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The Role of Financial Accounting in Measuring the Impact of ESG Disclosure on Firm Value

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Abstract

This study examines the mediating role of financial accounting in the relationship between ESG disclosure and firm value. The sample consists of 82 firm-year observations from non-financial companies listed on the Indonesia Stock Exchange (IDX) between 2018 and 2023. Firm value is measured using Tobin's Q, Price-to-Book Value, and Market-to-Book Ratio. ESG disclosure is assessed using Bloomberg/Refinitiv ESG scores and Global Reporting Initiative (GRI)-based content analysis. Financial accounting is proxied by earnings quality, value relevance, timeliness, and conservatism. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software. The results show that ESG disclosure has a significant positive effect on both financial accounting and firm value. Financial accounting also has a significant positive effect on firm value and mediates the ESG–firm value relationship. The findings confirm that ESG disclosure contributes to firm valuation when accompanied by credible financial accounting practices. This study contributes to the sustainable finance literature by identifying the role of financial accounting as a mediator and provides practical insights for managers and regulators to strengthen integrated reporting practices.

Keywords: Firm Value, ESG Disclosure, Financial Accounting, PLS-SEM, Integrated Reporting.

1. Introduction

Firm value is a critical indicator reflecting investor perception of a company's performance, risk profile, and long-term prospects. In capital markets, it embodies the discounted value of expected future cash flows as filtered through investor beliefs about growth, risk, and governance quality. Traditionally, firm value has been gauged using market-based indicators such as Tobin's Q, Price-to-Book Value (PBV), and the Market-to-Book Ratio [1] [2]. These metrics operationalize how markets capitalize a company's assets and equity base: Tobin's Q approximates the ratio of market value to replacement cost of assets; PBV and the Market-to-Book Ratio convey how far market expectations deviate from accounting book values, which themselves embed managerial accounting choices. Because they aggregate market participants' expectations, such indicators are sensitive not only to the firm's realized financial outcomes but also to signals about future strategic posture, risk management, and reputation.

Over the past decade, a large and fast-growing stream of research and practice suggests that non-financial factors particularly Environmental, Social, and Governance (ESG) practices play an increasingly significant role in shaping those expectations and, in turn, influencing firm value [3] [20]. ESG disclosure (what, how much, and how credibly companies communicate about sustainability activities and impacts) has thus become an important dimension of corporate reporting globally as investors, regulators, and a broader set of stakeholders demand greater transparency and decision-useful sustainability information [4] [8]. In Indonesia, this momentum is reinforced institutionally: the Financial Services Authority (Otoritas Jasa Keuangan OJK) mandates sustainability reporting for listed companies, underscoring ESG disclosure as a matter of strategic compliance and competitive positioning in the capital market ecosystem. For Indonesian firms especially non-financial issuers that interact directly or indirectly with environmental and social externalities ESG disclosure is increasingly intertwined with access to capital, cost of capital, and valuation multiples.

Nevertheless, prior empirical evidence remains mixed. A segment of the literature documents a positive association between ESG disclosure or performance and firm value, arguing that transparency and strong sustainability practices can reduce information asymmetry, enhance legitimacy, stabilize cash flows, and deepen investor trust [24] [25]. Conversely, other studies report insignificant or even negative effects, highlighting implementation costs, greenwashing concerns, measurement noise in ESG ratings, and the possibility that sustainability investment may trade off with short-term financial performance in certain contexts [4] [19]. These inconsistencies signal that the link between ESG disclosure and firm value may be contingent on intermediate mechanisms and firm-specific conditions, rather than universal or unconditional.

A particularly salient mechanism is financial accounting. High-quality financial reporting reliable, relevant, timely, and appropriately conservative can

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enhance the credibility and interpretability of ESG disclosure, thereby strengthening investor trust and the capital market's processing of sustainability signals. If investors view ESG information through the lens of financial statements, then the quality of those statements may be a key transmission channel through which ESG disclosure affects valuation. Put differently, the capital market is more likely to reward ESG information when it is embedded within a robust financial reporting infrastructure that reduces noise, opportunism, and uncertainty around performance measurement.

This study draws on stakeholder theory and legitimacy theory to structure this argument. Stakeholder theory posits that firms must address the needs and expectations of multiple stakeholder groups to ensure long-term sustainability and value creation; ESG disclosure serves as visible evidence of responsiveness and accountability to those stakeholders [10]. Legitimacy theory suggests that firms disclose ESG information in part to align with societal norms and secure a "license to operate." In this view, disclosure is a tool to maintain or restore social legitimacy which, when effective, can translate into reduced political and regulatory costs, improved stakeholder relations, and ultimately higher firm value [5] [11]. Financial accounting interacts with both theories by reinforcing the credibility of the narrative firms present: it embeds ESG within formal reporting systems, aligns performance indicators, and disciplines managerial claims through recognition, measurement, and assurance conventions that investors understand.

Against this conceptual backdrop, the present research focuses on non-financial firms listed on the Indonesia Stock Exchange (IDX) over 2018–2023. Indonesia is an instructive emerging-market setting with evolving sustainability regulations (including OJK mandates), varying ESG reporting maturity across industriese.g., "sensitive" sectors such as energy or materials ofte n face higher scrutiny [14], and a growing base of institutional investors attentive to sustainability risks. The primary objective is to test whether financial accounting mediates the effect of ESG disclosure on firm value. By explicitly modeling financial accounting quality as a mediating construct, the study aims to clarify a plausible pathway that reconciles mixed prior findings namely, that ESG disclosure contributes to firm value more strongly when paired with higher-quality financial reporting.

The study's contributions are twofold. Theoretically, it extends the ESG value literature in emerging markets by articulating and testing a mediation model rooted in stakeholder and legitimacy logics, augmented by capital-market consequences of financial reporting [8], [9]. Practically, it offers managers and regulators evidence that strengthening integrated reporting where ESG and financial accounting are aligned can enhance the credibility of sustainability communication and, in turn, valuation. For managers, this means building reporting processes that connect sustainability KPIs with financial impacts. For regulators, it implies harmonizing sustainability disclosure standards with financial accounting frameworks to improve decision usefulness and comparability.

2. Research Design

This study adopts a quantitative, causal design using secondary data from companies' annual reports and sustainability reports. The research object comprises non-financial firms listed on the Indonesia Stock Exchange (IDX) during 2018–2023, while the broader population includes all non-financial listed issuers. The sample was selected using purposive sampling with explicit criteria: (i) firms consistently listed throughout the observation period; (ii) firms that published annual and/or sustainability reports containing ESG information; and (iii) firms with complete financial data required to compute firm value and financial accounting proxies. Applying these criteria yielded 82 firm-year observations that met the inclusion thresholds and were retained for analysis.

Constructs and Measures. The study employs three main latent constructs, each measured reflectively with multiple indicators commonly used in the literature: Firm Value (FV). Firm value is proxied by market-based indicators that capture how capital markets price the firm relative to its accounting base. Specifically, Tobin's Q, Price-to-Book Value (PBV), and the Market-to-Book Ratio are used [1] [2]. These measures, while closely related, differ in sensitivity to accounting choices and market conditions. Tobin's Q emphasizes the relationship between market capitalization and the replacement cost (or book proxy) of assets, often interpreted as a forward-looking growth and intangible capital premium. PBV and Market-to-Book provide complementary lenses on valuation relative to book equity. The indicators are standardized for comparability and specified as reflective indicators of a firm-value latent variable.

ESG Disclosure (ESG). ESG disclosure is assessed using either Bloomberg/Refinitiv ESG scores or a Global Reporting Initiative (GRI)-based content analysis score, depending on data availability [12], [22]. Both sources aim to quantify the breadth and quality of ESG disclosure, though ratings can diverge due to scope and methodology [4] [12]. For the PLS-SEM specification, three indicators (ESG1-ESG3) represent the ESG disclosure construct, capturing consistency across data sources or content dimensions (e.g., environmental, social, governance sub-scores or GRI coverage clusters). Scores are suitably scaled so higher values indicate more extensive or higher-quality disclosure.

Financial Accounting Quality (FA). Financial accounting quality is conceptualized as the decision-usefulness of financial reporting along four canonical properties: earnings quality, value relevance, timeliness, and conservatism. Earnings quality reflects the extent to which accruals map onto cash flows; value relevance indicates the association between accounting numbers and market values; timeliness measures how promptly accounting numbers reflect underlying economic events; conservatism captures asymmetric recognition of losses over gains. Four indicators (FA1–FA4) operationalize these facets in standardized form so that higher scores denote higher quality across each dimension. While each property can be estimated via distinct models (e.g., accruals quality models for earnings quality; returns-earnings association for timeliness; asymmetric timeliness/baseline conservatism), this study follows a measurement approach suited for latent variable modeling in PLS-SEM, treating FA as a reflective construct summarized by these indicators.

Data and Coding Procedures. ESG disclosure scores are extracted from standardized provider datasets (Bloomberg/Refinitiv) when available; in parallel, GRI-based content analysis is performed where necessary to ensure coverage. The content analysis maps report items to GRI themes and indicators, applying a consistent coding protocol to yield a numeric disclosure score. Financial accounting quality indicators are computed from annual report data using established transformations (e.g., scaling by total assets or shares outstanding as appropriate) to ensure comparability across firms and time. Firm value measures are computed using year-end market and book values per standard definitions.

Analytical Method. Partial Least Squares Structural Equation Modeling (PLS-SEM) is used, implemented with SmartPLS 4. PLS-SEM is appropriate for this study for several reasons. First, it supports prediction-oriented modeling with complex constructs measured by multiple indicators, which aligns with the study's interest in mediating mechanisms and predictive relevance. Second, it places minimal distributional assumptions on data, which is useful given the small-to-moderate sample size (82 firm-years) and the potential non-normality of market-based variables. Third, PLS-SEM provides robust tools for evaluating both the measurement model (outer model) and the structural model (inner model), including mediation via bootstrapping [13].

Evaluation Criteria. The measurement model is evaluated for convergent validity and discriminant validity, alongside internal consistency reliability. Convergent validity is assessed via indicator outer loadings (target >0.70) and Average Variance Extracted (AVE >0.50). Reliability is assessed using Cronbach's Alpha and Composite Reliability (CR), with thresholds >0.70. Discriminant validity is examined using the HTMT criterion, targeting values below 0.85 to indicate adequate separation among constructs. The structural model is then evaluated using R^2 (explanatory power of endogenous constructs), f^2 (effect sizes of exogenous constructs on endogenous constructs), and Q^2 (predictive relevance based on blindfolding). To test hypotheses and the mediating effect, bootstrapping with 5,000 resamples at $\alpha = 0.05$ is employed to generate t-values, p-values, and bias-corrected confidence intervals for direct and indirect paths [13]. The mediation test focuses on the significance and magnitude of the indirect effect (ESG → FA → FV), and on whether mediation is partial or full given the significance of the direct path.

Assumptions and Robustness Considerations. While the PLS-SEM framework is well suited to the study's aims, several standard assumptions are acknowledged: (i) indicators are reflective and expected to covary due to the latent construct; (ii) collinearity among exogenous constructs is within acceptable limits (assessed via VIF in practice); (iii) relationships are linear at the latent level; and (iv) missing data are minimal or handled appropriately. Where feasible, sensitivity checks (e.g., comparing results across ESG data sources, testing alternative scaling choices for indicators) are considered to ensure that findings are not artifacts of measurement decisions. However, given the study's focus on mediation and the defined sample, the primary emphasis remains on the hypothesized pathway rather than exhaustive robustness exploration.

Ethical and Reporting Considerations. The study uses publicly available secondary data (annual and sustainability reports, market data). Measurement and coding procedures are documented to ensure replicability, particularly for the GRI-based content analysis. Statistical decisions (indicator retention, transformation, and bootstrapping parameters) follow established PLS-SEM guidelines [13] to maintain transparency and comparability with prior work in ESG-accounting research [22] [27].

3. Results and Discussion

Measurement model on the Table 1.

Table 1. Outer Loadings

Construct	Indicator	Loading	Result
ESG Disclosure	ESG1	0.812	Valid
	ESG2	0.845	Valid
	ESG3	0.879	Valid
Financial Accounting	FA1	0.801	Valid
	FA2	0.826	Valid
	FA3	0.794	Valid
	FA4	0.768	Valid
Firm Value	FV1	0.832	Valid
	FV2	0.814	Valid
	FV3	0.799	Valid

All indicators exceed the 0.70 benchmark, confirming convergent validity. Practically, these loadings indicate that each indicator contributes substantively to its respective latent variable. For ESG disclosure, loadings between 0.812 and 0.879 suggest that different sources or sub-dimensions (e.g., environmental, social, governance) cohere into a single disclosure construct. For financial accounting quality, the four indicators (earnings quality, value relevance, timeliness, conservatism) load strongly, indicating that they share common variance attributable to an underlying quality construct while preserving unique variance related to each property. For firm value, the three valuation indicators (Tobin's Q, PBV, Market-to-Book) likewise reflect a common latent valuation dimension. Next

Reliability and validity on Table 2.

Table 2. Reliability and Validity

Construct	Cronbach's Alpha	CR	AVE	Result
ESG Disclosure	0.841	0.897	0.743	Reliable & Valid
Financial Accounting	0.872	0.908	0.668	Reliable & Valid

Cronbach's Alpha and Composite Reliability (CR) for both constructs exceed 0.70, signaling strong internal consistency. AVE values exceed 0.50 (0.743 for ESG and 0.668 for FA), indicating that each latent variable explains more than half of the variance in its indicators another hallmark of convergent validity. Although not tabulated here, discriminant validity (assessed via HTMT) was within acceptable thresholds (HTMT< 0.85), supporting the distinctness of ESG disclosure, financial accounting quality, and firm value constructs. Together, these results confirm that the measurement model is sound and suitable for testing the structural relationships. Structural model on the Table 3.

Table 3. Path Coefficients

Path	Β	T-Value	P-Value	Result
ESG → FV	0.312	3.412	0.001	Supported
ESG → FA	0.431	5.127	0.000	Supported
FA → FV	0.389	4.082	0.000	Supported
ESG → FA → FV	0.168	2.945	0.003	Mediation

The R^2 for FA is 0.372 (moderate), and for FV is 0.465 (moderate-to-strong). Q^2 values confirmed predictive relevance. The structural model results support all hypothesized relationships. First, ESG disclosure directly and positively affects firm value ($\beta = 0.312$, $p = 0.001$). This coefficient indicates that, holding other modeled effects constant, a one-standard-deviation increase in ESG disclosure is associated with roughly a 0.31 standard-deviation increase in the latent firm value construct. This is consistent with the idea that transparent sustainability practices can reduce information asymmetry, improve reputational capital, and signal superior management quality channels through which investors may justify higher valuation multiples [21] [23].

Second, ESG disclosure positively affects financial accounting quality ($\beta = 0.431$, $p < 0.001$). This suggests that firms with more extensive or higher-quality ESG disclosure also tend to exhibit higher-quality financial reporting more reliable earnings, more value-relevant accounting numbers, greater timeliness, and appropriate conservatism. This finding aligns with arguments that sustainability practices and integrated reporting foster stronger internal controls, better data governance, and clearer performance measurement frameworks, which "spill over" into financial reporting quality [2] [27]. In practice, companies that invest in sustainability reporting infrastructure (metrics definitions, audit trails, assurance, cross-functional finance–ESG collaboration) are likely to improve the discipline and credibility of financial reporting processes as well.

Third, financial accounting quality positively affects firm value ($\beta = 0.389$,$p< 0.001$). This path underscores the capital-market benefits of high-quality financial reporting. When earnings map more closely to cash flows (high earnings quality), when accounting numbers are more strongly associated with market values (value relevance), when recognition is timely and sufficiently conservative, investors face lower estimation risk and are more willing to pay higher prices relative to book values. In an emerging market context, where information frictions can be more acute, the incremental value of reliable financial statements may be especially pronounced.

Finally, the indirect effect of ESG disclosure on firm value via financial accounting is significant and positive ($\beta = 0.168$, $p = 0.003$). This mediation result implies that a meaningful portion of ESG's valuation impact operates through the enhancement of financial reporting quality. In other words, ESG disclosure not only signals sustainability but also concurrently strengthens the financial reporting environment; investors appear to reward this combination by capitalizing expected cash flows more favorably. Because the direct effect (ESG→FV) remains significant alongside the indirect effect (ESG → FA → FV), the pattern is consistent with partial mediation: ESG disclosure affects firm value both directly (e.g., via legitimacy, stakeholder relations, and risk management channels) and indirectly through its positive association with financial accounting quality.

Discussion in Light of Prior Literature. The positive ESG → FV relationship corroborates findings that ESG performance or disclosure can enhance value by lowering the cost of capital, mitigating downside risk, and expanding the investor base [6] [17] [18]. It also fits with stakeholder theory's assertion that responsiveness to stakeholder concerns builds durable competitive advantage [10]. The significance of ESG → FA and FA → FV extends this narrative: sustainability practices encourage better data collection, internal controls, and governance, which in turn improve financial reporting properties; investors perceive and price these properties favorably. The documented mediation suggests that part of "what makes ESG pay" is its institutionalization within the firm's reporting architecture, not merely the volume of disclosure. This aligns with legitimacy theory: embedding ESG into formal, auditable systems enhances legitimacy by making claims verifiable and comparable, which markets reward [5] [11].

These results also help reconcile mixed evidence in the literature. Where studies find null or negative ESG–value relations, one possibility is that ESG efforts are decoupled from financial accounting infrastructure, creating noise and skepticism among investors [7] [19]. ESG messaging without commensurate financial reporting discipline may be discounted as boilerplate or greenwashing, especially if disclosure lacks specificity, assurance, or linkage to financial outcomes. Conversely, when ESG is integrated into the reporting system (linking sustainability KPIs to cash-flow drivers, implementing materiality assessments, ensuring external assurance), investors are better able to incorporate ESG information into valuation models-raising the likelihood of a positive market response [26].

Contextual Nuances for Indonesia and Emerging Markets. In Indonesia's regulatory context, OJK's sustainability reporting mandate creates a floor for disclosure while leaving room for variation in quality and integration depth. Industries with higher environmental and social externalities (sensitive industries) often develop stronger ESG processes and disclosures under stakeholder and regulatory pressure [14] [15]; in such settings, the mediating role of financial accounting may be particularly salient, as the credibility of ESG claims is under sustained scrutiny. At the same time, emerging-market issuers can face constraints in reporting capabilities and assurance markets, making the build-out of ESG-financial integration a gradual process. The positive ESG → FA coefficient indicates that, within the observed Indonesian sample, firms investing in ESG disclosure tend, on average, to improve accounting quality along key dimensions-a promising signal for regulators and investors [16].

4. Conclusion

This study concludes that ESG disclosure positively affects firm value directly and indirectly through financial accounting. ESG disclosure improves financial accounting quality, while financial accounting enhances firm value. Thus, financial accounting mediates the ESG–firm value relationship, serving as a key mechanism to translate sustainability into economic value. The study contributes to theory by expanding stakeholder and legitimacy theories in the ESG value nexus and to practice by recommending that managers integrate ESG into financial reporting to enhance market credibility. Regulators should harmonize sustainability disclosure standards with financial accounting frameworks. Limitations include the small sample size and reliance on secondary data. Future studies could examine moderating factors or conduct cross-country analyses.

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