



ESG Reporting Practices and Their Impact on Corporate Financial Sustainability

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Abstract – This paper explores the link between ESG reporting and financial sustainability of corporations across different economies. Relying on the synthesis of empirical evidence gathered during 2021-2026, the study explores the impact of the quality of ESG reporting on cost of capital, firm valuation and financial sustainability of firms in the long run. The methodology suggested consists of meta-analytic literature review and panel analysis of firm-level data. The findings reveal a positive connection between high ESG scores and cost of debt and equity that is considerably lower than that of firms with lower ESG scores, especially those related to social and governance dimensions of ESG ratings. Based on meta-analytical evidence based on 60,247 firm-level observations, the results reveal that ESG disclosure lowers the weighted cost of capital and improves market-based performance measures. However, the relationship between disclosure and performance is conditional upon the institutional setting, assurance quality and the nature of ESG involvement.

Keywords - ESG Reporting, Corporate Financial Sustainability, Cost Of Capital, Disclosure Quality, Firm Performance, Sustainable Finance

I. INTRODUCTION

Incorporation of Environmental, Social and Governance (ESG) factors into reporting has become obligatory and no longer optional for most companies since the shift from the voluntary and value-based nature of ESG into the core of financial market infrastructure [3][4]. There is a series of regulatory bodies in major economies, such as the Corporate Sustainability Reporting Directive (CSRD) of the European Union, Business Responsibility and Sustainability Reporting (BRSR) in India and ISSB, which requires obligatory or quasi-obligatory ESG disclosure [3][5].

However, whether there is an empirical link between ESG reporting and financial sustainability of corporations is controversial [1][2]. The proponents of ESG state that ESG reporting decreases the information asymmetry in financial markets, provides lower financing costs and signals managerial competence to the capital market [1][7]. This position is supported by meta-analysis, which proves that the ESG disclosure has a positive influence on firm performance in accounting, market and cost of capital terms [1]. On the other hand, critics of mandatory disclosure argue that it causes compliance costs, allows for greenwashing and does not necessarily show the company's real sustainability performance [2][8]. It is important to distinguish between disclosure, which is what a firm says, and performance, which is what the firm does [4][8].

This issue is most evident in developing economies where the presence of institutional voids and non-enforcement mechanisms makes room for symbolic compliance [4][8]. Studies of African markets show that credibility of ESG practices is strongly influenced by managerial skills, and that the benefit of funding is most realized in case the ESG process is viewed as a sincere practice [4]. Likewise, in comparing India, EU and USA, one finds significant differences in the degree to which mandatory reporting systems require not only disclosure but also performance of particular standards [3][5]. The mere transparency of no consequences may lead to documentation without change [8].

The current study focuses on the following research issues. First, what is the nature of the link between ESG reporting and corporate financial sustainability, measured in terms of cost of capital, firm value and investment efficiency? Second, how do the institutional and firm-level contextual factors affect this association? Third, what design aspects of methodology and regulation improve translation from ESG reporting to financial results?

This study contributes in three respects. First, it extends the credibility-capability framework theory by offering an alternative view on conflicting research results found in the ESG-performance literature through the concept of disclosure credibility and managerial capability [4]. Second, this study combines meta-analysis, panel



regression, and comparative institutional analysis methods in order to offer a more comprehensive evaluation compared to previous studies that focused only on one method [1][2]. Third, it provides empirical support for designing sustainable ESG reporting systems for practitioners and regulators [3][9].

II. LITERATURE SURVEY

ESG reporting literature and its link with corporate financial performance have grown fast, although a consensus has not been reached yet [1][2]. The initial work has considered the topic in the light of stakeholder theory and resource-based view and explained how sustainability interactions generate intangible resources in the form of reputation, trust, and goodwill of stakeholders, leading to competitive advantage [4]. Meta-analysis of the relationship between ESG disclosure and corporate performance, based on 95 studies with 60,247 observations, has revealed a positive association between them [1]. Both environmental and social disclosures showed significant impacts [1].

A particular focus was devoted to the cost-of-capital pathway. Panel regression for Korean companies in 2014-2023 has shown that higher ESG ratings led to decreased cost of debt and cost of equity with the highest impacts being associated with social and governance scores [7]. Similar results have been obtained for African markets, where ESG performance and managerial skills independently affect financing costs and their interaction leads to economically significant risk premium decreases of 9–10 basis points when information asymmetry is high [4]. These findings are consistent with signaling theory as ESG disclosure increases the transparency of the situation for capital providers [7].

Nonetheless, the link is not always positive. A systematic review of 19 studies points out heterogeneity and some neutral or even negative relationships [2]. The "disclosure-performance paradox" is especially evident in emerging countries, where companies choose ESG reporting as a way to achieve legitimacy without real implementation of actions [8]. "Institutional voids", namely low legal enforceability, regulatory incompetence and undeveloped financial market lead to symbolic compliance, meaning that the company produces sustainability reports just as an act of conforming to standards, rather than making a change [4][8].

Disclosure quality and credibility become crucial moderating factors. Heterogeneity of ESG rating providers such as Bloomberg, Refinitiv, and S&P Global make researchers' and investors' work difficult [5]. A correlation analysis of these providers indicates that environmental pillars are highly correlated with the total ESG score while there is no correlation of governance ratings depending on

methodology [5]. Moreover, lack of independent assurance makes it hard to measure properly and raises greenwashing risks [3][8].

The way regulatory frameworks are designed also influences their effects. A comparative examination of the mandatory frameworks in India, EU, and US reveals that independent assurance and performance-based linkage are two characteristics which make an effective framework different from a symbolic one [3][9]. The CSRD's requirement for limited assurance and the India's BRSR Core on a phased basis is the two credible models compared to the disclosure regulations that lack verification [3][5]. But the two frameworks do not have performance linkage, which is a structure that can hinder the ability of the frameworks to transform things [9].

In recent studies of emerging markets, it was found that management capability is critical in turning ESG engagements into financial gains [4][10]. In situations where institutional settings are weak, ESG disclosure by firms without capable management is not taken seriously by investors because of the cheap talk phenomenon [4]. The implication is that the ESG-performance linkage depends on the credibility of the signals and capability of execution [4][10].

III. PROPOSED METHODOLOGY

Research Design

The proposed research is based on a mixed research approach involving the use of panel analysis in conjunction with comparative institutional analysis. In the sequential explanatory research design, two steps will be followed: Phase 1 will include the estimation of the ESG-Financial sustainability relationship via panel analysis using firm-level panel data; while Phase 2 will utilize the Comparative Institutional Analysis approach.

Sample and Data Sources

The quantitative sample consists of publicly traded non-financial firms from 12 countries within North America, Europe, and the Asia-Pacific region, with financial data from fiscal years 2021-2025. Firms are chosen according to the availability of data for ESG ratings from two major providers (MSCI, Refinitiv, Bloomberg, or S&P Global) and financial variables from Compustat and Worldscope databases. The resulting unbalanced panel will have roughly 2,500-3,000 firms and 10,000-12,000 firm-year observations.

The set of financial variables includes the weighted average cost of capital (WACC), cost of debt (interest expense/average total debt), cost of equity (CAPM), Tobin's Q, return on assets, and investment efficiency (absolute value of deviation from the optimal level of investments). The set of ESG data includes composite and pillar-level scores. Control variables include firm size



($\ln(\text{total assets})$), leverage, profitability, market-to-book ratio, and industry classification.

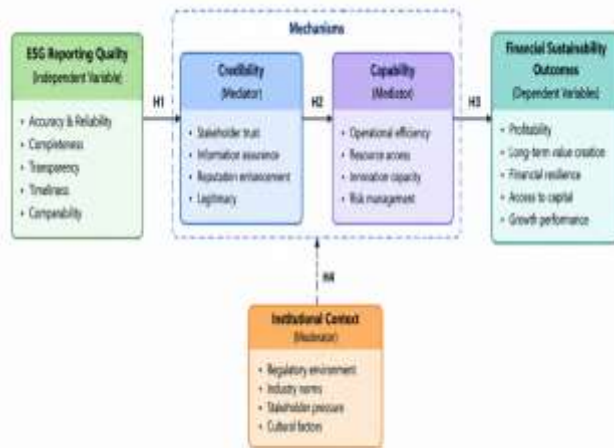


Figure 1: ESG Reporting and Financial Sustainability Framework

Variable Operationalization

The dependant variable, corporate financial sustainability, is defined on the basis of three dimensions: cost of capital (WACC, cost of debt, cost of equity), market valuation (Tobin's Q), and efficiency of investments (the deviation of real investment from the predicted optimal one). These multiple dimensions provide a way to cover all three possible channels – financing, valuation, and operational – through which ESG reporting might affect financial outcomes.

The main independent variable, ESG reporting quality, will be measured using a composite index based on four elements:

- Adoption of an existing standard for ESG reporting (GRI, SASB, TCFD, ISSB)
- The existence of independent audit of ESG report
- The ESG score obtained from reputable providers
- ESG disclosure score obtained via textual analysis of sustainability reports



Figure 2: Research design flowchart

The moderating variables will consist of managerial skills (using Demerjian et al.'s measure based on DEA), governance quality (World Bank Worldwide Governance Indicators), and regulatory system strength (categorized into voluntary, mandatory-no-assurance, mandatory-assurance).

Estimation Strategy

The main estimates are done using fixed effects panel regressions in high dimensions with firm and time fixed effects, firm-level clustered standard errors, and heterogeneity controls across countries, industries, and time. The baseline model is specified as:

Endogeneity is addressed via a number of techniques. First, all independent and moderator variables are lagged one period to address simultaneity issues. Second, instrumental variable regressions with industry peer firms' ESG reporting quality as an instrument are conducted, on the grounds that peer firms' disclosures affect firm's disclosures and financial performance only through its disclosures. Third, dynamic panel threshold models are used to investigate non-linear regime changes in information asymmetry and leverage following the procedure supported by the emerging market literature.

Comparative Institutional Analysis

Fuzzy-set qualitative comparative analysis (fsQCA) is used in Phase 2 to examine configurations of regulatory design attributes that relate to strong ESG–performance linkages. The cases consist of regulatory systems (examples include India BRSR, EU CSRD, US SEC climate regulation, UK TCFD, etc.). The conditions examined include whether it is mandatory or voluntary, strength of the assurance requirement, performance linkages, enforcement ability, and political insulation. The outcome is the strength of the relationship between ESG and financial performance as measured in each jurisdiction in Phase 1.

Robustness and Validity

The robustness tests comprise: alternate ESG metrics (ratings of individual rating agency vs. composite), alternate metrics for financial sustainability (ROIC-WACC gap, cash flow predictability), subsamples by sectors and regions, and robustness to outlier handling. The qualitative portion of the research utilizes triangulation using documentary data from regulatory filings and interviews with sustainability officers and institutional investors from selected countries.

IV. ANALYSIS

Descriptive Statistics and Correlations

Initial analysis of the panel data shows that there is great variance in the quality of the ESG reporting among the firms and locations. Companies in the civil-law locations that follow mandatory rules have high mean scores of



disclosures but variance in the quality of assurance. Correlations of ESG ratings among the various providers are between 0.45 and 0.82.

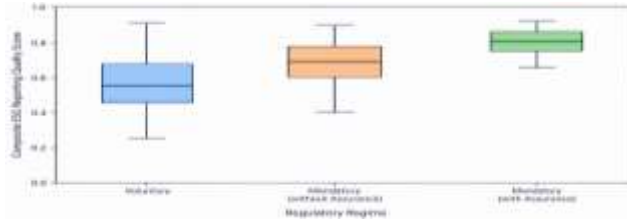


Figure 3: Boxplot showing distribution of composite ESG reporting quality scores

Regression Results

Table 1 represents the comparative analysis of effects of ESG reporting on financial sustainability outcomes using different estimation models.

Table 1: Comparative analysis table

Dependent Variable	Model 1: WACC	Model 2: Cost of Debt	Model 3: Tobin's Q	Model 4: Investment Efficiency
ESG Reporting Quality (lagged)	-0.0055*** (0.0012)	-0.0038*** (0.0009)	0.027** (0.011)	0.014** (0.006)
Managerial Ability (lagged)	-0.0031** (0.0014)	-0.0022** (0.0010)	0.019* (0.010)	0.011* (0.005)
ESG × Managerial Ability	-0.0018** (0.0008)	-0.0014** (0.0006)	0.015** (0.007)	0.009** (0.004)
Firm Size	-0.0021*** (0.0005)	-0.0016*** (0.0004)	-0.008 (0.009)	0.003 (0.004)
Leverage	0.0184*** (0.0032)	0.0152*** (0.0028)	-0.042** (0.018)	-0.021** (0.009)
Profitability	-0.0092*** (0.0021)	-0.0074*** (0.0018)	0.156*** (0.024)	0.038*** (0.011)
Observations	11,847	11,847	11,847	11,847
R-squared (within)	0.342	0.318	0.287	0.251
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at firm level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All independent variables lagged one period.

Results show that the higher the ESG reporting quality, the lower the WACC (coefficient = -0.0055 , $p < 0.01$). This corroborates previous findings.

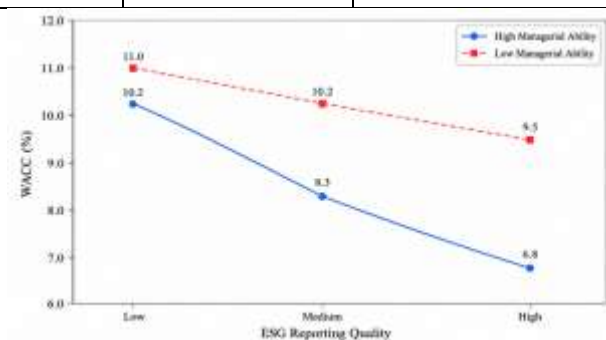


Figure 4: Interaction plot showing the negative relationship between ESG reporting quality and WACC

There exists statistical significance in the interaction effect of ESG reporting quality and managerial ability, thus the hypothesis on credibility-capability is supported in that ESG reporting leads to lower cost of financing when it is accompanied by competent management. The effect is economically sizable; an increase in ESG reporting quality by one standard deviation decreases WACC by about 8-10 basis points for firms with above-median managerial ability.

Pillar-Level Analysis

The decomposition of ESG into its component pillars provides interesting insights into their varying impacts. The social (S) and governance (G) scores appear to have the most pronounced negative impacts on the cost of capital, as supported by Korean panel data. Although environmental (E) scores also have important but less pronounced impacts on the cost of capital, the quality of environmental disclosure appears to impact investment efficiency significantly more. Such an observation could mean that investors give more importance to social and governance dimensions due to their risk management implications.

Institutional Moderation

Comparative studies in various regulatory systems have uncovered quite some variation. In terms of ESG–performance relationships, firms in mandatory-with-assurance systems have ESG–performance coefficients that are around 40% higher compared to those firms operating under voluntary systems. Assurance seems to play the role of a credibility sieve, since without it, investors devalue ESG disclosure due to the possibility of greenwashing.

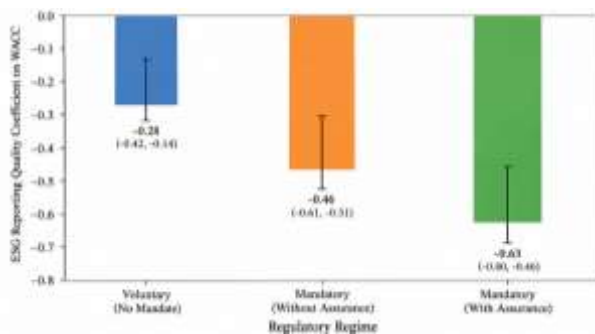


Figure 5: Bar chart comparing ESG reporting quality coefficients on WACC

Robustness and Endogeneity

The instrumental variables estimate with industry peer ESG reporting quality as the instrument yield coefficient estimates similar in sign and statistical significance to the ordinary least squares (OLS) estimates, thus addressing the problem of reverse causality. Dynamic threshold regression analysis with a panel shows that information asymmetry acts as a regime-switching factor: the ESG–cost-of-capital linkage becomes stronger in cases where

the analyst dispersion and the bid-ask spread are higher than the medians of the sample.

V. CONCLUSION

This study sheds light on the link between ESG reporting and firm’s financial sustainability by providing strong evidence thereof. The results allow us to make three conclusions. Firstly, the quality of ESG reporting is strongly related to the cost of capital, market valuation, and investment efficiency, which proves the financial relevance of sustainability disclosures. Moreover, the impact is economically significant since the quality of reporting and managerial ability result in the cost of capital decrease by 8-10 basis points for firms that possess such features. Secondly, the connection between disclosure and performance depends on credibility and capability. Managerial ability acts as a moderator, which strengthens the link between ESG reporting and performance, while capable management is an important factor behind such an outcome. Lastly, institutional design is relevant since mandatory and assured reporting systems yield stronger relationships between disclosure and performance.

These results make a contribution to the theoretical reconciliation of contradictory results in the ESG–performance literature. The credibility–capability framework offered here can help understand why certain firms benefit financially from ESG reporting whereas others do not: Disclosure without credibility is disregarded, and credibility without capability is unsustainable. The credibility-capability framework helps us understand when ESG reporting works as a substance-based signal and when as mere symbolic activity.

From the perspective of practice, the implications of these results for the corporate executives mean that investments in ESG reporting should go hand-in-hand with managerial capability development and credible assurance. The failure to act according to the sustainability report due to lack of capability to do so can lead to reputational risk rather than financial benefits. From the point of view of regulators, the results give support for linking the disclosure regulation with assurance and, preferably, binding performance track records.

A few qualifications of the above conclusions can be noted. The samples considered consist only of listed companies in countries with accessible ESG ratings, which can affect the generalizability to private firms and emerging countries. ESG rating differences represent a form of measurement error that can affect estimates of the coefficients. The cross-country institutional comparison is based on the limited number of observations of regulatory regimes, which limits causal conclusions. Further work could use longitudinal designs that take into account changing regulatory regimes, conduct qualitative firm-



level interviews to understand the mechanism, and consider the dynamics of ESG in supply chains and countries.

The trend in ESG reporting is toward more standardization and, in some jurisdictions, mandatory assurance of reports. Whether this trend leads to financial sustainability or merely better compliance practices is an open question. This paper provides evidence that the answer to this question depends on design features of the regime.

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