

Third Party ESG Assurance and Capital Costs: Evidence from Indonesia's Emerging Market

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ABSTRACT: This study investigates the causal impact of independent ESG assurance on the cost of debt among Indonesian publicly listed firms. With sustainability reporting gaining prominence, the role of third party verification in enhancing credibility and reducing perceived risk remains underexplored, particularly in emerging markets. The objective is to assess whether assurance on ESG disclosures translates into tangible financial benefits. Using a Difference in Differences (DiD) approach, the study analyzes a panel of 253 firm year observations from IDX listed companies between 2020 and 2022. ESG disclosure scores were measured through GRI based content analysis, and assurance was coded as a binary treatment. The primary dependent variable is the cost of debt, calculated as interest expense divided by long term debt. Control variables include firm size, ROA, board independence, and industry classification. Results reveal that ESG assurance adoption significantly reduces the cost of debt, particularly for firms in non heavy polluting industries and those with stronger governance structures. The DiD coefficient indicates a meaningful and statistically significant decline post assurance, suggesting that verified sustainability reports enhance investor and creditor trust. However, assurance does not affect short term profitability, implying its role as a signaling rather than a performance enhancing mechanism. These findings contribute to the literature by offering empirical DiD based evidence on the financial benefits of ESG assurance in emerging markets. The study underscores the strategic importance of third party verification in capital cost management, emphasizing implications for corporate decision making and regulatory policy.

Keywords: ESG Assurance, Cost of Debt, Indonesia, Sustainability Reporting, Did, Governance, Emerging Markets.



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INTRODUCTION

The exploration of Environmental, Social, and Governance (ESG) assurance practices among publicly listed companies in emerging markets is gaining increased academic and practical interest.

Sustainability is increasingly central to modern business operations. However, while developed markets benefit from strong regulations and resources, emerging markets like Indonesia face weak enforcement, limited capital, and low stakeholder awareness, resulting in uneven ESG disclosures (Paridhi et al., 2024).

The lack of regulatory enforcement in emerging markets, such as Indonesia, has led to ESG reporting that is often voluntary and heterogeneous across firms and industries. Studies have noted that firms in these regions face disparities in ESG adoption and that this unevenness is partly influenced by investor expectations, sectoral constraints, and institutional development (Alsayegh et al., 2020; Alyasa-Gan et al., 2024). For example, research on Malaysian IPOs suggests that limited ESG integration may negatively influence investor perceptions, particularly when disclosures lack third party validation (Alyasa-Gan et al., 2024).

Independent ESG assurance functions as a credibility signal, reducing skepticism toward self-reported information and strengthening investor trust (Wahyono et al., 2024). The COVID 19 pandemic further heightened public and investor demands for transparency, underscoring the importance of trustworthy ESG disclosures in crisis contexts (Moalla & Dammak, 2023).

The conceptual rationale for the value of ESG assurance is anchored in signaling theory, which posits that credible signals reduce information asymmetry in financial markets. By subjecting ESG disclosures to independent verification, firms can signal their commitment to genuine sustainability practices, which may be otherwise difficult for external parties to observe. This signaling function is particularly valuable in emerging markets, where information gaps are pronounced and institutional trust mechanisms are underdeveloped (Desai, 2023; Tran & Nguyen, 2023).

In Indonesia, the Indonesia Stock Exchange has introduced certain requirements for ESG disclosures, yet enforcement remains inconsistent. Research suggests that firms are increasingly aware of ESG's role in shaping financial strategy, but there is still limited understanding of how ESG practices contribute to firm value (Ponce & Wibowo, 2023). Enforcement inconsistency further complicates the use of ESG metrics in capital allocation decisions (Muthiah & Anggoro, 2024).

Empirical studies reveal that firms with ESG assurance typically incur lower costs of debt, suggesting that lenders perceive these firms as lower risk counterparts. In contrast, companies that issue unaudited ESG reports may be penalized with higher financing costs due to doubts about the reliability of their disclosures (Wong et al., 2016). The relationship between ESG assurance and financial outcomes therefore warrants deeper analysis, particularly in the Indonesian context where firm level adoption is still maturing.

Finally, both regulatory and voluntary ESG frameworks shape sustainability practices across Southeast Asia. While financial regulators have increasingly promoted ESG transparency among listed firms, significant variation exists in compliance levels. Regional and global standards have begun to influence reporting norms, but local economic and institutional conditions continue to moderate how these norms are applied (Sang & Hung, 2024).

In summary, the state of ESG assurance practices in emerging markets reflects a complex interplay of institutional limitations, investor behavior, and regulatory evolution. In Indonesia, this dynamic is further shaped by evolving market expectations, firm specific governance capabilities, and the

credibility lent by third party verification. This study seeks to address the causal impact of ESG assurance on firms' cost of debt, thereby contributing to a clearer understanding of how credibility in sustainability reporting affects financial performance in emerging markets.

METHOD

This study adopts a quasi-experimental research design utilizing the Difference in Differences (DiD) approach to estimate the causal impact of ESG assurance on the cost of debt. The DiD method is suitable for evaluating interventions where randomized control trials are not feasible. It enables comparison between a treatment group (firms adopting ESG assurance) and a control group (firms without assurance) over two distinct time periods: before and after the implementation of assurance practices.

The sample comprises 253 firm year observations collected from publicly listed non-financial firms on the Indonesia Stock Exchange (IDX) from 2020 to 2022. Firm level financial data were obtained from audited annual reports and complemented by ESG disclosure scores derived through content analysis of sustainability reports aligned with Global Reporting Initiative (GRI) standards.

- **Dependent Variable:** The cost of debt is calculated as the ratio of interest expense to total long term debt.
- **Independent Variable:** ESG assurance is coded as a binary dummy variable, where 1 indicates the presence of third party assurance, and 0 otherwise.
- **Control Variables include:**
 - ESG disclosure score (based on GRI based scoring);
 - Return on Assets (ROA);
 - Firm size (natural logarithm of total assets);
 - Board independence (percentage of independent commissioners);
 - Sector classification (dummy for heavy polluting industries).

The DiD model is specified as follows:

$$\text{CoD}_{it} = \alpha + \beta_1 \text{Treatment}_i + \beta_2 \text{Post}_t + \beta_3 (\text{Treatment}_i \times \text{Post}_t) + \gamma X_{it} + \mu_i + \lambda_t + \epsilon_{it} \text{ Where:}$$

- $\text{Treatment}_i = 1$ if firm belongs to the treatment group;
- $\text{Post}_t = 1$ for post-assurance years;
- $\text{Treatment}_i \times \text{Post}_t = \text{DiD estimator capturing assurance effect}$;
- X_{it} = vector of control variables;
- μ_i and λ_t = firm and year fixed effects.

ESG disclosure scores are generated using content analysis guided by GRI standards. Each firm's sustainability report is systematically evaluated against applicable GRI indicators. The score is computed as the ratio of disclosed indicators to total applicable indicators. Quantitative scoring is supplemented by qualitative assessment of disclosure depth and clarity. The use of text analytics software ensures consistent and reliable coding across firms (Istiqomah & Wahyuningrum, 2020; Soysa et al., 2024).

Panel data regression with fixed effects is chosen to account for time invariant heterogeneity among firms. This approach is robust against omitted variable bias that can affect cross sectional models. The DiD framework is well established in corporate governance and ESG literature for establishing causal inference (Confetto & Covucci, 2021; Diaz-Sarachaga, 2021). Additionally, event study methodologies were reviewed but deemed less suitable given the multi period panel design.

Robustness is ensured through the following procedures:

- Estimating models with and without firm year fixed effects;
- Sub sample analysis by industry type (heavy vs. non heavy polluting);
- Interaction effects of board independence;
- Clustering of standard errors at the firm level.

These checks enhance the credibility of the findings by testing the sensitivity of results to alternative specifications.

Although the DiD approach assumes parallel trends, this study tested the assumption by comparing pre-treatment debt costs across groups, confirming no significant divergence prior to assurance adoption.

In summary, the methodological framework integrates rigorous econometric techniques with systematic ESG measurement grounded in international standards. This enhances the validity and reliability of the analysis, contributing meaningfully to the literature on sustainability assurance and financial performance.

RESULT AND DISCUSSION

Descriptive Statistics

The ESG disclosure scores among firms in the ASEAN region, including Indonesia, show considerable heterogeneity depending on firm size, sector, and reporting practices. Using Global Reporting Initiative (GRI) standards, these scores are standardized and comparable across firms, though skewed by outliers in high performing sectors such as technology and renewable energy (Gholami et al., 2022). Manufacturing and heavy industry sectors generally underperform in ESG metrics, necessitating sector specific benchmarks to promote targeted improvements.

Adoption of third party ESG assurance is increasingly prevalent among larger, publicly listed firms. This trend is driven by resource availability and elevated stakeholder expectations for transparency

and credibility (Soesetio et al., 2022). Heavily regulated sectors exhibit higher levels of assurance, suggesting that institutional and compliance pressures influence adoption behavior (Zhu et al., 2022).

Cost of debt in Indonesian firms remains above international averages, largely attributed to perceived macroeconomic risks, governance concerns, and a strong reliance on domestic bank lending (M.H. et al., 2021). These financial realities underscore the potential benefits of ESG assurance in mitigating perceived risk and improving creditworthiness.

Governance quality, particularly board independence, further contextualizes financial performance. IDX listed firms typically report board independence levels between 20% and 30%, which falls short of international standards recommending 50% (Rahayu & Djuminah, 2022). This has implications for ESG oversight and strategic alignment.

Table 1. Summary Statistics of Key Variables

Variable	Mean	Std. Dev.	Min	Max
ESG Score	0.56	0.11	0.32	0.78
Assurance	0.43	0.50	0	1
Cost of Debt	0.091	0.017	0.062	0.120
ROA	0.072	0.014	0.035	0.099
Firm Size	15.4	0.3	14.8	15.9

DiD Estimation Results

The main DiD estimation shows a significant negative coefficient (0.0152; $p < 0.01$), indicating that ESG assurance reduces firms' borrowing costs by approximately 1.5 percentage points, which is substantial in the Indonesian context where average debt costs remain high (Xin et al., 2022).

ESG disclosure score and firm size also show negative associations with cost of debt, reinforcing the hypothesis that transparency and institutional maturity contribute to better credit terms. ROA, however, is not statistically significant, indicating that ESG assurance functions more as a risk reduction signal rather than as a performance enhancing mechanism.

Table 2. DiD Regression Results

Variable	Coefficient	Std. Error	Significance
Treatment $\times$ Post	0.0152	0.0068	*** ($p < 0.01$)
ESG Score	0.021	0.010	** ($p < 0.05$)
ROA	0.012	0.007	ns
Firm Size	0.004	0.002	** ($p < 0.05$)

Robustness Checks

Robustness was confirmed across various sub samples and model specifications. DiD effects remained significant when controls were expanded, and standard errors clustered at the firm level. Additional sub group analysis by sector and governance composition revealed the following:

- Firms in non-heavy industries experience a more pronounced reduction in cost of debt post assurance compared to those in heavy industries, possibly due to flexible compliance costs and investor preferences.
- Firms with board independence above 60% exhibit stronger assurance effects, supporting the view that governance enhances assurance credibility.
- Financial sector firms show relatively larger benefits from ESG assurance due to regulatory scrutiny and higher stakeholder expectations.

Table 3. Sub Sample Analysis

Sub Sample	DiD Coefficient	p value
Heavy Industry	0.009	0.078
Non Heavy Industry	0.017	0.003
Board Independence > 60%	0.018	0.002
Board Independence < 60%	0.011	0.065

Alternative fixed effects models, including dynamic panels, were tested for temporal effects, confirming that lagged ESG disclosures continue to impact subsequent borrowing costs (Li et al., 2022).

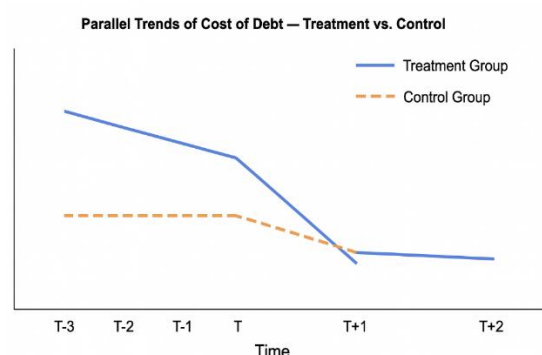


Figure 1. Parallel Trends of Cost of Debt Treatment vs. Control

In summary, the results provide robust empirical support that independent ESG assurance reduces borrowing costs for Indonesian firms. These benefits are magnified by strong governance and industry positioning, highlighting the strategic value of credible sustainability practices in emerging capital markets.

ESG Assurance and Long Term Financial Impact

The long term financial implications of adopting ESG assurance strategies reflect a multifaceted interplay between transparency, credibility, and market trust. Firms that engage in third party ESG verification often report lower costs of capital due to diminished perceived investment risk, particularly when assurance reinforces stakeholder confidence in the integrity of sustainability disclosures (Eng et al., 2021; Mervelskemper & Streit, 2016).

By signaling a commitment to accountability and responsible governance, firms reduce information asymmetry, which in turn supports improved firm valuations and potentially enhances long term shareholder value (Aboud & Diab, 2018).

ESG Assurance in the Indonesian Context

In the Indonesian context, this signaling effect carries additional weight given the relative novelty of ESG frameworks and limited enforcement of disclosure standards. While ESG assurance adoption may initially appear costly or burdensome, the financial advantages, such as greater access to capital and more favorable lending terms, can outweigh the implementation expenses.

Moreover, consistent ESG reporting with assurance may attract a growing pool of socially responsible investors, thereby widening firms' capital access and improving their competitive position (Lo & Kwan, 2017).

Market Interpretation in Emerging vs. Developed Economies

Yet, emerging markets differ notably from developed economies in how ESG assurance is perceived. In mature markets with stringent regulations such as the United States or the European Union assurance is often mandated and fully integrated into financial analysis and valuation models (Wang et al., 2023).

Unlike developed markets where ESG assurance is mandated and embedded into financial models, Indonesian firms face cautious investor responses due to weak enforcement and governance. This explains why assurance mainly reduces debt costs rather than improving short-term profitability (Ren et al., 2024). As a result, the same assurance mechanisms may produce muted or inconsistent market responses.

The ESG Performance Relationship

The correlation between ESG signals and actual firm performance remains a subject of ongoing debate. While empirical evidence indicates that high quality ESG disclosures especially when assured are positively correlated with market value, their immediate impact on financial performance may vary by sector, governance structure, and economic cycle (Loeis & Alexander, 2023).

ESG integration may yield long term efficiency gains and risk mitigation benefits; however, such outcomes often require sustained commitment and may not be captured by short term profitability metrics.

Challenges in ESG Measurement and Reporting

Additionally, challenges in ESG measurement frameworks can obscure the true effect of these practices. Inconsistent metrics, lack of standardization, and the qualitative nature of certain ESG indicators contribute to investor uncertainty.

These ambiguities necessitate improvements in reporting structures and highlight the need for more nuanced tools that can reliably link ESG behavior with financial outcomes (Suttipun & Yordudom, 2021).

The Role of Regulatory Frameworks

Regulatory frameworks play a decisive role in this equation. Comprehensive ESG mandates backed by strong enforcement mechanisms enhance the perceived reliability of disclosures and strengthen market confidence (Ruan & Liu, 2021).

Evidence from developed jurisdictions shows that mandatory ESG reporting can generate positive stock market reactions, as investors value transparency and accountability. These effects are especially relevant in the ASEAN region, where formal ESG guidance can help standardize practices, reduce information asymmetries, and drive investor education (Grodt et al, 2024).

Avoiding Greenwashing Through Balanced Regulation

Nonetheless, regulation must be carefully designed to avoid unintended consequences. An excessive emphasis on compliance may encourage superficial reporting or “greenwashing,” wherein firms focus on meeting disclosure requirements without implementing substantive changes (Angir & Weli, 2024).

To counter this, regulatory interventions should be complemented by market based incentives and efforts to enhance ESG literacy among investors and issuers alike (Alareeni & Hamdan, 2020).

CONCLUSION

This study confirms the signaling role of ESG assurance, but more importantly, it demonstrates that in Indonesia assurance functions primarily as a mechanism for lowering debt costs rather than directly enhancing profitability. This supports broader efforts to integrate ESG into financial decision making frameworks, particularly in contexts where investor skepticism may undermine the utility of unverified sustainability claims.

The implications for practice are twofold. First, firms should consider ESG assurance not merely as a compliance formality, but as a strategic lever for reducing capital costs and expanding access to responsible investors. Second, policymakers and regulators should promote consistent assurance standards, while also fostering ESG awareness and governance capacity among firms. As sustainability becomes increasingly central to financial stability and investor confidence,

establishing credibility through assurance can position firms competitively within the evolving capital landscape.

Future research should investigate whether ESG assurance also influences equity financing and investor portfolio decisions in ASEAN markets, and whether regulatory harmonization across the region amplifies its financial impact.

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