

## The Moderating Role of Board Skills in the ESG Performance and Dividend Payout Relationship: Evidence from Emerging Markets

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### Abstract

Prior research on the link between ESG performance and dividend policies has mainly focused on developed markets, with limited attention to emerging economies such as India. The role of directors' professional skills in this relationship also remains underexplored. This study examines the impact of ESG performance on dividend payouts, moderated by board background skills, using data from Indian listed companies during 2017-2024 sourced from Refinitiv Eikon. Dividend-to-assets and dividend-to-income ratios are used as payout proxies. Fixed-effect panel regression results show a significant positive association between ESG performance and dividend payouts, indicating that sustainable practices support both shareholder and stakeholder interests. The presence of highly skilled directors further strengthens this relationship. Robustness checks across alternative measures, firm size, sectors, and dividend-paying intensity confirm stability. Findings provide valuable insights for investors, managers, analysts, and policymakers in fostering ESG and governance excellence.

**Keywords:** ESG, Dividend, Board skills, Emerging markets, India

### 1. Introduction

In recent years, Environmental, Social, and Governance (ESG) performance has emerged as a significant determinant of corporate policies, stakeholder trust, and long-term sustainability (Garcia, Mendes-Da-Silva, & Orsato, 2017). Globally, there has been a notable shift in investors and corporate focus from firms that solely exhibit strong financials to those demonstrating responsible and sustainable business practices (Saygili, Arslan, & Birkan, 2022). Thus, ESG has become central not only to corporate reputation but also to critical financial decisions, such as dividend payouts (X. Chen, Li, Torsin, & Tsang, 2024). Traditionally, high dividend payouts have been attributed to firms with substantial cash holdings (Wong & Zhang, 2024); however, ESG performance is now increasingly viewed as a proxy for overall corporate health and financial discipline (Bilyay-Erdogan, Danisman, & Demir, 2023; Hendijani Zadeh, Magnan, Cormier, & Hammami, 2023), making ESG-aligned firms more likely to distribute dividends (Matos, Barros, & Sarmento, 2020; Uyar, Wasiuzzaman, Kuzey, & Karaman, 2024).

While much of the existing literature has focused on the relationship between Corporate Social Responsibility (CSR) disclosure and dividend policy (Benlemlih, 2019; De Villiers & Ma, 2017; Fonseka & Richardson, 2023; Saeed & Zamir, 2021; Uyar et al., 2024), relatively few studies have explored the broader link between ESG performance and dividend payouts (Bilyay-Erdogan et al., 2023; Ellili, 2022; Miah, Hasan, & Usman, 2021; Salvi, Nirino, Enrico, & Igor, 2024). Since the establishment of the Global Reporting Initiative (GRI) in 2001, CSR reporting has become more structured and mandatory in many jurisdictions (Chen et al., 2024; Fonseka & Richardson, 2023). However, ESG reporting extends beyond CSR, encompassing not only social, but also environmental and governance dimensions (Ellili, 2022). Transparent and holistic ESG disclosure is increasingly seen as essential for gaining stakeholder trust and enabling investors to make informed decisions, particularly in today's volatile and uncertain economic environments (Hao, Alharbi, Hunjra, & Zhao, 2025).

One of the most important financial decisions a company makes relates to its dividend payout policy (Ismillah & Faisal, 2023; Rastogi & Singh, 2025; Seth & Mahenthiran, 2022). Following the 2009 global financial crisis, when many firms became insolvent, investors began to favor companies that could provide stable and reliable returns through dividends. Consequently, dividend payouts are now viewed as strong signals of a firm's profitability, stability, and management confidence in its long-term cash flow (Arouri & Pijourlet, 2017; Atif, Liu, & Nadarajah, 2022; A. W. K. Cheung, 2016; Lu, Shailer, & Yu, 2017). In sustainability-oriented markets, dividend policy also serves as an indirect measure of a company's ESG commitment, linking financial performance with responsible business conduct.

Empirical evidence suggests that firms with higher ESG scores tend to pay higher dividends, indicating that strong sustainability practices and robust cash flow can coexist (Benlemlih, 2019; Ellili, 2022). High ESG performance is generally associated with enhanced internal control, transparency (Cuadrado-Ballesteros, Garcia-Sanchez, & Martinez Ferrero, 2016), and accountability to stakeholders. These governance strengths reduce agency costs, leading managers to distribute excess cash through dividends, rather than retaining it for self-serving purposes. Moreover, ESG-compliant firms are better positioned to endure financial shocks and maintain investor trust, enabling them to sustain dividend payouts even during periods of economic crises.

Importantly, dividend decisions are not influenced by financial performance alone, and the composition and effectiveness of the board of directors also play a critical role (Elmagrhi et al., 2017). Corporate governance mechanisms, particularly board background and skill diversity, significantly shape how firms balance their ESG objectives with shareholder returns (Ab Aziz, Abdul Latiff, Osman, & Alshdaifat, 2025; Alruwaili, 2025; Liu & Cheng, 2025). Boards equipped with expertise in sustainability, finance, risk management, and compliance are more likely to implement strategic dividend policies that reflect both responsible governance and stakeholder alignment (Harjoto, Laksmana, & Lee, 2015; Roffia, Simón-Moya, & Sendra García, 2022).

Despite a growing body of international research, most studies examining the relationship between ESG performance and dividend policies have focused on developed countries. However, evidence from emerging markets, especially India, remains limited. India presents a unique context owing to its evolving ESG regulatory landscape, such as the Securities and Exchange Board of India SEBI's Business Responsibility and Sustainability Reporting (BRSR) mandate, increased institutional pressure for sustainability disclosures, and greater emphasis on board effectiveness under the Companies Act, 2013. These developments warrant a closer examination of how ESG performance influences dividend behavior and how board-level competencies moderate this relationship.

Non-financial disclosures have been demonstrated in prior studies to lower the cost of capital, improve reputation, decrease information asymmetry, and improve business outcomes (Dhaliwal et al., 2011; El Ghouli et al., 2011). However, the impact of such disclosures on dividend policies has not been studied extensively (Saeed & Zamir, 2021). The empirical results are still conflicting, although research from the United States (Benlemlih, 2019), European Union (Matos et al., 2020), United Arab Emirates (Ellili, 2022), and France (Salah & Amar, 2022) indicates that ESG and dividend payments are positively correlated. Research in China has indicated a negligible or adverse correlation (A. Waikong) Cheung, Hu, & Schwiebert, 2016). Moreover, while the impact of board composition and skills on corporate financial performance has been widely studied (Jensen & Meckling, 1976; Ab Aziz et al., 2025; Alruwaili, 2025; Ellili, 2022; Elmagrhi et al., 2017; Gallego-Álvarez & Pucheta-Martínez, 2020), the moderating role of board background and skills in the ESG-dividend nexus remains underexplored.

Against this backdrop, the present study addresses two key research questions:

1. What is the impact of ESG performance on dividend payouts of Indian firms?
2. How do board background and skills moderate this relationship?

By focusing on India, an emerging economy with dynamic regulatory reforms and growing emphasis on sustainable finance, this study contributes to the limited but growing literature on ESG and financial policy integration. It provides valuable insights for investors, corporate managers, and policymakers seeking to understand how ESG performance and board competencies influence one of the most critical financial decisions, dividend distribution.

This study uses panel data estimations on a sample of Indian listed companies to examine how ESG performance affects dividend payment policies. The empirical results show a high positive correlation between dividend payments and ESG performance, indicating that companies with more robust sustainability policies are more likely to regularly distribute dividends to shareholders. Moreover, this study finds that board skills serve as a significant positive moderator in this relationship, indicating that the presence of highly skilled board members strengthens the link between ESG performance and dividend policy.

These findings meaningfully contribute to the growing body of empirical literature by offering a nuanced understanding of how ESG disclosure influences dividend decisions, particularly in the context of board governance. Specifically, this study emphasizes the critical role of directors with diverse functional expertise, especially in finance, sustainability, and risk management, in integrating ESG principles into key financial decisions.

The importance of this study is twofold. First, it addresses a major research gap by focusing on India, an emerging economy in which ESG regulations and governance structures are evolving. While prior research has largely concentrated on developed markets, this study provides novel evidence from the Indian context, where regulatory reforms such as the SEBI's Business Responsibility and Sustainability Reporting (BRSR) mandate are gradually reshaping corporate reporting standards. Second, by highlighting the moderating effect of board skills, this study sheds light on how board composition can amplify the financial implications of ESG practices, offering valuable insights for firms aiming to align corporate governance with sustainable finance. Third, the study holds practical relevance for policymakers and regulators, as the results can guide SEBI and other regulatory bodies to incorporate ESG disclosures more effectively into financial reporting norms, thereby enhancing market transparency and investor confidence.

To the best of our knowledge, this is among the first studies to explore the combined impact of ESG performance and board skill diversity on dividend policies in the Indian capital market. In doing so, it contributes both theoretically and practically by advancing the ESG-dividend literature and offering actionable implications for listed firms, investors, and regulators.

The remainder of this paper is organized as follows. The literature review and hypothesis development are presented in Section 2. The data, variables, and empirical techniques are described in Section 3. Section 4 discusses the empirical findings. The implications and suggestions for further research are presented in Section 5 in the conclusion part.

## **2. Literature Review**

### **2.1 Theoretical background**

In examining the relationship between a firm's ESG performance and its dividend payout policy, while considering the moderating effect of board skills and background, it is essential to ground the analysis within the foundations of agency theory, stakeholder theory, and signaling theory. These theories provide critical insights into how ESG initiatives, dividend decisions, and board characteristics interact to shape corporate behavior and shareholder value.

#### **Agency theory**

The agency theory discusses the relationship between managers and shareholders. According to this theory, the central issue that arises within this framework is conflict due to the separation of ownership and control (Al-Najjar & Hussainey, 2009). Dividend payments are traditionally seen as devices to mitigate agency problems by limiting the funds available for managerial pleasure and signaling managerial commitment to shareholder interests (Bilyay-Erdogan et al., 2023; Uyar et al., 2024). When firms actively engage in ESG practices, they not only address environmental and social expectations but also provide additional non-financial disclosures that help reduce information asymmetry (Seth & Mahenthiran, 2022). This means that when companies share clear ESG

information, they help investors understand what is happening within the company (Saeed & Zamir, 2021). Just as dividends reduce the chance of managers misusing money, transparency through ESG reporting keeps managers in check by making their actions more visible. By disclosing ESG performance, firms signal long-term orientation and ethical management, which, alongside dividend payments, can reassure investors about management's alignment with shareholders' interests (Benlemlih, 2019). However, agency concerns may also lead to the over-distribution of dividends when managers, under pressure to appease shareholders, prioritize payouts over sustainable stakeholder investment, potentially undermining ESG commitments (Salvi et al., 2024). In such contexts, board members with relevant backgrounds and strategic skills play a pivotal role in striking a balance between shareholder returns and long-term ESG investment. Skilled boards are better positioned to assess when dividend payouts support corporate governance and may be detrimental to broader sustainability goals (Alruwaili, 2025; Hampl & Vágnerová Linnertová, 2025; Seth & Mahenthiran, 2022).

### **Stakeholder Theory**

Stakeholder theory expands a firm's accountability beyond that of shareholders to include all parties affected by corporate decisions. Under this lens, strong ESG performance signals a firm's dedication to fulfill its obligations to multiple stakeholders, employees, communities, regulators, and investors alike (Benlemlih, 2019). High ESG ratings reflect integrated efforts across the environmental, social, and governance dimensions, showcasing a corporation's ethical and socially responsible posture (Salvi et al., 2024). In addition, when a company pays regular and high dividends, it is financially strong and committed to taking care of its stakeholders (Seth & Mahenthiran, 2022). This supports positive and responsible images. However, sometimes companies choose to pay less dividends now, so they can spend more money on ESG activities (such as protecting the environment or helping society) (De Villiers & Ma, 2017). They do this because these actions can improve their reputation and bring long-term benefits to everyone involved in the company, not just shareholders (Dhaliwal et al., 2011; Zahid, Taran, Khan, & Chersan, 2023). Here again, the background and expertise of the board become crucial—members with diverse experiences and skills are more likely to appreciate the long-term value of ESG over immediate shareholder appeasement (Hampl & Vágnerová Linnertová, 2025).

### **Signaling Theory**

Signaling theory concerns how companies share information with outsiders, such as investors. Investors in financial markets do not always know everything about a company (Bhattacharya, 1979). Thus, managers use dividend announcements and ESG reports to send a trustworthy message that the company is doing well and planning for the future (Saeed & Zamir, 2021). When a company shares ESG information, it shows that managers are honest, aware of risks, and think long term (Bilyay-Erdogan et al., 2023). This message becomes stronger and more believable when the company's board includes people with the right skills and experiences. A skilled board helps ensure that ESG efforts are real, not just for show. These build trust in the market and can also affect how much dividends a company decides to pay (Seth & Mahenthiran, 2022). Therefore, signaling theory shows that by sharing the right kind of information, such as ESG performance and dividend decisions, companies can reduce doubts, lower financing costs, and attract investors (El Ghouli et al., 2011; Fonseka & Richardson, 2023). A knowledgeable board helps to make these signals even more effective, leading to better company value in the long run.

## **2.2 ESG and Dividend Payout**

Environmental, social, and governance (ESG) performance appears to be a significant factor influencing a company's financial policies, including dividend payouts. With rising awareness of sustainability and climate risk, investors are increasingly expecting firms to align their operations with ESG principles, particularly their environmental efforts, due to the growing concern for climate change (Almaqtari et al., 2024). A growing body of

literature indicates that firms that demonstrate higher ESG performance are more likely to engage in large dividend policies. For instance, Salah & Amar, (2022), in their study of French firms, they find a positive association between ESG practices and dividend payouts. Extending this narrative across geographical contexts Dua & Sharma, (2024), focusing on BRICS economies and Maquieira, Espinosa-Méndez, & Arias, (2023) using a global firm sample, both affirmed the positive linkage between ESG engagement and dividend policies. Earlier studies have also examined the influence of broader corporate social responsibility (CSR) initiatives. For example, Benlemlih, (2019) found that U.S. companies with stronger CSR credentials not only pay higher dividends but also maintain more stable payout patterns over time. In the European context, Bilyay-Erdogan et al., (2023) utilized a panel dataset comprising over thousand non-financial listed firms across 21 countries (2002-2019), and concluded that ESG-active firms were more inclined to pay higher dividends. Complementing this, Salvi et al., (2024) analyzed data from 3,207 European firms between 2018 and 2022, and observed that sustainable corporate behavior is associated with more shareholder-friendly payout policies. Within the Indian context, Rastogi & Singh, (2025) examined the ESG-dividend dynamic for 78 non-financial firms (2016-2020) and concluded that ESG initiatives positively affected dividend payouts. Their study also considered the role of shareholder activism, which while reinforcing dividend distributions, showed a surprisingly negative interaction with ESG, weakening its positive effect. Matos et al., (2020), using data from Stoxx Euro 600 firms (2000–2019), established that sustainability-oriented firms, particularly those scoring high in environmental and governance dimensions, offer more consistent and stable dividends. This stability is interpreted as a reflection of a better long-term alignment with both shareholders and broader stakeholder groups. Zahid et al., (2023) extended this inquiry to Western European firms and found a strong positive relationship between ESG engagement and dividend levels, although superior ESG implementation may temper dividend growth. Interestingly, firms audited by Big Four auditors exhibited weaker ESG-dividend linkages, suggesting the moderating role of audit quality. In contrast, Chen et al., (2024) mandatory ESG disclosure obligations can lead firms to reduce dividend payouts by as much as 25% post-implementation. This was especially true for firms facing agency problems and operating in less transparent and financially constrained environments. Furthermore, Uyar et al., (2024) we explored the connection between CSR reporting and dividend behavior, uncovering a positive relationship that was further strengthened by the presence of CSR committees and executive CSR-based compensation. However, not all studies converge on a positive perspective. For example, Saeed & Zamir, (2021) focusing on emerging markets, such as India, China, and Turkey, identified a negative effect of CSR disclosures on dividend payouts, particularly among firms with high institutional ownership. Moreover, Fonseka & Richardson, (2023) we explore the combined effects of mandatory CSR disclosures (CSRD) and actual CSR practices (CSRPs) on dividend decisions. Their findings revealed mixed results in that both mandated and voluntary CSR initiatives significantly influence the likelihood and magnitude of dividend payouts, either enhancing or reducing them depending on contextual and regulatory factors.

The first hypothesis is presented as follows:

Hypothesis 1. ESG score is positively associated with dividend payout

### **2.3 Moderating role of Board skills**

The strategic role of a board's skill set in aligning sustainability objectives with financial decisions has garnered increasing scholarly attention. Boards consisting of members with relevant expertise are better equipped to manage the trade-off between environmental responsibility and shareholder returns (Bae et al., 2021). The educational background, professional experience, and domain-specific knowledge of directors, especially in fields such as environmental science, law, and sustainability, enhance a firm's capacity to navigate complex ESG-related challenges and formulate responsive policies. A board enriched with such diversity supports robust ESG decisions and promotes long-term financial stability, including dividend policies that reflect both profitability and responsibility.

Kreuzer & Priberny, (2022) in a study covering 6,000 firms across 46 countries demonstrated that firms with more skilled directors and greater female representation on boards tend to have lower carbon emissions. Interestingly, firms exhibiting stronger formal CSR initiatives were associated with higher emissions, suggesting that board

competence matters more than symbolic CSR actions. Other scholars, such as Darmadi, (2013) and Gaur, Bathula, & Singh, (2015), have identified a positive relationship between board education and firm performance. Al-Shaar, Kuzey, Uyar, & Karaman, (2024) provided further insights by exploring how board composition interacts with corporate strategy. Their study revealed that board skills positively moderated the relationship between cost leadership strategies and firm value, indicating that competent boards can effectively implement value-maximizing strategies. Conversely, when firms pursue differentiation strategies, excessive board specialization appears to dilute strategic alignment, suggesting that skill diversity must be appropriately matched with firm goals. Pearce & Zahra, (1992) emphasized the significance of a board's cognitive capital in enhancing strategic oversight. Building on this, scholars like Chen et al., (2009) and Ravasi & Zattoni, (2006) propose that a skilled board is better positioned to engage in innovative strategies. Adams, Akyol, & Verwijmeren, (2018) argued that board heterogeneity, particularly in skill sets, improves the advisory roles of directors by enabling comprehensive and detailed discussions. This viewpoint is supported by empirical evidence showing that diversity in director competencies contributes to enhanced governance outcomes (Katmon et al. 2019) and superior financial performance (Ujunwa, 2012). Liu & Cheng, (2025) found a significant positive effect of board skill diversity on corporate environmental responsibility (CER) in Chinese high-polluting industries. Their analysis also revealed that both regulatory and media pressure amplified this relationship. Gallego-Álvarez & Pucheta-Martínez, (2020), using the varieties of capitalism framework, observed that banks in coordinated market economies (CMEs) reported more environmental information than those in liberal market economies (LMEs). However, contrary to expectations, board skills do not have a strong influence on disclosure levels in CME countries, highlighting the contextual nuances in governance outcomes. Hamoudah et al. (2024) investigated the impact of corporate governance mechanisms on emission performance using data from 122 Malaysian firms (2016–2023). The study found that board expertise and board-specific skills have a significant negative effect on emissions scores, indicating that more skilled boards are associated with better (lower) emissions performance. Ab Aziz et al., (2025), examining ASEAN-5 firms and discovered that CSR strategies significantly boosted ESG performance. This effect is strengthened when boards include members with relevant expertise and female directors, reinforcing the argument that board composition is vital for effective CSR implementation. Shahab et al., (2018) and Al-Hiyari, Mas'ud, & Kolsi, (2022) underlined the importance of human capital on boards. Their studies revealed that directors possessing specialized ESG knowledge were better able to prevent managerial opportunism and improve sustainability performance. Similarly, Zhuang, Chang, & Lee, (2018) emphasized the influence of directors' academic and professional backgrounds on CSR achievements, reinforcing the notion that expertise translates into impact. Roffia et al., (2022) research on SMEs indicates a clear association between board competencies and financial metrics such as return on assets (ROA), suggesting that board skills are not only relevant for large corporations but also for smaller enterprises. Finally, Casciello, Maffei, & Meucci (2025), a study on European SOEs, showed that board-specific skills positively influenced the quality of sustainable development goal (SDGs) disclosure, thereby contributing to greater accountability and transparency.

The second hypothesis is presented as follows:

Hypothesis 2: Board skills positively moderate the relationship between ESG score and dividend payout

### **3. Data and Methodology**

#### **3.1. Sample selection**

Our sample covers 168 non-financial firms in India, spanning eight years, from 2017 to 2024. We construct our dataset by using Refinitiv Eikon database. India was selected as the sample country for this study because of its significant regulatory development and increasing institutional pressure regarding corporate sustainability and ESG disclosures. The government's focus on incorporating ESG principles into corporate governance was demonstrated by the 2019 launch of the National Guidelines on Responsible Business Conduct (NGRBC) (Alahdal et al., 2023). Additionally, the Securities and Exchange Board of India (SEBI) has implemented several significant changes in ESG reporting, replacing the previous Business Responsibility Report (BRR) with the Business Responsibility and Sustainability Report (BRSR) for the top 1,000 listed companies by market

capitalization starting in the fiscal year 2022-2023 (Al-ahdal et al., 2023; Maji & Lohia, 2024). This rule change promotes more openness and comparability in sustainability reporting and is consistent with the international ESG disclosure standards. Furthermore, India is one of the first countries to legislate Corporate Social Responsibility (CSR) through Section 135 of the Companies Act, 2013, which mandates eligible companies to spend a minimum percentage of their profits on CSR activities and report the same. The selected period, from 2017 to 2024, encompasses a transformative phase in India’s ESG landscape. This includes the formalization of CSR practices, the transition from BRR to BRSR, and India’s commitment to achieving net-zero emissions by 2070, announced during the COP26 summit (Ofori et al. 2023). This timeframe also captures the broader shift in investor and regulatory expectations, making it highly suitable for analyzing the evolving relationship between ESG performance and corporate financial behavior. Studying Indian firms during this period offers a unique opportunity to explore how legal and regulatory initiatives in emerging economies influence ESG practices and financial outcomes.

There are 38 sectors in our sample. Construction Materials had the highest representation of 15 firms, accounting for 8.93% of the total sample. This is followed by Auto, Truck & Motorcycle Parts with 13 firms (7.74%) and Electrical Components & Equipment with 12 firms (7.14%). Other notable sectors include Auto & Truck Manufacturers and Iron & Steel, each with ten firms (5.95%). On the other hand, several sectors have the lowest representation with only 1 firm each, such as Airlines, Airport Operators & Services, Department Stores, Diversified Industrial Goods Wholesale, Diversified Mining, Footwear, Ground Freight & Logistics, Oil & Gas Transportation Services, and Renewable Energy Equipment & Services, each contributing 0.60% to the total sample. This distribution indicates a relatively high focus on sectors related to infrastructure, automotive, and industrial equipment, which may reflect their significant roles in ESG or financial performance analyses. The ESG score and firm-level financial data were obtained from the Refinitiv Eikon Database. We also included board background skills as the moderating variable obtained from the Refinitiv Eikon Database. Our sample includes listed non-financial Indian companies. A panel of 1344 firm-year observations, representing 168 firms, constitutes the final sample. **Table 1: DISTRIBUTION OF SECTORS** shows the distribution of businesses and observations across 38 industries.

**Table 1: DISTRIBUTION OF SECTORS**

Category	Count	Percentage (%)
Aerospace & Defense	3	1.79%
Agricultural Chemicals	7	4.17%
Airlines	1	0.60%
Airport Operators & Services	1	0.60%
Aluminum	4	2.38%
Apparel & Accessories	3	1.79%
Apparel & Accessories Retailers	2	1.19%
Auto & Truck Manufacturers	10	5.95%
Auto, Truck & Motorcycle Parts	13	7.74%
Broadcasting	6	3.57%
Business Support Services	5	2.98%

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Casinos & Gaming	2	1.19%
Coal	4	2.38%
Commodity Chemicals	6	3.57%
Construction & Engineering	4	2.38%
Construction Materials	15	8.93%
Department Stores	1	0.60%
Diversified Chemicals	3	1.79%
Diversified Industrial Goods Wholesale	1	0.60%
Diversified Mining	1	0.60%
Electrical Components & Equipment	12	7.14%
Employment Services	2	1.19%
Footwear	1	0.60%
Ground Freight & Logistics	1	0.60%
Heavy Electrical Equipment	8	4.76%
Heavy Machinery & Vehicles	3	1.79%
Hotels, Motels & Cruise Lines	2	1.19%
Industrial Machinery & Equipment	6	3.57%
Iron & Steel	10	5.95%
Leisure & Recreation	5	2.98%
Marine Port Services	2	1.19%
Oil & Gas Exploration and Production	5	2.98%
Oil & Gas Refining and Marketing	5	2.98%
Oil & Gas Transportation Services	1	0.60%
Renewable Energy Equipment & Services	1	0.60%
Restaurants & Bars	4	2.38%
Textiles & Leather Goods	2	1.19%
Tires & Rubber Products	6	3.57%
<b>Total</b>	<b>168</b>	<b>100.00%</b>

3.2. Variables

The corporate ESG performance score was the primary variable of interest. In an additional analysis, we also used the environmental, social, and governance scores, the three pillars of the ESG composite score, as the independent variable. Two dividend payout proxies served as the primary dependent variables. The dividend payout ratio, which is the ratio of common cash dividends to net income, was the first dependent variable (Bilyay-Erdogan et al., 2023; Ellili, 2022). Dividends paid to common shareholders as a percentage of total assets are another dividend payment proxy (Bilyay-Erdogan et al., 2023); Benlemlih, 2019). We also incorporate firm size, cash ratio, return on assets (ROA), and leverage as company-specific control variables, in accordance with earlier research (Ellili, 2022; Saeed & Zamir, 2021; Seth & Mahenthiran, 2022). The definitions of all variables are provided in **Table 2: VARIABLES DEFINITION**.

Table 2: VARIABLES DEFINITION

Variable Name	Type	Definition / Measurement	Source	References
<b>Dividend Income Ratio (DIVINCOME)</b>	Dependent Variable	Ratio of common cash dividends to net income	Constructed by authors using Refinitiv Eikon	Bilyay-Erdogan et al., (2023);(Ellili, 2022)
<b>Dividend Assets Ratio (DIVASSETS)</b>	Dependent Variable	Ratio of common cash dividends to book value of total assets	Constructed by authors using Refinitiv Eikon	Bilyay-Erdogan et al., (2023), Benlemlih, (2019)
<b>ESG SCORE</b>	Independent Variable	Composite ESG score measuring a firm's environmental, social, and governance performance	Refinitiv Eikon	Bilyay-Erdogan et al., (2023);(Ellili, 2022)
<b>Board Background Skills (BBSKILL)</b>	Moderating Variable	Binary variable indicating the presence (1) or absence (0) of directors with relevant skills	Refinitiv Eikon	(Ellili, 2022); (Hamoudah et al., 2024)
<b>Firm Size (FSIZE)</b>	Control Variable	Natural logarithm of total assets	Refinitiv Eikon	Bilyay-Erdogan et al., (2023); Benlemlih, (2019)
<b>Leverage (LEV)</b>	Control Variable	Ratio of total debt to total assets	Refinitiv Eikon	Bilyay-Erdogan et al., (2023); Benlemlih, (2019)
<b>Return on Assets (ROA)</b>	Control Variable	Ratio of net income to total assets	Refinitiv Eikon	Bilyay-Erdogan et al., (2023); Benlemlih, (2019)
<b>CASH RATIO</b>	Control Variable	Ratio of cash and cash equivalents to total assets	Constructed by authors using Refinitiv Eikon	Bilyay-Erdogan et al., (2023); Benlemlih, (2019)

3.3. Model Specification

This section presents the econometric model specifications. They built two models. The first model examines how ESG scores directly affect dividend payments. The second model investigated how board skills and ESG scores interact to affect dividend payments. The econometric requirements of the empirical models are as follows:

Model 1: The direct effect of ESG score on dividend payout:

$$DIV_{it} = \alpha + \beta_1 ESG_{sit} + \beta_2 FSIZE_{it} + \beta_3 LEV_{it} + \beta_4 ROA_{it} + \beta_5 CASHRATIO_{it} + \epsilon_{it} \quad (1)$$

Model 2: Moderating effect of board skills and ESG score on dividend payout

$$DIV_{it} = \alpha + \beta_1 ESG_{sit} + \beta_2 BBSKILL_{it} + \beta_3 ESG_{sit} * BBSKILL_{it} + \beta_4 FSIZE_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 CASHRATIO_{it} + \epsilon_{it}, \quad (2)$$

We use fixed effects verified by the Hausman tests as part of our panel data estimation approach. To ensure robustness, we performed multiple analyses.

### 3.4. Descriptive statistics

The summary statistics are presented in

**Table 3: DESCRIPTIVE.** The descriptive statistics of the variables used in this study provide important insights into the characteristics and distribution of data. The average value of dividend payout relative to income (DIVINCOME) was 0.43, with a moderate standard deviation of 0.20, indicating variability across firms. The positive skewness (1.46) and leptokurtic nature (kurtosis = 3.77) suggest that while most firms pay dividends close to the mean, a few firms pay exceptionally high dividends. Similarly, dividend payout relative to assets (DIVASSETS) has a mean of 0.022, with low variability (SD = 0.017), and exhibits a slightly right-skewed and nearly normal distribution.

The ESG score of firms averages 49.26, with substantial variation (SD = 16.98), and is approximately symmetrically distributed (skewness = -0.09). Leverage (LEV) has a low average of 0.18, indicating limited reliance on debt financing among firms. The distribution was slightly right-skewed (0.56), with low kurtosis (1.87), implying moderate variation. Firm size, measured as the natural log of total assets (FSIZE), averages 21.50, with minimal skewness (0.20) and moderate kurtosis (2.31), suggesting that it is fairly consistent across the sample. Return on assets (ROA) has an average of 7.5%, with moderate variability and a slight right skew, indicating a few firms with relatively higher returns. Finally, the cash ratio averages 2.4%, but with high skewness (1.79) and kurtosis (5.49), indicating that while most firms maintain low cash holdings, a few hold significantly higher reserves, making the distribution highly right-skewed and peaking.

Regarding board-level characteristics, *BBSKILL*, which is dichotomous in nature (1 = presence of board members with relevant skills, 0 = absence), reveals that a substantial proportion of firm-year observations (85.57%) have at least one board member with relevant professional expertise, such as finance, accounting, law, or ESG-related domains. By contrast, only 14.43% of the observations lacked skilled board members. This indicates that most firms in the sample prioritize appointing board members with pertinent backgrounds, which may influence strategic decisions, including sustainability initiatives and dividend policies.

**Table 3: DESCRIPTIVE**

Variable	Mean	SD	Min	Max	Kurtosis	Skewness	N
<b>DIVINCOME</b>	0.42788	0.19547	0.30000	1.34231	3.77063	1.46471	1344
<b>DIVASSETS</b>	0.02224	0.01728	0.00169	0.25331	1.83903	0.56132	1344
<b>ESGSCORE</b>	49.26191	16.97956	8.35692	90.11928	1.92903	-0.09044	1344
<b>LEV</b>	0.18083	0.17399	0.00173	0.50998	1.87265	0.55871	1344
<b>FSIZE</b>	21.49740	1.45813	17.78726	26.00951	2.31374	0.20186	1344
<b>ROA</b>	0.07482	0.06006	-0.03228	0.20496	2.68549	0.35962	1344
<b>CASHRATIO</b>	0.02355	0.02582	0.00127	0.10053	5.49272	1.78777	1344
	<b>Frequencies for a dichotomous variable</b>						
<b>Variable</b>	<b>Modality</b>	%					
<b>BBSKILL</b>	0	14.43					
	1	85.57					

### 3.5 Correlation

The correlation matrix presented in **Table 4: CORRELATION** reveals key insights into the relationships among the study variables, especially the two dependent variables, DIVINCOME and DIVASSETS, representing dividend payouts relative to income and assets, respectively. The ESGScore showed a weak and insignificant

correlation with DIVINCOME and a significant negative correlation with DIVASSETS. This suggests that, while ESG performance does not strongly influence dividend distribution relative to income, firms with better ESG scores tend to distribute a lower portion of their assets as dividends, possibly because of resource allocation toward sustainability investments or long-term strategies. BBSKILL shows weak and statistically insignificant correlations with both DIVINCOME (0.025) and DIVASSETS (-0.016), suggesting that board skill diversity does not have a direct linear association with dividend distributions. Among the control variables, LEV and FSIZE are negatively and significantly correlated with both DIVINCOME and DIVASSETS, indicating that leveraged and larger firms tend to pay fewer dividends. ROA shows a positive and significant correlation with both DIVINCOME and DIVASSETS, indicating that more profitable firms have higher dividend payouts. The cash ratio is weakly correlated with the dependent variable, being slightly positive for DIVINCOME and slightly negative for DIVASSETS, although only the DIVASSETS correlation is marginally significant.

Table 4: CORRELATION

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) DIVINCOME	1.000								
(2) DIVASSETS	0.616***	1.000							
(3) ESGSCORE	-0.032	-	1.000						
		0.172***							
(5) BBSKILL	0.025	-0.016	0.054**	0.061**	1.000				
(6) LEV	-	-	0.211***	0.158***	0.015	1.000			
	0.158***	0.336***							
(7) FSIZE	-	-	0.304***	0.482***	-	0.297***	1.000		
	0.151***	0.304***			0.099***				
(8) ROA	0.056**	0.422***	-0.060**	-	0.024	-	-	1.000	
				0.137***		0.443***	0.274***		
(9) CASHRATIO	0.020	-0.048*	-	-0.065**	0.052*	-	-	-0.026	1.000
			0.107***			0.095***	0.221***		

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

#### 4. Findings

##### 4.1. Direct effect results

To account for unobserved firm-specific heterogeneity, regression analysis employs the fixed-effects (FE) estimation method. This is appropriate, as it controls for time-invariant characteristics across firms (e.g., firm culture and industry norms) that could bias the estimation of the relationship between ESG performance and dividend payout. The results are reported in **Table 5: DIRECT AND MODERATING EFFECT REGRESSION** for two different dependent variables: DIVINCOME (dividends to income) in Columns 1 and 2, and DIVASSETS (dividends to assets) in Columns 3 and 4.

In column 1, ESG performance has a positive and statistically significant impact on the dividend to income ratio. This finding suggests that firms with higher ESG scores tend to reward shareholders more generously. This finding aligns with Benlemlih, (2019), Uyar et al., (2024) and Bilyay-Erdogan et al., (2023), who argue that socially responsible firms tend to have better reputations and financial transparency, enabling them to maintain higher dividend payouts. These findings are also in line with the prior literature. Furthermore, Salvi et al., (2024) they argued the similar relation that companies prioritizing sustainability distribute higher dividends to shareholders. Surprisingly, ROA was negatively associated with dividend payouts. This could be due to profitable firms opting

for internal reinvestment over distribution, consistent with pecking order theory. These results are consistent with the findings of Matos et al., (2020), who also reported a negative relationship between dividend payouts and profitability, as measured by Return on Equity (ROE). Similarly, Salvi et al., (2024) they also find a negative association between dividend payouts and profitability. Leverage has a negative effect, indicating that highly indebted firms may conserve cash by lowering dividend payouts, which is supported by Jensen, (1986) the free cash flow hypothesis. The findings related to leverage are consistent with those of previous studies Saeed & Zamir, (2021) and Benlemlih, (2019), who also reported a negative relationship between leverage and dividend ratios. These studies suggest that firms with high debt levels tend to avoid dividend payments to preserve cash for debt servicing. Furthermore, the results show that larger firms tend to pay lower dividends relative to their income, possibly because they prefer to retain earnings to fund future growth. This observation aligns with the findings in Seth & Mahenthiran, (2022). However, the results for the control variables show some divergence from the previous literature (Benlemlih, 2019). Specifically, liquidity (measured by the cash ratio) does not significantly impact dividend decisions in this model. This is consistent with the findings of Zahid, Taran, Khan, and Chersan (2023), who also found an insignificant relationship. Additionally, Bilyay-Erdogan et al., (2023) reported a negative but insignificant relationship between the cash ratio and dividends, while in the present study, the relationship is positive but still insignificant.

In column 2, the dividend to assets ratio was regressed with the independent variable. Again, ESG continues to have a positive and significant association with dividend payouts, measured against assets. This finding supports the notion that strong ESG practices improve access to capital and reduce information asymmetry, thereby facilitating dividend payments. The findings are similar to those of another Indian study, Rastogi & Singh, (2025) which also concluded that ESG initiatives positively affect dividend payouts. Here, ROA is positive, and the rest of the control variables are similar to the previous interpretations.

The results of both models are supported by those of several previous studies. For example, Matos et al. (2020) found that in the European context, companies with high scores in environmental and governance areas tend to pay more stable and consistent dividends. This shows that such companies are better aligned with shareholders and other stakeholders in the long run. Zahid, Taran, Khan, and Chersan (2023) studied Western European firms and found the same results. Overall, the models show robust and consistent evidence that better ESG performance is associated with higher dividend payouts, supporting the argument that ESG-conscious firms attract more investors and exhibit shareholder-friendly behavior.

**Table 5: DIRECT AND MODERATING EFFECT REGRESSION** presents the regression results using board background and skills as the key moderating variables. Column 3 and 4 in the table present the moderating effect of a skilled board on the relationship between ESG and dividend payouts. In columns 3 and 4, the ESG score has a positive and significant influence on dividend income and dividend assets, suggesting that firms with strong ESG performance are more likely to reward shareholders through higher dividends. This result is similar to the direct effect results in Columns 1 and 2. This finding aligns with prior studies that Hampl & Vágnerová Linnertová, (2025) argue that ESG activities enhance a firm's reputation and investor confidence, leading to more stable dividend policies. The interaction term between ESG and board background and skills (ESG\*BBSKILL) is also positive and significant, indicating that the presence of board members with diverse professional expertise strengthens the positive link between ESG and dividend payouts. This finding supports the view Kreuzer & Priberny, (2022) that firms with more skilled directors and greater female representation on boards tend to have lower carbon emissions. Furthermore, Xia, Cai, & Yuan, (2022) they emphasized that corporate carbon performance significantly improves when the board includes members with strong expertise in climate-related matters. Their findings indicate that the presence of environmentally knowledgeable directors positively contributes to reducing emissions. Therefore, companies aiming for better environmental outcomes should consider appointing board members with specialized knowledge in areas such as sustainability, climate science, and environmental management, as their insights can play a crucial role in guiding climate-responsible strategies and decisions. Similarly, in terms of financial performance Darmadi, (2013) Gaur, Bathula, & Singh, (2015), we identify a positive relationship between board education and firm performance. Further, Al-Shaer, Kuzey, Uyar, & Karaman, (2024) board skills positively moderated the relationship between cost leadership strategies and firm

value, indicating that competent boards can effectively implement value-maximizing strategies. Pearce & Zahra, (1992) suggest that skilled boards are better at integrating sustainability into corporate governance, thereby enhancing financial outcomes, such as dividend distribution. By contrast, some studies argue that ESG investments may lead to reduced dividends because of the higher costs involved. Adams, Akyol, & Verwijmeren, (2018) skill sets improve the advisory role of directors by enabling comprehensive and detailed discussions.

In summary, this study confirms that board background and skills play a crucial moderating role in shaping the relationship between ESG performance and dividend policy. These results underscore the importance of board composition in enhancing or neutralizing the effects of sustainability strategies on shareholder returns. Firms with more professionally skilled boards appear better positioned to align ESG goals with consistent dividend payouts, thus effectively balancing stakeholders’ and shareholders’ interests.

**Table 5: DIRECT AND MODERATING EFFECT REGRESSION**

	(1) (Direct Effect)	(2) (Direct Effect)	(3) (Moderating Effect)	(4) (Moderating Effect)
VARIABLES	DIVINCOME	DIVASSETS	DIVINCOME	DIVASSETS
ESG SCORE	0.00340*** (0.000593)	0.000100*** (3.83e-05)	0.00293*** (0.00113)	0.000187** (7.28e-05)
ESGSCORE*BBSKILL			0.000529** (0.00114)	9.92e-05* (7.36e-05)
BBSKILL			-0.0211 (0.0569)	0.00430 (0.00367)
ROA	-0.631*** (0.143)	0.0631*** (0.00923)	-0.633*** (0.143)	0.0634*** (0.00923)
LEV	-0.367*** (0.0707)	-0.000964* (0.00457)	-0.367*** (0.0708)	-0.000874 (0.00457)
CASHRATIO	0.0685 (0.237)	0.00811 (0.0153)	0.0697 (0.237)	0.00783 (0.0153)
FSIZE	-0.0594*** (0.0201)	-0.00774*** (0.00130)	-0.0601*** (0.0202)	-0.00764*** (0.00130)
Constant	1.650*** (0.425)	0.179*** (0.0274)	1.683*** (0.430)	0.173*** (0.0277)
Observations	1,344	1,344	1,344	1,344
R-squared	0.064	0.083	0.064	0.085
Number of id	168	168	168	168

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**4.3 Robustness tests**

The following section entails brief description of the robustness measures employed in this study to verify our initial results.

**4.3.1. Alternate independent variables**

To ensure the robustness of our primary findings, we followed the methodology employed by Salvi (2022) and Bilyay-Erdogan (2023), who emphasized the relevance of analyzing individual ESG pillars rather than relying solely on the composite ESG score. Accordingly, we replaced the combined ESG score with its three constituent components-Environmental, Social, and Governance scores, to examine their distinct impact on dividend payouts.

**Table 6: DIRECT EFFECT USING INDIVIDUAL PILLARS OF ESG** (columns 1-6) presents the direct effect of each pillar on two dependent variables: dividend income and dividend-to-asset ratio. The results consistently reveal that all three ESG pillars significantly and positively influence dividend policies. Specifically, environmental and social scores are significantly associated with higher dividend income and dividend-to-asset

ratio, while governance scores exhibit a strong positive association with both dependent variables. These findings suggest that firms that actively engage in environmental initiatives, social responsibility, and sound governance are more likely to distribute dividends, reaffirming the importance of each ESG component in shaping shareholder-oriented policies. This is in line with prior studies such as Bilyay-Erdogan et al., (2023), who found that each ESG dimension contributes to financial policy decisions independently, and Salvi (2022), who emphasized ESG's influence on firm-level payout behavior in Europe. Furthermore, the R-squared values, ranging from 0.047 to 0.081, remain modest, but within the acceptable range for firm-level panel data studies, indicating that ESG-related variables explain a meaningful portion of the variation in dividend payouts.

The robustness of our results is also reinforced by **Table 7: MODERATING EFFECT USING INDIVIDUAL PILLARS OF ESG**, which shows the moderating role of board background and skills. The interaction terms between each ESG component and board skills (EP\*BBSKILL, SP\*BBSKILL, and GP\*BBSKILL) are included. The interaction effects remain consistent with our main findings, implying that board expertise strengthens the positive relationship between ESG components and dividend payouts. Specifically, the interaction between Environmental Score and board skills (EP\*BBSKILL) is positive and marginally significant at the 10% level, both for dividend income and dividend-to-assets ratio, suggesting that firms with environmentally competent boards tend to distribute slightly higher dividends when environmental performance improves. Similarly, the interaction term for Social Score and board skills (SP\*BBSKILL) shows a stronger and statistically significant effect, particularly on dividend income (significant at 5%) and dividend-to-assets (at 10%). This implies that boards with expertise in managing social capital, such as stakeholder engagement, labor practices, and community impact, amplify the positive relationship between social responsibility and dividend distribution. This finding aligns with that of Bilyay-Erdogan et al., (2023), who documented that social initiatives often serve as signaling mechanisms for good governance, enhancing investor confidence, and promoting higher dividend payouts. Interestingly, the interaction between Governance Score and board skills (GP\*BBSKILL) is negative and statistically significant for dividend-to-asset ratio but not for dividend income. This finding suggests that higher governance performance, when coupled with stronger board expertise, may lead firms to retain earnings for long-term strategic goals rather than distribute them, which contradicts the generally positive narrative around ESG and dividends. Such findings are supported by Dhaliwal et al. (2011), who argue that firms with strong governance may exercise prudence in dividend decisions, prioritizing sustainable investment over immediate shareholder returns.

These results not only support the validity of our model specification but also highlight the necessity of disaggregating ESG into its core elements for more targeted financial insights. Thus, the robustness analysis confirms that the positive impact of ESG performance on dividend policy is not solely driven by the aggregate ESG score but is also attributable to the individual contributions of the environmental, social, and governance pillars. Overall, the moderating role of board background and skills remains significant, although their direction and intensity vary across ESG components. This highlights that, while ESG performance is generally associated with higher dividend payouts, the effectiveness of this relationship depends significantly on the board's expertise in translating ESG goals into value-enhancing shareholder policies.

**Table 6: DIRECT EFFECT USING INDIVIDUAL PILLARS OF ESG**

	(1)	(2)	(3)	(4)	(5)	(6)
<b>VARIABLES</b>	<b>DIVINCO ME</b>	<b>DIVINCO ME</b>	<b>DIVINCO ME</b>	<b>DIVASSET S</b>	<b>DIVASSET S</b>	<b>DIVASSET S</b>
ENVIRONMENT ALSCORE	0.00170***			2.54e-05		
	(0.000465)			(2.98e-05)		
SOCIALSCORE		0.00300***			6.65e-05**	
		(0.000521)			(3.37e-05)	

GOVERNANCES CORE			0.00179***			6.97e-05**
			(0.000516)			(3.31e-05)
ROA	-0.691***	-0.623***	-0.780***	0.0603***	0.0623***	0.0586***
	(0.144)	(0.143)	(0.142)	(0.00922)	(0.00925)	(0.00911)
LEV	-0.372***	-0.368***	-0.396***	-0.00152*	-0.00122*	-0.00178
	(0.0715)	(0.0707)	(0.0711)	(0.00459)	(0.00457)	(0.00456)
CASHRATIO	0.0758	0.114	0.0980	0.00914	0.00958	0.00866
	(0.239)	(0.237)	(0.239)	(0.0154)	(0.0153)	(0.0153)
FSIZE	-0.0480**	-0.0512***	-0.0298	-0.00694***	-0.00724***	-0.00700***
	(0.0207)	(0.0196)	(0.0192)	(0.00133)	(0.00127)	(0.00123)
Constant	1.497***	1.480***	1.112***	0.166***	0.170***	0.165***
	(0.439)	(0.416)	(0.412)	(0.0282)	(0.0269)	(0.0264)
Observations	1,344	1,344	1,344	1,344	1,344	1,344
R-squared	0.048	0.064	0.047	0.078	0.081	0.081
Number of id	168	168	168	168	168	168

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 7: MODERAING EFFECT USING INDIVIDUAL PILLARS OF ESG**

	(1)	(2)	(3)	(4)	(5)	(6)
<b>VARIABLES</b>	<b>DIVINCO ME</b>	<b>DIVINCO ME</b>	<b>DIVINCO ME</b>	<b>DIVASSE TS</b>	<b>DIVASSE TS</b>	<b>DIVASSE TS</b>
ENVIRONMENTALSCORE	0.00138*			3.42e-05*		
	(0.000812)			(5.21e-05)		
EP*BBSKILL	0.000303*			9.58e-06		
	(0.000760)			(4.89e-05)		
SOCIALSCORE		0.00140*			6.08e-05**	
		(0.000835)			(5.41e-05)	
SP*BBSKILL		0.00197**			7.89e-06*	
		(0.000828)			(5.37e-05)	
GOVERNANCESCORE			0.00291**			0.000183*
			*			**
			(0.000951)			(6.09e-05)

GP*BBSKILL			-0.00129			- 0.000119* *
			(0.000853)			(5.46e-05)
BBSKILLS	-0.00239*	-0.0970**	0.0589	0.000356	-0.000589*	0.00411*
	(0.0395)	(0.0483)	(0.0358)	(0.00254)	(0.00313)	(0.00229)
ROA	-0.697***	-0.626***	-0.796***	0.0604***	0.0623***	0.0569***
	(0.144)	(0.143)	(0.143)	(0.00925)	(0.00926)	(0.00913)
LEV	-0.373***	-0.370***	-0.395***	-0.00151	-0.00124	-0.00178
	(0.0715)	(0.0706)	(0.0711)	(0.00459)	(0.00458)	(0.00455)
CASHRATIO	0.0777	0.119	0.109	0.00903	0.00966	0.00992
	(0.239)	(0.236)	(0.239)	(0.0154)	(0.0153)	(0.0153)
FSIZE	-0.0490**	-0.0543***	-0.0297	- 0.00692** *	- 0.00722** *	- 0.00684** *
	(0.0208)	(0.0197)	(0.0193)	(0.00133)	(0.00128)	(0.00124)
Constant	1.523***	1.627***	1.061**	0.165***	0.170***	0.158***
	(0.441)	(0.420)	(0.416)	(0.0283)	(0.0272)	(0.0266)
Observations	1,344	1,344	1,344	1,344	1,344	1,344
R-squared	0.049	0.069	0.050	0.078	0.081	0.085
Number of id	168	168	168	168	168	168

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

#### 4.3.2. Sub-sample Analysis: High vs. Low Dividend-Paying Firms

To further test the robustness of our findings, we performed a subsample analysis by dividing firms into high and low dividend-paying groups. The classification was based on the mean value of dividend payouts; firms with dividend values above the mean were categorized as high dividend-paying, while those below the mean were considered low dividend-paying.

**Table 8: HIGH AND LOW DIVIDEND PAYING FIRMS** presents the regression results for high dividend-paying firms, and low dividend-paying firms.

The subsample analysis highlights distinct differences in how ESG impacts dividend behavior across firms with high and low dividends. High-dividend-paying firms (

**Table 8: HIGH AND LOW DIVIDEND PAYING FIRMS**) show significantly positive relationships between ESG scores and both dividend measures, indicating that firms with strong sustainability performance tend to maintain stable and consistent dividend distributions. This finding supports the notion that environmentally

responsible firms may gain greater stakeholder trust and financial stability. In contrast, low dividend-paying firms show a significant positive relationship between ESG score and dividend income ratio only, with no significant association observed for dividend-to-asset ratio. This suggests that, while these firms may be committed to broader ESG initiatives, they might retain capital for long-term sustainability investments rather than immediate payouts, a pattern consistent with Bae et al. (2021). Additionally, the ESG score among high-dividend firms was only weakly significant ( $p < 0.1$ ), implying a more selective or strategic ESG approach. Overall, the results for high dividend-paying firms align more closely with the main regression findings, reinforcing the robustness of the original model. The moderating effect of board background and skills appears to be more pronounced among high dividend-paying firms. In these models, the interaction terms are positive and statistically significant, indicating that directors with relevant expertise enhance the positive influence of ESG initiatives on dividend policies. By contrast, for low-dividend-paying firms, although positive, the interaction terms are not statistically significant. This suggests that board skills may play a less influential role in linking ESG efforts to dividend outcomes when firms do not prioritize high distributions. These differences highlight that the effectiveness of ESG-related governance mechanisms may vary depending on a firm's financial distribution strategy. Overall, the findings largely support the original analysis, indicating that both ESG performance and board governance influence dividend decisions. Overall, these patterns suggest that ESG and board characteristics influence dividend policy differently across firm types, with low-paying firms prioritizing broader ESG integration and high-paying firms leveraging environmental performance and board expertise to sustain payouts.

#### 4.3.3. Sub-sample analysis based on Sector

For further analysis, the 38 sectors in our sample are grouped into three major clusters. Cluster 1 consists of heavy-industry and manufacturing firms, encompassing a total of 13 industries. Cluster 2 includes energy, chemicals, and natural resources and comprises nine industries. Cluster 3 represents consumer goods, services, and light industries, with 16 industries grouped under this cluster. This clustering approach allows for a more streamlined sectoral analysis of dividend behavior and ESG impacts across different industry types.

**Table 9: SECTOR 1** presents the analysis for Cluster 1, whereas **Table 10: SECTOR 2** and

**Table 11: SECTOR 3** present the results for Clusters 2 and 3, respectively.

**Table 9: SECTOR 1** shows the results for Cluster 1, where the ESG score has a positive and significant effect on both the dividend income ratio and the dividend-to-assets ratio (columns 1 and 2). The control variables are consistent with the original regression results. When board background skills are introduced as a moderating factor (Columns 3 and 4), ESG scores still show insignificant direct effects. Nevertheless, the interaction term between ESG and board skills is positive and significant ( $p < 0.1$ ) for the dividend income ratio (column 3), and positive but insignificant for the dividend-to-assets ratio (column 4). These moderation results were broadly consistent with those of the main analysis.

**Table 10: SECTOR 2** presents the findings for Cluster 2. Here, ESG scores show a stronger and highly significant positive impact ( $p < 0.01$ ) when the dividend-to-assets ratio is the dependent variable (column 2), but their effects are insignificant when the dividend income ratio is used (column 1). When board background skills were introduced as a moderating variable, the ESG score became insignificant, and the interaction term between ESG and board skills was negative and insignificant for both dividend measures. These results suggest that the sustainability performance of cluster 2 was the weakest among the three clusters.

**Table 11: SECTOR 3** displays the analysis for Cluster 3, which yields results that are similar to the original regression. The ESG score is positive and highly significant, and the interaction terms between board skills and ESG are significant for both dividend measures. These findings highlight that Cluster 3, which includes consumer-

oriented and service-based firms, shows relatively better performance in terms of sustainability practices and the integration of ESG considerations into dividend decisions compared to the other two clusters.

4.3.4 Sub-Sample analysis based on firm size

For further analysis, the sample was divided into large and small firms based on mean firm size, allowing us to assess whether firm size influences the relationship between ESG performance and dividend policy. **Table 12: LARGE AND SMALL SAMPLE FIRMS** presents the results for large and small firms. In **Table 12: LARGE AND SMALL SAMPLE FIRMS** the ESG score have a positive and highly significant impact on both dividend income ratio and dividend-to-assets ratio, as observed in columns 1 and 2. This indicates that larger firms, possibly because of greater resources, regulatory scrutiny, and stakeholder visibility, are more capable of aligning sustainability initiatives with consistent dividend payments. Moreover, the interaction between ESG scores and board skills is also positive and significant, suggesting that board expertise plays a supportive role in enhancing the effect of ESG practices on dividend distribution in large firms. These results are consistent with the original full-sample findings, reinforcing the idea that larger, more established firms are better positioned to integrate ESG into their financial strategies. In contrast, ESG is significantly and positively associated with the dividend income ratio, but its impact on the dividend-to-assets ratio is positive and statistically insignificant for small firms, as shown in columns 5 and 6. This could be because smaller firms face more financial constraints and prefer to retain earnings for reinvestment rather than distribute them relative to total assets. Furthermore, the interaction between ESG score and board skills is positive but not significant, indicating that board expertise does not significantly influence the ESG-dividend relationship in smaller firms. Overall, the results align with those of the main regression analysis, with minor variations across firm sizes that reflect differences in operational scale, resources, and governance structures.

Table 8: HIGH AND LOW DIVIDEND PAYING FIRMS

	-1 (High Dividend Paying Firms)	-2 (High Dividend Paying Firms)	-3 (High Dividend Paying Firms)	-4 (High Dividend Paying Firms)	-5 (Low Dividend Paying Firms)	-6 (Low Dividend Paying Firms)	-7 (Low Dividend Paying Firms)	-8 (Low Dividend Paying Firms)
VARIABLES	DIVINC OME	DIVAS SETS	DIVINC OME	DIVAS SETS	DIVINC OME	DIVAS SETS	DIVINC OME	DIVAS SETS
ESG SCORE	0.00281**	0.000163***	0.00207*	0.000214**	0.00368**	1.00E-05	0.00446*	0.000127
	-0.00076	-4.79E-05	-0.00134	-8.42E-05	-0.00097	-6.57E-05	-0.00209	-0.00014
ESGSCORE* BBSKILL			0.000954**	5.25e-05*			0.000829	0.000122
			-0.00142	-8.92E-05			-0.00195	-0.00013
BBSKILL			-0.0439	0.00156			0.045	0.00575
			-0.0706	-0.00443			-0.0989	-0.00671
ROA	-1.307***	0.0691**	-1.306***	0.0696**	-0.207*	0.0579**	-0.204	0.0582**
	-0.216	-0.0136	-0.217	-0.0136	-0.19	-0.0129	-0.19	-0.0129

LEV	-0.773***	0.000845	-0.770***	0.000568	-0.0415	-0.00151	-0.0403	-0.00115
	-0.106	0.00664	-0.106	0.00666	-0.0968	0.00657	-0.0972	-0.0066
CASHRATIO	-0.304	-0.0151	-0.3	-0.0147	-0.0512	0.022	-0.0556	0.0213
	-0.413	-0.0259	-0.414	-0.026	-0.29	-0.0197	-0.29	-0.0197
FSIZE	0.0866** *	0.00994 ***	0.0892** *	0.00981 ***	-0.0229*	0.00625 ***	-0.0243	0.00632 ***
	-0.0314	0.00197	-0.0317	0.00199	-0.026	0.00177	-0.0263	0.00179
Constant	2.501***	0.235** *	2.589***	0.230** *	0.712*	0.142** *	0.698	0.137** *
	-0.684	-0.0429	-0.698	-0.0438	-0.53	-0.036	-0.537	-0.0364
Observations	680	680	680	680	664	664	664	664
R-squared	0.143	0.101	0.144	0.102	0.029	0.075	0.029	0.077
Number of id	85	85	85	85	83	83	83	83

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 9: SECTOR 1

	(1)	(2)	(3)	(4)
VARIABLES	DIVINCOME	DIVASSETS	DIVINCOME	DIVASSETS
ESG SCORE	0.00189*	0.000425***	0.000229	0.000360
	(0.00140)	(0.000119)	(0.00267)	(0.000228)
ESGSCORE*BBSKILL			0.00228*	9.97e-05
			(0.00278)	(0.000237)
BBSKILLS			-0.0770	-0.00669
			(0.140)	(0.0119)
ROA	-0.480	0.278***	-0.487	0.279***
	(0.405)	(0.0345)	(0.406)	(0.0346)
LEV	-0.0842	0.0335*	-0.0795	0.0331*
	(0.233)	(0.0199)	(0.234)	(0.0200)
CASHRATIO	0.591	0.0663	0.597	0.0661
	(0.761)	(0.0649)	(0.761)	(0.0650)
FSIZE	-0.0804	-0.0254***	-0.0839	-0.0253***
	(0.0620)	(0.00529)	(0.0621)	(0.00530)

Constant	2.024	0.532***	2.174	0.536***
	(1.322)	(0.113)	(1.332)	(0.114)
Observations	760	760	760	760
R-squared	0.007	0.133	0.010	0.134
Number of id	95	95	95	95

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 10: SECTOR 2

	(1)	(2)	(3)	(4)
VARIABLES	DIVINCOME	DIVASSETS	DIVINCOME	DIVASSETS
ESG SCORE	0.00300	0.00121***	0.00411	0.00138
	(0.00310)	(0.000380)	(0.00890)	(0.00109)
ESGSCORE*BBSKILL			-0.000915	-0.000153
			(0.00864)	(0.00106)
BBSKILLS			0.00431	0.00425
			(0.410)	(0.0503)
ROA	1.299**	0.351***	1.322**	0.353***
	(0.540)	(0.0662)	(0.544)	(0.0668)
LEV	-0.930***	0.0281	-0.923***	0.0288
	(0.235)	(0.0289)	(0.237)	(0.0291)
CASHRATIO	-1.064	-0.281	-1.014	-0.277
	(2.334)	(0.286)	(2.344)	(0.288)
FSIZE	-0.0725	-0.0322***	-0.0672	-0.0318***
	(0.0885)	(0.0109)	(0.0892)	(0.0110)
Constant	1.876	0.658***	1.734	0.643***
	(1.896)	(0.233)	(1.956)	(0.240)
Observations	264	264	264	264
R-squared	0.176	0.176	0.178	0.176
Number of id	33	33	33	33

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 11: SECTOR 3

	(1)	(2)	(3)	(4)
VARIABLES	DIVINCOME	DIVASSETS	DIVINCOME	DIVASSETS
ESG SCORE	0.00874*** (0.00291)	6.47e-05* (0.000213)	0.00718* (0.00453)	0.000187 (0.000333)
ESGSCORE*BBSKILL			0.00176** (0.00399)	0.000289* (0.000293)
BBSKILLS			-0.00857* (0.207)	0.0140 (0.0152)
ROA	1.212** (0.562)	0.0344 (0.0413)	1.248** (0.566)	0.0376 (0.0416)
LEV	-1.654*** (0.161)	-0.0154 (0.0118)	-1.650*** (0.161)	-0.0152 (0.0118)
CASHRATIO	-0.299 (0.623)	0.0870* (0.0458)	-0.336 (0.627)	0.0838* (0.0461)
FSIZE	-0.0913 (0.0578)	-0.0118*** (0.00424)	-0.0983* (0.0583)	-0.0120*** (0.00429)
Constant	2.080* (1.173)	0.305*** (0.0861)	2.226* (1.183)	0.296*** (0.0870)
Observations	336	336	336	336
R-squared	0.347	0.058	0.350	0.061
Number of id	42	42	42	42

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 12: LARGE AND SMALL SAMPLE FIRMS

	(1) (Large Size Firms)	(2) (Large Size Firms)	(3) (Large Size Firms)	(4) (Large Size Firms)	(5) (Small Size Firms)	(6) (Small Size Firms)	(7) (Small Size Firms)	(8) (Small Size Firms)
VARIABLES	DIVINCOME	DIVASSETS	DIVINCOME	DIVASSETS	DIVINCOME	DIVASSETS	DIVINCOME	DIVASSETS

ESGSCORE	0.00284***	0.000123**	0.00113*	0.000154*	0.00421**	6.11e-05	0.00654**	0.000230*
	(0.000776)	(4.80e-05)	(0.00135)	(8.35e-05)	(0.000916)	(6.24e-05)	(0.00199)	(0.000136)
ESGSCORE*BBSKILL			0.00202*	2.70e-05*			0.00245	0.000177
			(0.00146)	(9.03e-05)			(0.00186)	(0.000127)
BBSKILLS			-0.0800	0.000343			0.113	0.00829
			(0.0735)	(0.00455)			(0.0924)	(0.00629)
ROA	-1.127***	0.0654**	-1.134***	0.0659**	-0.156	0.0592**	-0.144	0.0601**
	(0.205)	(0.0127)	(0.205)	(0.0127)	(0.200)	(0.0136)	(0.200)	(0.0136)
LEV	-0.107	-0.00983	-0.100	-0.0102	-0.421***	0.00161	-0.417***	0.00192
	(0.137)	(0.00844)	(0.137)	(0.00847)	(0.0856)	(0.00583)	(0.0857)	(0.00583)
CASHRATIO	0.202	-0.00505	0.203	-0.00551	-0.0900	0.0163	-0.121	0.0139
	(0.363)	(0.0224)	(0.363)	(0.0225)	(0.318)	(0.0217)	(0.320)	(0.0218)
FSIZE	-0.0722**	-0.00808**	-0.0770**	-0.00796**	-0.0664**	-0.00700**	-0.0671**	-0.00706**
	(0.0308)	(0.00190)	(0.0309)	(0.00191)	(0.0270)	(0.00184)	(0.0271)	(0.00184)
Constant	1.989***	0.193***	2.162***	0.190***	1.693***	0.159***	1.598***	0.153***
	(0.680)	(0.0420)	(0.688)	(0.0426)	(0.539)	(0.0367)	(0.545)	(0.0371)
Observations	680	680	680	680	664	664	664	664
R-squared	0.085	0.102	0.089	0.103	0.078	0.072	0.081	0.075
Number of id	85	85	85	85	83	83	83	83

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 5. Conclusion

Corporate sustainability performance plays a crucial role in shaping firm financial outcomes. Furthermore, among the key internal governance mechanisms, the board of directors has a significant influence on strategic decisions, including dividend policies. Their diverse expertise, long-term vision, and commitment to responsible governance practices enable firms to align profitability with sustainability objectives better. In recent years, companies' decisions to pay dividends have been more influenced by their focus on ESG practices. While prior research has

extensively examined the individual effects of ESG performance and board composition on corporate decisions, limited attention has been paid to their interaction, specifically how board-level skills may shape the ESG–dividend payout relationship. To address this gap, this study explores the moderating effect of directors' professional skills on the link between ESG performance and dividend payout ratios among listed Indian non-financial firms from 2017 to 2024. A robust analytical framework was adopted using a fixed-effects panel regression on a balanced dataset of 1,344 firm-year observations. Additional robustness checks are conducted by segmenting the data based on firm size, sectoral classification, high versus low dividend-paying firms, and individual ESG pillars (environmental, social, and governance scores).

The findings revealed a significantly positive moderating effect of board skills on the relationship between ESG performance and dividend payouts. Managers are more likely to prioritize shareholder returns and long-term sustainability in firms with highly skilled directors. This means that such directors have the knowledge and ability to manage both investing in ESG goals and meeting shareholders' profit expectations. Skilled directors act as catalysts, enabling firms to meet dual objectives, enhance ESG performance, and increase dividend payments. Interestingly, when looked at alone, board skills had a negative effect on the dividend-to-assets ratio, possibly because skilled directors are more careful about sharing profits. However, when board skills were combined with strong ESG performance, this effect changed and had an overall positive impact. This indicates that the presence of sustainability-literate board members can counterbalance conservative tendencies and foster more balanced financial policy. This also reinforces the notion that sustainability expertise at the board level is vital for achieving integrated financial and non-financial performance goals.

These results show that board composition plays an important and detailed role in how companies make financial decisions related to ESG. These findings support stakeholder theory, which states that companies should consider the needs of all their stakeholders, not just shareholders. They also support agency theory, as skilled board members help keep management checking and guiding decisions that benefit the company in the long run. Finally, the results support signaling theory, as strong ESG performance along with regular dividend payments sends a good message to the market about the company's strength, reputation, and commitment to sustainability.

The findings of this study have important implications for corporate governance, investors, and policymakers. The results highlight the strategic value of appointing board members with diverse and relevant skills, particularly in areas related to sustainability. Skilled directors not only support better ESG performance, but also help balance shareholder expectations through consistent dividend payouts, enhancing both financial and non-financial outcomes. For investors, this study provides insights into how board composition and ESG practices can signal a company's long-term value and stability. Policymakers and regulators may also draw from these findings to encourage stronger board governance frameworks and promote ESG-focused leadership to drive responsible corporate behavior and improve market transparency.

Our study had several limitations. First, we examined only non-financial companies listed in India, which may limit the applicability of our findings to firms in other sectors, non-listed companies, and organizations operating under different regulatory and governance regimes in other countries. Second, we relied on ESG data from the Refinitiv Eikon database, which is widely used; its scoring methods and data coverage may differ from those of other ESG rating providers. Third, our proxy for board skills is based on available director-level information, and may not fully capture the depth, quality, or sustainability-specific expertise of individual board members. Future research could broaden the sample to include financial and non-Indian companies across Asia and other regions to test whether these relationships hold in different contexts. Additional studies might also examine how board skills interact with other ESG dimensions such as resource use, innovation, and employee welfare scores. By expanding both the geographic scope and range of ESG subcomponents, future work can provide a more comprehensive understanding of how board expertise shapes the link between ESG performance and dividend policy.

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