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The Effects of Legal Origin and Corporate Governance on Financial Firms' Sustainability Performance

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Abstract: This paper examines the determinants of sustainability performance in the financial industry at the firm, country and legal origin levels. Through the analysis of the ESG score in a sample of 64 countries with 982 financial firms during the period between 2002 and 2018, we find that legal origin is a significant explanatory variable. In particular, our findings indicate that companies based in civil-law countries show higher values of ESG performance than their counterparts in common-law countries, suggesting the prevalence of the stakeholder theory in explaining the willingness of financial firms to engage in sustainability practices. Moreover, and following the assumptions of the "good governance" view, we also assess the joint the effect of corporate governance and legal origin ESG scores, finding that corporate governance structures emerge as a substitution mechanism of sustainability enhancement for financial firms based in common-law countries.

Keywords: sustainability; ESG scores; legal origin; corporate governance

Citation: Castillo-Merino, D.; Rodríguez-Pérez, G. The Effects of Legal Origin and Corporate Governance on Financial Firms' Sustainability Performance. *Sustainability* **2021**, *13*, 8233. https://doi.org/10.3390/su13158233

Academic Editor: Corrado Gatti

Received: 31 May 2021
Accepted: 12 July 2021
Published: 23 July 2021

1. Introduction

Under the classical approach to business economics analysis, managers should focus their effort toward maximizing shareholder wealth through profits. Thus, according to this view, the decision to invest in environmental, social and governance (ESG) activities is seen as a manifestation of managerial agency problems inside the firm [1,2]. However, there is an increasing number of financial firms worldwide that adopt socially and environmentally responsible policies, for instance, through the disclosure of sustainability reports, by the adoption of environmental criteria when defining their investment products or their credit policies, or with the assumption of United Nations' Sustainable Development Goals [3].

In fact, recent studies have highlighted the increasing importance of ESG issues in banks' policies following the financial crisis, and some of them have even defined the concept of a sustainable bank as a bank that aims to serve the interests of all its stakeholders and not just its shareholders, investing money responsibly considering both financial and non-financial outcomes, behaving ethically in its intermediation role, and contributing to the stability of the whole system through the adoption of governance structures that limit excessive risk-taking [4,5].

In this vein, a recent stream of literature has emerged with the aim to explain the old controversy between the classical assumptions of companies' goals and recent empirical evidence concerning the rising trend of investments in social and environmental activities [2]. There are several theories that may account for the determinants of these kinds of business decisions. Some explain the causes of companies enhancing sustainable activities from a firm-level perspective (such as agency, good governance and legitimacy theories), while others adopt a more aggregated country-level view (institutional theory).

According to the agency theory, managers decide to carry out sustainable investments to try to benefit themselves at the expense of shareholders [6], losing focus on their main responsibilities [2], and enhancing information asymmetries between management and investors due to the increased amount of business information disclosed and the difficulties

to compare inter-firm sustainability reports [7]. In contrast, the good governance or stakeholders view, contends that well-run and well-performing companies, with managers properly incentivized, tend to focus also on stakeholders and invest more in ESG activities, a "doing good by doing well" relationship. The opposite explanation is also used under this same approach, i.e., that sustainable investments allow companies to improve their financial performance, a "doing well by doing good" association [8]. A different explanation can be found in the legitimacy theory, which highlights the importance of reputation and social acceptance in corporate performance. This is particularly remarkable in the financial industry since the last financial crisis pointed out the excessive risk taken by banks' managers as one of its main causes [9]. As banking business is characterized by leverage, limited creditor activism and possibility to hide the riskiness of their assets [10], bank's shareholders promote risk-taking management to maximize their profits at the expense of other stakeholders' interests [11]. Thus, managers use sustainability-based activities to regain reputation and social acceptance. At a different level, the institutional theory contends that companies are influenced by institutional and social country-level structures, such as laws, with authorities that monitor firms' behavior shaping their strategies and business models and affecting their decisions.

However, neither of these arguments can explain differences across firms and across countries in sustainability activism [12]. Previous studies that analyze the determinants of ESG activity in the financial industry obtain a large range of results [13], indicating that both sustainability reporting and sustainable practices widely differ across financial firms.

This paper aims to contribute to the analysis of the determinants of sustainability enhancement in the financial industry by investigating whether the differences in a bank's sustainable practices can be explained by the legal origin of the country where the bank is based in. Therefore, anc following previous studies [8], we examine ESG performance at the firm, country, and legal origin levels. A country's legal origin defines the social mechanisms to controlling the economic activity and, thus, it implicitly shapes the agreements between companies and their stakeholders, including shareholders [14]. The significant differences in the form institutions intervene in the economy, according to the prominence of a shareholder or stakeholder view, between common-law and civil-law, motivates this research. We expect that countries' legal regime explains the diverse levels of sustainability engagement in the financial industry. Therefore, we aim at verifying whether the explanatory power of legal origin that previous studies [8] find in a cross-industry sample holds for financial firms an industry intimately related to countries' economic and political institutions.

In addition, and according to the stakeholder theory, we assess corporate governance variables in depth, since previous studies show that well-governed financial firms are more prone to engage in ESG investments [13,15–17]. In fact, we examine the joint effect of corporate governance and legal origin on sustainability performance, since governance structures are intimately related to the way societies shape the mechanisms to implement and control their economic life.

Our findings show that legal origin is an important determinant of ESG performance in financial firms. This result is consistent with previous findings [8,13], and highlights the relevant role that a country's legal origin plays in promoting sustainability policies and investments in the financial industry. In particular, we find that financial firms based in civil-law countries present higher ESG scores than those based in common-law countries, and that the difference is particularly significant for French-civil-law and German-civil-law countries. We also obtain evidence that indicates that well-governed financial firms seem to be more likely to engage in ESG activities. Furthermore, when we examine the joint effect of corporate governance and legal origin, we reach to several interesting findings that indicate a moderating role of governance structures on ESG scores considering the different legal origin. First, we see that corporate governance emerges as a substitutive mechanism of regulation to enhance sustainable behavior in common-law countries, which gives support to the stakeholders' view. Second, the high level of ex-ante government regulations

in French civil-law countries may explain the lack of significance of several corporate governance variables in financial firms based in these countries. Third, financial firms based in German-civil-law countries tend to be those that show the highest compliance with rules (along with Scandinavian companies). This may explain the relatively strong shareholders' legal protection in these countries. However, corporate governance structures do not seem to moderate the effect of legal origin on financial firms' sustainability performance in these last countries.

The remainder of the paper is organized as follows. Section 2 presents the previous research in the field and states the hypotheses. Section 3 describes the data and outlines the research design. Section 4 reports the results. In Section 5, we discuss the implications of our findings. Finally, Section 6 concludes.

2. Literature Review and Hypotheses Development

The literature focused on the analysis of the determinants of ESG performance in the financial industry is extremely scarce. However, a recent stream of studies has analyzed differences in sustainable activities across financial firms by focusing on firm-level characteristics. Some studies examine the association between banks characteristics and voluntary disclosure for a sample of Indian banks for fiscal years 2002 and 2003 by constructing a disclosure index that includes corporate and social information [18]. Their main result is a positive and significant relationship between banks' size and assets-in-place and the level of disclosure, supporting the "doing good by doing well" approach. Other authors also elaborate an ad hoc reporting index to measure the level of voluntary corporate social disclosure by a sample of private commercial banks of Bangladesh for the years 2007–2008 [15]. Through the analysis of corporate governance determinants of social disclosure, the findings show that the presence of non-executive and foreign directors in the Board is associated with higher reporting levels. They also show that banks' size and return on equity are positively related to voluntary social disclosure, supporting the idea that profitable banks are more prone to conduct sustainability-focused investments.

Recent research has moved to ESG ratings obtained from specialized databases in order to measure corporate disclosure instead of using ratings and indexes calculated by individual researchers after hand-collecting data from annual reports [13]. Previous studies use commercial ESG ratings to examine the effect of firm-level and corporate governance variables on US banks' corporate social reporting around the financial crisis [19]. They find that larger banks with gender and ethnic diversity on their Board of directors and shorter-tenured directors present higher reporting scores. Other studies also rely upon an ESG database to measure corporate social reporting level and assess banks' corporate governance, particularly the characteristics of the Board of directors, as determinants of corporate social performance [20]. Using a sample of European and US listed banks, they find some evidence that the association between gender diversity on the Board of directors and ESG performance follows an inverted U-shape, while board size and the existence of a CSR committee present a positive linear relation that turns to negative for the percentage of independent directors. Focusing also on corporate governance determinants, another paper examines the association between banks' governance characteristics and voluntary disclosure in a sample of banking firms listed on the Kazakhstan Stock Exchange [16]. The authors create a voluntary disclosure index by gathering the information from corporate reports and find that the number of outside directors presents a positive and significant relation with the level of disclosure. They also find a positive association for banks' size, adding more empirical evidence in support of the "doing good by doing well" view. In the same vein, and also using a checklist-based ad hoc disclosure index, other authors analyze the largest 100 Brazilian banks and find a positive link between banks' reputation and voluntary disclosure [21]. The analysis of Islamic banks has brought additional firm-level evidence of sustainability determinants. Through the examination of international samples of Islamic banks, recent woks [22,23] have found that Islamic banks characteristics, and

particularly their promotion of ethical behavior and their social orientation, are associated with higher levels of ESG performance, mostly revolving around the social pillar.

Other studies have tried to explain differences in banks' sustainability by adding a country-level approach. Some studies analyze the relationship between country's ESG performance and macroeconomic factors and banks' ESG reporting, through a sample of 251 banks from 45 emerging countries [17]. To measure country ESG performance, the authors use the ESG country strategic risk score, provided by Bloomberg and based on indicators related to emissions, energy, electricity, water, biodiversity, discrimination, employment, health, human rights, human welfare, defense, economic freedom, political risk, government effectiveness, corruption and innovation. The findings show that country ESG scores are significantly related to banks' environmental and social disclosure, and that banks in countries with higher economic freedom (Economic freedom is proxied based on ten quantitative and qualitative factors, categorized into four broad pillars: rule of law (property rights, freedom from corruption); limited government (fiscal freedom, government spending); regulatory efficiency (business freedom, labor freedom, monetary freedom); and open markets (trade freedom, investment freedom, financial freedom) [17]) are more willing to focus on ESG reporting. The results also suggest that size and a healthy financial position (proxied by liquidity, years of establishment and market power) are the cross-country firm-level factors associated with higher levels of ESG disclosure. These results give support to the theory that contends that larger and better banks are more prone to invest in ESG activities.

In short, previous studies are quite fragmented, with different approaches, levels of analysis and explanatory variables, and without conclusive results. Maybe the most relevant finding is that large and well-governed banks, with a good financial position, are more sustainable, i.e., associated with higher levels of ESG performance. With the aim of contributing to build a more general framework, recent works develop a comprehensive study that considers firm and country-level, and time-trend variables as determinants of financial firms' corporate social responsibility performance [13]. They analyze an international sample of 727 financial institutions and find that firms' size and profitability, along with the economic and social development of the country in which they are based in, show a positive relationship with sustainability performance. They also document a growing linear trend over time.

We elaborate on this research and examine sustainability performance at the firm, country, and legal origin level. Legal origin is the social culture shared by different countries, commonly referred as the style of social control over economic life [14], and might affect the sustainability behavior of financial firms. Common-law countries use the market as a private mechanism to optimize the interests of shareholders, with the idea that it is the best way for firms to act in the best interest of all stakeholders, and litigation as a mechanism to discourage misbehaviors and conflicts between economic agents. In contrast, civil-law countries, where states play an important role in controlling economic behavior, set rules and regulations as mechanisms to influence managerial behavior *ex ante*. Therefore, sustainability performance is a tradeoff between the shareholders' approach, more related to common-law countries, and the predominant stakeholders' view of civil-law countries [8]. In fact, a legal regime affects the contracts that explicitly or implicitly sign firms and their shareholders as well as other stakeholders, through the effects on corporate governance structure and management decision-making processes.

The above tradeoff leads us to expect differences in ESG reporting, since sustainability investments are based on managers' discretion in common-law countries, and are perceived as decisions that are not aligned with shareholders' interests, whereas in civil-law countries, ESG adoption is determined by explicit rules and implicit customs, as well as being incentivized by a low litigation risk environment. Accordingly, and considering that the financial industry is a highly regulated economic sector, we expect that financial firms based in civil-law countries are more willing to engage in sustainability. This leads to our first hypothesis:

Hypothesis 1 (H1). *Civil-Law Legal Origin Presents a Positive Effect on Financial Firms' ESG Scores in Financial Firms.*

A country's legal origin is intimately related to corporate governance structures. Companies are more willing to invest in ESG when they operate in more regulated and compelling institutional environments. Thus, companies in civil-law countries, with a highly developed legal system to protect stakeholders' interests, are more prone to engage in sustainability initiatives than companies based in common-law countries [24]. Acknowledging that corporate governance is an instrument for companies to safeguard minority shareholders' and other stakeholders' interests, and that investing in ESG is seen as a potential mechanism in the banking industry to balance the interests of shareholders and other stakeholders [10], we can expect a moderating effect of companies' corporate governance structure in the link from legal origin to sustainability performance. Thus, well-governed financial firms in common-law countries are expected to show higher levels of ESG scores. This leads to our second hypothesis:

Hypothesis 2 (H2). *There Is a Positive and Significant Effect of Corporate Governance on ESG Scores in Financial Firms Based in Common-Law Countries.*

Literature usually identifies three families of laws within the civil-law tradition: French, German and Scandinavian, because the influence of Roman law is weaker in German and Scandinavian legal traditions [25], and because they show significant differences in some of the mechanisms they use to organize and control the economic activity. Particularly, French civil-law countries have the highest degree of regulations oriented to protect the interests of customers, workers and other stakeholders different from shareholders. Therefore, since different legal jurisdictions entitle stakeholders to different bundles of rights, corporate governance mechanisms are expected to not be necessary in French-civil-law countries, since they have a strong legal protection of stakeholders' interests:

Hypothesis 3 (H3). *There Is an Insignificant Effect of Corporate Governance on Esg Scores in Financial Firms Based in French Civil-Law Countries.*

This might not be the situation in Scandinavian and German-civil-law countries. In these jurisdictions, shareholders' legal protection is lower than in common-law countries (and higher than in French civil-law countries), but the former countries present the highest quality of law enforcement [25]. This means that laws' effectivity is higher than in other jurisdictions, and, therefore in practice, shareholders' protection levels can be similar to common-law countries. Under this assumption, one might expect that corporate governance plays a moderating role in financial firms also based in Scandinavian civil-law and German civil-law countries to explain the effect of legal origin on ESG performance. This leads to our fourth and last hypothesis:

Hypothesis 4 (H4). *There Is a Positive and Significant Effect of Corporate Governance on ESG Scores in Financial Firms Based in Scandinavian and German-Civil-Law Countries.*

3. Materials and Methods

3.1. Data and Sample

The sample of the study considers all the financial companies in the world during the years 2008 to 2018, and arises from the combination of three databases. Financial and economic data are obtained from the Capital IQ (Standard & Poors) database. All financial companies contained in this database have been included, and have been classified into three groups: banks (credit and deposit institutions), insurance companies and the rest of financial companies (operators in the capital market, credit institutions as leasing or similar, etc.). Sustainability (ESG score) and corporate governance data (average Board tenure,

non-excecutive Board members and board size) have been obtained from the Thomson Reuters Eikon database. Once both databases have been combined, and having eliminated both extreme cases and observations without values in any of the study variables, the final sample consists of 6187 company-year observations (982 companies).

Data on the legal origin of each country have been obtained from the World Bank. First of all, countries have been classified as civil-law or common-law countries by using World Bank data, as well as previous studies contributions [25,26] in that cases for which the country has not been classified as common-law or civil-law (i.e., customary, Muslim law or mixed). A total of 20 countries (3850 observations, or 62%, for 626 companies) are classified as common-law, with the United States as the country with most observations (59%) and Cyprus as the least (0.13%). A total of 44 countries (2337 observations, 38%, for 356 companies) are classified as civil-law, with Japan as the country with more observations (17%) and Panama with the fewest (0.09%). Additionally, civil-law countries have been classified into three legal origins: French, German and Scandinavian, according to the previous classifications [25]. In terms of observations, 766 (114 companies, 33%) correspond to a French legal origin, 1376 observations (208 companies, 59%) to a German legal origin and 196 observations (34 companies, 8%) to a Scandinavian legal origin.

Globally, the sample is overrepresented in two areas with respect to the characteristics of the countries. On the one hand, countries with more financial economic power have more representation, since they have a greater number of financial companies. The US stands out with 37% of the observations, followed by Japan with 7% and the UK with 6%. Australia (4%), Canada and Switzerland (3% each) also have a high number of observations. Conversely, and not adhering quite so much to the weight of financial importance over the global population, China (4% of the observations) and India (3%) present a relatively high proportion of the total number of observations.

3.2. Methodology and Variables

In order to contrast to what extent the legal origin of respective countries influence firms' sustainability performance, we conduct several regressions (see Appendix A for the description of the variables). In all of them, the dependent variable is the sustainability index (ESG Score—Environmental, Social and Governance) published by Thomson Reuters Eikon. Independent variables can be classified into four categories.

The first is focused on the legal origin of the country in which the company's headquarters are located. Different legal origins have been considered in various regressions, all of them based on the classical legal origin classification [25]. The CIVIL variable has a value of 1 for civil-law countries and 0 for common-law. The variables FREN, GERM and SCAND have a value of 1 if the country has French, German and Scandinavian legal origin, respectively, and 0 otherwise.

The second category of explanatory variables corresponds to some of the most common indicators on the quality of companies' corporate governance. BOTEN captures the average Board tenure, BOSIZ the number of Board members and BONOEX the percentage of non-executive Board members. These variables have been chosen because they are poorly correlated with each other (Table 4). Thus, they present different characteristics of the company's corporate governance. Other analyzed variables (not reported in this study) show a high correlation with the former ones, and therefore they have been excluded from the analysis (such as the percentage of independent directors on the Board, or the fact that the CEO is also a member of the Board).

Another category of independent variables has been considered, with two variables that define the type of country considering its economic level: GDP (Gross Domestic Product) and GDP/capita. The last category of explanatory variables reflects company-level characteristics: size (ASSET, total assets), profitability (ROA: return on assets as net income over assets), leverage (LEVER: debt over assets), risk of the company (BETA: market beta), age (AGE) and two variables about the sector to which the company belongs: BANK: value of 1 if the company is a bank, zero otherwise and INSUR: value of 1 if the company

belongs to the insurance sector, zero otherwise. Financial companies that are not banks or insurance companies are grouped into a third category, which is the default category in this study.

Thus, the baseline model on which different regressions are conducted is the following:

$$\begin{aligned} ESG = {} & \alpha_0 + \alpha_1\, CIVIL + \alpha_2\, BOSIZ + \alpha_3\, BONOEX + \alpha_4\, BOTEN + \alpha_5\, GDP + \alpha_6\, GDPCAP + \alpha_7\, ASSET + \alpha_8\, ROA \\ & + \alpha_9\, LEVER + \alpha_{10}\, BETA + \alpha_{11}\, AGE + \alpha_{12}\, BANK + \alpha_{13}\, INSUR \end{aligned} \quad (1)$$

Numerous studies point out the endogeneity problems of the regressions that seek to explain the sustainability of companies through an index similar to the one used in the study. There is a reciprocal causal relationship between the dependent variable (sustainability–ESG Score) and one or more of the independent variables, which gives rise to inconsistent estimators. This happens especially, but not only with corporate governance variables. On the one hand, a better level of corporate governance implies greater sustainability. However, we can also establish the reciprocal causality: greater sustainability is related to better corporate governance characteristics. We cannot forget that the ESG index has three components: environmental, sustainability and governance, so we have, at least, this last component on both sides of the equation.

Additionally, we can also consider another issue related to endogeneity concerns. In a panel data analysis, random and fixed-effect models are commonly used. It seems that fixed-effect model is better, because it controls the unobserved individual heterogeneity. However, any time-invariant variables within individuals cannot be included in the estimation. On the other side, random-effects model assumes orthogonality among the error term and individual effects, which is often not true.

To avoid all the above problems (endogeneity and time-invariant variables), we use the Hausman–Taylor estimator for error-components model, which provides consistent estimators [27]. This methodology combines a transformed random effect model with instrument variables and, furthermore, can estimate the coefficients of time-invariant variables (that cannot be estimated in a panel data model using a fixed-effects regression). Using the Hausman–Taylor estimator, we have introduced as instruments the endogenous variables, correcting then the endogeneity problem.

In previous sections, we have explained the hypothetical relationship between legal origin variables and ESG, in line with the existing literature. This same explanation is exhibited below for the control variables.

Board Size (BOSIZ). The evidence around the size of the Board of directors is mixed. Some studies find a negative association between Board's size and ESG disclosure [16], while others find the opposite sign [20]. Since the size of the Board is directly related to the quality of corporate governance, one might consider that larger Boards have less incentives to promote ESG activities. Accordingly, we expect a negative relationship between this variable and sustainability scores.

Non-executive members on the Board (BONOEX). The good governance view contends that managers of well-run and well-governed firms have incentives to invest in sustainability. Accordingly, and considering the percentage of non-executive directors on the Board of directors as a direct indicator of good governance, we expect a positive coefficient on this variable.

Average Board Tenure (BOTEN). A long tenure can be associated with a better knowledge of the industry and more expertise, consistent with higher incentives to promote higher management engagement with ESG activities in benefit of minority shareholders. However, it also might be that long-tenured directors are less independent to the majority of shareholders' and, thus, prioritize short-term profits to sustainability investments. Therefore, whether the association is positive [16], negative [19] or insignificant seems to be an empirical issue.

Gross Domestic Product (GDP) and Gross Domestic Product per capita (GDPCAP). According to the "doing good by doing well" approach, one might expect that wealthier countries are more likely to promote policies that seek to increase firms' ESG activities. In

this vein, the majority of previous studies that include country-level variables, finds that GDP shows a positive effect on ESG performance [20,22,28].

Size (ASSET). Previous research has documented a positive and significant association between the size of financial firms, usually proxied by total assets, and the degree of ESG disclosure [13,15–21,28]. It seems that larger companies, characterized by having more available financial resources, and higher public scrutiny and media visibility, are more willing to invest in sustainability activities than small and medium-sized ones. Thus, we expect a positive effect of size on ESG performance.

ROA (ROA). A number of studies have used profitability to explain sustainability performance in the financial industry. Their results are mixed. Some of these studies measure it through the return on equity (ROE) and find a positive association with ESG disclosure [13,15,20]. Some others opt for the return on assets as a proxy for financial firms' profitability and find a negative effect on ESG scores [28], suggesting that more profitable firms focus more on profits and, thus, are less willing to engage in sustainability practices, a lack of significance [22] or mixed results [17]. Therefore, the results obtained by previous studies are not conclusive concerning the sign of this variable's coefficient.

Leverage (LEVER). The financial business relies upon an intensive use of external resources. A high leverage in the financial industry is a usual firm-level cross-country trait. Hence, one might expect a low variance across firms and an insignificant effect on ESG performance. In fact, many studies find a lack of a significant association between financial firms' leverage and ESG disclosure [13,15,20,22]. Previous findings lead us to expect an insignificant relation between leverage and ESG scores.

Risk (BETA). Financial firms' shareholders promote risk-taking management to maximize their profits at the expense of other stakeholders' interests [11]. Thus, from the stakeholders' theory, investing in ESG is seen as a potential mechanism in the financial industry to balance the interests of shareholders and other stakeholders [10]. Therefore, we expect that riskier firms are more prone to engage in sustainability.

Age (AGE). [17] finds that longer years of establishment positively affects banks' disclosure of ESG practices. It might be that old financial firms are typically big and financially stable, suggesting that consolidated companies that are doing well are more prone to invest in sustainability. Therefore, we expect a positive association between financial firms' age and ESG scores.

Bank industry (BANK). Banks typically present a higher scrutiny by regulators and stakeholders than other types of financial firms. Hence, we expect that banks are associated with higher disclosure levels than their industry counterparts, and, therefore, with higher ESG scores.

4. Results

4.1. Univariate and Bivariate Analysis

Table 1 shows the mean, standard deviation and percentiles 25, 50 and 75 of our variables, respectively. ESG ranges between 0 and 100, and presents a mean of 51%, very similar to the median. It is a variable with a skewed distribution to the right, which presents a greater proportion of data to the left of the distribution. The same happens with BOSIZ. On average, the Board has 11.5 members, with 25% of companies falling below 9 and 25% above 14. Furthermore, 78% of the Board members are non-executive (BONOEX). This value is high, which indicates that majority of Boards have a good separation between ownership and management, and that they present good corporate governance scores in this area. Reinforcing this idea, for the top 25% companies, more than 90% of the Board members are non-executive. The average number of years of permanence on the Board of directors (BOARTEN) is 7.6 years. The value is high, although most of the data is displayed to the left of the distribution. For the first 25% of the observations, the average permanence is less than 4.6 years, although for the top 25% it is more than 9.7 years, indicating a poor corporate governance performance, since a very high permanence can impair proper decision-making processes.

Table 1. Descriptive statistics (n = 6.187).

1. Variable	2. Mean	3. Sd	4. P25	5. P50	6. P75
ESG	51.16	18.6	35.66	48.69	66.37
BOSIZ	11.51	3.72	9.00	11.00	14.00
BONOEX	78.82	17.62	72.22	83.33	90.91
BOTEN	7.56	3.94	4.6	6.76	9.7
GDP (M€)	8040	7460	1120	4460	16,900
GDPCAP (€)	40,317	15,612	34,364	44,591	52,591
ASSET	160,511	390,099	6267	27,033	103,812
ROA	2.38	4.68	0.59	1.10	2.40
LEVER	78.53	21.65	74.91	87.77	91.85
BETA	0.95	0.58	0.56	0.89	1.28
AGE	78.61	63.06	26	61	125

GDP variable presents a less balanced distribution, with a large number of observations at the beginning and at the end of the series and with few observations in the center, as we can see according to the great difference between the mean and the median. The standard deviation is very high, indicating a very high variability between countries. Regarding GDP per capita, the distribution is relatively normal.

The distribution of assets (ASSET) is strongly skewed to the left, with very few values to the right and a very high variability: the standard deviation is 2.4 times the mean. The variability of the ROA is also high, showing a high accumulation of values around 2%. As corresponds to the sector, the leverage (LEVER) percentage is very high with many values to the right of the distribution. The average is 78%, with the top 25% observations above 92%. The BETA variable, indicator of risk, has a normal distribution, with a mean of 0.95. It is a value very close to 1, which indicates a risk similar to the reference sample with which this magnitude has been calculated. Finally, note that these are mostly quite old companies: on average 78 years. It is a sector in which trust and security are very important, with high entry barriers. These are two reasons why companies tend to be old. Only 25% of companies are under 26 years old.

Table 2 shows the mean value of continuous variables for each legal origin. The last column also indicates the values for which the mean differences are not significant between these different legal origins. The ESG score is significantly higher for civil-law countries than for common-law (54% vs. 29%). However, the mean of this variable does not present significant differences for the three legal origins within the civil-law jurisdiction. Corporate governance variables show significant mean differences between common-law and civil-law countries: the latter have more Board members, fewer non-executives on the Board, and less Board tenure, which could indicate worse corporate governance performance. Within civil-law countries, the differences are also significant: Scandinavian legal origin countries have significantly fewer Board members than French and German legal origin countries, and these observations have a significantly lower average number of non-executive directors on the Board and Board tenure. The means of the variables based on GDP are also for the most part significantly different: common-law countries have a significantly higher mean of GDP and GDP per capita. Within civil-law countries, German-civil-law countries have a significantly higher GDP average than the rest and, in terms of per capita income, Scandinavian-civil-law countries present a value that is not significantly different from that of the common-law countries.

For the firm-specific variables, assets (ASSET), profitability (ROA) and leverage (LEVER) the same reasoning can be carried out. Companies in civil-law countries have significantly higher average mean value of assets and leverage, and significantly less ROA. The mean differences between the common-law and Scandinavian countries are not significant (for the rest there are significant differences), neither between them nor French-civil-law countries. The risk's mean, measured by BETA, is significantly higher for companies based in common-law countries, although there are no significant differences between them and companies from Scandinavian countries, neither between the latter

companies nor for those with French legal origin. Finally, the mean age of companies is significantly higher in the common-law subsample and within the three legal origin civil-law countries. As a summary of Table 2, we observe how the different dimensions of the study differ among legal origins.

Table 2. Mean statistics (and non-significant differences) by legal origin.

	1. Common (N = 3850)	2. Civil (N = 2337)	3. French (N = 766)	4. German (N= 1375)	5. Scandin (N = 196)	No-Mean Differences ($p > 0.05$)
ESG	49.24	54.33	54.4	53.87	57.24	(3,4) (3,5) (4,5)
BOSIZ	11.20	12.03	12.32	12.16	9.97	(3,4)
BONOEX	81.10	75.06	84.74	67.94	87.18	(3,5)
BOTEN	8.43	6.13	7.23	5.44	6.71	(3,5)
GDP (M€)	10,731	3620	1317	5365	348	(3,5)
GDPCAP (€)	44,779	32,967	30,5	32,314	47,194	(1,5)
ASSET (m€)	111,449	241,336	180,714	288,177	149,658	(1,5) (3,5)
ROA	2.72	1.80	2.14	1.47	2.8	(1,5) (3,5)
LEVER	76.33	82.15	79.14	84.89	74.66	(1,5) (3,5)
BETA	1.00	0.86	0.80	0.89	0.94	(1,5) (4,5)
AGE	81.82	73.32	76.44	64.81	120.89	(1,3)

In Table 3, we observe the mean values of the continuous variables according to the sector of the financial industry considered (banks, insurance and the rest). Non-significant differences are indicated in the last column. The ESG variable only presents a significantly different mean between banks and insurance companies. The means of the variables BOSIZ (Board size), ROA, leverage (LEVER) and AGE are significantly different between the three sectors analyzed, with banks always presenting significantly higher mean values. Companies that are not banks or insurance firms have a significantly lower value of BONOEX and BOTEN than the rest. Moreover, banks have significantly higher mean value of assets than the rest.

Table 3. Mean statistics (and significant differences) by industry.

	1. Banks (N = 3.160)	2. Capital Markets (N = 1159)	3. Insurance (N = 1868)	No-Mean Differences ($p > 0.05$)
ESG	51.81	51.19	50.06	(1,2) (2,3)
BOSIZ	12.28	10.46	10.86	
BONOEX	79.37	76.88	79.1	(1,3)
BOTEN	7.62	6.93	7.85	(1,3)
GDP (M€)	6770	9020	9600	(2,3)
GDPCAP (€)	36,93	43,142	44,295	(2,3)
ASSET (m€)	224,715	93,189	93.67	(2,3)
ROA	1.40	5.73	1.95	
LEVER	84,3	61.45	79.35	
BETA	0.93	1.01	0.95	(2,3)
AGE	84.38	64.93	77.34	

Table 4 shows the Pearson correlations among the variables. The dependent variable ESG shows significant correlations with all the study variables, reaching 30% in the case of GDP and 29% in the case of AGE. The correlation with discrete variables is also significant and, as we have observed previously, the differences in means are significant. Obviously, there are significant correlations between the different measures of legal origin. Regarding corporate governance variables, there is no significant correlation between the Board average tenure (BOTEN) and Board size (BOSIZ), and there are significant coefficients among the rest. However, these correlations do not exceed 10% of significance.

Table 4. Correlations among study variables.

	ESG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. CIVIL	0.13 ***															
2. FREN	0.07 ***	0.48 ***														
3. GERM	0.08 ***	0.69 ***	−0.20 ***													
4. SCAND	0.06 ***	0.23 ***	−0.07 ***	−0.10 ***												
5. BOSIZ	0.19 ***	0.11 ***	0.08 ***	0.09 ***	−0.07 ***											
6. BONOEX	0.18 ***	−0.17 ***	0.13 ***	−0.33 ***	0.09 ***	0.08 ***										
7. BOTEN	−0.20 ***	−0.28 ***	−0.03 ***	−0.29 ***	−0.04 ***	0.01	0.10 ***									
8. GDP (M€)	−0.30 ***	−0.46 ***	−0.34 ***	−0.19 ***	−0.19 ***	−0.00	0.07 ***	0.29 ***								
9. GDPCAP (€)	−0.12 ***	−0.37 ***	−0.24 ***	−0.27 ***	0.08 ***	−0.16 ***	0.13 ***	0.26 ***	0.38 ***							
10. ASSET (m€)	0.40 ***	0.16 ***	0.02	0.17 ***	−0.01	0.27 ***	0.01	−0.18 ***	−0.05 ***	−0.09 ***						
11. ROA	−0.08 ***	−0.10 ***	−0.02	−0.10 ***	0.02	−0.19 ***	−0.04 ***	0.06 ***	0.01	0.05 ***	−0.15 ***					
12. LEVER	0.19 ***	0.13 ***	0.01	0.16 ***	−0.03 ***	0.22 ***	0.01	−0.08 ***	−0.04 ***	−0.12 ***	0.26 ***	−0.58 ***				
13. BETA	0.04 ***	−0.11 ***	−0.10 ***	−0.05 ***	−0.00	0.10 ***	0.02	0.09 ***	0.33 ***	0.26 ***	0.12 ***	−0.04 ***	0.06 ***			
14. AGE	0.29 ***	−0.07 ***	−0.01	−0.12 ***	0.12 ***	0.17 ***	0.13 ***	0.05 ***	−0.07 ***	0.11 ***	0.27 ***	−0.15 ***	0.25 ***	0.11 ***		
15. INSUR	−0.04 ***	−0.11 ***	−0.12 ***	−0.03 ***	−0.00	−0.12 ***	0.01	0.05 ***	0.14 ***	0.17 ***	−0.11 ***	−0.06 ***	0.03 ***	−0.00	−0.01	
16. BANK	0.04 ***	0.18 ***	0.20 ***	0.03 ***	0.05 ***	0.21 ***	0.03 ***	0.02	−0.17 ***	−0.22 ***	0.17 ***	−0.21 ***	0.27 ***	−0.04 ***	0.09 ***	−0.67 ***

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

In some cases, there are correlations between corporate governance variables and the legal system, which is logical, since the same system often determines the type of corporate governance. There are also significant correlations between the legal system and per capita GDP and total CGP variables. In fact, the highest correlation in the table is 46%: between GDP and civil-law countries. However, we have decided to keep all the previous variables, since they are proxies of characteristics that can be interpreted differently. In any case, the VIF calculated for the different regressions does not indicate the presence of multicollinearity.

For the rest of the variables, despite being significantly correlated, their coefficients are not very high. We see the expected high correlation coefficients between the dichotomous variables BANK and INSUR, indicative of the sector (67%), and between leverage (LEVER) and ROA (58%). Leverage shows a correlation of 26% with assets. Very few additional correlations exceed 20%: BETA has a correlation of 33% with GDP and 26% with GDPCAP. Also, the dichotomous variable BANK shows a correlation of −22% with GDPCAP and −21% with ROA.

4.2. Multivariate Analysis

In Table 5, we can observe the results of four regressions between the dependent variable ESG and the independent variables in our model, considering a single variable on legal origin: CIVIL, with a value of 1 if the company is in a civil-law country and zero otherwise. The first regression contemplates the total sample (n = 6187), the second the subsample of companies in common-law countries (n = 3850), the third regression the subsample of civil-law countries (n = 2337) and the last regression again the total sample but adding the interaction terms between the three corporate governance variables and the CIVIL variable.

Considering the total sample (Regression 1), except for the coefficients of ROA and BETA variables, the rest are significantly different from zero. CIVIL variable has a positive sign, indicating that belonging to a civil-law country is related to a higher ESG Score. Concerning corporate governance variables, BOSIZ presents a negative sign, indicating that the larger the Board the lower the value of ESG scores. But BONOEX and BOTEN variables present a significant and positive sign: greater presence of non-executives on the Board and more average Board tenure are associated with higher ESG values. The coefficients of the variables related to GDP also present values significantly different from zero and positive. Regarding firm-level variables, both ROA and BETA present coefficients that are not significantly different from zero. Size (ASSET), leverage (LEVER) and age (AGE) are positively associated with the ESG Score.

Regressions (2) and (3) are conducted with the same previous variables but for the subsamples of common-law (2) and civil-law (3) countries, to check if there are differences in the explanatory variables for these subsamples. The regression for companies in common-law countries shows the same significant variables and with the same signs as the regression (1). However, in the civil-law countries subsample there are differences: neither the assets nor the leverage nor the fact of being a bank or insurance company are no longer significant variables. On the other hand, for companies in these countries, unlike previous results, a higher risk (BETA) is associated with higher ESG.

The last regression in Table 5 uses the previous regressors and adds an interaction term between corporate governance continuous variables and civil-common-law binary variable. These interactions make it possible to check the effect on the total sample of our corporate governance variables, separating their impact in the case of companies based in common-law or civil-law countries. The results of the rest of the variables replicate those of regression (1). However, in the case of BONOEX (% of non-executives on the Board), the overall positive effect on the ESG Score is significantly moderate in companies based in civil-law countries.

Table 5. Determinants of ESG performance. Dependent variable: legal origin.

	(1) Total	(2) Common	(3) Civil	(4) Total
CIVIL	143.6960 ***			27.4980 ***
	(5.25)			(3.58)
CIVIL × BOSIZ				−0.1635
				(−1.30)
CIVIL × BONOEX				−0.0817 ***
				(−2.90)
CIVIL × BOTEN				0.1051
				(0.71)
BOSIZ	−0.3425 ***	−0.2470 ***	−0.3457 ***	−0.2426 ***
	(−5.35)	(−3.02)	(−3.46)	(−2.69)
BONOEX	0.0975 ***	0.1473 ***	0.0632 ***	0.1462 ***
	(6.82)	(7.55)	(3.01)	(6.80)
BOTEN	0.4560 ***	0.4512 ***	0.4991 ***	0.4283 ***
	(6.44)	(5.95)	(3.58)	(5.12)
GDP	0.0000 ***	0.0000 **	0.0000 ***	0.0000 ***
	(3.98)	(2.13)	(5.03)	(4.14)
GDPCAP	0.0003 ***	0.0003 ***	0.0007 ***	0.0003 ***
	(3.63)	(2.91)	(3.92)	(3.76)
ASSET	0.0000 ***	0.0000 ***	0.0000	0.0000 ***
	(5.23)	(4.21)	(0.82)	(5.40)
ROA	0.0042	0.0336	−0.0707	0.0076
	(0.10)	(0.85)	(−0.77)	(0.20)
LEVER	0.0430 **	0.0703 ***	−0.0164	0.0437 **
	(2.33)	(3.71)	(−0.40)	(2.42)
BETA	0.2448	−0.0059	0.8369 *	0.2620
	(1.09)	(−0.02)	(1.90)	(1.19)
AGE	1.1994 ***	1.1646 ***	1.1528 ***	1.1914 ***
	(21.02)	(15.01)	(13.47)	(21.39)
INSUR	−38.3843 ***	−40.8750 ***	−25.9330	−37.9393 ***
	(−3.37)	(−3.31)	(−1.39)	(−3.61)
BANK	−66.0579 ***	−56.8569 ***	−22.8851	−47.1109 ***
	(−5.27)	(−4.58)	(−1.40)	(−4.75)
CONSTANT	−76.2682 ***	−37.3083 ***	−39.8398 ***	−45.8218 ***
	(−7.01)	(−3.61)	(−2.75)	(−4.91)
Observations	6187	3850	2337	6187
Number of id	982	626	356	982
Wald chi2	1122 ***	647.6 ***	542.7 ***	1229 ***
Sargan-Hansen (*p*-Value)	0.23	0.58	0.46	0.34

z-statistics in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 6 considers a single independent variable different from those of Table 5. The binary variable for civil-common-law country has been replaced with another binary variable, with a value of 1 for French legal origin and 0 for the rest. The results for the regression with the total sample (5) in Table 6 replicate those displayed for regression (1) in Table 5. French legal origin is significantly and positively related with ESG Score. Both ROA and BETA do not present coefficients significantly different from zero in any regression, as does belonging to the insurance sector versus not belonging. Analyzing the subsamples, observations in no French (regression 6) and French civil-law legal origin countries (regression 7), there are differences in the variables GDPCAP and BANK (significant for non-French but not for French). Regarding corporate governance, we find two variables in which there are differences in the significance of the variables between the two subsamples: BOSIZ is negative and significant in no French countries, but the coefficient is not different from zero in French countries. BOTEN is positive and significant in no French countries but the coefficient is not different from zero in French countries.

Table 6. Determinants of ESG performance. Dependent variable: French/no French origin.

	(5) Total	(6) No French	(7) French	(8) Total
FREN	144.6192 ***			24.3724 **
	(3.08)			(2.17)
FREN × BOSIZ				0.1740
				(0.92)
FREN × BONOEX				−0.0295
				(−0.71)
FREN × BOTEN				−0.1916
				(−0.96)
BOSIZ	−0.3530 ***	−0.3766 ***	−0.2147	−0.3755 ***
	(−5.63)	(−5.82)	(−1.05)	(−5.66)
BONOEX	0.0942 ***	0.0989 ***	0.1103 **	0.0996 ***
	(6.72)	(6.84)	(2.49)	(6.72)
BOTEN	0.4464 ***	0.4827 ***	0.0579	0.4672 ***
	(6.44)	(6.73)	(0.28)	(6.35)
GDP	0.0000 ***	0.0000 ***	0.0000 ***	0.0000 ***
	(4.69)	(5.51)	(6.93)	(4.40)
GDPCAP	0.0004 ***	0.0005 ***	0.0001	0.0004 ***
	(4.68)	(5.27)	(0.21)	(4.47)
ASSET	0.0000 ***	0.0000 ***	0.0000 ***	0.0000 ***
	(5.18)	(4.78)	(2.88)	(5.30)
ROA	0.0060	0.0096	0.0633	0.0065
	(0.16)	(0.25)	(0.44)	(0.17)
LEVER	0.0414 **	0.0305 *	0.1948 ***	0.0409 **
	(2.28)	(1.68)	(2.66)	(2.28)
BETA	0.2459	0.3222	0.0624	0.2275
	(1.11)	(1.44)	(0.08)	(1.04)
AGE	1.1080 ***	0.9615 ***	1.3347 ***	1.1298 ***
	(21.02)	(16.87)	(10.41)	(21.56)
INSUR	−14.9921	−12.6145	−35.0282	−15.1181
	(−1.52)	(−1.46)	(−0.70)	(−1.56)
BANK	−37.8284 ***	−19.4589 **	−33.5419	−24.1719 ***
	(−3.57)	(−2.35)	(−0.81)	(−2.66)
CONSTANT	−59.8815 ***	−49.2645 ***	−64.8694	−52.8480 ***
	(−6.92)	(−6.74)	(−1.61)	(−6.55)
Observations	6187	5421	766	6187
Number of id	982	868	114	982
Wald chi2	1166 ***	930.3 ***	153.1 ***	1197 ***
Sargan-Hansen (*p*-Value)	0.36	0.28	0.25	0.77

z-statistics in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

In the last regression (8) of Table 6, in addition to previous independent variables, the interaction terms between corporate governance variables and the dichotomous variable FREN are added. The results replicate those of regression 5, since none of these interactions is significant, and the rest of the variables maintain both significance and signs.

Table 7 uses the same variables as in Table 5, but the civil-non-civil-law binary variable has been replaced by German civil-law non-German legal origin country. As before, the fact of belonging to a German legal origin country is significantly associated with a higher ESG score (regression 9). The rest of the results replicate those of the first regression in Table 5. When we analyze the subsamples of non-German (regression 10) and German civil-law legal origin countries (regression 11), we verify that there are differences in some explanatory variables. This is the table with most differences between the different subsamples. Belonging to the insurance or banking sector (INSUR, BANK) is significantly and negatively associated with the ESG score in companies from non-German legal origin countries, but not for the rest. The same happens in the case of assets (ASSET). GDP also presents a coefficient that is not significantly different from zero for non-German countries but positive and significant for the rest. Two variables change the sign of the relationship in

the two subsamples. Size (ASSET) and leverage (LEVER) present significant and positive coefficients for non-German legal origin countries and negative for the rest.

Table 7. Determinants of ESG performance. Dependent variable: German/no German origin.

	(9) Total	(10) No German	(11) German	(12) Total
GERM	146.8955 ***			40.3143 ***
	(4.67)			(4.60)
GERM × BOSIZ				−0.3294 **
				(−2.53)
GERM × BONOEX				−0.0941 ***
				(−3.29)
GERM × BOTEN				0.1427
				(0.76)
BOSIZ	−0.3446 ***	−0.1959 ***	−0.4433 ***	−0.2098 ***
	(−5.42)	(−2.58)	(−3.81)	(−2.65)
BONOEX	0.0972 ***	0.1401 ***	0.0393	0.1353 ***
	(6.84)	(8.24)	(1.54)	(7.63)
BOTEN	0.4520 ***	0.4183 ***	0.6002 ***	0.4103 ***
	(6.42)	(5.83)	(2.99)	(5.49)
GDP	0.0000 ***	0.0000	0.0000 ***	0.0000 ***
	(3.92)	(0.63)	(5.99)	(3.54)
GDPCAP	0.0003 ***	0.0003 ***	0.0011 ***	0.0004 ***
	(3.73)	(3.29)	(4.40)	(4.10)
ASSET	0.0000 ***	0.0000 ***	−0.0000	0.0000 ***
	(5.31)	(5.33)	(−0.46)	(5.41)
ROA	0.0059	0.0310	−0.3119 **	0.0076
	(0.15)	(0.81)	(−1.96)	(0.20)
LEVER	0.0420 **	0.0731 ***	−0.1215 **	0.0401 **
	(2.29)	(3.87)	(−2.28)	(2.23)
BETA	0.2462	−0.0441	1.7015 ***	0.2770
	(1.10)	(−0.19)	(3.11)	(1.26)
AGE	1.1938 ***	1.3034 ***	0.6785 ***	1.1938 ***
	(21.04)	(21.52)	(4.86)	(21.59)
INSUR	−33.1007 ***	−36.5914 ***	0.0102	−25.7890 **
	(−3.03)	(−2.69)	(0.00)	(−2.45)
BANK	−43.2348***	−51.2578 ***	5.4513	−34.1142 ***
	(−4.05)	(−3.89)	(0.49)	(−3.39)
CONSTANT	−68.2044 ***	−45.7258 ***	−30.2175 ***	−54.7265 ***
	(−6.70)	(−4.02)	(−2.88)	(−6.02)
Observations	6187	4812	1375	6187
Number of id	982	774	208	982
Wald chi2	1128 ***	953.1 ***	312 ***	1196 ***
Sargan-Hansen (*p*-value)	0.65	0.53	0.25	0.32

z-statistics in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

There is also a difference in the two subsamples for the BONOEX variable, which is significant and positive for the non-German legal origin countries subsample and not significantly different from zero for the rest. In order to have more detail on the joint effect of the corporate governance variables and the German and non-German legal origin, in Regression 12 we interact with these variables. The results indicate that in the German civil-law countries, BOSIZ reinforces its negative effect over ESG, also significantly. The interaction has a positive coefficient and significantly different from zero like the original variable, but in this case with an even higher value. Regarding BONOEX, we find that the effect for non-German countries is positive, but it decreases significantly (while remaining positive) for companies in German civil-law countries.

Table 8 is also based on Table 5, but the binary variable civil-non-civil-law is substituted by Scandinavian non-Scandinavian legal origin country. The low number of observations of

companies in Scandinavian-civil-law countries (n = 196, 34 companies) must be considered in the analysis because it can make it difficult to interpret the results. For the total sample (Regression 12), the significant variables and the signs are similar to those found on the first regression in Table 5, although now INSUR and BANK variables have lost their significance. This lack of significance is repeated in the subsample of Scandinavian countries, but not for the rest, with a negative and significant effect when belonging to these sectors.

Table 8. Determinants of ESG performance. Dependent variable: Scandinavian/non-Scandinavian.

	(13) Total	(14) No Scandinav.	(15) Scandinav.	(16) Total	(17) Total
FREN					187.0742 ***
					(3.84)
GERM					59.2648 ***
					(4.64)
SCAND	124.4563 *			49.5887 **	14.8572 ***
	(1.71)			(2.51)	(2.54)
SCAND × BOSIZ				0.7271	
				(1.46)	
SCAND × BONOEX				0.0286	
				(0.47)	
SCAND × BOTEN				0.9217 **	
				(2.08)	
BOSIZ	−0.3417 ***	−0.3705 ***	1.0144 *	−0.3711 ***	−0.3450 ***
	(−5.48)	(−5.92)	(1.67)	(−5.91)	(−5.58)
BONOEX	0.0978 ***	0.0901 ***	0.0525	0.0896 ***	0.0966 ***
	(7.03)	(6.27)	(0.62)	(6.22)	(6.99)
BOTEN	0.4560 ***	0.3976 ***	1.2931 ***	0.4001 ***	0.4580 ***
	(6.62)	(5.71)	(2.63)	(5.74)	(6.69)
GDP	0.0000 ***	0.0000 ***	−0.0000 **	0.0000 ***	0.0000 ***
	(4.22)	(4.08)	(−2.32)	(4.05)	(4.64)
GDPCAP	0.0003 ***	0.0004 ***	0.0029 ***	0.0004 ***	0.0004 ***
	(3.70)	(3.82)	(3.18)	(4.28)	(4.11)
ASSET	0.0000 ***	0.0000 ***	0.0001 ***	0.0000 ***	0.0000 ***
	(5.31)	(5.33)	(2.61)	(5.50)	(5.22)
ROA	0.0020	0.0016	−0.0881	0.0020	0.0026
	(0.05)	(0.04)	(−0.53)	(0.05)	(0.07)
LEVER	0.0443 **	0.0447 **	−0.3176 *	0.0412 **	0.0437 **
	(2.46)	(2.47)	(−1.85)	(2.29)	(2.44)
BETA	0.2429	0.2417	−0.7311	0.2456	0.2422
	(1.11)	(1.09)	(−0.41)	(1.12)	(1.11)
AGE	1.1984 ***	1.1811 ***	1.0648 ***	1.1577 ***	1.1618 ***
	(21.57)	(20.89)	(3.11)	(20.98)	(21.57)
INSUR	−36.3218	−23.6953 **	−131.3230	−23.4489 **	−71.2645 ***
	(−1.00)	(−2.25)	(−0.94)	(−2.23)	(−2.76)
BANK	−49.4296	−30.9075 ***	−131.0091	−30.2633 ***	−120.1979 ***
	(−1.42)	(−3.06)	(−0.99)	(−3.00)	(−3.53)
CONSTANT	−75.5575 **	−43.3108 ***	−38.2558	−43.3839 ***	−20.7215
	(−2.28)	(−5.02)	(−0.32)	(−4.99)	(−0.87)
Observations	6187	5991	196	6187	6187
Number of id	982	948	34	982	982
Wald chi2	1164 ***	1126 ***	55.72 ***	1167 ***	1206 ***
Sargan-Hansen (p-value)	0.97	0.43	0.59	0.26	0.28

z-statistics in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Upon further analysis of the two subsamples of regressions 14 (non-Scandinavian countries) and 15 (Scandinavian countries), we see how there are differences between these subsamples. In the Scandinavian countries, the sign of significance changes for the GDP and LEVER variables (from positive to negative). Regarding the corporate governance variables, BONOEX loses its positive significance for the Scandinavian countries and BOSIZ changes the sign of the relationship with ESG from negative to positive. Regression 16 incorporates the interacting variables of corporate governance with the Scandinavian-non-Scandinavia binary variable. The results show that BOTEN doubles its positive effect on ESG in the Scandinavian countries.

Finally, regression 17 has been incorporated. The original independent variable with the civil-law or common-law legal system has been replaced here by three binaries: whether or not the country is French legal origin (FREN), German legal origin (GERM) and Scandinavian Legal origin (SCAND). In this way, the value of the coefficients for these variables can be compared in the same regression. The results for the rest of the variables replicate those of the original regression of each of the tables. Conversely, the effect of

each legal origin considered in regression 17 on the ESG score is positive and significant, being the highest value of the coefficient for countries with French-civil-law legal origin, following German and finally Scandinavian jurisdiction.

5. Discussion

In line with previous research [8,13], we obtain consistent evidence that financial firms based in civil-law countries present higher ESG scores than companies located in common-law countries. This result supports the good governance view, which contends that when managers are properly incentivized (with government regulations, for instance), companies tend to have a more comprehensive focus that includes all stakeholders' interests. Based on institutional differences between common-law and civil-law countries, we hypothesize that a more regulated environment is associated with higher levels of sustainability performance in the financial industry. These findings offer a new and industry-focused evidence of the importance of considering a country's legal origin when analyzing financial firms' ESG disclosure and performance. Furthermore, they allow us to verify our first hypothesis, that claims that there is a positive and significant association between civil-law legal origin and ESG scores.

As in previous studies [15,16,19,20], we find that corporate governance is intimately related with ESG scores of financial firms. However, when we examine the joint effect with firms' legal origin, our results show interesting differences depending on the jurisdiction. As expected, we find that corporate governance variables work as a compensation mechanism to balance the interest of shareholders and other stakeholders in financial firms based in common-law countries. In particular, we see that board size and tenure, as well as the proportion of non-executive directors show the significant expected effect on ESG scores, indicating that corporate governance structures are important to safeguard minority shareholders and other stakeholders' interests in jurisdictions where the shareholders view prevails. This result allows us to verify our second hypothesis, that contends that one might expect a significant relationship between corporate variables and ESG scores in financial firms based in common-law countries.

Another interesting finding when assessing the joint effect of corporate governance structures and countries' legal origin is that in financial firms based in French-civil-law countries, corporate governance variables are no longer significant. This result suggests that in this jurisdiction, regulations aiming to protect stakeholders' interests are more determinant in enhancing companies' sustainability activities than corporate governance mechanisms. This finding is particularly important, since it seems to indicate that government rules are an effective channel to promote ESG practices in the financial industry. Furthermore, it allows us to confirm the fulfillment of our third hypothesis, that sustains the lack of significance of corporate governance variables as determinants of ESG scores in companies based in French-civil-law countries.

Finally, we fail to find a clear evidence concerning the substitution effect of corporate governance to improve sustainability behavior in civil-law jurisdictions with relatively low stakeholders' legal protection and high law enforcement. Thus, for financial firms based in German-civil-law countries, we find a higher effect of board size on ESG scores, but a lower one from the percentage of non-executive directors, while the effect of Board tenure remains the same than in non-German countries. When we assess this association in financial firms based in Scandinavian countries, we only find an augmented effect in the case of Board tenure, and no statistical differences for board size or for the proportion of non-executive directors in the Board. The lack of significance might be due to the fact that we have also included common-law countries in non-German and non-Scandinavian subsamples, along with a relatively low number of financial firms based in Scandinavian countries. Therefore, we do not obtain enough evidence to verify our fourth and last hypothesis, that expects a significant relationship between corporate governance structures and ESG performance in Scandinavian and German-civil-law countries.

6. Conclusions

This paper aims to examine whether the country's legal origin is an important determinant of ESG performance in the financial industry, and if there is a joint effect between corporate governance structures and legal origin in the explanation of financial firms' sustainability scores. To our best knowledge, this is the first paper that specifically addresses this issue.

We use an international sample of 982 financial firms and 6187 firm-year observations for the period 2008 to 2018, with 20 countries classified as common-law countries (3850 observations) and 44 as civil-law (2337 observations) and conduct our regression through the Hausman–Taylor estimator in order to minimize the effect of endogeneity threats.

Our findings show that legal origins present a significant effect on ESG scores in the financial industry. We also find that the effect of legal origins on ESG scores is higher in civil-law than in common-law countries. In contrast with previous research, we analyze the joint effect of corporate governance and legal origin on ESG performance, and find evidence that support our hypotheses for common-law and French civil-law countries, but not for Scandinavian and German jurisdictions.

The results of our study might be of interest to scholars, practitioners, regulators and policy makers. We obtain consistent evidence of the importance of considering firm, country and legal origin levels when assessing the determinants of financial firms' ESG practices. Thus, the effect of countries' legal origin should be considered at least as a control variable in future empirical studies focused on the financial industry, since the related institutional differences seem to influence the sustainability behavior of financial firms. Therefore, the institutional theory emerges as an important approach to consider when assessing sustainability drivers.

Another interesting implication of our findings is that they suggest the need to seek different ways to promote ESG engagement by governments in different countries. Indeed, direct regulations seem to be an effective way to enhance sustainability performance in French civil-law countries, but it is not the case for common-law countries. In these countries, the enforcement of corporate governance structures emerges as an alternative to government rules, and in German civil-law and Scandinavian civil-law countries a mix of both strategies seems to be a better public policy.

Our work is not exempt of limitations that, in turn, may emerge as avenues for further research. The proxy of ESG performance is a quite aggregated measure, with many factors included. Thus, for a broader understanding of the implications of our results, it may be interesting to examine the effects on the different pillars of ESG scores, by separating environmental, social and governance magnitudes. Another limitation stems from our sample's distribution, with a relatively low number of observations of Scandinavian countries, which makes it difficult to empirically capture their theoretical differences from other jurisdictions. Finally, we acknowledge that a more thorough analysis within civil-law countries, by contrasting results between these three different jurisdictions, might be necessary for a better assessment of the diversity in financial firms' ESG practices.

Author Contributions: D.C.-M. and G.R.-P. have contributed equally to the paper. Both authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Ethical review and approval were waived for this study.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data have been collected using public funds but at the time of the publication of this paper, it has not been shared on a repository.

Conflicts of Interest: The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

Appendix A

Table A1. Study Variables.

Variable	Variable Definition
ESG	Dependent variable: ESG Score (Thomson Reuters Eikon)
	LEGAL ORIGIN CHARACTERISTICS
CIVIL	Value one if the company is based in a civil legal origin country, zero otherwise (common-law country)
FREN	Value one if the company is based in a French legal origin country, zero otherwise
GERM	Value one if the company is based in a German legal origin country, zero otherwise
SCAND	Value one if the company is based in a Scandinavian legal origin country, zero otherwise
	CORPORATE GOVERNANCE CHARACTERISTICS
BOSIZ	Board size. Number of Board members
BONOEX	Percentage of non-executive Board members
BOTEN	Average Board tenure in years
	COUNTRY CHARACTERISTICS
GDP (M€)	Total Gross Domestic Product of the country where the company is based
GDPCAP (€)	GDP/capita
	FIRM CHARACTERISTICS
ASSET	Total assets, in thousands
ROA	Return on assets, net income/assets
LEVER	Leverage, debt/assets
BETA	Market beta
AGE	Age of the company
INSUR	Value one if it is an insurance company, zero otherwise
BANK	Value one if it is a bank, zero otherwise

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