variation in firm value can be explained by Green Accounting, Corporate Social Responsibility Disclosure, and profitability, while the remaining 75.02% is influenced by other variables outside the research model. Overall, both regression models meet the model feasibility criteria because they have Prob(F-statistic) values below 5%. Thus, the regression models used in this study are feasible as the basis for hypothesis testing and empirical conclusion drawing.

## Mediation Test (Sobel Test)

After testing the direct effects, the next stage was to test the indirect effects through the mediating variable. In this study, the mediation role of profitability was tested using the Sobel Test to determine whether profitability serves as an intervening variable in the relationship between Green Accounting and CSR and firm value. The mediation test results are summarized in Table 6.

**Table 6. Mediation Test Results (Sobel Test)**

Mediation Path	Sobel Test Statistic	p-value	Decision
Green Accounting -> Profitability -> Firm Value	2.783708	0.005374	Significant Mediation
CSR -> Profitability -> Firm Value	1.310658	0.189973	No Significant Mediation

Testing criteria:

p-value < 0.05 = mediation occurs.

p-value > 0.05 = mediation does not occur.

Based on Table 6, the mediation path from Green Accounting to firm value through profitability produces a Sobel Test Statistic of 2.783708 with a p-value of 0.005374, which is smaller than 0.05. This result indicates that profitability mediates the effect of Green Accounting on firm value. In other words, the implementation of Green Accounting does not directly increase firm value, but first increases profitability, which subsequently increases firm value. Conversely, the mediation path from Corporate Social Responsibility Disclosure (CSR) to firm value through profitability produces a Sobel Test Statistic of 1.310658 with a p-value of 0.189973, which is greater than 0.05. This result indicates that profitability does not mediate the effect of CSR on firm value. This finding suggests that CSR disclosure has not been able to generate a sufficiently strong increase in profitability to be translated into an increase in firm value. Overall, the mediation test results show that profitability serves as an intervening variable only in the relationship between Green Accounting and firm value, but not in the relationship between CSR and firm value. Thus, the sixth hypothesis is accepted, while the seventh hypothesis is rejected.

## RESULTS AND DISCUSSION

### The Effect of Green Accounting on Firm Value

The test results show that Green Accounting has no significant effect on firm value. This finding indicates that the implementation of Green Accounting in energy sector companies has not been able to directly increase investors' valuation of the company. In other words, information regarding corporate environmental management has not become the main consideration for investors in making investment decisions. Based on Stakeholder Theory, the implementation of Green Accounting should increase corporate legitimacy because it demonstrates the company's commitment to managing environmental impacts caused by its operational activities (Parmar et al., 2010). However, the benefits generated from the implementation of Green Accounting are generally long-term in nature, so they have not been fully responded to by the market in the form of increased firm value. This finding supports the study by Amira and Siswanto (2022), which found that the implementation of environmental accounting has no significant effect on firm value. Similar results were also found by Nwaigwe et al. (2022), who showed that sustainability information is not necessarily responded to by investors through increased corporate market value. Conversely, the results of this study differ from those of Agustia et al. (2019), Gantino et al. (2023), Astuti et al. (2020), Ekawati (2023), and Sukmadilaga et al. (2023), who found that Green Accounting has a

positive effect on firm value. These differences show that investors in the Indonesian energy sector still pay greater attention to financial indicators than to environmental information. Therefore, the implementation of Green Accounting has not been able to create firm value directly without being accompanied by improved financial performance that can be observed by investors.

### **The Effect of Corporate Social Responsibility Disclosure on Firm Value**

The results show that Corporate Social Responsibility Disclosure (CSR) has no significant effect on firm value. This finding indicates that the extent of social and environmental activity disclosure by companies has not been able to increase market perceptions of firm value. Theoretically, CSR disclosure can serve as a means to obtain social legitimacy and build harmonious relationships with stakeholders. According to Gray et al. (1995), CSR disclosure enables companies to obtain community support through transparency of social and environmental information. However, investors do not always consider CSR disclosure as information that has a direct impact on a company's ability to generate profit. This finding is consistent with Nwaigwe et al. (2022), who found that sustainability disclosure has no significant effect on firm value. This finding is also strengthened by Nampoothiri et al. (2024), who found that mandatory sustainability disclosure has not been able to significantly increase firm value. Conversely, this study differs from Handayati et al. (2022), Hermawan et al. (2023), Hu et al. (2018), Kim et al. (2018), Machmudah et al. (2020), and Riyadh et al. (2022), who found a positive effect of CSR on firm value. This condition shows that CSR disclosure in energy sector companies is still viewed as compliance with regulations and stakeholder expectations, rather than as information that directly affects investor investment decisions.

### **The Effect of Green Accounting on Profitability**

The results show that Green Accounting has a positive and significant effect on profitability. This finding indicates that companies implementing Green Accounting have a better ability to improve operational efficiency, thereby generating higher profitability. Green Accounting enables companies to identify and control environmental costs more effectively. Proper environmental cost management can reduce resource waste, improve energy efficiency, and minimize unnecessary operating costs. As a result, companies can improve financial performance through increased profit. This finding supports the studies of Al-Mawali et al. (2018), Egbunike and Okoro (2018), Pratiwi et al. (2020), Somjai et al. (2020), and Sudimas et al. (2023), which found that Green Accounting has a positive effect on corporate financial performance. This result is also consistent with the meta-analysis by Khan and Gupta (2024), which concluded that the implementation of Green Accounting generally has a positive impact on corporate performance. These findings indicate that the benefits of Green Accounting in energy sector companies are more visible in improving efficiency and profitability than in directly increasing firm value.

### **The Effect of Corporate Social Responsibility Disclosure on Profitability**

The results show that CSR has no significant effect on profitability. This finding indicates that CSR disclosure activities have not been able to provide a direct economic impact on the company's ability to generate profit. CSR activities often require substantial cost allocation, such as costs for social programs, community empowerment programs, and environmental activities. Although these activities can improve corporate reputation, their economic benefits tend to be long-term and are not always reflected in improved profitability within a relatively short period. This finding is not in line with the studies of Handayati et al. (2022), Hermawan et al. (2023), Machmudah et al. (2020), and Prayanthi and Budiarto (2022), which found that CSR has a positive effect on corporate profitability. Nevertheless, the results of this study indicate that energy sector companies still face challenges in converting social and environmental activities into measurable economic benefits. Therefore, CSR disclosure in the energy sector functions more as a form of social accountability than as an instrument that directly increases corporate profit.

### **The Effect of Profitability on Firm Value**

The results show that profitability has a positive and significant effect on firm value. This finding shows that investors respond positively to companies that have a high ability to generate profit. Profitability is one of the main indicators used by investors to assess corporate quality and prospects. The higher the level of corporate profitability, the greater the company's ability to create cash flow, pay dividends, and maintain business continuity. Therefore, increased profitability will enhance investor confidence, which is then reflected in increased firm value. This finding is consistent with Handayati et al. (2022), Machmudah et al. (2020), and Zhou et al. (2022), who found that profitability has a positive effect on firm value. This result strengthens the view that the Indonesian capital

market still places financial performance as the main basis for assessing corporate prospects compared with non-financial aspects (Hermawan et al., 2021).

### **The Role of Profitability in Mediating the Effect of Green Accounting on Firm Value**

The mediation test results show that profitability mediates the effect of Green Accounting on firm value. This finding indicates that Green Accounting cannot directly increase firm value, but can first increase profitability, which subsequently affects firm value. The implementation of Green Accounting enables companies to improve operational efficiency and manage environmental costs more effectively. Such efficiency increases corporate profitability, which ultimately receives a positive response from investors through increased firm value. This finding supports Ekawati (2023), Nugroho (2023), and Susilawati et al. (2024), who show that profitability is an important path connecting Green Accounting and firm value. This finding is also in line with the meta-analysis by Khan and Gupta (2024), which shows that the impact of Green Accounting is more often reflected through improved corporate performance. Thus, profitability acts as an economic mechanism that explains how sustainability practices can be translated into increased firm value.

### **The Role of Profitability in Mediating the Effect of Corporate Social Responsibility Disclosure on Firm Value**

The results show that profitability does not mediate the effect of CSRD on firm value. This finding indicates that CSR disclosure has not been able to create sufficiently strong economic benefits to increase profitability and ultimately increase firm value. This condition suggests that although companies have carried out various CSR activities and disclosed them in annual reports and sustainability reports, investors have not viewed such activities as factors capable of improving corporate economic performance in a tangible way. Consequently, the mediation mechanism through profitability is not formed. This finding does not support Handayati et al. (2022), Hermawan et al. (2023), and Machmudah et al. (2020), who found that profitability can bridge the relationship between CSR and firm value. Nevertheless, this study strengthens the view that the benefits of CSR in energy sector companies are more often realized in the form of social legitimacy, stronger stakeholder relationships, and corporate reputation than in short-term financial benefits. Overall, the results show that Green Accounting and CSRD have not been able to directly increase firm value. However, Green Accounting is proven to provide economic benefits through increased profitability, which subsequently contributes to increased firm value. This finding confirms that in the Indonesian energy sector, investors still appreciate measurable financial results more than non-financial sustainability information.

## **CONCLUSION**

Based on the results of panel data regression analysis and mediation testing on energy sector companies listed on the Indonesia Stock Exchange during the 2018-2023 period, several conclusions can be drawn as follows:

1. Green Accounting has no significant effect on firm value. This finding shows that environmental cost disclosure has not become information that is directly responded to by investors in valuing energy sector companies. Investors tend to give greater consideration to financial information that reflects the company's ability to generate profit.
2. Corporate Social Responsibility Disclosure (CSRD) has no significant effect on firm value. This result indicates that the extent of CSR disclosure has not been able to improve market perceptions of firm value. CSR disclosure is viewed more as a form of corporate compliance and accountability than as a factor that creates firm value.
3. Green Accounting has a positive and significant effect on profitability. This result shows that the implementation of Green Accounting can improve resource management efficiency, environmental cost control, and operational effectiveness, thereby increasing profitability.
4. Corporate Social Responsibility Disclosure has no significant effect on profitability. This finding shows that the economic benefits of CSR activities and disclosures have not been directly realized in the form of increased corporate profit during the observation period.
5. Profitability has a positive and significant effect on firm value. This result shows that the company's ability to generate profit remains the main factor considered by investors in determining firm value.
6. Profitability mediates the effect of Green Accounting on firm value. In other words, Green Accounting does not increase firm value directly, but does so through increased profitability, which then provides a positive signal to investors.

7. Profitability does not mediate the effect of Corporate Social Responsibility Disclosure on firm value. This indicates that CSR disclosure has not been able to generate sufficiently strong economic benefits to increase profitability or firm value.

## **RECOMMENDATIONS**

Energy sector companies are advised to improve the quality of Green Accounting implementation through more systematic and measurable environmental cost management. Companies also need to ensure that the sustainability activities they conduct are capable of producing economic benefits so that profitability and, ultimately, firm value can increase. Investors are advised not only to consider financial indicators, but also to pay attention to the quality of corporate sustainability practice implementation because such practices have the potential to create competitive advantage and long-term value. Regulators are expected to strengthen sustainability reporting standards and encourage companies to improve the transparency of environmental and social information that is more measurable and comparable across companies. Future research is recommended to expand the research object to other industrial sectors so that more general results can be obtained, use more comprehensive measures of Green Accounting such as environmental costs in the form of ratios or environmental scores, add other mediating or moderating variables such as firm size, leverage, corporate governance, environmental performance, carbon emissions, or ESG, and use a longer observation period to capture the long-term effects of sustainability practices on firm value.

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# GREEN ACCOUNTING AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE ON FIRM VALUE: EVIDENCE OF PROFITABILITY MEDIATION IN INDONESIAN ENERGY COMPANIES

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## GREEN ACCOUNTING AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE ON FIRM VALUE: EVIDENCE OF PROFITABILITY MEDIATION IN INDONESIAN ENERGY COMPANIES

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