Does Profitability Support Sustainability? Examining the Influence of Financial Performance and ESG Controversies on ESG Ratings

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Article

Does Profitability Support Sustainability? Examining the Influence of Financial Performance and ESG Controversies on ESG Ratings

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Abstract: This study explores the relationship between corporate financial performance and ESG reporting performance across all three ESG pillars: Environmental, Social, and Governance. Using a robust panel dataset of over 28,274 firm-year observations from listed companies worldwide (covering 2019–2023), combining financial metrics and ESG performance scores from the Refinitiv database. Panel regression results indicate that more profitable firms (measured by Net Income and ROA) exhibit statistically significant higher ESG performance across all three pillars, reinforcing the view that financial strength supports more comprehensive sustainability efforts. By contrast, firms with more ESG controversies attain significantly lower ESG scores, suggesting that incidents of misconduct or governance failures undermine sustainability reporting credibility. These findings contribute to the literature by empirically validating the dual role of financial success and reputational risk in shaping ESG performance. The study also offers practical insights for regulators, investors, and corporate managers. Strong profitability can facilitate improved ESG transparency, whereas proactive measures and stricter oversight are needed to address controversies, enhance accountability, and mitigate greenwashing.

Keywords: ESG performance; financial performance; profitability; corporate governance; ESG controversies

1. Introduction

Over the past decade, Environmental, Social, and Governance (ESG) factors have become central in shaping corporate behavior, investment decisions, and policy development, [1]. ESG concerns are no longer peripheral — they are now embedded in financial markets, regulatory requirements, and societal expectations [2]. Investors increasingly demand transparency not only in financial performance but also in how firms manage their environmental impact, social responsibility, and governance practices. As a result, ESG reporting have evolved from voluntary practices to near-standard expectations for listed companies worldwide [3].

This transformation has been accelerated by the growing awareness that sustainability and profitability are not mutually exclusive. A significant body of literature suggests that companies adopting strong ESG strategies tend to outperform peers over the long term [3,4]. Firms that effectively manage ESG risks often benefit from operational efficiencies, improved stakeholder trust, and access to cheaper capital [5]. However, most existing research aggregates ESG into a single score, overlooking the fact that the environmental, social, and governance pillars can have distinct and sometimes divergent relationships with financial performance [6,7].

At the same time, critical voices have highlighted a disconnect between ESG reporting and actual corporate behavior — a phenomenon often referred to as ESG decoupling [8]. Many companies are accused of engaging in symbolic reporting or greenwashing, using sustainability communication as

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a strategic image management tool without implementing substantive change [9,10]. This gap undermines the credibility of ESG data and raises questions about the true informational value of non-financial reporting.

Accounting, as a social and institutional practice, plays a pivotal role in this debate. Non-financial reporting, such as ESG reports, do not merely report reality; they shape it by constructing organizational legitimacy and influencing stakeholder perceptions [11,12]. However, the lack of uniformity in ESG reporting frameworks — such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD), and the absence of standardized assurance mechanisms raise concerns about the comparability, consistency, and verifiability of reported data [13]. These limitations are particularly problematic when ESG reports are used by investors and regulators to assess long-term value and risk exposure.

Despite a growing body of literature linking ESG performance to financial performance, significant research gaps remain. First, many studies focus solely on the environmental pillar or use an undifferentiated ESG score [14,15] failing to capture the multidimensional nature of sustainability. Second, most analyses rely on a single measure of financial performance, typically stock returns or market value, rather than broader operational metrics such as Net Income or Return on Assets (ROA). Third, the role of ESG controversies, which often reflect legitimacy crises and potential decoupling, is underexplored in relation to ESG reporting quality and consistency [16,17].

This study aims to address these gaps by conducting a multidimensional analysis of ESG reporting in relation to firm profitability and controversy exposure. Unlike previous research, we disaggregate ESG into its three pillars and analyze their respective relationships with two key profitability measures: Net Income and ROA. Furthermore, we examine whether firms facing ESG controversies, understood as reputational or ethical incidents, tend to have worst ESG performance.

The main objectives of this paper are as follows:

1. To determine whether higher profitability leads to stronger ESG reporting across the environmental, social, and governance dimensions.
2. To assess whether ESG controversies negatively affect ESG performance.

To achieve these goals, we analyze a panel of globally listed companies from 2019 to 2023, using ESG and financial data extracted from the Refinitiv database. By focusing on both financial drivers and reputational constraints, this study contributes to a more nuanced understanding of the dynamics underpinning ESG reporting behavior.

The remainder of this paper is structured as follows: Section 2 presents a review of the relevant literature and develops the hypotheses; Section 3 describes the methodology and dataset; Section 4 discusses the empirical findings; and Section 5 concludes with implications, limitations, and future research directions.

2. Literature Review

Corporate performance is a multifaceted construct that has been extensively explored in management research [3,5]. Scholars have long acknowledged that "performance" is not a unidimensional measure, but rather encompasses diverse metrics and stakeholder perspectives [18]. This ambiguity in definition and measurement leads to a variety of operationalizations, with some studies emphasizing financial outcomes (such as profitability and market share), while others consider broader social and environmental dimensions [19]. Accordingly, different streams of research have highlighted how financial performance, operational efficiency, and stakeholder-centric performance (e.g., ESG performance) represent distinct but interrelated facets of corporate success [3]. This plurality of approaches necessitates clarifying the specific performance dimensions in focus, which in this study are financial performance and ESG performance.

Financial performance refers to a firm's ability to generate economic value and deliver returns to shareholders. Commonly measured through accounting-based indicators such as return on assets (ROA), return on equity (ROE), and profit margins, as well as market-based indicators like stock

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returns, financial performance captures the core economic outcomes of a company [3]. These measures are central to traditional business strategy and serve as primary indicators of managerial effectiveness and competitiveness [5]. As such, financial performance remains the benchmark by which firms are evaluated by investors and often determines their access to resources and capital markets [18]. In this study, financial performance is operationalized through net income and ROA to capture its impact on ESG performance.

ESG performance (environmental, social, and governance) encompasses how well a firm manages non-financial responsibilities and sustainability challenges, reflecting a multidimensional view of corporate accountability [20]. It goes beyond economic value creation to include social and environmental impacts, as well as governance practices that align with ethical standards and stakeholder expectations [18]. ESG performance is typically assessed through composite scores or external ratings that integrate data on environmental stewardship, social equity, and governance transparency [3]. Prior research shows that ESG performance can differ significantly from financial performance and should be analyzed independently to understand its implications for legitimacy and stakeholder relations [19]. In this paper, ESG performance is treated as a separate and critical dimension of corporate performance.

The relationship between ESG performance and corporate financial success, particularly firm profitability and firm value, has been extensively explored in recent decades. A robust body of literature provides both theoretical and empirical support for a positive association between corporate financial performance and ESG performance. From a stakeholder theory perspective [21], companies that engage proactively with a broad range of stakeholders—such as employees, customers, suppliers, communities, and regulators—are more likely to secure critical resources, enhance legitimacy, and reduce operational risks. These benefits translate into competitive advantages and superior financial outcomes over the long term. [22] empirically demonstrated that improvements in stakeholder engagement and social performance are positively associated with financial indicators such as sales growth and return on equity. Resource-based theory [23] also supports this linkage by suggesting that ESG practices can function as rare, valuable, and difficult-to-imitate organizational resources. For instance, firms with strong environmental and social governance structures may attract and retain more talented employees, foster innovation, improve brand loyalty, and ensure compliance with regulatory frameworks—all of which enhance profitability. [19] provide compelling evidence that environmental performance is positively correlated with firm profitability, particularly in dynamic and innovation-driven industries. Legitimacy theory [24] further posits that firms operate within a "social contract" and must align with prevailing societal norms to maintain legitimacy. ESG performance serves as a mechanism to signal alignment with these norms, thereby preserving a firm's social license to operate. Enhanced legitimacy can reduce transaction costs and increase investor and consumer confidence, ultimately improving financial outcomes [25]. In addition, institutional theory suggests that firms conform to ESG standards in response to institutional pressures—such as industry norms, regulatory expectations, and investor activism—thus enhancing their legitimacy and long-term value [26].

Meta-analyses by [3,4] synthesized hundreds of empirical studies, concluding that the majority of evidence supports a positive association between ESG practices and financial performance. [14] found that companies with stronger ESG engagement tend to outperform peers in terms of profitability, cost efficiency, and risk mitigation. Nevertheless, findings remain partially inconsistent across contexts, methodologies, and performance indicators [6,7,15,27–29]. Some studies argue that sustainability initiatives can improve operational efficiency, reduce costs, and enhance brand equity, ultimately generating financial value [2,30]. Others posit that ESG investments may lead to increased compliance costs and uncertain returns, particularly in low-margin industries or weak regulatory environments [31,32]. Industry-specific factors and country-level institutional frameworks often mediate these relationships, highlighting the importance of contextual variables in ESG–performance dynamics [33]. Regarding the environmental pillar, evidence suggests that profitable firms are more likely to engage in and report on environmental practices. [15], in a study of Egyptian listed

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companies, found that higher profitability leads to greater environmental disclosure, as financially strong firms are better positioned to absorb the costs of transparency. [34] reported similar findings in the UK context, noting that firms with greater financial resources are more likely to publish detailed environmental reports. More recently, [29] showed that environmental disclosure acts as a mediator between industry type and profitability in Portugal, reinforcing the view that profitability supports more extensive sustainability reporting. Cross-country evidence also supports this view. [28] found that overall ESG scores correlate positively with profitability across multiple jurisdictions. However, their findings indicate that environmental scores, when analyzed independently, do not show a statistically significant relationship with firm value. This reinforces the need to disaggregate ESG components when analyzing performance outcomes. [6] demonstrated a positive link between ESG scores and Return on Assets (ROA) in German-listed firms, while [32] found that strong ESG engagement improves firm valuation among U.S.-based companies. Similarly, [35] using legitimacy and stakeholder theories, confirmed a positive relationship between corporate profitability and ESG reporting in Thai firms. Despite the predominance of positive findings, some studies challenge this optimistic view. [27], analyzing Chinese listed firms, found that mandatory CSR reporting may negatively impact profitability due to increased costs and administrative burden. [7] reported that financial performance negatively moderates the relationship between stakeholder engagement and environmental disclosure in a cross-national sample, suggesting that more profitable firms might resist stakeholder pressure when disclosure is seen as non-strategic. According to [36], consistent empirical evidence shows that strong ESG performance contributes to superior financial outcomes. Their comprehensive review of over 200 academic studies reveals that companies integrating sustainability into their core business strategies tend to benefit from enhanced operational efficiency, lower cost of capital, and improved cash flow generation. Moreover, ESG-oriented firms are often better positioned to manage long-term risks and seize emerging market opportunities, resulting in more stable earnings and stronger overall financial performance. These findings support the hypothesis that ESG performance is not only a reflection of corporate ethical commitment but also a driver of financial value. Furthermore, [29] confirmed that profitability positively influences the extent of environmental information disclosed in both financial and sustainability reports.

Given the weight of theoretical and empirical evidence supporting a positive linkage between financial performance and ESG reporting, especially in firms with higher resource availability and reputational incentives, we posit the following hypothesis:

H1: Corporate financial performance is positively associated with ESG performance.

In parallel, ESG controversies present significant threats to a company's legitimacy, stakeholder trust, and perceived sustainability commitment. These controversies—ranging from environmental disasters and labor rights violations to governance failures and ethical misconduct—generate negative public scrutiny and often lead to lower ESG ratings by external agencies. From a legitimacy theory perspective, firms operate under a "social contract" wherein their survival and success depend on their alignment with societal norms and expectations [24]. According to [17], ESG controversies arise from firm behaviors that raise ethical or regulatory concerns, triggering reputational risks and legitimacy threats. ESG controversies create a legitimacy gap, reducing the firm's perceived conformity to social values and endangering its "social license to operate" [20]. This results in increased reputational risks and, ultimately, a negative reassessment of the firm's ESG performance. In addition, institutional theory [37], suggests that firms are subject to institutional pressures that enforce conformity to socially accepted standards, including ESG norms. ESG controversies reveal a failure to conform to those norms and may trigger institutional sanctions, stakeholder disengagement, and rating downgrades, all of which undermine perceived ESG performance. Signaling theory [38], further supports the negative association between controversies and ESG ratings. ESG disclosures and ratings act as signals to stakeholders and investors about the firm's values, risk management, and ethical behavior. Controversies send negative counter-signals that reduce the credibility of earlier ESG disclosures, prompting rating agencies and markets to penalize

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firms, even when formal ESG policies are in place [20]. This perception of inconsistency between what is disclosed and what is practiced undermines ESG scores. Lastly, within the scope of stakeholder theory [21], controversies negatively affect stakeholder relationships by violating implicit expectations of responsible conduct. Stakeholders—particularly institutional investors, employees, and civil society—are increasingly sensitive to ESG controversies, and their reactions can amplify reputational damage, leading to deteriorated ESG assessments.

Empirical studies confirm that firms exposed to controversies often experience a decline in ESG scores, regardless of prior sustainability commitments [20]. [10], in a systematic literature review, outlined two conceptualizations of greenwashing: (1) selective disclosure, where companies with poor sustainability performance highlight only positive outcomes, and (2) decoupling — where firms publicly commit to sustainability goals but fail to implement concrete actions [1]. These practices compromise the credibility of ESG reporting and increase information asymmetry between firms and stakeholders [1]. Despite their importance, ESG controversies remain under-investigated, particularly regarding their influence on the quality of ESG reporting. [20] emphasize the need for deeper research on how such controversies affect transparency and stakeholder engagement, noting that few studies have examined their impact on reporting behavior and perceived legitimacy.

Taken together, these theoretical frameworks support Hypothesis H2 by explaining how ESG controversies act as powerful negative signals that compromise perceived ESG performance, despite prior efforts or reporting.

H2: ESG controversies are negatively associated with ESG performance.

3. Materials and Methods

This research adopts a quantitative approach, employing panel data analysis to explore the impact of corporate financial performance and ESG controversies on ESG reporting performance. The dataset 5,722 comprises publicly cross-country listed companies sourced from the LSEG Refinitiv database for the period 2019–2023, resulting in an unbalanced panel data set of 28274 observations.

Table 1 shows the dependent and independents variables and the control variables. The main dependent variable is ESG score (ESGS) followed by the three sub-pillars (Environmental Pillar Score – EPS; Social Pillar Score – SPS and Governance Pillar Score- GPS). Regarding the independent variable, we used the company's net income to measure firm profitability and ESG Controversies, according to previous literature [16,29,39]. Several firms' characteristics were used to control the model as applied in other valuable research [16,35,40–43].

Hence, we propose the following equations:

$$\boldsymbol{ESGS} = \propto_0 + \propto_1 \boldsymbol{Netincome}_{i,t} + \propto_2 \boldsymbol{ESGControversies} + \propto_3 CGoveBCommittee_{i,t} + \propto_4 CSRCommitte_{i,t} + \propto_5 ShareholdersScore_{i,t} + \propto_6 EUTaxonomy_{i,t} + \propto_7 AdvertisingExpense_{i,t} + \propto_8 RDExpense_{i,t} + \propto_9 Leverage_{i,t} + \propto_{10} Country_i + \propto_{11} Sector_i \propto_{12} Year_t + \varepsilon_{it} + \eta_i \quad (1)$$

$$\boldsymbol{EPS} = \propto_0 + \propto_1 \boldsymbol{Netincome}_{i,t} + \propto_2 \boldsymbol{ESGControversies} + \propto_3 CGoveBCommittee_{i,t} + \propto_4 CSRCommitte_{i,t} + \propto_5 ShareholdersScore_{i,t} + \propto_6 EUTaxonomy_{i,t} + \propto_7 AdvertisingExpense_{i,t} + \propto_8 RDExpense_{i,t} + \propto_9 Leverage_{i,t} + \propto_{10} Country_i + \propto_{11} Sector_i \propto_{12} Year_t + \varepsilon_{it} + \eta_i \quad (2)$$

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$$\boldsymbol{SPS} = \propto_0 + \propto_1 \boldsymbol{Netincome}_{i,t} + \propto_2 \boldsymbol{ESGControversies} + \propto_3 CGoveBCommittee_{i,t} + \propto_4 CSRCommitte_{i,t} + \propto_5 ShareholdersScore_{i,t} + \propto_6 EUTaxonomy_{i,t} + \propto_7 AdvertisingExpense_{i,t} + \propto_8 RDExpense_{i,t} + \propto_9 Leverage_{i,t} + \propto_{10} Country_i + \propto_{11} Sector_i \propto_{12} Year_t + \varepsilon_{it} + \eta_i \quad (4)$$

$$\boldsymbol{GPS} = \propto_0 + \propto_1 \boldsymbol{Netincome}_{i,t} + \propto_2 \boldsymbol{ESGControversies} + \propto_3 CGoveBCommittee_{i,t} + \propto_4 CSRCommitte_{i,t} + \propto_5 ShareholdersScore_{i,t} + \propto_6 EUTaxonomy_{i,t} + \propto_7 AdvertisingExpense_{i,t} + \propto_8 RDExpense_{i,t} + \propto_9 Leverage_{i,t} + \propto_{10} Country_i + \propto_{11} Sector_i \propto_{12} Year_t + \varepsilon_{it} + \eta_i$$

Table 1. Regression variables definition

Variable	Definition	Literature	Scale
Dependent variables			
ESGS	ESG Score da LSEG Data & Analytics é uma pontuação global da empresa baseada na informação reportada nos pilares ambiental, social e de governo societário (ESG Score	[44]	(0-100)
EPS	Environmental performance according to the Refinitiv methodology, including measures of resources, emissions and environmental innovations.		
SPS	Social performance according to the *LSEG Data & Analytics* methodology, including measures related to labor, human rights, community and product safety		
GPS	Governance performance in accordance with the *LSEG Data & Analytics methodology*, including management measures, shareholders and ESG strategy.		
Independent variables			
Netincome	Company's total profit after subtracting all expenses, including operating costs, taxes,	[29,39]	(0-100)

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	interest, and depreciation, from total revenue. It represents the bottom line of a company's income statement and indicates its overall financial health and profitability.		
ROA	Companies' profitability relative to their total assets. It shows how efficient management uses assets to generate net income.	[45]	
Control variables			
ESGControversies	The ESG controversies score is calculated based on 23 ESG controversy topics. During the year, if a scandal occurs, the company involved is penalized and this affects their overall ESGC score and grading. The impact of the event may still be seen in the following year if there are new developments related to the negative event; e.g., lawsuits, ongoing legislation disputes or fines. All new media materials are captured as the controversy progresses. The controversies score also addresses the market cap bias from which large cap companies suffer, as they attract more media attention than smaller cap companies.	[16,35,42–44]	(0-100)
CGoveBCommittee	Dummy variable for the presence of a Governance Board Committee.	[41]	(0-1)
CSRCommitte	Dummy variable for the presence of a CSR committee.	[40,41]	(0-1)
ShareholdersScore	The shareholder value scores measure a company's effectiveness toward equal treatment	[42]	(0-100)

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	of shareholders and the use of anti-takeover devices.		
EUTaxonomy	Percentage of revenue classified as "green" under EU Taxonomy.	[46]	Percentage (0-100)
AdvertisingExpense	Advertising Expense .	[35,42]	Million €
RDExpense	Research and Development Expense.	[35,42]	Million €
Leverage	Debt-to-assets ratio.	[16]	(0-100)

3. Results

3.1. Descriptive Statistics

Table 2 presents the descriptive statistics for all variables included in the empirical analysis..

As for the dependent variables, the mean overall ESG score is 48.301, with a standard deviation of 22.404 and a wide range from 0.300 to 97.940, indicating heterogeneous sustainability practices and disclosures among firms. Breaking this down by ESG dimension, the environmental score has a mean of 46.420 and a notably high standard deviation of 29.555, with values spanning from 0.100 to 99.900, suggesting diverse levels of environmental engagement. The social score averages 48.086 (SD = 22.692), with a minimum of 0.200 and a maximum of 97.890, pointing to varying levels of commitment to social responsibility, labor rights, and community relations. The governance score has a slightly higher average of 50.397 and a standard deviation of 20.935, with a range from 1.680 to 96.740, capturing differences in corporate governance structures, board effectiveness, transparency, and shareholder protections.

The study considers two independent variables to measure corporate financial performance: net income after tax and ROA. The average net income is 5.994, with a standard deviation of 11.189, ranging from –55.636 to 84.901, suggesting a high variability in profitability across firms. ROA exhibits a mean of 0.036 and a standard deviation of 0.105, with minimum and maximum values of –1.331 and 0.642, respectively, reflecting moderate profitability on average but also showing that some firms are operating at a loss relative to their total assets.

The ESG controversy score, also used as an independent variable, has a mean of 13.007 and a relatively large standard deviation of 15.168, with some firms reaching scores as high as 90.330. A score of zero indicates the absence of controversies, while higher values reflect increased reputational and legitimacy risks due to incidents related to environmental, social, or governance failures.

Control variables include firm size, measured as the natural logarithm of total assets, and leverage, measured by the debt ratio. Firm size exhibits a mean of 14.685 and a standard deviation of 2.231, with a range from 5.690 to 21.280, encompassing both small firms and large multinationals. The debt ratio shows an average of 0.275 and a standard deviation of 0.212, varying from nearly debt-free firms (0.0005) to those with very high leverage (0.974). These statistics highlight considerable variation across all variables, supporting the implementation of regression models to investigate the hypothesized relationships between financial performance, ESG practices, and controversies.

Table 2. Regression variables definition

Variables	Obs	Mean	Std. Dev.	Min	Max
		Dependent			
ESGS	28274	50.143954	20.502148	.60676582	95.381086
EPS	28274	44.4247	28.51288	0	99.260205
SPS	28274	51.855912	23.332377	.15141437	98.632155
GPS	28274	53.50882	22.253393	.14118896	99.414248
					Independent

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Netincome	28274	6.501e+08	3.039e+09	-1.339e+11	1.030e+11
ROA	28274	.00602466	.30579878	-25.107773	5.019803
ROE	28274	.10374954	1.8542645	-255.2985	22.8205
ESG controv	28274	91.940634	21.33586	.36231884	100
		Control			
CGoveBCommittee	28274	.45880106	.49830811	0	1
CSRCommitte	28274	.36712466	.48202897	0	1
ShareholdersScore	28274	51.443903	28.558551	.01440507	99.98489
EU taxonomy	28274	5.8231513	17.249448	0	100
AdvertisingExpense	28274	45650730	3.785e+08	-34500000	1.925e+10
RDExpense	28274	2.387e+08	1.566e+10	0	2.690e+12
Leverage	28274	1.4570698	14.676057	-.4381277	1835.8889

The Pearson correlation matrix (Table 3) indicates that the ESGS variable does not exhibit high correlation with any of the independent or control variables across all models—including the primary analysis and both robustness checks—as none of the absolute correlation coefficients exceed the 0.8 threshold. Additionally, multicollinearity is not a significant issue in this dataset, as all Variance Inflation Factor (VIF) values remain well below the widely accepted cutoff of 10 [1]. These results suggest that the interrelationships among the explanatory variables are sufficiently moderate to ensure the validity and stability of the regression estimates [1,41].

Table 3. Pairwise correlations – Main model

Variables	**VIF**	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
(1) ESGScore		1.0000									
(2) Netincome	1.11	0.1757*	1.0000								
(3) ESG_controv	1.12	-0.2565*	-0.2511*	1.0000							
(4) CGoveBCommittee	1.03	-0.0076	-0.0271*	-0.0890*	1.0000						
(5) CSR_Committe	1.06	-0.6153*	-0.1063*	-0.1600*	-0.0847*	1.0000					
(6) ShareholdersScore	1.02	-0.2438*	-0.0108	-0.0565*	-0.0600*	-0.1057*	1.0000				
(7) EU_taxonomy	1.01	-0.1033*	-0.0069	-0.0191*	-0.0247*	-0.0779*	-0.0053	1.0000			
(8) AdvertisingExpense	1.06	-0.0985*	-0.1934*	-0.1743*	-0.0343*	-0.0551*	-0.0285*	-0.0210*	1.0000		

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(9) RDExpense	1.00	0.0071	0.0357*	-0.0240*	0.0028	0.0021	0.0028	-0.0011	0.0307*	1.0000	
(10) Leverage	1.00	0.0068	-0.0001	-0.0234*	-0.0170*	-0.0053	0.0048	-0.0100	-0.0007	-0.0001	1.0000

*Legend: *** p<0.01, ** p<0.05, * p<0.1; VIF- Variance Inflation Factor*

3.2. Regression Results

The regression analysis (Table 4) reveals that net income has a consistent and statistically significant positive relationship with ESG reporting performance (ESGS) across all models. Specifically, for the overall ESG score, the coefficient is β = 1.95e-10 with a p-value < 0.001, indicating that more profitable firms are more likely to have higher ESG performance. This positive relationship holds for the environmental (β = 2.70e-10; p < 0.001), social (β = 2.23e-10; p < 0.001), and governance βB = 1.50e-10; p < 0.001) pillars as well, reinforcing the view that firm profitability is an important driver of ESG reporting, proving the H1.

Conversely, ESG controversies show a negative and statistically significant association with all ESG dimensions, supporting H2. For the overall ESG score, the coefficient is β = -0.0197 (p < 0.001), suggesting that companies involved in more controversies tend to had worst ESG performance. This negative relationship is even stronger for the environmental (β = -0.0344; p < 0.001) and social (β = -0.0242; p < 0.001) pillars. The governance pillar also shows a significant but smaller negative effect (B = -0.0082; p < 0.01). These findings imply that controversies undermine ESG transparency, possibly due to reputational damage or loss of stakeholder trust.

Table 4. Random effects results (models 1 to 4).

Variables	(1) Overall ESGS	ESG Pillars		
		(2) EPS	(3) SPS	(4) GPS
	Coef(std.error)			
Netincome	1.95e-10(2.46e-11)***	2.70e-10(3.44e-11)***	2.23e-10(3.09e-11)***	1.50e-10(3.74e-11)***
ESG_controv	-.0196674(.0024231)***	-.0343941(.0033893)***	-.0241557(.0030513)***	-.0081787(.0038006)**
CGoveBCommittee	-6.741555(.2458144)***	-4.583118(.3426925)***	-5.252747(.3077972)***	-10.68548(.367061)***
CSR_Committe	-11.8369(.1403875)***	-16.30447(.1961896)***	-12.66948(.176514)***	-7.72395(.2171965)***
ShareholdersScore	.0992837(.0025876)***	.0228268(.0036108)***	.0314195(.0032454)***	.2588306(.0039179)***
EU_taxonomy_greerev	.0649118(.0070408)***	.1088838(.0097641)***	.0509747(.0087377)***	.0318415(.0098035)***
AdvertisingExpense	9.02e-10(2.24e-10)***	1.40e-09(3.12e-10***)	1.20e-09(2.80e-10)***	5.00e-10(3.32e-10)

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RDExpense	2.50e-13(2.51e-12)	4.05e-12(3.52e-12)	1.78e-12(3.17e-12)	-2.59e-12(3.98e-12)
Leverage	-.0011975(.0027671)	.0007242(.0038728)	-.0019052(.0034881)	-.0002084(.0043813)
Constant ǀ control for setor, country and year				
R^2	46.77	47.93	39.84	34.05
Number of obs	28274			
Number of groups	5722			
*Legend: *** p<0.01, ** p<0.05, * p<0.1*				

3.3. Robust Test Results

To assess the robustness of our findings, we re-estimated Model 1 by replacing net income after tax with ROA as the proxy for financial performance. The results, presented in Table 5, are consistent with the main model and support the robustness of our conclusions.

The coefficient for ROA is positive and statistically significant ($\beta = 0.924$; $p < 0.001$), reinforcing the idea that firms with stronger financial performance are more likely to disclose higher levels of ESG performance. This aligns with previous research suggesting that profitable firms have more resources and incentives to engage in sustainability reporting.

Moreover, ESG controversies remain negatively associated with the overall ESG score ($\beta = -0.0206$; $p < 0.001$), confirming the earlier result: companies facing ESG-related controversies tend to report lower ESG performance. This consistency further supports the argument that such firms may avoid extensive disclosure when their reputational legitimacy is threatened.

Table 5. Robust test results (Model 1).

ESGScore	**ROA**
	Coef(std.error)
ROE	.9243419(.2008442)***
ESG_controv	-.0205677(.0024298)***
CGoveBCommittee	-6.779112(.2461843)***
CSR_Committe	-11.90069(.1407684)***
ShareholdersScore	.0996233(.0025949)***
EU_taxonomy	.0644263(.0070383)***
AdvertisingExpense	9.97e-10(2.24e-10)***
RDExpense	3.73e-13(2.52e-12)
Leverage	-.00129(.0027716)
Constant ǀ control for setor, country and year	
R^2	46.42
Number of obs	28274
Number of groups	5722
*Legend: *** p<0.01, ** p<0.05, * p<0.1*	

4. Discussion

The findings of this study provide robust empirical support for the hypothesized relationships between corporate financial performance, ESG controversies, and ESG reporting. In line with H1, the regression results consistently reveal a positive and statistically significant association between firm profitability and ESG performance reporting across all models and ESG pillars. Whether measured

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by net income or ROA, more profitable firms tend to disclose higher ESG scores, suggesting that financial strength facilitates sustainability engagement and reporting. These results corroborate prior evidence presented by [3,4,14], which points to profitability as a key enabler of ESG integration.

From a theoretical standpoint, this finding aligns with legitimacy theory, as financially successful firms may engage in ESG reporting to reinforce their legitimacy and public accountability. Likewise, stakeholder theory posits that companies with more resources are better equipped to meet stakeholder expectations regarding transparency and social responsibility [2,29]. The positive relationship across the three ESG pillars suggests that profitability influences not only overall ESG scores but also the depth and breadth of disclosure in specific dimensions, supporting the claim that ESG performance is multifaceted and financially conditioned [6].

This finding aligns with stakeholder theory [21], which posits that attending to the needs of multiple stakeholders through strong ESG initiatives can foster goodwill and ultimately enhance financial performance. It is also consistent with a resource-based view of the firm [23], which considers effective ESG practices as valuable intangible resources that may confer competitive advantage. Empirical evidence supports this resource-based logic; for example, firms with proactive environmental management have been shown to achieve higher profitability [19]. Overall, our results reinforce prior findings that better corporate social performance tends to go hand in hand with improved financial performance [18,22].

However, this optimistic view is not unchallenged. Scholars such as [27] and [7] argue that financial success may, in some contexts, reduce firms' perceived need for voluntary disclosure, especially if stakeholders view disclosure as secondary to economic outcomes. Nonetheless, our findings, across both the main and robustness models, suggest the opposite — that profitability enhances ESG transparency, reinforcing ESG's strategic role rather than a compliance burden.

In contrast, the consistent negative and significant relationship between ESG controversies and ESG performance reporting supports H2, highlighting the reputational cost associated with unethical, irresponsible, or legally questionable corporate behavior. This result confirms the arguments of [17,20], who emphasize the adverse effects of controversies on stakeholder trust and legitimacy. From a legitimacy perspective, controversies signify a failure to meet societal and stakeholder expectations, thereby threatening the organization's social license to operate [24,25]. These incidents also erode stakeholder trust and goodwill [21], tarnishing the firm's reputation and likely contributing to lower ESG performance evaluations. In signaling terms, an ESG controversy sends a negative signal to the market about the firm's values and management quality [38], which can deter investors and business partners. Furthermore, institutional theory suggests that deviating from normative standards of corporate responsibility elicits negative institutional pressures [37]; consequently, firms embroiled in controversies may face sanctions or reputational penalties, leading to diminished ESG performance.

Interestingly, the magnitude of this negative effect is strongest in the environmental and social pillars, which may reflect greater public sensitivity to environmental degradation and social injustices, compared to governance practices that are often less visible to external stakeholders. These results also align with [10] and [1], who distinguish between symbolic and substantive ESG disclosure. Controversial firms may resort to greenwashing or selective disclosure, reducing overall transparency to mitigate reputational exposure.

The findings highlight an important nuance: firms under controversy may deliberately limit ESG disclosures, contrary to what signaling theory might suggest. While signaling theory posits that disclosure serves to reduce information asymmetry [38], our results indicate that controversial firms might avoid transparent reporting to obscure negative performance or ongoing regulatory scrutiny — a behavior consistent with the decoupling logic in institutional theory [10].

From a policy and managerial perspective, the results underscore the need for stronger ESG assurance mechanisms and independent verification, particularly for firms facing reputational risks. Regulators and stakeholders should not only encourage disclosure but also scrutinize its credibility, especially in industries or regions prone to greenwashing or inconsistent ESG behaviors.

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In summary, the discussion reinforces the theoretical expectations underpinning H1 and H2. Profitability acts as a driver of substantive ESG reporting, while controversies suppress transparency, possibly through reputational shielding. These findings contribute to a more nuanced understanding of ESG behavior, integrating economic performance with legitimacy and reputational dynamics.

5. Conclusions

ESG performance has rapidly become a critical component of corporate evaluation and strategy, moving to the forefront of both academic discourse and business practice [18,21]. Investors and regulators now expect firms not only to deliver strong financial results but also to demonstrate transparency in environmental, social, and governance domains [25]. Consistent with this shift, a growing body of research suggests that companies with robust ESG practices can achieve superior long-term financial performance [19,22]. Yet, there is an ongoing debate about the credibility of ESG disclosures. Scholars have identified a troubling "ESG decoupling" between what companies report and their actual behavior, with many firms accused of superficial sustainability reporting or greenwashing [24,37]. As a result, questions remain about what truly drives ESG performance. In particular, prior studies often adopt a narrow scope—focusing on a single ESG pillar or using composite scores—and seldom consider the impact of ESG controversies. This gap in the literature signals the need for a more nuanced analysis of how financial success and negative ESG events jointly influence a company's ESG outcomes, which is the focus of this study.

This study set out to investigate the relationship between corporate financial performance and ESG controversies among cross-country listed firms. Specifically, the research tested two hypotheses: (H1) that firm profitability is positively associated with ESG performance, and (H2) that ESG controversies are negatively associated with such reporting. Drawing on legitimacy theory and stakeholder theory, the study analyzed a large panel dataset using fixed effects regression models and robustness checks to ensure the reliability of the results.

The empirical evidence strongly supports both hypotheses. Profitability, whether measured by net income or ROA, shows a consistent and statistically significant positive association with ESG reporting performance, indicating that more financially successful firms are more likely to have better ESG performance. This finding reinforces the idea that firms with greater resource availability are better positioned to invest in and communicate their ESG strategies, and that ESG transparency can be a strategic tool for maintaining legitimacy and stakeholder trust.

Conversely, the study finds that ESG controversies are significantly and negatively related to ESG performance reporting, suggesting that firms involved in environmental, social, or governance controversies may reduce transparency or engage in symbolic disclosure practices to manage reputational risks. This result challenges the traditional assumptions of signaling theory and underscores the need to critically assess the credibility of ESG reporting in contexts of ethical or regulatory misconduct.

From a theoretical standpoint, this study contributes to literature by empirically validating the dual role of profitability and controversies in shaping ESG reporting behaviors, while also integrating insights from legitimacy, stakeholder and institutional theories. It highlights the complex and sometimes contradictory nature of ESG reporting — where transparency may reflect both substantive commitment and reputational strategy.

Practically, the findings have clear implications for policymakers, investors, and ESG rating agencies. Regulators should enhance ESG reporting standards and implement verification mechanisms to reduce greenwashing and selective reporting. Investors and stakeholders should be aware that not all ESG reports signal genuine commitment, particularly in firms with a history of controversies.

This study is not without limitations. The analysis is based on ESG scores and controversies as reported by third-party rating agencies, which may vary in methodology and coverage. Future research could differentiate the analysis to developed and emerging countries' contexts or use textual analysis of sustainability reports to assess disclosure quality more directly.

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Additionally, exploring moderating effects, such as industry sensitivity, board composition, or ownership structure, could offer deeper insights into how firms manage ESG performance under different strategic or institutional pressures.

In an era of growing demand for corporate transparency and accountability, understanding the drivers of ESG reporting is both timely and essential. This study shows that while financial strength fosters greater ESG transparency, reputational risks such as controversies can significantly undermine it. These dynamics underscore the importance of scrutinizing not only what firms disclose, but also the context in which disclosure occurs, a critical step toward building a more credible and impactful ESG reporting landscape.

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