

# The Implications of the Transition from GRI Standards 2016 to GRI Standards 2021 for Firm Value: Evidence from Indonesian Energy and Basic Materials Companies

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## Abstract

The transition from the Global Reporting Initiative (GRI) Standards 2016 to GRI Standards 2021 represents a significant development in sustainability reporting by introducing revised Environmental, Social, and Governance (ESG) disclosure requirements intended to improve the quality, consistency, and comparability of sustainability information. However, empirical evidence on whether this transition strengthens the relationship between ESG disclosure and firm value remains limited, particularly in emerging markets. This study examines the implications of the transition from GRI Standards 2016 to GRI Standards 2021 for firm value by comparing ESG disclosure measured under the two reporting standards. A quantitative approach was employed using secondary data from energy and basic materials companies listed on the Indonesia Stock Exchange during the 2019–2024 period. ESG disclosure was measured using disclosure indices constructed under GRI Standards 2016 and GRI Standards 2021, while firm value was proxied by Tobin's Q. Panel data regression analysis was applied to examine the proposed relationships. The findings reveal that ESG disclosure measured under both GRI Standards 2016 and GRI Standards 2021 has no significant effect on firm value. Furthermore, no significant difference was found between the two reporting standards in explaining firm value. These findings indicate that the transition from GRI Standards 2016 to GRI Standards 2021 has not strengthened the informational role of ESG disclosure in influencing market valuation among energy and basic materials companies. This study contributes to the sustainability reporting literature by providing empirical evidence that revisions to reporting standards alone are insufficient to enhance the informational usefulness of ESG disclosure in the Indonesian capital market.

## Keywords

ESG disclosure; GRI Standards 2016; GRI Standards 2021; firm value; Tobin's



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## INTRODUCTION

The revision of the Global Reporting Initiative (GRI) Standards from the 2016 to the 2021 version represents one of the most important developments in sustainability

reporting over the past decade. The revised standards introduced substantial changes in the disclosure of Environmental, Social, and Governance (ESG) information by strengthening requirements related to material topics, due diligence, governance disclosures, and stakeholder accountability. These revisions were intended to improve the quality, consistency, and comparability of sustainability information so that investors and other stakeholders could make better-informed economic decisions. Despite these improvements, whether the transition from GRI Standards 2016 to GRI Standards 2021 enhances the usefulness of ESG disclosure in explaining firm value remains an unresolved empirical issue, particularly in emerging capital markets.

In Indonesia, the implementation of sustainability reporting has accelerated following the issuance of Financial Services Authority Regulation (POJK) No. 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Service Institutions, Issuers, and Public Companies. Since its phased implementation began in 2019, sustainability reporting has become a mandatory component of corporate accountability for publicly listed companies (Otoritas Jasa Keuangan, 2017). This regulatory framework has significantly increased corporate sustainability disclosure. By the end of 2024, 882 listed companies, representing approximately 94% of all firms listed on the Indonesia Stock Exchange (IDX), had published sustainability reports for the 2023 reporting period (Bursa Efek Indonesia, 2025). Moreover, recent evidence indicates that the adoption of GRI Standards 2021 among Indonesian listed companies has increased substantially following the implementation of the revised reporting framework.

The rapid growth of sustainability reporting reflects increasing market demand for high-quality ESG information. Investors increasingly consider ESG performance alongside financial indicators when evaluating corporate resilience, long-term competitiveness, and business sustainability. Nevertheless, an increase in the quantity of sustainability reports does not necessarily imply that the disclosed information has become more useful for capital market participants. The effectiveness of ESG disclosure depends not only on whether companies publish sustainability reports but also on whether the reporting framework produces information that is sufficiently transparent, comparable, and decision-useful for investors. Consequently, evaluating the implications of revisions to sustainability reporting standards has become an increasingly important issue in accounting and sustainability research.

The relevance of ESG disclosure is particularly important for companies operating in environmentally sensitive industries. Energy companies play a strategic role in supporting economic growth while simultaneously generating significant environmental externalities through resource extraction, greenhouse gas emissions, and energy transition challenges (Pramesti et al., 2024). According to the Katadata Environmental, Social, and Governance Index (KESGI), the Indonesian energy sector recorded one of the highest sustainability performance scores among listed industries (Ridwan, 2025). Likewise, companies in the basic materials sector are characterized by intensive utilization of natural resources and substantial environmental exposure because they provide essential raw materials for manufacturing, construction, and infrastructure development (Anshari & Prihandini, 2024; Susanti et al., 2024). These characteristics make both sectors appropriate empirical settings for examining whether improvements in ESG reporting standards contribute to market valuation.

From a theoretical perspective, Stakeholder Theory argues that firms create sustainable value by addressing the information needs of various stakeholder groups rather than focusing solely on shareholders. High-quality ESG disclosure enables firms to demonstrate accountability for environmental, social, and governance impacts while simultaneously reducing information asymmetry between management and investors. Accordingly, improvements in sustainability reporting standards are expected to increase the credibility and comparability of ESG information, thereby strengthening its role in capital market decision-making.

Despite the growing body of ESG literature, empirical evidence regarding the relationship between ESG disclosure and firm value remains inconclusive. Several studies reported that ESG disclosure does not significantly affect firm value (Pramesti et al., 2024; Anshari & Prihandini, 2024), whereas other studies documented a positive relationship between sustainability reporting and firm value (Putri & Herawaty, 2024; Sari et al., 2025). These inconsistent findings indicate that differences in reporting quality, industrial characteristics, institutional settings, and ESG measurement approaches may influence market responses to sustainability information.

More importantly, previous studies generally measured ESG disclosure using a single reporting framework without considering revisions to the GRI Standards. Consequently, they implicitly assumed that ESG disclosure measured under different GRI versions produces equivalent information. This assumption has rarely been examined empirically, even though GRI Standards 2021 introduced substantial revisions to disclosure requirements and reporting principles. Furthermore, most

previous studies employed observation periods ending in 2023, whereas sustainability reporting practices continue to evolve following the implementation of GRI Standards 2021. These limitations reveal three important research gaps: a conceptual gap concerning the implications of revisions to GRI reporting standards, a methodological gap regarding ESG measurement under different reporting frameworks, and a temporal gap arising from the limited use of recent observation periods.

This study addresses these gaps by simultaneously measuring ESG disclosure using GRI Standards 2016 and GRI Standards 2021 to evaluate whether revisions to the reporting standards alter the relationship between ESG disclosure and firm value. Using panel data from energy and basic materials companies listed on the Indonesia Stock Exchange during 2019–2024, this study provides more recent evidence regarding the implications of the GRI Standards transition within an emerging market context. Unlike previous studies that primarily examined the association between ESG disclosure and firm value, this research evaluates whether revisions to sustainability reporting standards themselves improve the informational usefulness of ESG disclosure for investors.

Accordingly, this study aims to examine the implications of the transition from GRI Standards 2016 to GRI Standards 2021 for firm value by comparing ESG disclosure measured under both reporting standards. The findings are expected to contribute to the sustainability reporting literature by extending empirical evidence regarding revisions to GRI Standards and their implications for capital market valuation. From a practical perspective, the results provide useful insights for regulators, reporting standard setters, and corporate managers regarding whether revisions to sustainability reporting standards have enhanced the effectiveness of ESG disclosure in supporting investment decision-making and strengthening market transparency.

## **METHODS**

This study employed a quantitative archival research design using secondary panel data to examine the implications of the transition from Global Reporting Initiative (GRI) Standards 2016 to GRI Standards 2021 for firm value. The observation period covered 2019–2024, encompassing sustainability reports prepared under GRI Standards 2016 during 2019–2021 and GRI Standards 2021 during 2022–2024. The analysis focused on energy and basic materials companies listed on the Indonesia Stock Exchange (IDX), as these sectors are characterized by significant environmental

and social impacts and are therefore expected to provide more comprehensive ESG disclosures.

The study population comprised all energy and basic materials companies listed on the IDX during the observation period. The sample was selected using purposive sampling based on three criteria: (1) companies continuously listed on the IDX throughout 2019–2024; (2) companies consistently publishing complete annual reports; and (3) companies consistently publishing sustainability reports prepared in accordance with GRI Standards 2016 for the 2019–2021 reporting period and GRI Standards 2021 for the 2022–2024 reporting period. Applying these criteria resulted in a final sample of **20 companies**. Secondary data were collected from annual reports and sustainability reports available on the official IDX website (<https://www.idx.co.id>) and the respective corporate websites.

ESG disclosure was measured using a content analysis approach based on GRI Standards 2016 and GRI Standards 2021. A dichotomous scoring method was applied, where each disclosure item was assigned a value of one (1) if disclosed and zero (0) otherwise. The ESG Disclosure Index (ESGDI) was calculated as the proportion of disclosed items relative to the total disclosure items required under the respective GRI Standards:

$$ESGDI = \frac{\sum \text{Disclosed GRI Items}}{\sum \text{Total GRI Disclosure Items}}$$

The ESG disclosure index was constructed separately under GRI Standards 2016 and GRI Standards 2021, covering three dimensions, namely Environmental (GRI 300), Social (GRI 400), and Governance, represented by GRI 102 under GRI Standards 2016 and GRI 2 under GRI Standards 2021. Firm value was measured using Tobin's Q, which reflects the market valuation of a firm relative to its total assets and captures investors' expectations of future growth opportunities. Tobin's Q was calculated as follows:

$$\text{Tobin's Q} = \frac{\text{Market Capitalization} + \text{Total Liabilities}}{\text{Total Assets}}$$

The operational definitions of the research variables are presented in Table 1.

**Table 1. Operational Definition of Variables**

Variable	Proxy	Measurement	Scale	Reference
ESG Disclosure (GRI Standards 2016)	ESG Disclosure Index (ESGDI)	Ratio of disclosed ESG items to the total disclosure items required under GRI Standards 2016	Ratio	Global Reporting Initiative (2016)
ESG Disclosure (GRI Standards 2021)	ESG Disclosure Index (ESGDI)	Ratio of disclosed ESG items to the total disclosure items required under GRI Standards 2021	Ratio	Global Reporting Initiative (2021)
Firm Value	Tobin's Q	(Market Capitalization + Total Liabilities) / Total Assets	Ratio	Tobin (1969)

## Empirical Model

To assess the implications of the transition from GRI Standards 2016 to GRI Standards 2021, two panel regression models were estimated separately using ESG disclosure measured under each reporting standard. The models are specified as follows:

Model 1 (GRI Standards 2016)

$$TQ_{it} = \alpha + \beta ESG_{2016it} + \varepsilon_{it}$$

Model 2 (GRI Standards 2021)

$$TQ_{it} = \alpha + \beta ESG_{2021it} + \varepsilon_{it}$$

Panel data regression analysis was conducted using EViews. Three estimation approaches Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM) were evaluated. The most appropriate model was selected using the Chow, Hausman, and Lagrange Multiplier tests. Hypothesis testing was subsequently performed using the coefficient of determination (Adjusted (R<sup>2</sup>)), F-test, and t-test at a 5% significance level. Finally, the estimation results from both regression models were compared to evaluate whether the transition from GRI Standards 2016 to GRI Standards 2021 altered the relationship between ESG disclosure and firm value

## FINDINGS AND DISCUSSION

## Sample Selection

This study examines energy and basic materials companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2024 period. Based on the purposive sampling criteria, a total of 20 companies were selected as the final sample. With an observation period of six years, the study generated 120 firm-year observations. The sample selection process indicates that a large number of companies were excluded due to inconsistency in publishing annual reports and sustainability reports in accordance with GRI Standards 2016 and GRI Standards 2021. This suggests that sustainability reporting practices in Indonesia are still in the process of standardization, particularly in the energy and basic materials sectors.

## Descriptive Statistics

The descriptive statistics show that ESG disclosure under both GRI Standards 2016 and GRI Standards 2021 varies across firms and over time. This indicates differences in the extent and quality of sustainability reporting among companies in the sample. Similarly, firm value measured by Tobin's Q shows considerable variation, reflecting differences in market valuation and investor perception across companies in the energy and basic materials sectors during the observation period. Overall, the descriptive results suggest that both ESG disclosure and firm value are heterogeneous across firms, indicating that companies differ significantly in both sustainability practices and market performance.

## Panel Regression Results

Panel data regression analysis was conducted to examine the effect of ESG disclosure on firm value under two different reporting frameworks. The results of Model 1 indicate that ESG disclosure measured under GRI Standards 2016 has a positive but statistically insignificant effect on firm value ( $\beta = 0.034$ ;  $p = 0.946$ ). This implies that ESG disclosure under the 2016 framework does not significantly influence market valuation of firms.

Similarly, Model 2 shows that ESG disclosure measured under GRI Standards 2021 also has a positive but statistically insignificant effect on firm value ( $\beta = 0.024$ ;  $p = 0.945$ ). This suggests that even after the revision of the GRI reporting framework, ESG disclosure has not yet become a value-relevant factor in the Indonesian capital market. In addition, both models exhibit very low explanatory power (Adjusted  $R^2$  approximately 0), indicating that ESG disclosure does not meaningfully explain variations in firm value in the sampled companies.

## Comparative Analysis of GRI Standards 2016 and 2021

To examine whether the transition from GRI Standards 2016 to GRI Standards 2021 affects the relationship between ESG disclosure and firm value, a coefficient comparison test was conducted. The results show that there is no statistically significant difference between the coefficients of the two models ( $Z = 0.016$ ). This finding indicates that the revision of GRI reporting standards has not led to a meaningful change in the value relevance of ESG disclosure.

## **Discussion**

The findings of this study consistently show that ESG disclosure does not significantly affect firm value, regardless of whether it is measured under GRI Standards 2016 or GRI Standards 2021. This suggests that sustainability reporting has not yet been fully integrated into investor decision-making in the Indonesian capital market. One possible explanation is that ESG disclosure in emerging markets such as Indonesia is still largely compliance-oriented rather than value-relevant information. Companies may disclose ESG information primarily to meet regulatory or legitimacy requirements, rather than as a strategic signal to investors.

Another explanation relates to the characteristics of the energy and basic materials sectors, which are highly influenced by commodity price fluctuations and macroeconomic conditions. In such sectors, investors tend to prioritize financial performance indicators such as profitability and cash flow over non-financial information like ESG disclosure. The absence of a significant difference between GRI Standards 2016 and GRI Standards 2021 further suggests that the revision of sustainability reporting standards has not yet improved the market usefulness of ESG information. Although GRI 2021 introduces more refined disclosure requirements, these improvements may not yet be fully reflected in corporate reporting practices or investor interpretation.

From a theoretical perspective, these findings provide limited support for signaling theory in the context of ESG disclosure, as improved reporting standards do not necessarily result in stronger market responses. Similarly, from a stakeholder theory perspective, although firms disclose ESG information to meet stakeholder expectations, such disclosures have not yet translated into increased firm value. Overall, the results highlight a gap between the development of sustainability reporting standards and their economic relevance in the capital market. ESG disclosure in its current form has not yet functioned as a strong valuation signal in the Indonesian energy and basic materials sectors

## **CONCLUSION**

This study found that the transition from GRI Standards 2016 to GRI Standards 2021 did not significantly affect the relationship between ESG disclosure and firm value among energy and basic materials companies listed on the Indonesia Stock Exchange during 2019–2024. The findings indicate that revisions to sustainability reporting standards alone are insufficient to enhance investors' responses to ESG information, as disclosure quality, implementation consistency, corporate commitment, and market maturity also play important roles. This study contributes to the ESG literature by demonstrating that updated reporting standards do not automatically increase the value relevance of ESG disclosure in emerging markets. However, the findings are limited by the sector-specific sample and the exclusion of additional firm-specific control variables. Future research should include broader industry coverage, longer observation periods, relevant control variables, and measures of ESG disclosure quality to provide a more comprehensive understanding of its impact on firm value.

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