Journal of Applied Accounting and Taxation
Vol. 10, No. 2, October 2025, 287-297
e-ISSN: 2548-9925

Article History
Received September, 2025
Accepted October, 2025

The Role of Profitability in Moderating the Relationship between Sustainability Reporting and ESG Disclosure onFirm Value of Energy Sector in Indonesia

Tri Wulandari[a], Syafrida Hani[b*] and Maya Sari[c]
[a]*Master of Accounting Department, Universitas Muhammadiyah Sumatera Utara, ririntwd@gmail.com, Indonesia*
[b*]*Master of Accounting Department, Universitas Muhammadiyah Sumatera Utara, syafridahani@umsu.ac.id, Indonesia*
[c]*Master of Accounting Department, Universitas Muhammadiyah Sumatera Utara, mayasari@umsu.ac.id, Indonesia*

Abstract. This study aims to test and analyze the effects of Sustainability Reporting and ESG Disclosure on firm Value, moderated by profitability, among energy sector companies listed on the Indonesia Stock Exchange in 2019-2023. The research is associative and quantitative. The population of this study comprised 87 companies listed on the Indonesia Stock Exchange, which were purposively sampled, yielding 11 companies in the 2019-2023 period. The collected data were analyzed using SPSS version 27. The results of this study indicate that only Sustainability Reporting affects firm value, as measured by Price-to-Book Value (PBV). Then, Profitability as measured by ROA is also unable to moderate either Sustainability Reporting or ESG Disclosure on firm Value.

Keywords: Sustainability Report, ESG Disclosure, Corporate Value, Profitability, and Energy Sector

* Corresponding author. E-mail: syafridahani@umsu.ac.id

Introduction

The energy sector is a strategic sector that plays a vital role in national economic development, but it is also a significant contributor to environmental issues. Oil and gas exploration and production activities not only impact natural resource utilization but also increase greenhouse gas emissions. Data from the (Asian Development Bank, 2020) shows that Indonesia ranks 10th globally as a greenhouse gas emitter and 19th as a CO_2 emitter. This situation confirms the energy sector's moral and strategic responsibility to support the resolution of the environmental crisis (Purnomo & Sutapa, 2024).

Increasing global awareness of sustainability has led to the emergence of various regulations at both the national and international levels. Energy sector companies are now faced with sustainability reporting obligations, compliance with Environmental, Social, and Governance (ESG) principles, and commitments to decarbonization in line with the Sustainable Development Goals (SDGs). However, academic literature on sustainability and ESG reporting is still dominated by the banking sector (Cantero-Saiz et al., 2024; Ioannidis et al., 2025; (Chen et al., 2025); (Mandas et al., 2024), despite the energy sector's equally important importance.

In the context of domestic regulations, Law No. 40 of 2007 and POJK No. 29/POJK.04/2016 and also No. 51/POJK.03/2017 require natural resource-based companies to disclose social and environmental responsibilities in their annual reports (IAI, 2021 dalam Nisaih & Prijanto, 2023). Unfortunately, energy companies' compliance with this obligation remains low; only around 13% of companies (11 companies) consistently submit sustainability reports (Pratama, 2021).

The Green Business Benchmark (2022) emphasizes the conceptual distinction between sustainability reporting and ESG disclosure. Sustainability reporting encompasses strategic aspects involving three main pillars—environmental, social, and economic—as a corporate communication tool, while ESG is more evaluative of company performance Gasset (2023). However, the transition to renewable energy requires significant investment, which presents challenges, especially for companies with limited access to financing.

Firm value is an important indicator in measuring market perception of business performance, one of which is the Price to Book Value (PBV) ratio. PBV reflects how much investors are willing to pay for a company's book value and can reflect investment attractiveness (McClure, 2024). Data shows that most energy companies on the Indonesia Stock Exchange have suboptimal PBV values, with five companies falling below 1, indicating undervaluation and inadequate performance: companies with the codes ABMM, DEWA, INDY, PGAS, and PTRO.

Factors influencing firm value include profitability, size, capital structure, and sustainability Kasmir (2019). In this context, profitability, as measured by Return on Assets (ROA), not only reflects the efficiency of asset use but also serves as a driving factor in sustainability reporting practices Hani (2015). Companies with high profitability tend to be better able to allocate resources to support ESG and sustainability reporting (Budiana & Budiasih, 2020); Zinn & Safane, 2024). However, based on ROA data, only a portion of energy companies demonstrate good performance (≥5%), while the rest remain in the low category. This indicates an imbalance in the ability of energy sector companies to manage resources efficiently, which impacts the consistency of ESG disclosure and sustainability reporting.

On the other hand, effective sustainability reporting as stipulated by the (Global Reporting Initiative, 2022) covers aspects of people, planet, and profit and can enhance a company's reputation and overall value. However, based on a recent study (Ananda et al., 2023); Krychiw (2023) found that many companies still meet less than 50% of sustainability reporting indicators, placing them in the "below average" category, including companies with codes DEWA, INDY, and PTBA. Furthermore, based on the ESG scores from S&P Global (2023), not a single Indonesian energy company falls into the "very good" category (score ≥80%), indicating room for improvement in transparency and accountability of sustainability practices.

Thus, there is a need to encourage the energy sector to be more active and consistent in implementing sustainability reporting and ESG disclosure. Profitability (ROA) can serve as a moderating variable that strengthens the relationship between sustainability reporting and firm value, given that a company's internal capacity is a crucial factor in implementing sustainability practices.

Stakeholder Theory

Donaldson & Preston (1995) stakeholder theory states that companies are responsible not only to shareholders but also to all stakeholders. In this context, sustainability reporting and ESG performance are important tools for building relationships with stakeholders (Cheng et al., 2023); (Duan et al., 2023). ROA and firm value also contribute to sustainability management, supporting the achievement of ESG goals (Tang & Zhang, 2020); (Bhutta et al., 2022); (Ren et al., 2023).

Signaling Theory

According to Brigham & Houston (2019), sustainability reporting and ESG disclosure are positive signals from management to investors regarding the company's prospects and responsibility for sustainability. This increases market confidence and impacts firm value.

Firm Value

Firm value reflects the market's perception of a company's future prospects. PBV is used as an indicator to assess whether a company's shares are undervalued or overvalued (Sihombing, 2023); (Lestari & Ghani, 2020). A high value reflects shareholder prosperity and the company's ability to attract capital (Martono & Harjito, 2021) (Martono & Harjito, 2021); (Arfan, 2020); (Brigham & Houston, 2019). This study uses the formula:

$$PBV = \frac{\text{Share Price}}{\text{Book Value Per Share}}$$

Sustainability Reporting

Sustainability reporting is regulated by Law No. 40 of 2007 and is reinforced by the GRI Standards. This report covers 89 economic, environmental, and social performance indicators (Global Reporting Initiative, 2022). Reports covering ≥50% of the indicators are referred to as categories (Ananda et al. ,2023); (Krychiw, 2023). This study uses the formula:

$$SR = \frac{Number\ of\ Items\ Reported}{Total\ GRI\ Standard\ Reporting\ Items}$$

ESG Disclosure

ESG integrates environmental, social, and governance aspects into business practices. ESG disclosure can be measured using the GRI Standards, which include a total of 128 indicators (Ghazali dan Zulmaita (2022); (Noviarianti, 2020); (Kumar dan Firoz, 2022); (Meles et al., 2023). S&P Global (2023) categorizes ESG performance into three levels: poor (0–59%), good (60–79%), and excellent (80–100%). This study uses the formula:

$$ESG = \frac{Number\ of\ Company\ Disclosure\ Items}{Total\ GRI\ Standard\ Disclosure\ Itens}$$

Profitability

Profitability, measured by Return on Assets (ROA), serves as a moderating variable that can enhance the impact of various financial and non-financial factors on firm value. Prior research highlights its strategic role: profitability strengthens the effect of intellectual capital disclosure on firm value Ariyani & Hani (2023), influences financial decision-making (Yunita et al., 2022), and reinforces the relationship between liquidity and tax aggressiveness with firm value (Handayani, Hani & Sari (2022). Furthermore, profitability—alongside capital structure and firm size—has been identified as a key determinant of firm value in the plantation sector (Manurung & Hani, 2023). Collectively, these findings underscore the consistent and significant role of profitability in shaping firm value through its moderating effects.

ROA measures a company's efficiency in generating profit from total assets. This ratio is used to assess asset productivity and long-term profitability potential (Sari dan Putri, 2016); (Wahyuni dan Hafiz, 2018). This study uses the formula:

$$\text{ROA} = \frac{\text{Net Income After Tax}}{\text{Total Assets}}$$

Research Methods

This study employed an associative approach with a quantitative approach, aiming to determine the causal influence of the variables under study. The data presented in numerical form was analyzed using statistical analysis by Sugiyono (2022). Based on the problem and hypotheses tested, the variables used in this study were independent variables (Sustainability Reporting (X1) and ESG Disclosure (X2), dependent variable is Firm Value, and moderating variable is ROA.

Population and Sample

The population in this study consisted of 87 energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2019-2023 period. The sample selection method used purposive sampling, a technique for selecting samples from a population based on specific considerations, both expert and scientific (Juliandi & Manurung, 2014).

The sample selection was based on the following criteria: 1. Companies in the energy sector and listed on the IDX during the 2019-2023 period; 2. Energy sector companies that published complete financial reports for the 2019-2023 period; and 3. Energy sector companies that published sustainability reports annually during the 2019-2023 period, accessible from each company's official website. Based on these criteria, a sample of 11 companies was selected over a five-year period, resulting in a total of 55 samples.

Data Analysis Techniques

This study used Microsoft Excel for data tabulation and SPSS version 27 for statistical analysis. The tests performed included:

Normality Test

This test aims to determine whether the residuals are normally distributed, using the Kolmogorov-Smirnov method with a significance level of 0.05 (Ghazali, 2021).

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		55
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.69071088
Most Extreme Differences	Absolute	.084
	Positive	.084
	Negative	-.059
Test Statistic		.084
Asymp. Sig. (2-tailed)[c]		.200[d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Fig. 1. Normality Test Result

Based on figure above, it shows that the data is normally distributed, with a probability value greater than or equal to 0.05 or (0.200> 0.05).

Multicollinearity Test

This test is used to determine whether there is a correlation between the independent variables. The absence of multicollinearity is indicated by a tolerance value > 0.10 and a VIF < 10 (Ghazali, 2021).

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	X1_Sustainability_Reporting	.973	1.028
	X2_ESG_Disclosure	.969	1.032
	Z_ROA	.988	1.013

a. Dependent Variable: Y_PBV

Fig. 2. Multicollinearity Test Result

Based on figure above, it shows that the tolerance value of each variable is > 0.100 and the VIF value of each variable is < 10.00, which proves that the variables are free from symptoms of multicollinearity.

Heteroscedasticity Test

This test aims to detect whether there is inequality in residual variance between observations. The test is performed using a scatterplot. If the points are randomly distributed and do not form a specific pattern, heteroscedasticity does not occur (Purnomo, 2017).

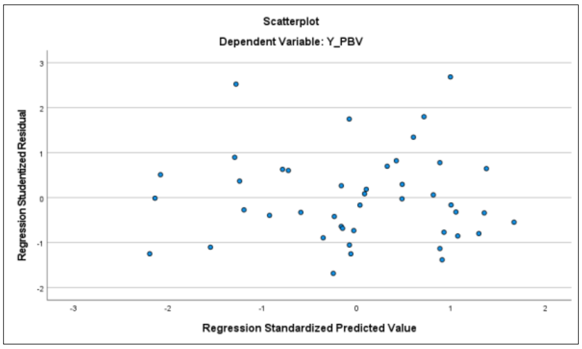

Fig. 3. Heteroscedasticity Test

From the results of the heteroscedasticity test analysis on the regression model above, in the scatterplot graph it can be seen that the points are spread randomly and do not form a certain pattern and are spread above and below the number 0 on the Y axis. These results indicate that in the regression model to be used there are no symptoms of heteroscedasticity and can be used for further analysis.

Autocorrelation Test

This test is used to test for residual correlation between observation periods using the Run Test. If the Asymp. Sig. (2-tailed) value is > 0.05, there is no autocorrelation (Perdana, 2016); (Ghazali, 2021).

Runs Test

	Unstandardized Residual
Test Value[a]	-.26779
Cases < Test Value	27
Cases >= Test Value	28
Total Cases	55
Number of Runs	22
Z	-1.768
Asymp. Sig. (2-tailed)	.077

a. Median

Fig. 4. Autocorrelation Test Result

From the data processing results in figre above, the value of the Asymp.Sig (2-tailed) run test is 0.118. This value is greater than the significance value of 0.05, so it can be concluded that there is no autocorrelation.

Hypothesis Test

This test aims to partially examine the effect of independent variables on the dependent variable. Significant results are indicated by a p-value < 0.05 or a calculated t-value > t-table (Ghazali, 2021).

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.491	.256		1.914	.061
	X1_Sustainability_Reporting	.477	.166	.371	2.868	.006
	X2_ESG_Disclosure	.271	.342	.103	.793	.432

a. Dependent Variable: Y_PBV

Fig. 5. Hypothesis Test Result

Based on figure above, the following hypothetical conclusions can be drawn:

1. The calculated t-value is 2.868 with a significance level of 0.006. Using a significance level of α = 5%, the t-table is 2.006. It means that the calculated t-value is greater than the t-table value, or 2.868 > 2.006, with a significance level of 0.006 < 0.05. Therefore, it can be concluded that the Sustainability Reporting variable significantly influences firm value as measured by PBV. Therefore, the first hypothesis (H1) in this study **is accepted**.
2. The test results show that the calculated t-value is 0.793 with a significance level of 0.432. Using a significance level of α = 5%, the t-table is 2.006. This means that the calculated t < t table or 0.793 < 2.006 and the significance value is 0.432 > 0.05. Thus, it can be concluded that the ESG Disclosure variable does not significantly influence firm value as measured by PBV, so the second hypothesis (H2) in this study **is rejected**.

Moderated Regression Analysis (MRA)

This analysis is used to determine whether profitability moderates the relationship between sustainability reporting and ESG disclosure on firm value. The method used is an interaction test, by entering the interaction variable (X * Z) into the regression model. The regression equation used is:

$$Y=\beta 0+\beta 1X1+\beta 2X2+\beta 3Z+\beta 4(X1*Z) + \beta 5(X2*Z) + e$$

From the results of the regression equation above, the following conclusions can be drawn:

1. The significance value of the interaction variable between Sustainability Reporting and ROA is 0.274 (>0.050). Therefore, it can be concluded that the **ROA (Z) variable is unable to moderate** the effect of the Sustainability Reporting variable (X1) on the Firm Value variable, as measured by PBV (Y), therefore the third hypothesis (H3) in this study **is rejected**.
2. The significance value of the interaction variable between ESG disclosure and ROA is 0.149 (>0.050). Therefore, it can be concluded that the **ROA (Z) variable is unable to moderate** the effect of the ESG disclosure variable (X2) on the Firm Value variable, as measured by PBV (Y), therefore the fourth hypothesis (H4) in this study **is rejected**.

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-.067	1.029		-.065	.948
	X1_Sustainability_Reporting	-1.053	.938	-.492	-1.123	.268
	X2_ESG_Disclosure	-1.563	1.221	-.629	-1.280	.208
	Z_ROA	-.169	.380	-.193	-.445	.659
	Sustainability_Reporting*ROA	-.412	.371	-.533	-1.109	.274
	ESG_Disclosure*ROA	-.713	.484	-.800	-1.471	.149

a. Dependent Variable: Y_PBV

Fig. 6. Moderated Regression Analysis Result

Result and Discussion

The Effect of Sustainability Reporting on Firm Value

The analysis reveals that the Sustainability Reporting variable has a significance value of 0.006, which is below the 0.05 threshold. This indicates that Sustainability Reporting exerts a significant partial effect on firm value, as measured by the Price-to-Book Value (PBV). The positive coefficient of 0.477

suggests a direct positive relationship, whereby a one-unit increase in Sustainability Reporting corresponds to an increase in firm value (PBV). Consequently, the first hypothesis (H1) of this study is accepted.

This result aligns with Signaling Theory, which posits that companies voluntarily disclosing non-financial information, such as sustainability reports that send positive signals to investors, indicating responsible management, effective risk control, and long-term orientation. Such signals enhance investor confidence, reduce information asymmetry, and consequently drive-up share prices, reflected in a higher PBV. Additionally, these findings resonate with Stakeholder Theory, which argues that companies fulfilling social and environmental responsibilities garner support from various stakeholders including investors, employees, customers, and the community that thereby improving corporate reputation and ultimately increasing firm value.

These outcomes are consistent with the studies of Hussain et al. (2025); Pramita. (2021)), who reported that sustainability reporting significantly affects firm value. Firms with extensive sustainability disclosures tend to enhance legitimacy, benefiting from effective management practices and government support, which directly contributes to increased firm value.

Conversely, the studies by Nurlatifah, Widyastuti, dan Ahmar (2025), as well as Suminaringtias (2024), concluded that sustainability reporting does not significantly influence firm value, suggesting that such disclosures alone may not be sufficient to shape investors' valuation of the firm.

The Effect of ESG Disclosure on Firm Value

The partial t-test results for the ESG Disclosure variable indicate a calculated t-value of 0.793 with a significance level of 0.432. Given that the t-value is less than the critical t-value of 2.006 and the significance level exceeds 0.05, it can be concluded that ESG disclosure does not significantly influence firm value, as measured by the Price-to-Book Value (PBV). This suggests that the extent of ESG disclosure by companies does not meaningfully affect investor perceptions of firm value within the context of this study. Accordingly, the second hypothesis (H2) is rejected.

This finding contradicts the assumption that ESG disclosure universally enhances firm value and implies that, despite the global rise in ESG importance, its impact remains limited in the Indonesian energy sector. Several factors may underlie this outcome, first, Investor Perceptions and Market Signals: In many emerging and developing markets, investors often regard ESG disclosure as an additional cost rather than a direct driver of profitability, potentially diminishing investment appeal and reducing market valuation. According to Angir and Weli (2024), investors may respond negatively, viewing ESG activities as expenditures without immediate financial benefits. Corporate ranks Indonesia 19th among G20 countries on the Earth Index, reflecting suboptimal management of adverse ESG factors such as emissions, waste, transportation, and industrial pollution. Consequently, ESG disclosure may be perceived as an incremental cost burden, reducing profits and investor returns, thereby lowering overall firm value. Additionally, investors may perceive ESG information as unreliable or non-essential in decision-making. ESG disclosures may also inadvertently reveal corporate weaknesses, affecting investor trust and valuation.

Second, Uneven Influence of ESG Components: Research suggests that not all ESG elements contribute equally to firm value. Social factors often have a positive effect, whereas environmental and governance aspects may be insignificant or negatively correlated with firm value. This discrepancy arises because markets tend to value social initiatives such as employee welfare and community engagement that directly enhance reputation and operational efficiency (Kusumawati et al., 2024). Transparent social disclosures can therefore serve as strategic tools to bolster competitive advantage and firm value. Conversely, environmental and governance disclosures are often perceived as normative or lacking immediate investor benefits, diminishing their impact on valuation (Aditya dan Hasnawati, 2025).

Last, Quality of ESG Disclosure and Greenwashing: The prevalence of greenwashing exaggerating or misrepresenting ESG performance to gain market favor undermines the credibility of ESG disclosures. Such practices mislead investors and risk damaging corporate reputations Zhang (2025) identified that over 30% of firms engage in greenwashing, especially in environmental and social disclosures. This erodes investor ability to accurately assess true ESG performance, elevating investment risk.

To enhance the impact of ESG disclosure on firm value, firms should pursue the following strategic actions: (1) Enhance Quality and Transparency: ESG disclosures must be transparent, specific, and relevant, avoiding superficial reporting or greenwashing. Clear, measurable information reduces information asymmetry, builds investor confidence, and strengthens corporate legitimacy. (2) Integrate ESG into Long-Term Strategy: ESG reporting should not be treated as a mere supplemental document but embedded into the company's core business and operational strategies.

These findings align with those of Oktaviana et al. (2025); (Sedyasana and Wijaya (2024); (Kaplale et al. (2023), who reported no significant effect of ESG disclosure on firm value. In contrast, Suminaringtias (2024) found a significant positive effect. Fakhriansyah, Septyani, and Reza (2025) further reported that only 27.4% of variations in firm value could be attributed to ESG disclosure, with the remaining 72.6% explained by other variables.

The Effect of Sustainability Reporting on Firm Value, Moderated by Profitability

The analysis reveals that the interaction term between Sustainability Reporting and Return on Assets (ROA) has a significance value of 0.274, which exceeds the 0.05 threshold. This indicates that profitability, as measured by ROA, does not moderate the effect of Sustainability Reporting on firm value, measured by Price-to-Book Value (PBV). In other words, profitability neither strengthens nor weakens the relationship between sustainability disclosure and firm value. Consequently, the third hypothesis (H3) is rejected.

These findings suggest that firm profitability does not influence the relationship between sustainability disclosure and firm value. One plausible explanation is that profitability is a dominant factor in investor decision-making. Investors tend to be highly sensitive to profitability signals, and firms demonstrating strong profitability already convey a powerful positive message to the market. In such cases, additional information from sustainability reports may provide limited incremental value or fail to significantly alter investors' perceptions of firm value.

Furthermore, Contingency Theory suggests that other variables such as firm size, industry type, institutional ownership, stock liquidity, or the quality of corporate governance (GCG) may serve as more potent moderators or mediators in this relationship than profitability.

This study's results corroborate those of Triyani and Siswanti (2024); Amin et al.. (2023), who also found that profitability was unable to moderate the relationship between sustainability reporting and firm value. ROA's inability to mediate this effect may be attributed to the standalone nature of sustainability reporting, which is distinct from financial statements. While financial statements reflect a company's financial performance and profitability according to accounting standards such as PSAK and IFRS, sustainability reports focus on a company's sustainable business practices based on Global Reporting Initiative (GRI) standards.

Triyani dan Siswanti (2024) further explain that investors increasingly consider not only profit but also environmental and social factors ("people and planet") as important signals. This perspective is consistent with findings from Julinda et al. (2022); Santoso et al. (2023); Mukhzarudfa and Wiralestari (2022), all of whom emphasize the evolving criteria by which investors assess firm value beyond mere financial profitability.

The Effect of ESG Disclosure on Firm Value, Moderated by Profitability

The analysis reveals that the significance value of the interaction term between ESG Disclosure and Return on Assets (ROA) is 0.149, which exceeds the 0.050 threshold. This indicates that profitability, as measured by ROA, does not moderate the relationship between ESG Disclosure and firm value, as measured by Price-to-Book Value (PBV). In other words, profitability does not play a significant moderating role in the effect of ESG disclosure on firm value. As such, the fourth hypothesis (H4) is rejected.

These findings imply that, regardless of whether a company is highly profitable or not, its profitability level does not significantly strengthen or weaken the influence of ESG disclosure on firm value. This result can be interpreted through the lens of Market Perception Theory. If the quality, credibility, and relevance of ESG disclosure remain inadequate or if market participants have yet to fully recognize the long-term strategic benefits of ESG then the interaction between ESG performance and profitability may remain insignificant. While ESG practices may yield advantages such as improved corporate reputation, reduced regulatory risk, and greater innovation capacity, these outcomes are typically realized in the long run. In contrast, investors often emphasize short-term financial performance, where profitability serves as the primary indicator. As a result, profitability and ESG disclosures are frequently viewed as separate, rather than integrated, determinants in firm valuation.

This study's results are consistent with prior research by Adhia and Paramita (2025);

Rahelliamelinda and Handoko (2024), who found that profitability does not moderate the effect of ESG disclosure on firm value within the energy sector. Even in firms with strong profitability and high ROA, ESG disclosure was not found to exert a significant influence on firm value. This supports the notion that capital markets, especially in developing economies, tend to place greater emphasis on immediate, tangible financial outcomes such as profit margins, revenue growth, and dividend yield rather than long-term non-financial indicators such as ESG performance. Moreover, ESG-related initiatives are sometimes perceived as increasing operational costs, which can further diminish their perceived value from the investor's perspective. Thus, ROA may be ineffective as a moderating variable in this context.

Nevertheless, contrasting evidence is provided by studies conducted by Triyani and Siswanti (2024); Arofah (2023); Zhou et al. (2022); Aditama (2022); Lyan et al. (2021); (Yoon et al., 2018), which demonstrate that ROA can indeed moderate the relationship between ESG disclosure and firm value. According to these studies, operating a sustainable business often requires substantial capital investment to comply with the standards set by ESG rating agencies, such as Sustainalytics. This introduces an economic trade-off between capital allocation for sustainability initiatives and the pursuit of a higher ESG rating. ESG disclosures also serve as an important information channel for stakeholders, providing insights into a company's exposure to material ESG-related risks and offering evidence of concrete corporate actions and policies in response to those risks. In such contexts, ROA may enhance the perceived effectiveness and credibility of ESG initiatives, thereby influencing investor sentiment and firm valuation

Conclusion

The conclusion of this study is that sustainability reporting has a positive and significant effect on firm value, as measured by Price to Book Value (PBV), in energy sector companies in Indonesia, while ESG disclosure does not significantly affect firm value. Furthermore, profitability, as measured by Return on Assets (ROA), is unable to moderate the influence of sustainability reporting or ESG disclosure on firm value in energy sector companies in Indonesia.

Acknowledgement

The researcher would like to thank the Ministry of Higher Education, Science, and Technology, Directorate of Research and Community Service of the Ministry of Higher Education, Science, and Technology for the grants provided under Research Assignment Contracts: 122/C3/DT.05.00/PL/2025; for the 2025 fiscal year. The researcher would also like to thank LLDIKTI 1 and LPPM UMSU.

References

Adhia, L. L., & Paramita, V. S. (2025). The Effect of Environmental Social Governance (ESG) Disclosure on Firm Value with Profitability and Firm Size as Moderation Variables. *Moneta : Journal of Economics and Finance*, *3*(1), 1–18. https://doi.org/10.61978/moneta.v3i1.444

Aditama, F. W. (2022). Analisis Pengaruh Environment, Social, Governance (Esg) Score Terhadap Return Saham Yang Terdaftar Di Index Idx30. *Contemporary Studies in Economic, Finance and Banking*, *1*(4), 592–602.

Aditya, M., & Hasnawati, S. (2025). Periode 2021–2023). *Jurnal Internasional Pendidikan, Studi Sosial, Dan Manajemen (IJESSM)*, *5*, 614–627.

Amin, A., Selvia, K., & Andriansyah, A. (2023). Analisis Pengaruh Sustainability Report Terhadap Nilai Perusahaan Dengan Profitabilitas Sebagai Pemoderasi (Studi Pada Perusahaan Sektor Pertambangan Yang Terdaftar Di Bursa Efek Indonesia Periode 2019-2021). *Jurnal Manajemen Dirgantara*, *16*(1), 41–49. https://doi.org/10.56521/manajemen-dirgantara.v16i1.913

Ananda, W., Aditya Pradesa, H., Wijayanti Prodi Administrasi Bisnis Sektor Publik, R., STIA LAN Bandung, P., Jl Hayam Wuruk No, B., Bandung Wetan, K., Bandung, K., & Barat, J. (2023). Pelaksanaan Sustainability Report Berdasarkan GRI Standards Guidelines Pada Perusahaan Manufaktur di Indonesia. *Investasi Dan Syariah (EKUITAS)*, *5*(2), 543. https://doi.org/10.47065/ekuitas.v5i2.4299

Angir, P., & Weli, W. (2024). The Influence of Environmental, Social, and Governance (ESG) Disclosure on Firm Value: An Asymmetric Information Perspective in Indonesian Listed Companies. *Binus Business Review*, *15*(1), 29–40. https://doi.org/10.21512/bbr.v15i1.10460

Arfan, I. (2020). *Analisi Laporan Keuangan*. Madenatera.

Ariyani, Rini, and Syafrida Hani. 2023. "Determinants of Tax Aggressivity in Registered Pharmaceutical Sector Companies in Indonesia Stock Exchange Moderated By Profitability." *Jurnal Ekonomi* 12(3): 695–706.

Arofah, S. N. (2023). Pengaruh good corporate governance dan environmental social governance terhadap nilai perusahaan dengan kinerja keuangan sebagai moderasi. *Jurnal Informatika Ekonomi Bisnis*, 125–133.

Asian Development Bank. (2020). Energy Sector Assessment, Strategy, and Road Map: Indonesia. In *Asian Development Bank* (Issue December).

Bhutta, U. S., Tariq, A., Farrukh, M., Raza, A., & Iqbal, M. K. (2022). Green bonds for sustainable development: Review of literature on development and impact of green bonds. *Technological Forecasting and Social Change*, *175*, 121378.

Birken, E. G. (2021). *No Title*. Forbes. https://www.forbes.com/advisor/investing/roa-return-on-assets/

Brigham, E. F., & Houston, J. F. (2019a). *Dasar – dasar manajemen keuangan* (Edisi Kese). Salemba Empat.

Brigham, E. F., & Houston, J. F. (2019b). *Fundamentals of financial management*. Cengage Learning.

Buallay, A. (2019). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality: An International Journal*, *30*(1), 98–115.

Budiana, Q. A., & Budiasih, I. (2020). Profitabilitas Sebagai Pemoderasi Pengaruh Pengungkapan Sustainability Reporting Pada Nilai Perusahaan Pemenang Indonesian Sustainability Reporting Awards. *E-Jurnal Akuntansi*, *30*(3), 662.

Cantero-Saiz, M., Polizzi, S., & Scannella, E. (2024). ESG and asset quality in the banking industry: The moderating role of financial performance. *Research in International Business and Finance*, *69*(January 2024), 102221. https://doi.org/10.1016/j.ribaf.2024.102221

Chen, S. L., Wang, D. ni, & Chen, H. W. (2025). The impact of ESG factors on credit ratings: An empirical study of European banks. *International Review of Economics and Finance*, *99*(March), 104056. https://doi.org/10.1016/j.iref.2025.104056

Chen, Z., & Xie, G. (2022). ESG disclosure and financial performance: Moderating role of ESG investors. *International Review of Financial Analysis*, *83*, 102291.

Cheng, L. T. W., Sharma, P., & Broadstock, D. C. (2023). Interactive effects of brand reputation and ESG on green bond issues: A sustainable development perspective. *Business Strategy and the Environment*, *32*(1), 570–586.

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review*, *20*(1), 65–91.

Duan, X., Xiao, Y., Ren, X., Taghizadeh-Hesary, F., & Duan, K. (2023). Dynamic spillover between traditional energy markets and emerging green markets: Implications for sustainable development. *Resources Policy*, *82*, 103483.

Fakhriansyah, M., Septyani, D., & Reza, K. . F. (2025). Pengaruh Pengungkapan ESG Terhadap Nilai Perusahaan. *Jurnal Ekonomi, Manajemen, Akuntansi Dan Keuangan*, *6*(1), 1–6. https://doi.org/10.53697/emak.v6i1.2257

Gasset, P. (2023). *Understanding the Difference: ESG vs. Sustainability*. OBATA. https://obata.com/esg-sustainability-report-differences/

Ghazali, A., & Zulmaita, Z. (2022). Pengaruh pengungkapan environmental, social, and governance (esg) terhadap tingkat profitabilitas perusahaan (studi pada perusahaan sektor infrastruktur yang terdaftar di bursa efek indonesia). *Seminar Nasional Akuntansi Dan Manajemen PNJ*, *3*.

Ghazali, I. (2021). *Aplikasi Analisis Multivariate dengan Program IBM* (10 ed). Badan Penerbit Universitas Diponegoro.

Ghozali, I. (2016). Aplikasi Analisis Multivariete Dengan Program IBM SPSS 23 (Edisi 8). Cetakan ke VIII. Semarang: Badan Penerbit Universitas Diponegoro. Hansen, Don R dan Maryanne M Mowen. 2017. *Dasar-Dasar Akuntansi Manajerial*.

Global Reporting Initiative. (2022). *Standart Development*. Global Reporting Initiative. https://www.globalreporting.org/standards/standards-development/

Green Business Benchmark. (2022). *ESG vs. Pelaporan Keberlanjutan: Perbedaan Utama Dijelaskan*. Green Business Benchmark. https://www-greenbusinessbenchmark-com.translate.goog/archive/esg-reporting-sustainability-reporting?_x_tr_sl=en&_x_tr_tl=id&_x_tr_hl=id&_x_tr_pto=tc

Handayani, Irma, Syafrida Hani, and Eka Nurmala Sari. 2024. "The Effect Of Liquidity And Profitability On Tax Aggressivity With Company Value As A Moderation Variable On The Food And Beverage Company On The Indonesian Stock Exchange." *International Journal of Economics and Management* 2: 70–83.

Hani, Syafrida. 2015. *Teknik Analisa Laporan Keuangan*. Medan: UMSU Press.

Hussain, F., Zhou, Z., Abbas, H., & Dusengemungu, D. R. (2025). The Impact of Sustainability Disclosure on Firm Value in the Energy Sector of BRICS Economies: The Holistic Approach of GRI Guidelines. *Sustainable Development*.

Ioannidis, F., Kosmidou, K., & Zopounidis, C. (2025). The effect of national culture and social capital on banking ESG performance: Evidence from Europe. *International Review of Financial Analysis*, *102*(February), 104084. https://doi.org/10.1016/j.irfa.2025.104084

Julinda, D., Kharisma, K., Wahyuni, T., & Susilo, T. P. (2022). Pengaruh kinerja keuangan dan ukuran perusahaan terhadap nilai perusahaan. *Media Riset Akuntansi*, *12*(1), 45–70.

Kaplale, Y. S., Murni, Y., & Ani, S. M. (2023). Pengaruh Environmental Disclosure, Social Disclosire dan Mekanisme Governance Terhadap Nilai Perusahaan (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia tahun 2018-2020). *Jiap*, *3*(2), 163–177. https://doi.org/10.35814/jiap.v3i2.4033

Kasmir. (2019). *Analisis Laporan Keuangan*. PT. Raja Grafindo Persada.

Krychiw, J. (2023). *ESG Scores: The good, the bad, & why they matter*. Conservice ESG. https://esg.conservice.com/esg-scores-why-they-matter/

Kumar, P., & Firoz, M. (2022). Does Accounting-based Financial Performance Value Environmental, Social and Governance (ESG) Disclosures? A detailed note on a corporate sustainability perspective. *Australasian Accounting, Business and Finance Journal*, *16*(1), 41–72.

Lestari, Sri Puji, and Ghani, Roy Gika Al. (2020). Pengaruh Good Corporate Governance Terhadap Nilai Perusahaan yang Terdaftar di Bursa Efek Indonesia. http://jurnal.abulyatama.ac.id/index.php/humaniora/article/view/1284

Kusumawati, R., Arfianto, Y., & Surwanti, A. (2024). *Menavigasi Medan Pengungkapan ESG : Dampaknya terhadap Nilai Perusahaan 2 Tinjauan Pustaka dan Pengembangan Hipotesis*. *03005*.

Mandas, M., Lahmar, O., Piras, L., & De Lisa, R. (2024). ESG reputational risk and market valuation: Evidence from the European banking industry. *Research in International Business and Finance*, *09*(February), 102286. https://doi.org/10.1016/j.ribaf.2024.102286

Manurung, Khairun Nisa, and Syafrida Hani. 2023. "The Influence of Profitability Ratio, Capital Structure and Company Size on Company Value in Plantation Companies Listed on The Indonesia Stock Exchange." 1. https://proceeding.umsu.ac.id/index.php/Miceb/article/view/502/468.

Martono, & Harjito, A. (2021). *Manajemen Keuangan (Edisi 3)*. Ekonisia.

McClure, B. (2024). Using the Price-to-Book (P/B) Ratio to Evaluate Companies. In *Investopedia*. https://www.investopedia.com/investing/using-price-to-book-ratio-evaluate-companies/

Meles, A., Salerno, D., Sampagnaro, G., Verdoliva, V., & Zhang, J. (2023). The influence of green innovation on default risk: Evidence from Europe. *International Review of Economics & Finance*, *84*, 692–710. https://doi.org/https://doi.org/10.1016/j.iref.2022.11.036

Mukhzarudfa, M., & Wiralestari, W. (2022). Pengaruh Kinerja Keuangan Dan Kinerja Lingkungan Terhadap Nilai Perusahaan Dengan Corporate Social Responsibility Sebagai Variabel Moderasi (Studi Empiris Pada Perusahaan Manufaktur Yang Terdaftar Di Bei Tahun 2017-2019). *JAKU (Jurnal Akuntansi & Keuangan Unja)(E-Journal)*, *7*(3), 168–179.

National Centre For Sustainability Reporting. (2021). *No Title*. National Centre For Sustainability Reporting.

Nisaih, D., & Prijanto, B. (2023). Pengaruh Pengungkapan Sustainability Report Terhadap Nilai Perusahaan Dengan Profitabilitas Sebagai Variabel Moderasi Pada Perusahaan Sektor Pertanian Yang Terdaftar Di Bursa Efek Indonesia Periode 2020-2022. *Riset Ilmu Manajemen*, *3*(4), 356–376. https://doi.org/10.61132/rimba.v1i4.377

Noviarianti, K. (2020). ESG: Definisi, contoh, dan hubungannya dengan perusahaan. *Retrieved April*, *22*, 2021.

Nurlatifah, S., Widyastuti, T., & Ahmar, N. (2025). Nexus of Esg Disclosure, Sustainability Performance and Financial Performance on Firm Value: the Role of Corporate Reputation and Sustainability Reporting Quality. *Financial and Credit Activity: Problems of Theory and Practice*, *3*(62), 589–602. https://doi.org/10.55643/fcaptp.3.62.2025.4704

Oktaviana, S., Sembel, R., & Manurung, A. H. (2025). Analisis Pengaruh Environment, Social, General Disclosure, dan Indikator Keuangan terhadap Nilai Perusahaan. *Owner*, *9*(1), 464–478. https://doi.org/10.33395/owner.v9i1.2602

Perdana, E. (2016). *No TitleOlah Data Skripsi Dengan SPSS 22*. Dalam Lab Kom Manajemen Ubb.

Pramita, M., Agussalim, M., & Desmiwerita. (2021). Pengaruh Pengungkapan Sustainability Reporting dan Intelectual Capital terhadap Nilai Perusahaan (Studi Empiris pada Perusahaan Sektor Pertambangan yang Terdaftar di Bursa Efek Indonesia Periode 2014-2019). *Pareso Jurnal*, *3*(1), 173–188.

Pratama, A. (2021). *Pengantar Pelaporan Korporat Kontemporer*. Prenada Media.

Purnomo, D. A., & Sutapa. (2024). *Pengaruh Green Accounting Dan Corporate Social Resposibility Terhadap Nilai Perusahaan : Dengan Pertumbuhan Perusahaan Sebagai Variabel Intervening (Perusahaan Terdaftar di Bursa Efek Indonesia Sektor Energi Periode 2018 – 2022)*. *September*, 363–374.

Purnomo, R. A. (2017). *Analisis Statistik Ekonomi dan Bisnis dengan SPSS (3 ed.)*. CV Wade Group bekerja sama dengan UNMUH Ponorogo Press.

Rahelliamelinda, L., & Handoko, J. (2024). Profitabiltas Sebagai Moderating Pengaruh Kinerja Esg, Green Innovation, Eco-Efficiency Terhadap Nilai Perusahaan. *Jurnal Informasi, Perpajakan, Akuntansi, Dan Keuangan Publik*, *19*(1), 145–170. https://doi.org/10.25105/jipak.v19i1.19191

Ren, X., Zeng, G., & Zhao, Y. (2023). Digital finance and corporate ESG performance: Empirical evidence from listed companies in China. *Pacific-Basin Finance Journal*, *79*, 102019.

S&P Global. (2023). *No Title*. S&P Global. https://www.spglobal.com/esg/solutions/esg-scores-data

Santoso, S., Qalbia, F., & Benardi, B. (2023). Dampak Pandemi Covid 19 Terhadap Kinerja Keuangan Bank Umum di Indonesia. *ASSET: Jurnal Manajemen Dan Bisnis*, *6*(1).

Sari, N., & Putri, I. (2016). Kemampuan profitabilitas memoderasi pengaruh likuiditas dan leverage terhadap financial distress. *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana*, *10*(5), 3419–3448.

Sedyasana, D. U., & Wijaya, S. (2024). Pengaruh Esg Disclosure, Likuiditas, Dan Profitabilitas Terhadap Nilai Perusahaan. *Jurnal Ekonomi Trisakti*, *4*(2), 365–374. https://doi.org/10.25105/v4i2.20671

Sihombing, G. (2023). *Kaya & Pintar Jadi Trader dan Investor Saham*. UPP STIM YKPN.

Sugiyono. (2022). *Metode Penelitian Bisnis : Pendekatan Kuantitatif, Kualitatif, Kombinasi dan R&D (2 ed)* (2 Ed (ed.)). Alfabeta.

Suminaringtias, R. (2024). *Pengaruh Esg Disclosure Dan Sustainability Reporting Terhadap Firm Value Dengan Board Gender Diversity Sebagai Variabel Moderasi (Studi Empiris Pada Perusahaan Sektor Energy Yang Terdaftar di Bursa Efek Indonesia Tahun 2022)*. http://repository.uin-suska.ac.id/id/eprint/81677

Tang, D. Y., & Zhang, Y. (2020). Do shareholders benefit from green bonds? *Journal of Corporate Finance*, *61*, 101427.

Triyani, M., & Siswanti, I. (2024). The effect of sustainability reporting disclosure, environment, social and governance rating, and digital banking transactions on firm value with financial performance as an intervening variable (case study on commercial Bank in Indonesia). *Journal of Management and Economic Studies*, *6*(1), 17–37.

Wahyuni, S. F., & Hafiz, M. S. (2018). Pengaruh CR, DER dan ROA terhadap DPR pada Perusahaan Manufaktur di BEI. *Jesya (Jurnal Ekonomi & Ekonomi Syariah)*, *1*(2), 25–42. https://doi.org/10.36778/jesya.v1i2.18

Yoon, B., Lee, J. H., & Byun, R. (2018). Does ESG performance enhance firm value? Evidence from Korea. *Sustainability*, *10*(10), 3635.

Yunita, Rizki Arvi, Syafrida Hani, Widia Astuty, and Eka Nurmala Sari. 2022. "Pengaruh Keputusan Keuangan Terhadap Nilai Perusahaan Dimediasi Oleh Return on Asset." *Jurnal Akuntansi* 11(2): 142–56.

Zhang, A. (2025). Studi Literatur tentang Dampak Kualitas Pengungkapan Informasi ESG terhadap Nilai Perusahaan Tercatat.

Highlights in Business, Economics and Management, *50*(tahun), 441–446.

Zhou, G., Liu, L., & Luo, S. (2022). Sustainable development, ESG performance and company market value: Mediating effect of financial performance. *Business Strategy and the Environment*, *31*(7), 3371–3387.

Zinn, D., & Safane, J. (2024). *No Title*. Business Insider. https://www.businessinsider.com/personal-finance/investing/return-on-assets