

# ESG and Dividend Payout under the Consideration of Agency Cost

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## Abstract

This study examines 1495 publicly listed companies over the period 2016-2022 to assess whether higher ESG (environmental, social, and governance) scores are associated with greater cash dividend payouts, and to explore how this relationship varies under both performance-driven and governance-driven agency cost scenarios. The results reveal that firms with higher ESG scores are associated with greater dividend payouts. Among the three pillars, the social and governance scores exert a stronger influence on dividend payout than the environmental score. The positive ESG-dividend relationship is most pronounced in firms facing greater agency costs, including young, low asset efficiency, and low free cash flow firms. The social score has a particularly strong effect in firms with non-dual leadership structures or low institutional ownership. The environmental score is most influential in firms with high institutional ownership, reflecting institutional investors' sensitivity to environmental performance.

## Keywords

Environmental, Social, and Governance (ESG), Dividend Payout, Agency Cost, Asset Efficiency, Institutional Ownership, CEO-Duality

## 1. Introduction

Environmental, social, and governance (ESG) issues have garnered increasing attention from stakeholders, regulators, and academics. The literature suggests that firms prioritizing ESG initiatives can improve both operational and financial performance [1]-[4], experience lower financial distress [5]-[7], enhance firm value [8]-[10], increase transparency for investors [11], and strengthen stakeholder relationships [12]-[14]. Additionally, ESG has been shown to positively influence capital markets [4] [15], with firms demonstrating strong ESG performance ex-

hibiting higher stock liquidity, lower volatility, and a reduced likelihood of stock price crashes [2] [16]–[20].

As a result, ESG has become an increasingly important criterion for evaluating corporate performance, and its attributes are playing a growing role in investor decision-making [21]–[23]. Several studies suggest that ESG endorsement or disclosure may influence investor behavior independently of financial return considerations [22] [24] [25]. A growing number of exchange traded funds (ETFs) now incorporate ESG performance as a core factor in stock selection or index tracking. Moreover, ESG funds and indices have been found to outperform broader market benchmarks [26]–[29].

In the third quarter of 2024, retail investors accounted for 53.38% of the total trading value on the Taiwan Stock Exchange (TWSE), whereas foreign investors and domestic institutional investors contributed 34.18% and 12.44%, respectively. These figures highlight the predominant role of retail investors in stock market, which may in turn exacerbate information asymmetry due to their generally limited access to timely and comprehensive market information compared to institutional investors. ETFs focused on environmental, social, and governance (ESG) criteria have increasingly become a vehicle for investors seeking to bridge this information gap. According to data from ESG Fund Section of the Depository & Clearing Corporation (TDCC) Fund Information Observatory, as of December 2024, the stock market had 53 domestic ESG funds with combined assets of approximately NT\$861.5 billion, along with 85 offshore ESG funds totaling around NT\$109.8 billion.

Empirical studies indicate that firms with higher overall ESG composite score—as well as higher scores in the individual environmental, social, and governance pillars—tend to be more financially stable and more likely to pay dividends compared to firms with lower ESG scores [30]–[33]. However, the literature on the relationship between ESG performance and dividend policy presents mixed findings. Some studies report a positive relationship between ESG scores and dividend payout [30] [31] [33]–[38], while others find a negative [39] [40], mixed [32] [41], or inconclusive relationship [42].

Some research suggests that firms with high ESG scores are more likely to pay dividends as a strategy to prevent overinvestment in sustainability initiatives and to mitigate agency problems [34]. Socially responsible companies that maintain stable dividend policies may also signal to the market a commitment to shareholder interests [30] [34]. Conversely, other studies propose that ESG initiatives and dividends may act as substitutes, with firms exhibiting stronger ESG engagement potentially demonstrating lower dividend growth or payouts [31] [32] [39].

In addition, existing research has linked ESG-related reputational risks to higher agency costs, increased stakeholder sanction risks, and greater external financing costs—all of which can affect dividend policy [14] [43] [44]. Several studies suggest that ESG disclosure can serve as a substitute for dividend payments by reducing information asymmetry [31] [39]. In particular, greater environmental

and social transparency has been associated with higher dividend payout among firms facing significant agency costs and information asymmetry [45] [46].

Traditionally, investors have viewed dividends as a reliable source of returns. However, as environmental, social, and governance (ESG) factors gain prominence, both investors and corporate managers increasingly recognize that strong ESG performance bolsters long-term resilience and shareholder value, thereby prompting deeper integration of ESG criteria into corporate practices and investment strategies. In recent years, TWSE has made significant progress in enhancing its ESG and corporate governance standards through various policy initiatives and regulatory reforms. For example, “Corporate Governance 3.0—Sustainable Development Roadmap (2021-2023)” was introduced to strengthen the corporate governance framework, promote sustainable development, and enhance the international competitiveness of its capital markets. The roadmap sets five strategic action plans comprising a total of 39 specific measures. These plans focus on: strengthening board responsibilities and functions; enhancing information transparency; improving communication with stakeholders; encouraging stewardship and alignment with international standards; and fostering a culture of sustainable governance while promoting the development of diversified financial products. In addition, the Financial Supervisory Commission (FSC) has introduced a series of regulations to enhance transparency and promote sustainability among listed firms. Beginning in 2023, all listed firms with paid-in capital exceeding NT\$2 billion are required to disclose sustainability reports in alignment with international standards, such as those set by the Global Reporting Initiative (GRI). These measures have improved sustainability and transparency, thereby reducing information asymmetry between firms and investors. Moreover, ESG reforms have indirectly shaped corporate dividend policies by encouraging firms to align payout decisions with sustainable development goals and long-term shareholder value. Over time, robust ESG initiatives can enhance corporate performance, boost earnings, and strengthen a company’s capacity to pay dividends. The findings of this study may provide valuable insights for other markets with similar institutional environments.

This study investigates whether higher ESG scores increase the likelihood of paying larger dividends and examines how this relationship varies under both performance-driven and governance-driven agency cost scenarios. It contributes to the growing body of literature on sustainable finance in several important ways. First, the study confirms a positive relationship between a firm’s ESG performance and its dividend payout, enriching the literature on the intersection of sustainability practices and financial decision-making. This finding reinforces the role of ESG as an influential factor in shaping corporate financial policies, particularly dividend strategies. Second, this research complements prior studies that primarily explain dividend policies through the lenses of financial performance, corporate governance, or market efficiency. By incorporating both performance-driven and governance-driven agency costs, this study offers a more comprehensive un-

derstanding of the relationship between ESG scores and dividend payouts across different agency cost scenarios. Third, this study provides valuable insights for investors by examining whether firms with higher ESG scores are more likely to adopt stronger dividend policies. These findings can guide investment decisions, especially for investors who prioritize both financial returns and sustainability considerations. Finally, the research offers a useful reference for regulators evaluating the potential benefits of promoting ESG disclosure. Enhanced ESG reporting can improve market transparency, strengthen confidence in corporate financial decisions, and support the development of a more sustainable and accountable financial system. Overall, this study not only deepens the understanding of how ESG factors interact with dividend policies but also highlights practical implications for investment strategies and regulatory frameworks.

The rest of the paper is organized as follows. Section 2 reviews the literature and develops hypotheses. Section 3 describes the data, variables, and model specifications. Section 4 presents and discusses the results. Section 5 concludes and highlights the implications of findings.

## 2. Literature and Hypotheses

From an agency theory perspective, managers may overinvest in ESG initiatives to satisfy personal interests and secure private benefits [47]. In such cases, dividend payout can serve as a mechanism to control agency costs. A high dividend payout policy signals to the market that ESG expenditures are not depleting the firm's cash reserves, leading to more efficient resource allocation and ensuring shareholder satisfaction [30]. From a stakeholder theory perspective, dividend payout are expected to be positively associated with ESG activities, as firms engage in ESG investments to manage the interests of all stakeholders [30] [41] [48]. By integrating the propositions of agency theory and stakeholder theory, companies engage in ESG investments to align with the stakeholder interests. High ESG performance is expected to enhance a firm's profitability, thereby increasing its capacity to pay dividends in the future. Furthermore, a high dividend payout policy may signal to the market that the firm's ESG expenditures result from an efficient allocation of financial resources. However, the literature presents conflicting findings on the relationship between ESG performance and dividend payout. Some studies suggest that firms with high ESG performance offer larger dividends to their investors [30]–[33], while others report a negative association [15] [39] [49] and note that dividend growth may be negatively affected by ESG activities [32]. Based on the previous discussion, the following hypotheses are proposed:

**Hypothesis 1:** ESG scores are associated with the likelihood of dividend payout.

**Hypothesis 2:** Higher ESG scores are associated with greater dividend payout.

The literature also suggests that a firm's ESG performance influences its dividend payout, with this effect being more pronounced in firms facing significant information asymmetry and agency costs [39] [40] [45] [46]. Moreover, ESG disclosure may serve as a substitute for dividends in mitigating information asym-

metry [31] [39]. Therefore, the following hypothesis is also proposed:

**Hypothesis 3:** The relationship between ESG and dividend payouts is stronger under high agency costs.

### 3. Methodology

#### 3.1. Data

This study uses a sample of 1495 publicly listed companies in stock market from 2016 to 2022, excluding the financial sector and covering 30 industries. During the study period, 1074 of these companies paid cash dividends, while 421 did not. The overall ESG composite score and the three pillar scores—environmental, social, and governance—were obtained from the TSEG Sustainability Indicators database of the Taiwan Economic Journal (TEJ). Additionally, the financial and governance data were retrieved from the TEJ Finance database and the TEJ Corporate Governance database, respectively.

Each international ESG rating agency uses its own evaluation framework, with scores differing based on the selected indicators and their respective weights. As a result, the same company may receive significantly varying ESG ratings from different agencies, leading to inconsistencies and unexplained discrepancies [50]. The TSEG Sustainability Indicators database, established by the TEJ in 2016, currently provides data up to 2022. TEJ's TSEG sustainability indicators for companies are structured around three pillars—environmental, social, and governance—comprising 16 indicators in total. These indicators are aligned with the Sustainability Accounting Standards Board (SASB) framework. The weights for the environmental and social pillars are based on the SASB framework, while TEJ determines the weight for the governance pillar. The ESG score is calculated based on relative rankings within specific industries, which are categorized according to the 11 major industry sectors defined by SASB. The raw ESG score is derived from a weighted combination of indicator values (75%) and Global Reporting Initiative (GRI) disclosure data (25%). Final scores for each pillar—environmental, social, and governance—range from 0 to 100, with higher scores indicating better performance in ESG-related indicators.

#### 3.2. Variables and Models

Since the model includes industry dummy variables that remain constant over time, a random-effects model is employed in this study to avoid collinearity between the industry dummies and the intercept term. Specifically, a random-effects logistic regression is used to examine the relationship between ESG scores and the likelihood of paying dividends, utilizing the full sample that includes both dividend-paying and non-dividend-paying firms. The empirical model is as follows:

$$P(Div_{it}) = \alpha_0 + \beta_1 Score_{it-1} + \sum \delta_k Control_{kt-1} + \theta_i + \mu_i + \varepsilon_{it} \quad (1)$$

where  $Div_{it} = 1$ , if the firm pays cash dividends in year  $t$ ;  $Div_{it} = 0$ , if it does not [33].  $Score_{it-1}$  represents the natural logarithm of firm  $i$ 's overall ESG composite

score and the three individual pillar scores (environmental, social, and governance scores) in year  $t - 1$ . A set of firm-level characteristics, widely documented in the literature, is incorporated into the empirical model. These factors—such as firm size, profitability, leverage, and growth opportunities—are commonly recognized as key determinants of dividend payout [15] [30]–[34] [37] [39] [40] [42] [51]. Existing studies suggest that larger, more profitable, and leveraged firms tend to have greater incentives or resources to distribute dividends. Firm size is measured as the natural logarithm of total assets ( $LnTA$ ). Profitability is measured as the ratio of earnings before interest and tax (EBIT) to average total assets ( $ROA$ ). According to slack resources theory, firms with greater financial slack have more flexibility to invest in CSR-related activities, which are likely to generate long-term benefits [52]. Leverage is measured as the ratio of total debt to total assets ( $DebtRatio$ ). Growth is measured as the ratio of the market value of equity to the book value of equity ( $MBratio$ ). Prior studies suggest that high-growth firms pay dividends not to alleviate free cash flow concerns, but to signal strong future operating performance. Dividend payments also serve as a tool to reduce information asymmetry between the firm and investors. However, these firms are likely to reduce dividend payouts when confronted with higher systematic risk or an increased probability of an economic downturn [53]. Additionally, an industry dummy is included, where  $IT = 1$  if the firm belongs to the electronics and technology industries (including information services, e-commerce, electronic channels, telecommunications, semiconductors, electronic components, computers and peripherals, optoelectronics, and other electronics), and  $IT = 0$  otherwise. Here,  $\theta_t$  represents the year effect. A year fixed effect is included to control for the impact of annual economic fluctuations on a firm's score ranking within subsectors.  $\mu_i$  represents the firm's effect, and  $\varepsilon_{it}$  denotes the error term. Detailed variable definitions are provided in Table 1.

Next, this study employs a random-effects regression to examine whether higher ESG scores are associated with greater dividend payout, using a subsample of 1074 companies that paid cash dividends. The empirical model is as follows:

$$DPS_{jt-1} = \alpha_0 + \beta_1 Score_{jt-1} + \sum \delta_k Control_{kt-1} + \theta_t + \mu_i + \varepsilon_{it} \quad (2)$$

where  $DPS_{it}$  represents the natural logarithm of the cash dividend per share (DPS) paid by the firm in year  $t$  [15] [34] [45] [54]. To address the issue of some firms with operating losses still paying cash dividends, which leads to negative dividend payout ratios, this study uses DPS as the dependent variable in the empirical analysis. The variables  $Score_{it-1}$  and  $Control_{it-1}$  are defined as in equation (1).

Finally, this study provides a more comprehensive examination of the relationship between ESG scores and dividend payouts across both performance-driven and governance-driven agency cost scenarios. To capture performance-driven agency costs, the analysis includes the following variables: firm age [30] [33] [46] [51], asset efficiency (measured by total asset turnover) [40] [55] [56], and free cash flow [57]. To capture governance-driven agency costs, the variables used are

family-owned [42] [58] [59], institutional ownership [31] [33] [39] [53] [60]–[66], and CEO duality [32]. The sample is divided into groups based on the median values of relevant variables. These groupings include: old vs. young firms (based on firm age), high vs. low asset efficiency (measured by total asset turnover), family-owned vs. non-family-owned firms, dual leadership (measured by CEO-duality) vs. non-dual leadership, and high vs. low institutional ownership. This stratification allows for a more nuanced analysis of the ESG-dividend relationship under varying agency cost scenarios. Equation (2) is used to conduct the analysis. Detailed definitions of these variables are provided in **Table 1**.

**Table 1.** Summary of variables.

| Variable                             | Symbol                       | Definition                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dividend</b>                      |                              |                                                                                                                                                                                                                                                                                                                                  |
| Cash dividend per share              | DPS                          | Natural logarithm of cash dividend per share.                                                                                                                                                                                                                                                                                    |
| Dividend dummy                       | Div                          | Div = 1 if the firm pays cash dividends in year $t$ ; otherwise, Div = 0.                                                                                                                                                                                                                                                        |
| <b>ESG scores</b>                    |                              |                                                                                                                                                                                                                                                                                                                                  |
| Overall ESG composite score          | ESG                          | A weighted average of the environmental, social, and governance pillar scores, ranging from 1 to 100. The natural logarithm of overall ESG composite score.                                                                                                                                                                      |
| Environmental score                  | Env                          | Based on GRI (Global Reporting Initiative) standards, this score reflects disclosure items related to environmental aspects. The score ranges from 1 to 100. The natural logarithm of environmental score.                                                                                                                       |
| Social score                         | Soc                          | Based on GRI (Global Reporting Initiative) standards, this score reflects disclosure items related to environmental aspects. The score ranges from 1 to 100. The natural logarithm of social score.                                                                                                                              |
| Governance score                     | Gov                          | Based on GRI (Global Reporting Initiative) standards, this score reflects disclosure items related to environmental aspects. The score ranges from 1 to 100. The natural logarithm of governance score.                                                                                                                          |
| ESG score ranking                    | Leader<br>Average<br>Laggard | In accordance with TEJ's ESG ratings, the overall ESG composite scores of all listed companies are classified into seven level, ranging from A+ to C-. Firms rated A+ and A are classified as leaders; those rated B+, B, and B- are placed in the average group; and companies with C or C- ratings are identified as laggards. |
| <b>Firm-specific characteristics</b> |                              |                                                                                                                                                                                                                                                                                                                                  |
| Firm size                            | LnTA                         | Natural logarithm of total assets.                                                                                                                                                                                                                                                                                               |
| Return on assets                     | ROA                          | Net income before interest and taxes scaled by average book value of total assets.                                                                                                                                                                                                                                               |
| Debt ratio                           | Debratio                     | The ratio of the book value of total liabilities to the book value of total assets.                                                                                                                                                                                                                                              |

**Continued**

|                         |             |                                                                                                                                                                                                                                                             |
|-------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Market-to-book ratio    | MBratio     | The ratio of market value of equity at year-end to the book value of equity at year-end.                                                                                                                                                                    |
| Industry                | IT          | IT = 1 for electronic technology industry (including IT services, e-commerce, electronic distribution, communication networks, semiconductors, electronic components, computers and peripherals, optoelectronics, and other electronics); otherwise, IT= 0. |
| <b>Agency costs</b>     |             |                                                                                                                                                                                                                                                             |
| Firm age                | Firmage     | Number of years since the firm's establishment.                                                                                                                                                                                                             |
| Free cash flow          | FCF         | Operating net cash flow minus capital expenditures.                                                                                                                                                                                                         |
| Total asset turnover    | TATurnover  | The ratio of net sales revenue to the average book value of total assets.                                                                                                                                                                                   |
| Family-owned            | Family      | Dummy variable: Family = 1 for single-family controlled firms; otherwise = 0 for non-family firms.                                                                                                                                                          |
| Institutional ownership | Instholding | The ratio of the cumulative number of shares held by institutional investors at year-end to the total number of outstanding shares issued by the firm at year-end.                                                                                          |
| CEO-duality             | CEOduality  | CEOduality = 1 if the chairman also serves as CEO; otherwise, CEOduality = 0.                                                                                                                                                                               |

Note: This table displays the variables used in the analysis along with their descriptions.

Equations (1) and (2) were estimated using panel data regression with robust standard errors clustered at the firm level [67]. The analysis incorporates firm and year fixed effects to control for unobservable characteristics that could potentially influence the results. To address concerns related to contemporaneous endogeneity, ESG scores and all control variables are lagged by one period [68]. Moreover, to minimize the influence of outliers and reduce data noise, all continuous variables—except for ESG scores—are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles [32] [37] [64]. Winsorization is not applied to ESG scores, as these values have already undergone multiple validation and control procedures by the TEJ.

## 4. Result and Discussion

### 4.1. Descriptive Statistics and Correlations

**Table 2** presents the descriptive statistics of the key variables used in the analysis. Panels A and B correspond to firms that paid dividends and those that did not, respectively. The mean, median, and standard deviation of the overall ESG composite score and the three pillar scores (environmental, social, and governance) are higher in the dividend-paying sample compared to the non-dividend-paying sample. Furthermore, dividend-paying firms exhibit larger firm size, greater profitability, older firm age, and higher institutional ownership. In contrast, they show lower debt ratio, market-to-book ratio, and CEO-duality than firms that did not

**Table 2.** Summary of statistic description.

| <b>Panel A. Dividend-paying sample.</b>     |             |            |               |            |                  |            |            |
|---------------------------------------------|-------------|------------|---------------|------------|------------------|------------|------------|
| <b>Variables</b>                            | <b>Mean</b> | <b>p25</b> | <b>Median</b> | <b>p75</b> | <b>Std. Dev.</b> | <b>Min</b> | <b>Max</b> |
| DPS                                         | 2.440       | 0.69       | 1.5           | 3          | 2.759            | 0.010      | 14.730     |
| ESG                                         | 56.202      | 50.7       | 55.7          | 61.3       | 7.731            | 33.700     | 83.700     |
| Env                                         | 56.345      | 47.0       | 53.9          | 64.8       | 11.444           | 25.400     | 91.000     |
| Soc                                         | 56.767      | 49.1       | 56.1          | 63.9       | 10.444           | 27.100     | 91.000     |
| Gov                                         | 55.611      | 48.7       | 55.9          | 62.7       | 10.430           | 21.900     | 84.300     |
| TotalAssets (NT\$ million)                  | 25,100      | 2405       | 5310          | 1.41e+07   | 69               | 296        | 452,000    |
| ROA                                         | 7.192       | 3.38       | 6.045         | 9.71       | 5.459            | −15.250    | 27.270     |
| Debtratio                                   | 41.115      | 28.14      | 41.15         | 53.47      | 16.967           | 5.090      | 84.480     |
| MBratio                                     | 1.902       | 1.01       | 1.46          | 2.18       | 1.856            | 0.260      | 66.080     |
| FCF (NT\$ thousand)                         | 2,745,415   | 152,671    | 494,301       | 1,543,625  | 8,255,186        | −3,549,665 | 57,400,000 |
| Firmage                                     | 33.320      | 23.1       | 31.6          | 42.4       | 13.485           | 3.300      | 76.600     |
| Taturnover                                  | 0.817       | 0.503      | 0.737         | 1.006      | 0.537            | 0.003      | 5.432      |
| Instholding                                 | 43.544      | 25.73      | 42.7          | 60.4       | 22.040           | 1.78       | 90.08      |
| Family-owned                                | 0.615       | 0          | 1             | 1          | 0.486            | 0          | 1          |
| CEOduality                                  | 0.333       | 0          | 0             | 1          | 0.471            | 0          | 1          |
| <b>Panel B. Non-dividend-paying sample.</b> |             |            |               |            |                  |            |            |
| <b>Variables</b>                            | <b>Mean</b> | <b>p25</b> | <b>Median</b> | <b>p75</b> | <b>Std. Dev.</b> | <b>Min</b> | <b>Max</b> |
| DPS                                         | 0           | 0          | 0             | 0          | 0                | 0          | 0          |
| ESG                                         | 51.154      | 46.6       | 50.8          | 55.4       | 6.850            | 29.900     | 78.500     |
| Env                                         | 51.665      | 45.3       | 50.6          | 55.3       | 9.167            | 29.900     | 88.700     |
| Soc                                         | 51.404      | 44.7       | 50.5          | 57         | 8.834            | 26.600     | 84.500     |
| Gov                                         | 50.549      | 43.1       | 50.9          | 58.3       | 10.880           | 19.700     | 84.400     |
| TotalAssets (NT\$ milion)                   | 8479        | 941        | 2107          | 5109       | 33,200           | 258,519    | 452,000    |
| ROA (%)                                     | −3.531      | −6.7       | −1.8          | 0.99       | 8.390            | −26.810    | 27.270     |
| Debtratio                                   | 44.284      | 27.36      | 45.85         | 60.27      | 21.245           | 5.090      | 84.480     |
| MBratio                                     | 2.149       | 0.88       | 1.32          | 2.22       | 4.685            | 0.150      | 157.840    |
| FCF (NT\$ thousand)                         | 406         | −43,144    | 41,009        | 259,523    | 2762             | −3549      | 57,400     |
| Firmage                                     | 31.525      | 22.1       | 30.1          | 40         | 12.805           | 2.200      | 75.800     |
| Taturnover                                  | 0.592       | 0.261      | 0.510         | 0.791      | 0.499            | 0.001      | 5.705      |
| Instholding                                 | 35.044      | 18.10      | 32.66         | 50.01      | 21.471           | 1.78       | 90.08      |
| Family-owned                                | 0.637       | 0          | 1             | 1          | 0.469            | 0          | 1          |
| CEOduality                                  | 0.432       | 0          | 0             | 1          | 0.495            | 0          | 1          |

Note: This table presents the descriptive statistics for the key variables used in the analysis. Detailed variable definitions are provided in **Table 1**.

pay dividends.

**Table 3** presents the Pearson correlation matrix of the key variables for the subsample with positive dividend per share ( $DPS > 0$ ). The correlation coefficients between DPS and the ESG scores range from 0.1670 to 0.2425. Among the three individual ESG pillar scores, the correlation coefficients range from 0.1671 to 0.4436. Notably, the correlation between the environmental and social scores is 0.4436, indicating that firms emphasizing social responsibility also tend to prioritize environmental protection. The correlation coefficients for all other variables, excluding the ESG scores, range from  $-0.0571$  to  $0.5594$ .

**Table 3.** Correlation matrix.

| Variable     | 1         | 2         | 3         | 4         | 5         | 6             | 7             | 8             | 9 |
|--------------|-----------|-----------|-----------|-----------|-----------|---------------|---------------|---------------|---|
| 1. DPS       | 1         |           |           |           |           |               |               |               |   |
| 2. ESG       | 0.2425*** | 1         |           |           |           |               |               |               |   |
| 3. Env       | 0.1571*** | 0.6939*** | 1         |           |           |               |               |               |   |
| 4. Soc       | 0.1670*** | 0.7382*** | 0.4436*** | 1         |           |               |               |               |   |
| 5. Gov       | 0.1983*** | 0.6820*** | 0.1831*** | 0.1671*** | 1         |               |               |               |   |
| 6. LnTA      | 0.1936*** | 0.3710*** | 0.3443*** | 0.4332*** | 0.0734*** | 1             |               |               |   |
| 7. ROA       | 0.5594*** | 0.1419*** | 0.0634*** | 0.0916*** | 0.1370*** | $-0.0371$ *** | 1             |               |   |
| 8. Debtratio | 0.0026    | 0.0885*** | 0.1194*** | 0.0876*** | 0.0109    | 0.3917***     | $-0.2399$ *** | 1             |   |
| 9. MBratio   | 0.3403*** | 0.1131*** | 0.0684*** | 0.0661*** | 0.0978*** | $-0.0571$ *** | 0.4691***     | $-0.0393$ *** | 1 |

Note: This table presents the Pearson correlation matrix for the key variables used in the analysis, based on the subsample where  $DPS > 0$ . Detailed variable definitions are provided in **Table 1**. Statistical significance at the 1%, 5%, and 10% levels is denoted by \*\*\*, \*\*, and \*, respectively.

## 4.2. The Nexus between ESG and Dividend Payout

This study employs a random-effect logistic regression on the full sample (including both dividend-paying and non-dividend-paying samples). **Table 4** presents the results examining the relationship between ESG scores and the likelihood of paying dividends. The collinearity among the independent variables in the regression model was assessed using variance inflation factors (VIFs). The average VIFs for Model (1) and Model (2) are 1.31 and 1.33, respectively, indicating that multicollinearity is not a concern. The results from Models (1) and (2) indicate that both the overall ESG composite score and the individual pillar scores are significantly and positively associated with dividend payments. Notably, the social and governance scores have a greater influence on dividend payout than the environmental score. These findings are consistent with prior literature suggesting that ESG performance positively influences dividend policies [30] [32] [33] [41].

Next, the study applies a panel-data random-effect regression to a subsample of 1074 companies that paid cash dividends, in order to determine whether higher ESG scores are associated with larger dividend payout. **Table 5** presents the

**Table 4.** The results of ESG and the likelihood of dividend payout.

| Variable           | Model (1)             | Model (2)             |
|--------------------|-----------------------|-----------------------|
| constant           | −17.903***<br>(−8.95) | −17.258***<br>(−8.23) |
| ESG ( $t-1$ )      | 3.383***<br>(6.52)    |                       |
| Env ( $t-1$ )      |                       | 0.468<br>(1.20)       |
| Soc ( $t-1$ )      |                       | 1.524***<br>(3.36)    |
| Gov ( $t-1$ )      |                       | 1.232***<br>(4.63)    |
| LnTA ( $t-1$ )     | 0.735***<br>(10.84)   | 0.739***<br>(10.56)   |
| ROA ( $t-1$ )      | 0.176***<br>(19.25)   | 0.177***<br>(19.26)   |
| Debratio ( $t-1$ ) | −0.014***<br>(−3.75)  | −0.015***<br>(−3.76)  |
| MBratio ( $t-1$ )  | 0.010<br>(0.56)       | 0.011***<br>(0.55)    |
| Industry           | 0.085<br>(0.54)       | 0.086<br>(0.55)       |
| Year-effect        | Yes                   | Yes                   |
| Firm-effect        | Yes                   | Yes                   |
| Wald $\chi^2$      | 704.45***             | 704.11***             |
| Log likelihood     | −3000.170             | −3000.629             |
| Average VIF        | 1.31                  | 1.33                  |

Note: This table reports the results of a random-effects logistic regression model using the full sample. Robust t-statistics are reported in parentheses. Detailed variable definitions are provided in **Table 1**. Statistical significance at the 1%, 5%, and 10% levels is denoted by \*\*\*, \*\*, and \*, respectively.

**Table 5.** The results of ESG and dividend payout.

| Variable      | Random-effects model  |                       | Tobit model          |                      |
|---------------|-----------------------|-----------------------|----------------------|----------------------|
|               | Model (1)             | Model (2)             | Model (1)            | Model (2)            |
| constant      | −4.728***<br>(−10.23) | −4.710***<br>(−10.00) | −4.439***<br>(−9.93) | −4.159***<br>(−8.97) |
| ESG ( $t-1$ ) | 0.794***<br>(6.49)    |                       | 0.766***<br>(6.67)   |                      |
| Env ( $t-1$ ) |                       | 0.246***<br>(2.81)    |                      | 0.217***<br>(2.88)   |

## Continued

|                            |                     |                     |                     |                     |
|----------------------------|---------------------|---------------------|---------------------|---------------------|
| Soc ( $t-1$ )              |                     | 0.247**<br>(2.20)   |                     | 0.169*<br>(1.65)    |
| Gov ( $t-1$ )              |                     | 0.298***<br>(4.31)  |                     | 0.304***<br>(5.05)  |
| LnTA ( $t-1$ )             | 0.130***<br>(7.32)  | 0.130***<br>(7.09)  | 0.128***<br>(7.89)  | 0.132***<br>(7.89)  |
| ROA ( $t-1$ )              | 0.048***<br>(15.15) | 0.048***<br>(15.20) | 0.039***<br>(19.91) | 0.039***<br>(19.87) |
| Debratio ( $t-1$ )         | 0.001<br>(1.17)     | 0.001<br>(1.13)     | 0.000<br>(0.17)     | 0.000<br>(0.04)     |
| MBratio ( $t-1$ )          | 0.043***<br>(2.63)  | 0.043***<br>(2.64)  | 0.043***<br>(8.08)  | 0.044***<br>(8.15)  |
| Industry                   | 0.230***<br>(5.06)  | 0.228***<br>(5.03)  | 0.242***<br>(5.48)  | 0.241***<br>(5.45)  |
| Year-effect                | Yes                 | Yes                 | Yes                 | Yes                 |
| Firm-effect                | Yes                 | Yes                 | Yes                 | Yes                 |
| Adj. R <sup>2</sup>        | 0.3588              | 0.3605              |                     |                     |
| Wald $\chi^2$ /LR $\chi^2$ | 983.89***           | 996.63***           | 1180.36***          | 1179.68***          |
| Log likelihood             |                     |                     | -4990.3342          | -4990.6763          |

Note: This table shows the relationship between ESG scores and dividend payout, using the subsample where  $DPS > 0$ . Robust t-statistics are reported in parentheses. Detailed variable definitions are provided in Table 1. Statistical significance at the 1%, 5%, and 10% levels is denoted by \*\*\*, \*\*, and \*, respectively.

regression results of random-effects model and Tobit model [45]. Both models reveal a significant positive relationship between ESG scores and cash dividend per share (DPS), suggesting that firms with higher overall ESG composite scores—as well as higher scores in the environmental, social, and governance pillars—tend to pay more generous dividends [30]–[33]. The analysis also shows that firms with larger size, greater profitability, higher growth opportunities, and those operating in the electronics and technology sectors are more likely to pay higher cash dividend.

In addition, this study employs quantile regression analysis to assess the impact of ESG scores on dividend payouts at different levels of DPS. The results reveal a significant positive relationship between ESG scores and DPS at quantiles where DPS is greater than or equal to 0.5. Notably, both the overall ESG composite score and the social score exhibit an increasing effect as the DPS quantile rises, while the environmental score shows a decreasing influence at higher DPS quantiles. The results of the quantile regression analysis are not presented here.

Prior research indicates that firms with higher ESG ratings tend to achieve superior financial performance [1]–[4], which in turn supports larger dividend payouts [30]–[33]. Motivated by these findings, this study classifies 1074 dividend-

paying firms into three groups—leaders, average, and laggards—based on their ESG ratings from the TEJ’s T ESG database. TEJ assigns overall ESG composite scores to all listed companies, categorized into seven levels ranging from A+ to C-. Firms rated A+ and A are classified as leaders; those rated B+, B, and B- are grouped as average; and companies receiving C or C- ratings are identified as laggards. TEJ updates its ESG ratings twice annually to ensure the provision of up-to-date and relevant ESG data to stakeholders. Based on these ratings, firms are categorized into three groups. Leaders are firms with excellent ESG practices, often serving as industry benchmarks or role models. The average group consists of firms that demonstrate moderate ESG performance. While they have implemented some ESG measures, they often lack full disclosure or comprehensive policies. Laggards are firms that exhibit poor ESG implementation, insufficient disclosure, or show a significant need for improvement in their ESG practices. This classification allows for a more nuanced understanding of corporate ESG maturity and its potential impact on dividend policies. **Table 6** presents the results across the three ESG rating groups. The findings reveal a significant positive relationship between the overall ESG composite score and DPS for firms in the average and laggard groups. Moreover, the individual ESG pillar scores (environmental, social, and governance) show a significant positive impact on DPS only within the average group. In contrast, for firms classified as leaders, DPS is not significantly influenced by ESG scores. Instead, it appears to be driven primarily by firm-specific factors, particularly the market-to-book ratio and affiliation with the electronics industry.

To facilitate direct comparisons of ESG effects across different dividend payout behaviors, firms are categorized into high- and low-dividend groups based on whether their DPS is above or below the sample median. **Table 7** presents the results for these two groups. The analysis shows that both the overall ESG composite score and the governance score are significantly and positively associated with DPS in both groups, with a stronger effect observed in the high-dividend group. However, the environmental and social scores do not show significant effects in either group.

### 4.3. ESG-Dividend Payout Analysis Considering Agency Costs

This section examines how ESG influences dividend payout policies under two contrasting agency cost scenarios—namely, performance-driven and governance-driven contexts. **Table 8** presents the results. Panel A reports the findings related to performance-driven agency costs and shows that, in young firms or those with low free cash flow (FCF), higher ESG pillar scores are associated with greater dividend payouts. Young firms may lack well-established governance systems, while firms with low FCF may use high ESG performance as a substitute for internal governance resources. In such cases, firm may prefer distributing dividends as a transparent and externally verifiable signal of responsible behavior [30] [34]. Furthermore, a strong ESG score enhances this signaling effect. Investors often

**Table 6.** The results of ESG score ranking.

| Variable                   | Leader             |                    | Average              |                      | Laggard              |                     |
|----------------------------|--------------------|--------------------|----------------------|----------------------|----------------------|---------------------|
|                            | Model (1)          | Model (2)          | Model (1)            | Model (2)            | Model (1)            | Model (2)           |
| constant                   | -2.161<br>(-1.57)  | -1.985<br>(-1.51)  | -3.924***<br>(-6.29) | -3.872***<br>(-5.92) | -4.960***<br>(-2.81) | -4.531**<br>(-2.33) |
| ESG ( $t-1$ )              | 0.214<br>(0.64)    |                    | 0.621***<br>(3.91)   |                      | 0.981**<br>(2.24)    |                     |
| Env ( $t-1$ )              |                    | -0.072<br>(-0.45)  |                      | 0.201**<br>(1.97)    |                      | 0.145<br>(0.41)     |
| Soc ( $t-1$ )              |                    | 0.036<br>(0.15)    |                      | 0.107***<br>(0.77)   |                      | 0.411<br>(1.35)     |
| Gov ( $t-1$ )              |                    | 0.201<br>(1.08)    |                      | 0.294***<br>(3.80)   |                      | 0.316<br>(1.61)     |
| LnTA ( $t-1$ )             | 0.102***<br>(3.51) | 0.105***<br>(3.58) | 0.115***<br>(5.48)   | 0.119***<br>(5.47)   | 0.058<br>(1.04)      | 0.058<br>(1.04)     |
| ROA ( $t-1$ )              | 0.055***<br>(8.15) | 0.055***<br>(8.13) | 0.050***<br>(12.95)  | 0.050***<br>(12.97)  | 0.049***<br>(5.57)   | 0.049***<br>(5.56)  |
| Debtratio ( $t-1$ )        | 0.001<br>(0.28)    | 0.001<br>(0.31)    | 0.002<br>(1.30)      | 0.002<br>(1.21)      | 0.005**<br>(2.08)    | 0.005**<br>(2.09)   |
| MBratio ( $t-1$ )          | 0.064**<br>(2.39)  | 0.063**<br>(2.37)  | 0.047***<br>(2.58)   | 0.048***<br>(2.63)   | 0.010<br>(0.17)      | 0.010<br>(0.17)     |
| Industry                   | 0.477***<br>(5.56) | 0.470***<br>(5.51) | 0.212***<br>(4.22)   | 0.209***<br>(4.17)   | 0.137<br>(1.44)      | 0.138<br>(1.46)     |
| Year-effect                | Yes                | Yes                | Yes                  | Yes                  | Yes                  | Yes                 |
| Firm-effect                | Yes                | Yes                | Yes                  | Yes                  | Yes                  | Yes                 |
| Adj. R <sup>2</sup>        | 0.4155             | 0.4159             | 0.3452               | 0.3493               | 0.2405               | 0.2419              |
| Wald $\chi^2$ /LR $\chi^2$ | 276.35***          | 275.29***          | 637.68***            | 652.51***            | 85.28***             | 83.82***            |
| Obs.                       | 1289               |                    | 4306                 |                      | 865                  |                     |

Note: This table presents the results based on ESG score rankings within the DPS > 0 sample. Robust t-statistics are reported in parentheses. Detailed variable definitions are provided in **Table 1**. Statistical significance at the 1%, 5%, and 10% levels is denoted by \*\*\*, \*\*, and \*, respectively.

**Table 7.** The results of high- and low-dividend payouts.

| Variable      | High-dividend      |                   | Low-dividend         |                      |
|---------------|--------------------|-------------------|----------------------|----------------------|
|               | Model (1)          | Model (2)         | Model (1)            | Model (2)            |
| constant      | -0.728*<br>(-1.95) | -0.514<br>(-1.38) | -2.390***<br>(-5.05) | -2.465***<br>(-5.14) |
| ESG ( $t-1$ ) | 0.185*<br>(1.94)   |                   | 0.317***<br>(2.57)   |                      |
| Env ( $t-1$ ) |                    | 0.010<br>(0.17)   |                      | 0.086<br>(0.83)      |

## Continued

|                            |                    |                    |                    |                    |
|----------------------------|--------------------|--------------------|--------------------|--------------------|
| Soc ( $t-1$ )              |                    | -0.027<br>(-0.33)  |                    | 0.089<br>(0.76)    |
| Gov ( $t-1$ )              |                    | 0.137**<br>(2.41)  |                    | 0.161**<br>(2.10)  |
| LnTA ( $t-1$ )             | 0.077***<br>(6.46) | 0.083***<br>(6.79) | 0.025<br>(1.58)    | 0.026<br>(1.57)    |
| ROA ( $t-1$ )              | 0.024***<br>(8.92) | 0.024***<br>(8.91) | 0.033***<br>(9.06) | 0.033***<br>(9.08) |
| Debratio ( $t-1$ )         | 0.000<br>(0.06)    | 0.000<br>(-0.08)   | 0.004***<br>(3.00) | 0.004***<br>(2.95) |
| MBratio ( $t-1$ )          | 0.037***<br>(3.56) | 0.037***<br>(3.63) | -0.025<br>(-1.36)  | -0.025<br>(-1.36)  |
| Industry                   | 0.058**<br>(1.94)  | 0.058**<br>(1.94)  | 0.083**<br>(2.18)  | 0.082**<br>(2.17)  |
| Year-effect                | Yes                | Yes                | Yes                | Yes                |
| Firm-effect                | Yes                | Yes                | Yes                | Yes                |
| Adj. R <sup>2</sup>        | 0.3458             | 0.3512             | 0.0991             | 0.1009             |
| Wald $\chi^2$ /LR $\chi^2$ | 584.96***          | 588.77***          | 245.43             | 248.32***          |
| Obs.                       | 3232               |                    | 3228               |                    |

Note: This table reports the results for the high-dividend and low-dividend payouts, using the sample with DPS > 0. Robust t-statistics are reported in parentheses. Detailed variable definitions are provided in **Table 1**. Statistical significance at the 1%, 5%, and 10% levels is denoted by \*\*\*, \*\*, and \*, respectively.

associate high ESG ratings with greater transparency, lower risk, and sustainable operations [31] [39]. Thus, the link between ESG scores and dividend payout becomes especially significant in these contexts. Similarly, for firms with low asset efficiency, where external signals are particularly valuable, the relationship between ESG scores and dividend payout is also stronger.

Panel B presents the results related to governance-driven agency costs and reveals that the impact of ESG on dividend payouts is more pronounced in non-family-owned firms compared to family-owned firms. Non-family-owned firms are subject to greater external pressure from investors, regulators, and rating agencies; improving ESG performance in such firms helps reduce agency costs and conveys positive signals to the market. In contrast, family-owned firms—characterized by concentrated ownership, active family oversight, and long-term commitment—rely less on external signals such as dividends, leading to a weaker relationship between ESG scores and dividend payout [42] [58] [59].

Additionally, the social score shows a particularly strong influence in firms with non-CEO duality and low institutional ownership. In firms where the CEO does not also serve as the board chair, enhanced board independence and oversight amplify the impact of social responsibility initiatives [32]. In these settings,

**Table 8.** The results of performance-driven and governance-driven agency costs.

## Panel A. Performance-driven agency costs.

| Variable                   | Firm age             |                      | Assets efficiency    |                      |                      |                      | Free cash flow (FCF) |                      |                      |                      |
|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                            | Old                  |                      | Young                |                      | High                 |                      | Low                  |                      | High                 |                      |
|                            | Model (1)            | Model (2)            | Model (1)            | Model (2)            | Model (1)            | Model (2)            | Model (1)            | Model (2)            | Model (1)            | Model (2)            |
| constant                   | -4.595***<br>(-7.58) | -4.541***<br>(-7.27) | -4.779***<br>(-6.91) | -4.929***<br>(-6.99) | -3.881***<br>(-6.65) | -3.735***<br>(-6.15) | -5.085***<br>(-7.71) | -4.989***<br>(-7.73) | -3.947***<br>(-6.58) | -5.575***<br>(-8.64) |
| ESG (t-1)                  | 0.690***<br>(4.34)   |                      | 0.799***<br>(4.36)   |                      | 0.616***<br>(4.10)   |                      | 0.872***<br>(4.83)   |                      | 0.543***<br>(3.48)   | 1.008***<br>(5.92)   |
| Env (t-1)                  |                      | 0.279**<br>(2.29)    |                      | 0.212*<br>(1.71)     |                      | 0.198*<br>(1.84)     |                      | 0.193*<br>(1.64)     | 0.139<br>(1.24)      | 0.262**<br>(2.20)    |
| Soc (t-1)                  |                      | 0.176<br>(1.16)      |                      | 0.337**<br>(2.04)    |                      | 0.147<br>(1.09)      |                      | 0.307*<br>(1.94)     | 0.181<br>(1.28)      | 0.374**<br>(2.42)    |
| Gov (t-1)                  |                      | 0.225**<br>(2.38)    |                      | 0.296***<br>(3.00)   |                      | 0.231**<br>(2.86)    |                      | 0.349***<br>(3.27)   | 0.210**<br>(2.43)    | 0.398***<br>(4.16)   |
| LnTA (t-1)                 | 0.143***<br>(6.27)   | 0.143***<br>(6.05)   | 0.161***<br>(5.84)   | 0.158***<br>(5.54)   | 0.147***<br>(6.85)   | 0.149***<br>(6.74)   | 0.133***<br>(5.30)   | 0.134***<br>(5.15)   | 0.120***<br>(5.34)   | 0.133***<br>(5.46)   |
| ROA (t-1)                  | 0.039***<br>(8.81)   | 0.039***<br>(8.21)   | 0.049***<br>(12.89)  | 0.049***<br>(12.90)  | 0.054***<br>(12.33)  | 0.054***<br>(12.36)  | 0.039***<br>(8.45)   | 0.039***<br>(8.45)   | 0.059***<br>(10.89)  | 0.042***<br>(12.00)  |
| DebtRatio (t-1)            | -0.001<br>(-0.31)    | 0.000<br>(-0.29)     | 0.001<br>(0.71)      | 0.001<br>(0.71)      | 0.000<br>(-0.26)     | 0.000<br>(-0.28)     | 0.000<br>(-0.09)     | 0.000<br>(-0.14)     | 0.004*<br>(1.81)     | 0.006***<br>(2.88)   |
| MBratio (t-1)              | 0.188***<br>(8.12)   | 0.188***<br>(8.10)   | 0.022*<br>(1.65)     | 0.023*<br>(1.65)     | 0.044***<br>(3.04)   | 0.044***<br>(3.06)   | 0.052<br>(1.36)      | 0.053<br>(1.37)      | 0.093***<br>(3.43)   | 0.006***<br>(1.64)   |
| Industry                   | 0.265***<br>(4.13)   | 0.260***<br>(4.04)   | 0.037<br>(0.51)      | 0.036<br>(0.50)      | 0.104*<br>(1.87)     | 0.103*<br>(1.85)     | 0.193***<br>(3.00)   | 0.192***<br>(2.98)   | 0.252***<br>(4.44)   | 0.147***<br>(2.41)   |
| Year-effect                | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Firm-effect                | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Adj. R <sup>2</sup>        | 0.3622               | 0.3624               | 0.3756               | 0.4384               | 0.4025               | 0.4041               | 0.3006               | 0.3037               | 0.3665               | 0.3798               |
| Wald $\chi^2$ /LR $\chi^2$ | 550.93***            | 555.76***            | 615.79***            | 632.38***            | 778.99***            | 778.68***            | 363.74***            | 373.44***            | 520.31***            | 616.83***            |
| Obs.                       | 3232                 |                      | 3228                 |                      | 3232                 |                      | 3228                 |                      | 3232                 | 3228                 |

Panel B. Governance-driven agency costs.

| Variable                   | Family-owned         |                      |                      |                      | Institutional ownership |                      |                      |                      | Leadership structure |                      |                      |                      |
|----------------------------|----------------------|----------------------|----------------------|----------------------|-------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                            | Family               |                      | Non-Family           |                      | High                    |                      | Low                  |                      | Non-Duality          |                      | Duality              |                      |
|                            | Model (1)            | Model (2)            | Model (1)            | Model (2)            | Model (1)               | Model (2)            | Model (1)            | Model (2)            | Model (1)            | Model (2)            | Model (1)            | Model (2)            |
| constant                   | -4.275***<br>(-7.43) | -4.295***<br>(-7.10) | -5.057***<br>(-6.59) | -5.021***<br>(-6.86) | -4.448***<br>(-7.31)    | -4.309***<br>(-7.20) | -4.243***<br>(-6.08) | -4.324***<br>(-5.94) | -5.046***<br>(-9.02) | -4.981***<br>(-8.81) | -4.987***<br>(-6.60) | -5.082***<br>(-6.45) |
| ESG (t-1)                  | 0.719***<br>(4.75)   |                      | 0.832***<br>(4.06)   |                      | 0.850***<br>(5.18)      |                      | 0.762***<br>(4.37)   |                      | 0.896***<br>(6.03)   |                      | 0.844***<br>(4.29)   |                      |
| Env (t-1)                  |                      | 0.212*<br>(1.85)     |                      | 0.251*<br>(1.88)     |                         | 0.374***<br>(3.43)   |                      | 0.019<br>(0.14)      |                      | 0.214**<br>(2.08)    |                      | 0.335**<br>(2.26)    |
| Soc (t-1)                  |                      | 0.230<br>(1.61)      |                      | 0.281<br>(1.59)      |                         | 0.116<br>(0.80)      |                      | 0.459***<br>(2.81)   |                      | 0.291**<br>(2.19)    |                      | 0.252<br>(1.34)      |
| Gov (t-1)                  |                      | 0.283***<br>(3.40)   |                      | 0.296**<br>(2.43)    |                         | 0.319***<br>(3.06)   |                      | 0.304***<br>(3.33)   |                      | 0.375***<br>(4.26)   |                      | 0.288***<br>(2.74)   |
| LnTA (t-1)                 | 0.117***<br>(5.22)   | 0.118***<br>(5.05)   | 0.139***<br>(4.82)   | 0.138***<br>(4.70)   | 0.081***<br>(3.67)      | 0.085***<br>(3.80)   | 0.075***<br>(2.34)   | 0.076**<br>(2.30)    | 0.116***<br>(5.86)   | 0.118***<br>(5.73)   | 0.132***<br>(4.20)   | 0.130***<br>(3.98)   |
| ROA (t-1)                  | 0.048***<br>(10.63)  | 0.048***<br>(10.63)  | 0.048***<br>(10.45)  | 0.049***<br>(10.52)  | 0.048***<br>(11.45)     | 0.048***<br>(11.50)  | 0.051***<br>(10.14)  | 0.051***<br>(10.17)  | 0.051***<br>(12.73)  | 0.051***<br>(12.73)  | 0.044***<br>(8.61)   | 0.044***<br>(8.68)   |
| DebtRatio (t-1)            | 0.000<br>(-0.2)      | 0.000<br>(-0.21)     | 0.004**<br>(2.06)    | 0.004<br>(2.04)      | 0.003*<br>(1.80)        | 0.003*<br>(1.69)     | 0.002<br>(0.91)      | 0.002<br>(0.93)      | 0.001<br>(0.85)      | 0.001<br>(0.79)      | 0.003<br>(1.56)      | 0.003<br>(1.54)      |
| MBratio (t-1)              | 0.066<br>(2.49)      | 0.067**<br>(2.51)    | 0.015<br>(0.63)      | 0.015**<br>(0.62)    | 0.046***<br>(3.02)      | 0.047***<br>(3.06)   | 0.013<br>(0.35)      | 0.013<br>(0.34)      | 0.058***<br>(2.66)   | 0.058***<br>(2.69)   | 0.022<br>(0.85)      | 0.022<br>(0.86)      |
| Industry                   | 0.153***<br>(2.72)   | 0.153***<br>(2.70)   | 0.315***<br>(3.93)   | 0.312***<br>(3.91)   | 0.351***<br>(5.86)      | 0.347***<br>(5.82)   | 0.178***<br>(2.98)   | 0.181***<br>(3.06)   | 0.271***<br>(5.23)   | 0.271***<br>(5.25)   | 0.191***<br>(2.62)   | 0.187**<br>(2.55)    |
| Year-effect                | Yes                  | Yes                  | Yes                  | Yes                  | Yes                     | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Firm-effect                | Yes                  | Yes                  | Yes                  | Yes                  | Yes                     | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Adj. R <sup>2</sup>        | 0.3437               | 0.3452               | 0.3876               | 0.3892               | 0.3905                  | 0.3950               | 0.3003               | 0.3035               | 0.3768               | 0.3798               | 0.3273               | 0.3275               |
| Wald $\chi^2$ /LR $\chi^2$ | 514.68***            | 518.09***            | 513.60***            | 536.49***            | 564.56***               | 589.75***            | 406.99***            | 406.28***            | 784.30***            | 787.45***            | 327.00***            | 338.71***            |
| Obs.                       | 3971                 |                      | 2489                 |                      | 3232                    |                      | 3228                 |                      | 4326                 |                      | 2134                 |                      |

Note: This table presents results based on firm-level agency costs, using the sample with  $DPS > 0$ . Robust t-statistics are reported in parentheses. Detailed variable definitions are provided in **Table 1**. Statistical significance at the 1%, 5%, and 10% levels is denoted by \*\*\*, \*\*, and \*, respectively.

improvements in the social score are perceived as more credible, strengthening their effect on dividend payments. Moreover, in firms with low institutional ownership, management may strategically tie social score improvements to dividend distributions to attract retail and potential long-term investors. This linkage serves as a clear signal of sound governance and long-term value creation [31] [33] [39] [60] [63].

Overall, the findings suggest that the relationship between ESG scores and dividend payout becomes stronger in contexts characterized by higher agency costs or specific stakeholder pressures that enhance the signaling value of environmental and social achievements. These results support prior research indicating that firms with lower agency costs and reduced information asymmetry are more likely to pay higher dividends [14] [43] [44] [46]. This provides further evidence that ESG scores can serve as a strong predictor of dividend behavior, especially when agency-related considerations are taken into account.

#### 4.4. Endogeneity Issues

The literature on the ESG-performance-dividend relationship presents mixed findings. Some studies suggest that a firm's ESG performance positively impacts its profitability, which in turn enhances its dividend payout [30]–[33]. Conversely, other research reports a negative relationship between ESG and dividend payout [15] [32] [39] [49].

In this section, I examine the relationship between profitability and dividend payout by categorizing firms into two groups based on their return on assets (ROA). Firms with a negative ROA are classified as loss-making, while those with a positive ROA are classified as profit-making. The results for these two groups are presented in **Table 9**. For profit-making firms, the findings reveal a significant positive correlation between all three ESG pillar scores and dividend payout. This suggests that firms with strong ESG performance are more likely to reward shareholders through higher dividends when they are financially healthy. Such firms may view ESG excellence as part of a comprehensive value creation strategy, aligning responsible practices with shareholder returns. In contrast, among loss-making firms, the governance score plays a more substantial role in influencing dividend payout. This highlights the importance of governance mechanisms—such as managerial oversight, board independence, and protection of shareholder rights—especially when financial performance is weak.

A particularly noteworthy finding is the negative association between the social score and dividend payout within loss-making firms. This supports the slack resources theory, which posits that firms with more discretionary resources (often reflected in higher social performance, such as CSR initiatives and community engagement) may opt to allocate funds toward non-financial goals rather than distribute dividends [52] [69]. Thus, the relationship between ESG and dividend payouts appears to be context-dependent. Profit-making firms tend to respond positively to overall ESG signals, whereas loss-making firms place greater empha-

sis on governance factors when shaping their payout strategies.

**Table 9.** The results of loss-making and profit-making.

| Variable                   | Loss-making        |                      | Profit-making        |                      |
|----------------------------|--------------------|----------------------|----------------------|----------------------|
|                            | Model (1)          | Model (2)            | Model (1)            | Model (2)            |
| constant                   | 0.844<br>(0.25)    | 2.539<br>(0.83)      | −4.541***<br>(−9.70) | −4.437***<br>(−9.34) |
| ESG ( $t-1$ )              | −0.855<br>(−0.98)  |                      | 0.746***<br>(6.03)   |                      |
| Env ( $t-1$ )              |                    | −0.570<br>(−0.96)    |                      | 0.240***<br>(2.78)   |
| Soc ( $t-1$ )              |                    | −1.686***<br>(−2.69) |                      | 0.203***<br>(1.83)   |
| Gov ( $t-1$ )              |                    | 0.765*<br>(1.74)     |                      | 0.277***<br>(3.97)   |
| LnTA ( $t-1$ )             | 0.213**<br>(1.89)  | 0.318***<br>(3.07)   | 0.132***<br>(7.36)   | 0.134***<br>(7.22)   |
| ROA ( $t-1$ )              | 0.043***<br>(3.08) | 0.036***<br>(3.09)   | 0.047***<br>(14.75)  | 0.047***<br>(14.81)  |
| Debratio ( $t-1$ )         | −0.001<br>(−0.19)  | −0.002<br>(−0.27)    | 0.001<br>(1.12)      | 0.001<br>(1.05)      |
| MBratio ( $t-1$ )          | −0.064<br>(−0.34)  | 0.019<br>(0.12)      | 0.040**<br>(2.52)    | 0.040**<br>(2.54)    |
| Industry                   | 0.610***<br>(2.62) | 0.500**<br>(2.22)    | 0.230***<br>(4.95)   | 0.228***<br>(4.92)   |
| Year-effect                | Yes                | Yes                  | Yes                  | Yes                  |
| Firm-effect                | Yes                | Yes                  | Yes                  | Yes                  |
| Adj. R <sup>2</sup>        | 0.1651             | 0.2835               | 0.3481               | 0.3500               |
| Wald $\chi^2$ /LR $\chi^2$ | 42.03***           | 59.95***             | 982.73***            | 1004.58***           |
| Obs.                       | 116                |                      | 6133                 |                      |

Note: This table presents results for loss-making and profitable firms, using the sample with DPS > 0. Robust t-statistics are reported in parentheses. Detailed variable definitions are provided in **Table 1**. Statistical significance at the 1%, 5%, and 10% levels is denoted by \*\*\*, \*\*, and \*, respectively.

To further analyze the potential endogeneity between ESG performance, firm performance, and dividend payout, this study employs the two-stage least squares (2SLS) model. The results, as shown in **Table 10**, indicate that only the overall ESG composite score exhibits a significant endogenous effect on firm performance. This finding is consistent with prior literature [1]–[4], which suggests that integrated ESG strategies contribute meaningfully to improved performance outcomes.

However, no significant endogenous effects are observed for the individual ESG pillar scores when examined separately. This implies that while ESG performance as a whole influences firm performance, the individual components do not have the same direct effect when isolated. These results highlight the complexity of ESG's impact on corporate outcomes, suggesting that its influence is more holistic in nature and may not be fully captured by examining the pillars independently.

**Table 10.** The results of 2SLS.

| Variable                   | First stage           |                       | Second stage          |                      |
|----------------------------|-----------------------|-----------------------|-----------------------|----------------------|
|                            | Model (1)             | Model (2)             | Model (1)             | Model (2)            |
| constant                   | −10.020***<br>(−5.48) | −6.282**<br>(−2.42)   | −5.521***<br>(−15.36) | −4.533***<br>(−8.34) |
| ESG ( $t-1$ )              | 3.937***<br>(8.14)    |                       |                       |                      |
| Env ( $t-1$ )              |                       | 0.440<br>(0.96)       |                       |                      |
| Soc ( $t-1$ )              |                       | 0.259<br>(0.45)       |                       |                      |
| Gov ( $t-1$ )              |                       | 1.489<br>(4.07)       |                       |                      |
| ROA ( $t-1$ )              |                       |                       | 0.497***<br>(7.70)    | 0.682***<br>(4.40)   |
| LnTA ( $t-1$ )             | 0.213***<br>(4.30)    | 0.694***<br>(8.14)    | 0.378***<br>(11.21)   | 0.065<br>(0.51)      |
| Debratio ( $t-1$ )         | −0.084***<br>(−21.74) | −0.101***<br>(−18.19) | 0.024<br>(4.14)       | 0.052***<br>(3.21)   |
| MBratio ( $t-1$ )          | 1.299***<br>(41.89)   | 1.046***<br>(29.62)   | −0.032***<br>(−0.36)  | −0.336**<br>(−2.04)  |
| Industry                   | 0.366***<br>(3.03)    | 0.325<br>(1.54)       | 0.342***<br>(5.03)    | 0.286*<br>(1.86)     |
| Year-effect                | Yes                   | Yes                   | Yes                   | Yes                  |
| Firm-effect                | Yes                   | Yes                   | Yes                   | Yes                  |
| Adj. R <sup>2</sup>        |                       |                       | 0.3579                | 0.2910               |
| Wald $\chi^2$ /LR $\chi^2$ | 2645***               | 1412***               | 2238.14***            | 491.01***            |
| Obs.                       | 6460                  |                       | 6460                  |                      |

Note: This table reports the results of the two-stage least squares (2SLS) analysis, using the sample with DPS > 0. In the first stage, ROA is the dependent variable; in the second stage, DPS is the dependent variable. Robust t-statistics are reported in parentheses. Detailed variable definitions are provided in **Table 1**. Statistical significance at the 1%, 5%, and 10% levels is denoted by \*\*\*, \*\*, and \*, respectively.

## 5. Conclusions

The increasing focus on ESG issues by stakeholders, regulators, and academics has

intensified interest in how ESG factors influence corporate financial decisions, particularly dividend policies. Firms with higher ESG scores are generally more financially stable and are more likely to provide consistent and generous dividend payout. These firms also tend to exhibit higher stock liquidity and more favorable price reactions from investors, which can shape both investor behavior and market valuations.

The findings of this study reveal that the overall ESG composite score, along with the individual scores for the three ESG pillars are significantly and positively correlated with dividend payout. Among these, the social and governance scores demonstrate a stronger influence on dividend policies compared to the environmental score. These results provide empirical evidence of the positive relationship between ESG performance and dividend payout, highlighting the impact of ESG on corporate financial decisions. For investors, this relationship is especially valuable, suggesting that firms with strong ESG performance are more likely to adopt robust and consistent dividend policies, which may serve as a signal of corporate stability and long-term value creation.

Moreover, this study contributes to the existing literature by extending the application of agency theory to the context of ESG and dividend policies. While prior research has primarily examined dividend decisions through lenses such as financial performance, governance structures, or market efficiency, this study introduces a new dimension by analyzing the relationship between ESG performance and dividend payouts under both performance-driven and governance-driven agency cost scenarios. The results suggest that higher ESG scores are associated with increased dividend payout in specific scenarios—particularly among young firms, firms with low asset efficiency, and those with limited free cash flow. In such contexts, ESG performance may serve as a substitute for traditional internal governance mechanisms and act as a signaling tool to mitigate agency problems. Additionally, the social score exerts a stronger effect in firms with non-dual leadership structures (*i.e.*, where the CEO and board chair roles are separated) and in firms with low institutional ownership. This reflects the increased credibility of social initiatives in settings with enhanced board independence and oversight. Conversely, the environmental score shows greater influence in firms with high institutional ownership, suggesting that environmentally conscious strategies are particularly valued by institutional investors. These insights reinforce the idea that the relationship between ESG performance and dividend payout is more pronounced in firms that face higher levels of information asymmetry and agency costs.

This research offers important implications for policymakers and regulators. By promoting ESG disclosure, authorities can enhance market transparency and strengthen investor confidence. Overall, the study provides a comprehensive analysis of the relationship between ESG performance, agency costs, and dividend policy. It highlights the growing influence of ESG on corporate financial behavior and its significance for sustainable finance and effective market regulation. Fur-

thermore, these findings may provide valuable insights for other markets that share similar institutional characteristics, such as limited trading depth, a predominance of individual investors, information opacity, and dividends as a primary source of investment returns.

Future research could explore the dynamic impact of individual ESG pillars over different time horizons to assess whether the influence of environmental, social, or governance factors on dividend policies changes as firms mature or adapt to evolving stakeholder expectations. Such investigations would offer deeper insights into investor perceptions and corporate financial behavior.

## Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

## References

- [1] Lee, C., Chen, R.C.Y., Hung, S. and Yang, C. (2018) Corporate Social Responsibility and Firm Value: The Mediating Role of Investor Recognition. *Emerging Markets Finance and Trade*, **56**, 1043-1054. <https://doi.org/10.1080/1540496x.2018.1501676>
- [2] Engelhardt, N., Ekkenga, J. and Posch, P. (2021) ESG Ratings and Stock Performance during the COVID-19 Crisis. *Sustainability*, **13**, Article 7133. <https://doi.org/10.3390/su13137133>
- [3] Kim, S. and Li, Z. (2021) Understanding the Impact of ESG Practices in Corporate Finance. *Sustainability*, **13**, Article 3746. <https://doi.org/10.3390/su13073746>
- [4] Sandberg, H., Alnoor, A. and Tiberius, V. (2022) Environmental, Social, and Governance Ratings and Financial Performance: Evidence from the European Food Industry. *Business Strategy and the Environment*, **32**, 2471-2489. <https://doi.org/10.1002/bse.3259>
- [5] Boubaker, S., Cellier, A., Manita, R. and Saeed, A. (2020) Does Corporate Social Responsibility Reduce Financial Distress Risk? *Economic Modelling*, **91**, 835-851. <https://doi.org/10.1016/j.econmod.2020.05.012>
- [6] Nguyen, P., Kecskés, A. and Mansi, S. (2020) Does Corporate Social Responsibility Create Shareholder Value? The Importance of Long-Term Investors. *Journal of Banking & Finance*, **112**, Article 105217. <https://doi.org/10.1016/j.jbankfin.2017.09.013>
- [7] Li, H., Zhang, X. and Zhao, Y. (2022) ESG and Firm's Default Risk. *Finance Research Letters*, **47**, Article 102713. <https://doi.org/10.1016/j.frl.2022.102713>
- [8] Oprean-Stan, C., Oncioiu, I., Iuga, I.C. and Stan, S. (2020) Impact of Sustainability Reporting and Inadequate Management of ESG Factors on Corporate Performance and Sustainable Growth. *Sustainability*, **12**, Article 8536. <https://doi.org/10.3390/su12208536>
- [9] Gillan, S.L., Koch, A. and Starks, L.T. (2021) Firms and Social Responsibility: A Review of ESG and CSR Research in Corporate Finance. *Journal of Corporate Finance*, **66**, Article 101889. <https://doi.org/10.1016/j.jcorpfin.2021.101889>
- [10] Yu, E.P. and Luu, B.V. (2021) International Variations in ESG Disclosure—Do Cross-Listed Companies Care More? *International Review of Financial Analysis*, **75**, Article 101731. <https://doi.org/10.1016/j.irfa.2021.101731>
- [11] Dhaliwal, D.S., Li, O.Z., Tsang, A. and Yang, Y.G. (2011) Voluntary Nonfinancial

- Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. *The Accounting Review*, **86**, 59-100.  
<https://doi.org/10.2308/accr.00000005>
- [12] Krueger, P., Sautner, Z. and Starks, L.T. (2020) The Importance of Climate Risks for Institutional Investors. *The Review of Financial Studies*, **33**, 1067-1111.  
<https://doi.org/10.1093/rfs/hhz137>
- [13] Cornell, B. and Shapiro, A.C. (2020) Corporate Stakeholders, Corporate Valuation and ESG. *European Financial Management*, **27**, 196-207.  
<https://doi.org/10.1111/eufm.12299>
- [14] Economidou, C., Gounopoulos, D., Konstantios, D. and Tsiritakis, E. (2022) Is Sustainability Rating Material to the Market? *Financial Management*, **52**, 127-179.  
<https://doi.org/10.1111/fima.12406>
- [15] Jyoti, G. and Khanna, A. (2024) How Does Sustainability Performance Affect Firms' Market Performance? An Empirical Investigation in the Indian Context. *Environment, Development and Sustainability*, **26**, 20457-20483.  
<https://doi.org/10.1007/s10668-023-03482-9>
- [16] Benlemlih, M., Shaukat, A., Qiu, Y. and Trojanowski, G. (2018) Environmental and Social Disclosures and Firm Risk. *Journal of Business Ethics*, **152**, 613-626.  
<https://doi.org/10.1007/s10551-016-3285-5>
- [17] Feng, J., Goodell, J.W. and Shen, D. (2022) ESG Rating and Stock Price Crash Risk: Evidence from China. *Finance Research Letters*, **46**, Article 102476.  
<https://doi.org/10.1016/j.frl.2021.102476>
- [18] Gao, J., Chu, D., Zheng, J. and Ye, T. (2022) Environmental, Social and Governance Performance: Can It Be a Stock Price Stabilizer? *Journal of Cleaner Production*, **379**, Article 134705. <https://doi.org/10.1016/j.jclepro.2022.134705>
- [19] Tsai, H. and Wu, Y. (2022) Changes in Corporate Social Responsibility and Stock Performance. *Journal of Business Ethics*, **178**, 735-755.  
<https://doi.org/10.1007/s10551-021-04772-w>
- [20] Wang, K., Li, T., San, Z. and Gao, H. (2023) How Does Corporate ESG Performance Affect Stock Liquidity? Evidence from China. *Pacific-Basin Finance Journal*, **80**, Article 102087. <https://doi.org/10.1016/j.pacfin.2023.102087>
- [21] Cui, J., Jo, H. and Na, H. (2016) Does Corporate Social Responsibility Affect Information Asymmetry? *Journal of Business Ethics*, **148**, 549-572.  
<https://doi.org/10.1007/s10551-015-3003-8>
- [22] Hartzmark, S.M. and Sussman, A.B. (2019) Do Investors Value Sustainability? A Natural Experiment Examining Ranking and Fund Flows. *The Journal of Finance*, **74**, 2789-2837. <https://doi.org/10.1111/jofi.12841>
- [23] Leite, B.J. and Uysal, V.B. (2023) Does ESG Matter to Investors? ESG Scores and the Stock Price Response to New Information. *Global Finance Journal*, **57**, Article 100851. <https://doi.org/10.1016/j.gfi.2023.100851>
- [24] Doh, J.P., Howton, S.D., Howton, S.W. and Siegel, D.S. (2009) Does the Market Respond to an Endorsement of Social Responsibility? The Role of Institutions, Information, and Legitimacy. *Journal of Management*, **36**, 1461-1485.  
<https://doi.org/10.1177/0149206309337896>
- [25] Riedl, A. and Smeets, P. (2017) Why Do Investors Hold Socially Responsible Mutual Funds? *The Journal of Finance*, **72**, 2505-2550. <https://doi.org/10.1111/jofi.12547>
- [26] Aureli, S., Gigli, S., Medei, R. and Supino, E. (2019) The Value Relevance of Environmental, Social, and Governance Disclosure: Evidence from Dow Jones Sustainability

- World Index Listed Companies. *Corporate Social Responsibility and Environmental Management*, **27**, 43-52. <https://doi.org/10.1002/csr.1772>
- [27] Sangiorgi, I. and Schopohl, L. (2021) Why Do Institutional Investors Buy Green Bonds: Evidence from a Survey of European Asset Managers. *International Review of Financial Analysis*, **75**, Article 101738. <https://doi.org/10.1016/j.irfa.2021.101738>
- [28] Beloskar, V.D. and Rao, S.V.D.N. (2023) Did ESG Save the Day? Evidence from India during the COVID-19 Crisis. *Asia-Pacific Financial Markets*, **30**, 73-107. <https://doi.org/10.1007/s10690-022-09369-5>
- [29] Pástor, L., Stambaugh, R.F. and Taylor, L.A. (2022) Dissecting Green Returns. *Journal of Financial Economics*, **146**, 403-424. <https://doi.org/10.1016/j.jfineco.2022.07.007>
- [30] Benlemlih, M. (2019) Corporate Social Responsibility and Dividend Policy. *Research in International Business and Finance*, **47**, 114-138. <https://doi.org/10.1016/j.ribaf.2018.07.005>
- [31] Ellili, N.O.D. (2022) Impact of Environmental, Social and Governance Disclosure on Dividend Policy: What Is the Role of Corporate Governance? Evidence from an Emerging Market. *Corporate Social Responsibility and Environmental Management*, **29**, 1396-1413. <https://doi.org/10.1002/csr.2277>
- [32] Lakhal, F., Kuzey, C., Uyar, A. and Karaman, A.S. (2023) The Relationship between Dividend Payout and Corporate Social Responsibility: The Moderating Effect of Shareholder Friendliness and Board Monitoring. *Journal of Cleaner Production*, **394**, Article 136297. <https://doi.org/10.1016/j.jclepro.2023.136297>
- [33] Fonseka, M. and Richardson, G. (2023) The Effect of Mandatory Corporate Social Responsibility Disclosure and Performance on Firms' Dividend Decisions: Evidence from China. *Economic Modelling*, **120**, Article 106152. <https://doi.org/10.1016/j.econmod.2022.106152>
- [34] Verga Matos, P., Barros, V. and Miranda Sarmento, J. (2020) Does ESG Affect the Stability of Dividend Policies in Europe? *Sustainability*, **12**, Article 8804. <https://doi.org/10.3390/su12218804>
- [35] Oh, H. and Park, S. (2021) Corporate Sustainable Management, Dividend Policy and Chaebol. *Sustainability*, **13**, Article 7495. <https://doi.org/10.3390/su13137495>
- [36] Ben Salah, O. and Ben Amar, A. (2022) Does Corporate Social Responsibility Affect Dividend Policy? Empirical Evidence in the French Context. *Journal of Global Responsibility*, **13**, 268-289. <https://doi.org/10.1108/jgr-10-2021-0082>
- [37] Bilyay-Erdogan, S., Danisman, G.O. and Demir, E. (2024) ESG Performance and Investment Efficiency: The Impact of Information Asymmetry. *Journal of International Financial Markets, Institutions and Money*, **91**, Article 101919. <https://doi.org/10.1016/j.intfin.2023.101919>
- [38] Salvi, A., Nirino, N., Battisti, E. and Gianfrancesco, I. (2024) Payout Policy and ESG: A European Investigation. *Research in International Business and Finance*, **68**, Article 102189. <https://doi.org/10.1016/j.ribaf.2023.102189>
- [39] Saeed, A. and Zamir, F. (2021) How Does CSR Disclosure Affect Dividend Payments in Emerging Markets? *Emerging Markets Review*, **46**, Article 100747. <https://doi.org/10.1016/j.ememar.2020.100747>
- [40] Chen, X., Li, W., Torsin, W. and Tsang, A. (2024) Dividend Policy under Mandatory ESG Reporting. *Journal of International Financial Markets, Institutions and Money*, **93**, Article 101986. <https://doi.org/10.1016/j.intfin.2024.101986>
- [41] Cheung, A., Hu, M. and Schwiebert, J. (2016) Corporate Social Responsibility and Dividend Policy. *Accounting & Finance*, **58**, 787-816. <https://doi.org/10.1111/acfi.12238>

- [42] Sheikh, M.F., Bhutta, A.I., Rehman, B., Bazil, M. and Hassan, A. (2021) Corporate Social Responsibility and Dividend Policy: A Strategic Choice in Family Firms. *Journal of Family Business Management*, **12**, 296-315. <https://doi.org/10.1108/jfbm-10-2020-0096>
- [43] Agoraki, M.K., Giaka, M., Konstantios, D. and Patsika, V. (2023) Firms' Sustainability, Financial Performance, and Regulatory Dynamics: Evidence from European Firms. *Journal of International Money and Finance*, **131**, Article 102785. <https://doi.org/10.1016/j.jimonfin.2022.102785>
- [44] Arena, M.P. and Julio, B. (2022) Litigation Risk Management through Corporate Payout Policy. *Journal of Financial and Quantitative Analysis*, **58**, 148-174. <https://doi.org/10.1017/s002210902200076x>
- [45] Wang, Y., Li, M. and Kamar, A. (2022) Environmental Concerns and Impression Offsetting: New Evidence on Dividend Payout. *Financial Markets, Institutions & Instruments*, **31**, 87-118. <https://doi.org/10.1111/fmii.12165>
- [46] Hendijani Zadeh, M. (2020) The Effect of Corporate Social Responsibility Transparency on Corporate Payout Policies. *International Journal of Managerial Finance*, **17**, 708-732. <https://doi.org/10.1108/ijmf-07-2020-0386>
- [47] Harper, J., Johnson, G. and Sun, L. (2020) Stock Price Crash Risk and CEO Power: Firm-Level Analysis. *Research in International Business and Finance*, **51**, Article 101094. <https://doi.org/10.1016/j.ribaf.2019.101094>
- [48] Singh, S.K., Del Giudice, M., Chiappetta Jabbour, C.J., Latan, H. and Sohal, A.S. (2021) Stakeholder Pressure, Green Innovation, and Performance in Small and Medium-sized Enterprises: The Role of Green Dynamic Capabilities. *Business Strategy and the Environment*, **31**, 500-514. <https://doi.org/10.1002/bse.2906>
- [49] Ni, X. and Zhang, H. (2019) Mandatory Corporate Social Responsibility Disclosure and Dividend Payouts: Evidence from a Quasi-Natural Experiment. *Accounting & Finance*, **58**, 1581-1612. <https://doi.org/10.1111/acfi.12438>
- [50] Berg, F., Kölbel, J.F. and Rigobon, R. (2022) Aggregate Confusion: The Divergence of ESG Ratings. *Review of Finance*, **26**, 1315-1344. <https://doi.org/10.1093/rof/rfac033>
- [51] Narula, R., Rao, P., Kumar, S. and Matta, R. (2024) ESG Scores and Firm Performance-Evidence from Emerging Market. *International Review of Economics & Finance*, **89**, 1170-1184. <https://doi.org/10.1016/j.iref.2023.08.024>
- [52] Cheng, B., Ioannou, I. and Serafeim, G. (2013) Corporate Social Responsibility and Access to Finance. *Strategic Management Journal*, **35**, 1-23. <https://doi.org/10.1002/smj.2131>
- [53] Chen, B., Chen, H., Chen, H. and Lin, F. (2022) Corporate Growth and Strategic Payout Policy. *Review of Quantitative Finance and Accounting*, **59**, 641-669. <https://doi.org/10.1007/s11156-022-01053-z>
- [54] Lin, D. and Lin, L. (2020) Does Corporate Governance Affect the Critical Corporate Policies such as Dividend Policy? *International Journal of Economics and Financial Issues*, **10**, 18-24. <https://doi.org/10.32479/ijefi.10546>
- [55] Ang, J.S., Cole, R.A. and Lin, J.W. (2000) Agency Costs and Ownership Structure. *The Journal of Finance*, **55**, 81-106. <https://doi.org/10.1111/0022-1082-1082.00201>
- [56] Pahi, D. and Yadav, I.S. (2022) Product Market Competition, Agency Cost and Dividend Payouts: New Evidence from Emerging Market. *Journal of Management and Governance*, **26**, 925-956. <https://doi.org/10.1007/s10997-021-09570-0>
- [57] Latif, B., Voordeckers, W., Lambrechts, F. and Hendriks, W. (2020) Multiple Directorships in Emerging Countries: Fiduciary Duties at Stake? *Business Ethics: A Euro-*

- pean Review*, **29**, 629-645. <https://doi.org/10.1111/beer.12275>
- [58] Kwon, Y. and Han, S.H. (2019) Controlling Shareholders' Preference in Business Groups: Evidence from Korea. *Emerging Markets Finance and Trade*, **56**, 940-959. <https://doi.org/10.1080/1540496x.2018.1553157>
  - [59] Zellweger, T.M., Nason, R.S., Nordqvist, M. and Brush, C.G. (2013) Why Do Family Firms Strive for Nonfinancial Goals? An Organizational Identity Perspective. *Entrepreneurship Theory and Practice*, **37**, 229-248. <https://doi.org/10.1111/j.1540-6520.2011.00466.x>
  - [60] Pan, L. (2020) Demystifying ESG Investing Considerations for Institutional Cash Investors. *The Journal of Portfolio Management*, **46**, 153-156. <https://doi.org/10.3905/jpm.2020.46.3.153>
  - [61] El-Bassiouny, D. and El-Bassiouny, N. (2019) Diversity, Corporate Governance and CSR Reporting: A Comparative Analysis between Top-Listed Firms in Egypt, Germany and the USA. *Management of Environmental Quality: An International Journal*, **30**, 116-136. <https://doi.org/10.1108/meq-12-2017-0150>
  - [62] Aluchna, M., Roszkowska-Menkes, M., Kamiński, B. and Bosek-Rak, D. (2022) Do Institutional Investors Encourage Firm to Social Disclosure? The Stakeholder Salience Perspective. *Journal of Business Research*, **142**, 674-682. <https://doi.org/10.1016/j.jbusres.2021.12.064>
  - [63] Seth, R. and Mahenthiran, S. (2022) Impact of Dividend Payouts and Corporate Social Responsibility on Firm Value—Evidence from India. *Journal of Business Research*, **146**, 571-581. <https://doi.org/10.1016/j.jbusres.2022.03.053>
  - [64] Liu, J., Xiong, X., Gao, Y. and Zhang, J. (2022) The Impact of Institutional Investors on ESG: Evidence from China. *Accounting & Finance*, **63**, 2801-2826. <https://doi.org/10.1111/acfi.13011>
  - [65] Velte, P. (2022) Which Institutional Investors Drive Corporate Sustainability? A Systematic Literature Review. *Business Strategy and the Environment*, **32**, 42-71. <https://doi.org/10.1002/bse.3117>
  - [66] Chasiotis, I., Gounopoulos, D., Konstantios, D. and Patsika, V. (2023) ESG Reputational Risk, Corporate Payouts and Firm Value. *British Journal of Management*, **35**, 871-892. <https://doi.org/10.1111/1467-8551.12745>
  - [67] White, H. (1980) A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity. *Econometrica*, **48**, 817-838. <https://doi.org/10.2307/1912934>
  - [68] Petersen, M.A. (2009) Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches. *Review of Financial Studies*, **22**, 435-480. <https://doi.org/10.1093/rfs/hhn053>
  - [69] Rafailov, D. (2017) Financial Slack and Performance of Bulgarian Firms. *Journal of Finance and Bank Management*, **5**, 1-13.