

RESEARCH ARTICLE

The CSR committee as moderator for the ESG score and market value

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Abstract

This paper investigates the relationship between the ESG score and market values. Specifically, we test the moderating role of CSR committee defined as organizational subcommittees of boards of directors that make social and environmental recommendations to the boards of directors and support members in their CSR-related tasks. We built a panel data set with all the listed companies in STOXX Europe 600, covering the period 2014–2020. Firms' data come from Refinitiv Eikon database which contains financial and ESG scores data of all EU listed companies. Our sample of firm-level data contains a dataset of 600 European listed companies which are part of the STOXX Europe 600 Index. We included ESG data of STOXX Europe 600 Index components in the period 2014–2020. Our dataset contains a total of 4800 firm-year observations. We found a negative relationship between ESG score and stock prices while the presence of CSR committee as moderating variable generates no significant evidence of ESG score. The presence of CSR committee is not considerably supporting ESG in achieving higher market performance. The CSR committee plays an essential role in monitoring management activities. This may support management practitioners in better understanding and reacting to stakeholder expectations.

KEYWORDS

CSR committee, ESG score, market value, STOXX Europe 600 Index

1 | INTRODUCTION

Sustainability has currently reshaped the concepts of finance and accounting as well as supported sustainable finance goals driven by institutional investors and individuals looking to invest their money in firms with strong environmental, social and governance (ESG) performance.

Nowadays, ESG performance has raised to meet the growing expectations on companies to be more responsible towards the environment and society. These expectations derive from a variety of

stakeholders, such as shareholders, customers, regulators, employees, suppliers, social and activist groups, media and lenders (Arif et al., 2021; Camilleri, 2015; Sajjad et al., 2020). Furthermore, the recent turbulence of market conditions is also requiring companies to make and disclose sustainable initiatives while making relevant organizational decisions (Garcia-Sanchez et al., 2014). ESG indicators have received much attention from managers to convey the focus of their efforts towards a more sustainable environment and society. According to Broadstock et al. (2019), managers may frequently establish ESG activities to enhance their reputation and self-interest.

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This paper investigates the value relevance of ESG score. Specifically, we test the moderating role of CSR committee defined as organizational subcommittees of boards of directors that make social and environmental recommendations to the boards of directors and support members in their CSR-related tasks. In order to perform our investigation, we built a panel data set with all the listed companies in STOXX Europe 600, covering the period 2014–2020. Firms' data come from Thomson Reuters platform, a database containing financial and ESG data of all European listed companies. Our sample of firm-level data contains a dataset of 600 European listed companies which are part of the STOXX Europe 600 Index, containing 4800 firm-year observations.

Our results provide evidence on the negative relationship between ESG score and stock prices while the presence of CSR committee as moderating variable generates no significant evidence of ESG score. We finally demonstrate that the presence of CSR committee is not considerably helping ESG in achieving higher market performance. The CSR committee plays an essential role in monitoring management activities. This may support management practitioners in better understanding and reacting to stakeholder expectations.

The rest of the paper is organized as follows. First, we describe the literature review and hypotheses development. The subsequent section presents the research analysis with data collection and variables' description. The fourth section reports the analytical model. The fifth section shows the results. Finally, we conclude with some concluding remarks.

2 | LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

In this section, prior literature will be discussed. This section seeks to establish the crucial points of the existing knowledge as well as the literature gaps. We will first consider the value relevance approach in its basic sense and then, the literature on the value relevance of ESG issues, emphasizing the relevant differences in findings. Furthermore, the literature on the impact of CSR committee as interaction variable for the ESG and firms' market performance will be analyzed. The above sub-sections will be concluded with our hypothesis's development.

The value relevance is one of the most known sub-topic of accounting and financial reporting research used to study the decision usefulness approach (Baboukardos & Rimmel, 2016; Barth et al., 2001; Frank, 2002; Holthausen & Watts, 2001). Therefore, it is relevant to define this approach that has led standard setting in accounting over the past years and has become essential in the disclosure of financial and non-financial information. Several contributions support empirical evidence indicating the value relevance of CSR activities, finding a positive and significant relationship between CSR measures and firm performance that consequently increases firms' stock prices (Hassel et al., 2005).

Investors widely use ESG scores as a major index to understand a firm's overall corporate social performance (CSP) and in the last two

decades, some scholars investigated the correlation between CSP and corporate financial performance (CFP). In particular, it is possible identify 3 different currents: positive correlation, no-correlation and negative correlation.

Some authors find a positive correlation between the CSP and CFP, considering this last as a proxy of firm value (in terms of stock returns, ROE and share price). Karagiorgos (2010) analyzing the impact of CSR volunteering disclosure of Greek companies in 2010, showed that there is a positive correlation among stock returns and CSR performance. Moreover, Lourenço and Branco (2013); Lourenço et al. (2014) demonstrated a greater return on capital for companies' leaders in sustainability. Yoon et al. (2018) found a positive correlation between CSR performance (measured using ESG score) and firm valuation. And, as showed by Osarto et al. (2015) that there are several reasons that could suggest firms to invest and to be part of a CSI index and those are: to raise funds, to search for competitive advantages and to increase its reputation.

As said before, other scholars sustain that there is not a relationship between CSP and CFP. Margolis et al. (2007), after they analyzed 85 published in international studies covering 190 experiments across 40 years (1972–2012), sustain that there is no significant relation between CSP, in terms of socially responsible investments (SRI) and financial performance. Also, other scholars (Santis et al., 2016) found no evidence of correlation between CSP and CFP analyzing Brazilian listed companies included and not in the CSI Index. Other studies (Sahut & Pasquini-Descomps, 2015) demonstrated that there is not a clear correlation between CSP and CFP, supporting the theory that shareholders do not recognize the effect of a high ESG rating.

At least, in contrast to the stakeholders 'theory (Friedman, 1970), which sustain that the primary purpose of a firm is to increase the stakeholder's wealth, several authors put the accent on how shareholders could disagree with this kind policy. In fact, investing in ESG, the firm redistributes its capital and for some categories of shareholders this should be done in other ways (i.e., charity) (MacCkey et al., 2007). According to this interpretation, some scholars (Graff Zivin & Small, 2005) sustain that for the shareholders the first purpose of a firm is to maximize its wealth not necessarily adopting ESG investments. Other scholars (Demers et al., 2021) suggest that shareholders could not positively accept the investment in ESG considering it just a tool used by manager in order to increase the company's ESG scores just to improve their personal reputation. This aspect led to conclude that, in some situations, ESG performance is not positively correlated to share price just because investors could think that their money is used to finance managers 'investments (ESG activities) destroying the firm value. According to this view, Lys et al. (2015) show that ESG expenditures could be just a marketing channel used to communicate the non-financial initiatives sustained by firms. In fact, authors show that ESG investments do not provide a sufficient CFP reducing the shareholder value.

As said by Cornell and Damodaran (2020) "*the evidence that markets incorporate social responsibility into pricing is weak*" and several scholars demonstrated that there is a negative and significant correlation between the performance achieved in socially activities and the

financial performance of a firm. In particular, Nollet et al. (2016), using both accounting-based and market-based financial performance index, investigated the relation between CSP and CFP performance for the S&P 500 during 2007 to 2011 and found a significant negative effect on return on capital. The same trend was investigated by Pava and Krausz (1996) using also risk and firm-specific index. Authors, in this case, analyzing 53 firms referred “socially-responsible” by Council on Economic Priorities in 1985–1991, found that this category of firms do not has a significant and better performance than other companies. Other studies showed a negative relation between CSP and CFP both in terms of price volatility (Jakobsson & Lundberg, 2018) and in stock returns (Brammer et al., 2006). Just about this last correlation, also Gladyssek and Chipeta (2012), analyzing the share returns for firms listed in the South African JSE SRI Index in the period 2004–2009 found that even if firm were included in CSR indices there were no benefit in terms of share price. A same result is provided by Becchetti et al. (2012) who analyzing the Domini 400 Social Index¹ found a significant negative effect on returns for firms just after their announcement in the previous index in the period 1990–2004.

Starting by the aforementioned literature review, there is no unanimous consensus regarding the nature of the relationship between CSP and CFP but according to the majority of the studies reported before, we address the following hypotheses:

H1. The level of ESG performance is negatively associated with the firm's stock price.

Only in recent years has there been a strong interest to the CSR committees than the previous two decades (Mackenzie, 2007). The CSR Committee is generally composed by three or more directors, out of which at least one shall be an independent director and has several activities as: to recommend the amount of expenditure for CSR projects, to constitute a management committee for the implementation and execution of CSR activities, to monitor mechanism for implementing CSR activities, to submit annual report of CSR activities. Several institutions encouraged the presence of a committee interested in the social activities. For example, the International Institute for Sustainable Development (IISD) recommends to identify “people or committees at the top levels of the firm who will assume key CSR decision making responsibilities” (IISD, 2007).

The CSR committee, in line with the stakeholder theory, is a governance bodies able to satisfy stakeholders needs (Donaldson & Preston, 1995) but at the same time, in line with the agency theory, is a tool used to improve the relation between managers and shareholders (Jo & Harjoto, 2011). As said before, one of the most important activities of a CSR committee is to assist and to manage the formulation of the CSR strategy developing proper implementation in order to achieve a better social performance (Shaukat et al., 2016). The presence of a CSR committee is fundamental in order to provide assistance to CSR and ESG activities, improving the quality and the

quantity of CSR and ESG disclosure (Baraibar-Diez & Odriozola, 2019). In fact, several studies showed that the presence of a CSR committee is positive correlate to a better performance in terms of disclosure (Liao et al., 2015), pollution (Homroy & Slechten, 2019) and human rights (Mallin & Michelon, 2011). In addition, some authors as Flammer (Flammer, 2014), Burke et al. (2019) and Elmaghrabi (2021) suggest that the presence of a CSR committee is positively correlated to the ESG performance. Despite this, some scholars do not perceive CSR as a useful tool for managers to improve the performance of sustainable activities. About this, scholar showed how the profitability of firms with a CSR committee did not significantly differ from those without (Panwar et al., 2018).

Starting by the aforementioned literature review, it is possible asses that most of the literature sustain a positive effect provided by the presence of a CSR committee in order to improve the ESG performance. In line with the previous studies, we address the following hypotheses:

H2. The CSR Committee treated as interaction variable produce significant association between ESG performance and firm's stock price. In other terms, when the BoD nominates a CSR Committee, there is an improvement of relationship between ESG and stock price.

3 | RESEARCH ANALYSIS

3.1 | Empirical setting

The ideal setting to test our hypotheses would allow us to observe how company's share price is affected by firm's ESG score, and if there are moderating effects of specific variables on that correlation. While finding a perfect setting might be difficult, numerous circumstances make the European context suitable for our work. First, in 2014, the European Union (EU) issued the Directive 2014/95/EU that mentioned environmental, social and governance disclosures alongside financial reporting obligations of big companies, and so EU law requires large companies (more than 500 employees) to disclose non-financial information on their social and environmental impact. Therefore, the sample of companies used in this work is not affected by a sample selection bias (a common problem in works that use data provided by firms voluntarily), since are all affected by the Directive 2014/95/EU. Second, Thomson Reuters database has built and validated a measure of the ESG score at the company level in Europe, with information taken by annual reports, CSR reports, stock exchange filings, company websites, and so forth. That database is considered as the world's largest related to ESG rating (Dorfleitner et al., 2020). Third, the focus on one geographical area (even if the are some cultural differences across European countries) reduces the risk of an omitted-variable problem characterizing multi-geographical areas studies where it is difficult to control for all the time-variant geographical area characteristics simultaneously affecting the dependent and the independent variables (De Jong et al., 2008). Fourth, Europe is the area in which companies are more involved in investing

¹Launched in May 1990, the MSCI KLD 400 Social Index is the first Socially Responsible Investing index (<https://www.msci.com/our-solutions/indexes/kld-400-social-index>).

in ESG practices, as we can see in the following graph that indicates the average ESG Score for regional indices (see Figure 1).

3.2 | Data and sample

To perform our investigation, we built a panel data set with all the listed companies in STOXX Europe 600, covering the period 2014–2020. Our sample includes 15 super-sectors and 17 countries. The final sample is composed by 600 companies, which corresponds to 4200 firm-year observations.

For our empirical analysis, we used two types of data at company level. The first is related to financial information, while the second to firm's ESG data. According to prior studies related to firm's market value, we used financial information as book value per share, share price, and earnings per share (Barth & Clinch, 2009; Lee et al., 2014; Ohlson, 1995). Moreover, we considered other data like total assets, return on equity (ROE), earnings before interest and taxes (EBIT), earnings per share (EPS), and market index price.

Firms' data come from Thomson Reuters platform, a database containing financial and ESG data of all European listed companies. Our sample of firm-level data contains a dataset of 600 European listed companies, which are part of the STOXX Europe 600 Index. The STOXX Europe 600 Index is derived from the STOXX Europe Total Market Index (TMI) and is a subset of the STOXX Global 1800 Index. With a fixed number of 600 components, the STOXX Europe 600 Index represents large, mid and small capitalization companies across 17 countries of the European region: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland and the United Kingdom. In our dataset, we included ESG data of

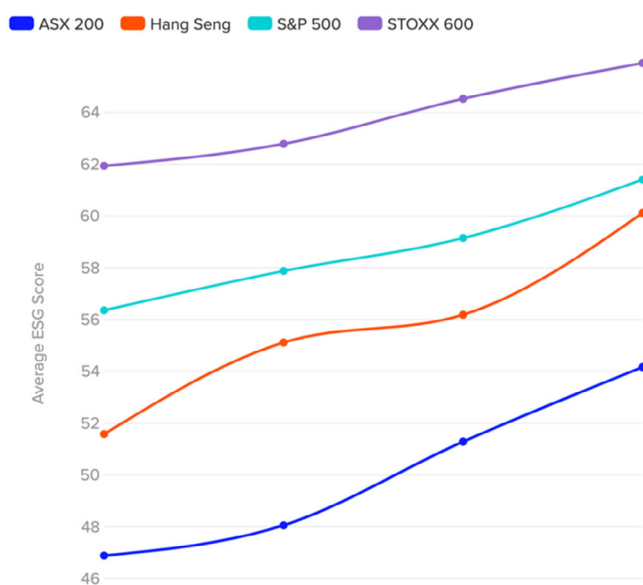


FIGURE 1 Average ESG Score for regional indices. Source: Refinitiv ESG data • Updated: March 4th, 2021. (ASX 200, blue line; Hang Seng, orange line; S&P 500, green line; STOXX 600, purple line).

STOXX Europe 600 Index components in the period 2014–2020. Our dataset contains a total of 4800 firm-year observations.

Descriptive statistics for the variables and their pairwise correlations are following reported. All data are computed at the end of each fiscal year (Tables 1 and 2).

4 | VARIABLE'S DESCRIPTION

4.1 | Independent variables

4.1.1 | ESG score

The ESG score is an overall company score based on the self-reported information in the environmental, social and corporate governance pillars. The ESG scores are recorded on an annual basis and are built through the collection of three different sub-indexes (environmental, social, governance), each capturing different dimensions of firm ESG quality. The ESG score evaluates environmental performance of a company in relation to factors like clean production, practice in response to climate change, green marketing, and so forth. Social factors included in the ESG score are evaluated considering business ethics, working conditions for employees, job security, and so forth. Governance factors included in the ESG score are elements like board structure, audit quality, information disclosure quality, and so forth. Our independent variable identifies the ESG score with an indicator that ranges between 1 (highest ESG quality) and 0 (lowest ESG quality).

The ideal point for the ESG score is 1; therefore, a higher value means that the company invested more in ESG practices obtaining a higher score, while a lower value means lower investments in ESG practices.

In our sample, the average ESG score is 63.8, with a minimum score of 45.4 and a maximum score of 94.6. Across the whole sample, listed companies evolved from an average score of 58.9 in 2014 to 68.1 in 2020.

4.1.2 | CSR Committee

This is a variable that indicates the existence of a Corporate Social Responsibility (CSR) committee and is a dummy variable that equals 1 if the company has a CSR Committee and 0 otherwise. The CSR Committee is a Committee of the Board of Directors, with the purpose of setting guidance and direction and overseeing policies and progress on the Company's social, ethical, and environmental issues. In our sample, 78% of the observations include the CSR Committee, and 22% do not. Across the whole sample, companies evolved from 77% having a CSR Committee in 2014 to 84% having a CSR Committee in 2020.

4.2 | Dependent variables

The key dependent variable is the share price of company i at a specific point in time. In the specific, we perform several analysis

TABLE 1 Descriptive statistics

Variables	Observations	Average	Standard deviation	Min	Max
ESG Score	3.678	63,8	18,1	0,5	94,6
ROE	3.711	0,2	1	-20,8	26
ROA	3.326	0,1	0,1	-0,3	2,5
EPS	3.796	7,8	76,7	-93	2.123,70
Totale attività	4.052	102.855,90	337.174,70	7,5	3.761.050,00
Book Value per Share	4.056	63,4	674,4	-12,8	19.652,00

TABLE 2 Pairwise correlations

	ESG score	ROE	ROA	EPS	Total assets	Book value per share
ESG Score	1					
ROE	-0,0330*	1				
ROA	-0,1359*	0,6429*	1			
EPS	-0,0079	-0,0036	0,0098	1		
Total Assets	0,1886*	-0,0284	-0,1366*	-0,0085	1	
Book Value per Share	-0,0079	-0,007	-0,0053	0,9902*	-0,002	1

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

considering the share price at seven points in time in order to confirm the results. We considered the share price of company i at the last trading day of year t , and at the last trading day of the months of January, February, March, April, May and June, of year $t + 1$, since the companies selected for the analysis reported their annual ESG data of year t within the first months of the following year ($t + 1$). We considered the share price at the end of year t as done in prior studies (Miralles-Quirós et al., 2018; Yoon et al., 2018). Moreover, we considered the share prices in six points in time in $t + 1$ from January to June to capture the effects of ESG data disclosure on share price at $t + 1$, since ESG data of year t are disclosed during the first months of $t + 1$.

4.3 | Control variables

In order to control for individual firm heterogeneity, we estimate our models, including firms' fixed effects, which control for any firm time-invariant characteristic, including where the firm operates. We also include year-fixed effects, which control for yearly aggregate shock. The inclusion of firms' fixed effects and of the robust clustering of errors at the firm level allow us to account for heteroscedasticity and the clustering of errors.

The inclusion of firm and year-fixed effects in the model do not account for time-variant differences at a firm level that could influence the propensity of firms to decide to invest in ESG practices. For this reason, we include several time-variant control variables at the firm level and at a macro level.

At firm level, to account for size, we control for *total assets* (as natural logarithm). We control for firm size since it can "be

considered as a proxy for the amount of slack resources available to a firm" (Fuentelsaz et al., 2002). Moreover, we include this control because smaller firms might have access to a lower quantity of resources and might invest less than bigger firms (Waddock & Graves, 1997). We control for firm *EBIT* (i.e., Earnings Before Interest and Taxes) and *ROE* (i.e., Return on Equity), which capture the quality of firms' operations, *EPS* (Earnings per Share), and *Book Value per Share*.

At the macro level, since market indexes and company share prices are highly correlated (Agmon, 1972), we also include a variable to control for this, which is the STOXX Europe 600 Price Index taken in the same days of the dependent variable (last trading day of year t , and the last trading day of the months of January, February, March, April, May and June in $t + 1$).

5 | ANALYTICAL METHOD

The aim of the paper is to explain how ESG Score impacts company's share price, and if the existence of a CSR committee can play a role in the relationship between ESG Score and share price. To inspect the effect of ESG Score on company share price we implemented a modified Ohlson (1995) model, since it provides a theoretical and empirical framework for examining the impact of ESG elements on company share price.

With his work Ohlson (1995) suggested to implement a model for the valuation of publicly traded companies in which the company market value is determined considering both company financial and non-financial information. In fact, Ohlson model admits that information that differ from earnings and dividends are able to be as value-



TABLE 3 Regression analysis (Hp 1)

Variables	(1) PriceCloseDec t	(2) PriceCloseJan t + 1	(3) PriceCloseFeb t + 1	(4) PriceCloseMar t + 1	(5) PriceCloseApr t + 1	(6) PriceCloseMay t + 1	(7) PriceCloseJun t + 1
ESGScore	-2.142** (1.080)	-2.416** (1.191)	-2.006* (1.119)	-1.726* (1.016)	-2.599** (1.073)	-2.324** (1.125)	-3.304*** (1.262)
InTotAss	95.79 (69.81)	91.26 (76.13)	84.06 (74.20)	61.58 (67.08)	88.60 (73.46)	88.51 (84.97)	30.89 (45.48)
BookValueperShare	2.891*** (0.168)	3.699*** (0.173)	2.779*** (0.152)	3.016*** (0.123)	2.595*** (0.322)	2.389*** (0.222)	3.249*** (0.475)
ROE	1.183 (4.488)	-0.323 (4.097)	-1.726 (4.437)	-1.361 (4.081)	-4.656 (4.965)	-6.889 (5.893)	-7.375 (9.792)
EBIT	-0.00367* (0.00193)	-0.00324 (0.00218)	-0.000947 (0.00244)	-0.000360 (0.00250)	-0.00229 (0.00203)	-0.00135 (0.00200)	-0.00134 (0.00303)
EPS	-0.334 (1.770)	-2.733 (1.694)	-2.298 (1.456)	-2.649** (1.207)	0.0397 (3.116)	-1.099 (2.170)	-0.273 (4.192)
2015 year	-13.15 (27.90)	94.78* (37.34)		-28.49 (18.81)			
2016 year	-21.81 (18.61)	36.31 (23.21)	16.83 (20.71)	21.26 (17.76)	44.98** (18.18)	60.88*** (17.79)	67.02*** (18.62)
2017 year	-3.186 (12.32)	-17.22 (17.20)	55.00** (21.62)	40.85*** (15.67)	93.28*** (20.50)	97.63*** (21.49)	126.8*** (24.20)
2018 year	67.69*** (23.35)	92.04*** (28.48)	65.42*** (23.21)	70.06*** (19.25)	107.3*** (24.56)	77.58*** (29.06)	
STOXXPriceDec t	2.549*** (0.444)						
STOXXPriceJan t + 1		3.776*** (0.773)					
STOXXPriceFeb t + 1			0.496 (0.308)				
STOXXPriceMar t + 1				-0.408 (0.396)			
STOXXPriceApr t + 1					0.205 (0.332)		
STOXXPriceMay t + 1						0.0641 (0.517)	



TABLE 3 (Continued)

Variables	(1) PriceCloseDec t	(2) PriceCloseJan t + 1	(3) PriceCloseFeb t + 1	(4) PriceCloseMar t + 1	(5) PriceCloseApr t + 1	(6) PriceCloseMay t + 1	(7) PriceCloseJun t + 1
STOXXPriceJun t + 1							
Constant	-1309** (627.7)	-1777*** (676.0)	-466.6 (722.8)	69.56 (690.4)	-364.2 (708.0)	-295.8 (797.7)	353.4 (455.4)
Observations	2938	2938	2938	2938	2392	2392	1850
R-squared	0.444	0.551	0.503	0.549	0.502	0.385	0.469
Number of id	562	562	562	562	548	548	512

Note: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

relevant events that can affect future expected earnings, and therefore the market value. Since Ohlson did not provide details regarding the non-financial information to be considered in his model, scholars have begun to use the model including information on ESG factors (De Klerk et al., 2015; Miralles-Quirós et al., 2018).

The Ohlson model reveals a long-term relationship between company share price and the fundamental company value and has a good aptitude to forecast future share price for several time horizons (Lee et al., 2014).

The model is founded on the hypothesis that the market expectancies of future dividends are exposed in earnings, equity book value, and non-accounting information. The aim of the analysis is to show if the coefficient of non-financial ESG score differs from zero with the expected sign.

The specification for the first hypothesis is extended to a panel setting. Since implementing ordinary least squares to estimate panel data can generate biased estimations because of undetected heterogeneity, we executed a Hausman (1978) specification test of the null hypotheses of a random-effects model in comparison to the other hypothesis of a fixed-effects model to define the recommended model for the study. The resultant chi-square value of 0.00 is not significant, implying that the fixed-effects model effectively explains the relations of the hypotheses. To assess the relations, we used the STATA function “xtreg”, which is able to estimate cross-sectional time-series regression models and, with “fe” option, estimates fixed-effects model that control for the effects of time-invariant variables with time-invariant effects.

In order to corroborate this recommendation, we also implemented the Breusch and Pagan Lagrangian multiplier test for random effects (xttest0 in STATA). The test results are not significant, showing that fixed-effects model is suitable for the dataset (Bustamante, 2019).

Moreover, as additional test to see if time fixed-effects model is the needed one, we ran the command “testparm”. This is a joint test to see if the dummies for all years are equal to 0; if they are then no time fixed-effects are needed. Running the test, we found that $\text{prob} > F$ is < 0.05 , so we did not fail to reject the null that the coefficients for all years are jointly equal to zero, and therefore it signifies that time fixed-effects model is needed in this case.

After the demonstration that the time fixed-effects model is the best one to use, as baseline specification we considered the following regression:

$$Y_{it} + 1 = \alpha + \beta * ESG_t + \delta X_{it} + \gamma_i + c_i + \varepsilon_{it} \quad (1)$$

where Y is our dependent variable (share price at the end of year t , and the share price at the end of each months from January to June of year $t + 1$); ESG is the ESG Score variable of each company – that is, a value close to 1 if the ESG score is high and close to 0 otherwise, in year t . X_{it} is the vector of control variables, which includes total assets (in natural logarithm), Book Value per Share, EBIT, ROE, EPS and STOXX 600 Index Price. γ_i represents year fixed effects, c_i represents firm fixed effects, and ε_{it} is the error term. The coefficient of interest is β , which measures the effect of the ESG Score on



TABLE 4 Regression analysis (Hp 2)

Variables	(1) PriceCloseDec t	(2) PriceCloseJan t + 1	(3) PriceCloseFeb t + 1	(4) PriceCloseMar t + 1	(5) PriceCloseApr t + 1	(6) PriceCloseMay t + 1	(7) PriceCloseJun t + 1
ESGScore	-2.453* (1.266)	-2.638* (1.384)	-2.073 (1.272)	-1.468 (1.126)	-2.957** (1.193)	-2.713** (1.240)	-3.631*** (1.169)
CSRSustainabilityCommittee	-121.3 (77.35)	-108.0 (81.38)	-66.69 (79.59)	-4.786 (71.89)	-95.53 (69.24)	-83.12 (76.39)	-60.84 (61.09)
c.ESGScore#c. CSRSustainabilityCommittee	1.328 (1.173)	1.127 (1.251)	0.625 (1.230)	-0.222 (1.090)	1.106 (1.092)	1.042 (1.170)	0.699 (1.031)
InTotAss	101.7 (70.46)	96.76 (76.81)	87.79 (74.90)	63.05 (67.89)	94.34 (74.30)	93.26 (86.04)	34.96 (45.53)
BookValueperShare	2.890*** (0.169)	3.698*** (0.174)	2.779*** (0.152)	3.016*** (0.123)	2.594*** (0.323)	2.388*** (0.223)	3.249*** (0.475)
ROE	1.081 (4.487)	-0.418 (4.099)	-1.790 (4.440)	-1.388 (4.080)	-4.781 (4.993)	-6.998 (5.927)	-7.408 (9.828)
EBIT	-0.00388** (0.00196)	-0.00343 (0.00222)	-0.00107 (0.00249)	-0.000376 (0.00255)	-0.00242 (0.00205)	-0.00146 (0.00203)	-0.00140 (0.00304)
EPS	-0.349 (1.772)	-2.746 (1.695)	-2.306 (1.457)	-2.650** (1.204)	0.0316 (3.117)	-1.106 (2.176)	-0.282 (4.196)
2015 year	-14.84 (27.94)	89.74** (37.18)		-28.89 (18.76)			
2016 year	-24.12 (18.79)	32.54 (23.13)	15.47 (20.63)	20.74 (17.78)	42.82** (18.22)	59.14*** (17.83)	65.92*** (18.54)
2017 year	-4.451 (12.51)	-18.43 (17.43)	52.90** (21.42)	40.04** (15.75)	90.83*** (20.43)	95.89*** (21.47)	125.6*** (24.12)
2018 year	62.76*** (23.10)	87.11*** (28.09)	63.37*** (22.74)	69.58*** (19.02)	104.2*** (24.49)	75.93*** (29.11)	
STOXXPriceDec t	2.489*** (0.439)						
STOXXPriceJan t + 1		3.687*** (0.764)					
STOXXPriceFeb t + 1			0.528* (0.305)				
STOXXPriceMar t + 1				-0.407 (0.390)			



TABLE 4 (Continued)

Variables	(1) PriceCloseDec t	(2) PriceCloseJan $t + 1$	(3) PriceCloseFeb $t + 1$	(4) PriceCloseMar $t + 1$	(5) PriceCloseApr $t + 1$	(6) PriceCloseMay $t + 1$	(7) PriceCloseJun $t + 1$
STOXXPriceApr $t + 1$					0.247 (0.331)		
STOXXPriceMay $t + 1$						0.100 (0.515)	
STOXXPriceJun $t + 1$							-0.201 (0.362)
Constant	-1298** (618.8)	-1755*** (663.6)	-489.7 (724.4)	54.57 (693.4)	-395.4 (708.1)	-320.0 (799.6)	337.6 (455.2)
Observations	2938	2938	2938	2938	2392	2392	1850
R-squared	0.445	0.551	0.503	0.549	0.502	0.385	0.470
Number of id	562	562	562	562	548	548	512

Note: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

company's share price. For example, H1 predicts that β should be negative and significant, meaning that as ESG Score increases, company's share price should decrease.

In order to show under what conditions this hypothesized relationship is stronger or weaker, we identify another mechanism – the existence of a CSR Committee – that could influence this relationship. To study the effect of ESG Score considering jointly the CSR Committee existence on company's share price, we estimate the following model:

$$Y_{it} = \alpha + \theta * ESG_t * CSR\ Committee + \delta X_{it} + \gamma_i + \epsilon_{it} \quad (2)$$

where CSR Committee is a dummy variable equal to 1 if the firm i has a CSR Committee, and 0 otherwise. The coefficient of interest is θ , which measures the combined effect of the ESG and of CSR Committee existence on company's share price. For example, H2 predicts that θ should be not significant, meaning that as ESG Score decreases or increases, and the Board of Directors nominate a CSR Committee, there is not a negative or positive effect on company's share price.

6 | RESULTS

6.1 | Regression analysis

Table 3 reports the results for Hypothesis 1. All columns of Table 3 (in the first row) show the estimates of equation (1) and display that the ESG Score has an influence on company share price (at 7 different points in time) since the effect is negative and statistically significant. This result supports H1 and is consistent with a decrease of company share price in contexts where the ESG Score is high.

Table 4 reports the results for Hypothesis 2. All columns of Table 4 (in the third row) show the interaction between the existence of a CSR Committee and ESG Score on company share price. The interactive term is not significant. This finding supports H2 that, when the Board of Directors nominates a CSR Committee, there is not a correlation between ESG Score and company share price.

6.2 | Robustness checks

To corroborate our findings, we performed some robustness checks. The additional checks provide evidence that our findings are robust to different specifications.

6.2.1 | Different censoring

As a first robustness check, we restricted the sample considering different percentages of censoring. Tables S1 through S6 in the Appendix show the estimated effect of ESG Score on company share price (also contemplating the existence of the CSR Committee) considering a change in the sample size due to a censoring of 2 per cent, 5 per



cent and 10 per cent. Considering the different specifications, the effect with different size of censoring remains the same of the baseline hypotheses.

6.2.2 | Change of control variables

Results might be influenced by the choice of control variables. Therefore, we perform the analysis considering the sensitivity to the exclusion of some relevant controls (STOXX 600 Index Price, EPS, EBIT). The results of the analysis based on the exclusion of some control variables remain the same to those of the baseline findings. Tables S7 through S12 in the Appendix show the estimated effect.

7 | CONCLUSIONS, LIMITATIONS AND IMPLICATIONS

This research displays interesting results related to the effects of ESG performance and CSR committee on firm market value in the largest EU companies.

In particular, ESG Score has a negative influence on company share price (at 7 different points in time) supporting the H1. This is consistent with a decrease of company share price in contexts where the ESG Score is high. Second, we provide empirical evidence on the interaction between the existence of a CSR Committee and ESG Score on company share price. We did not find any significance in the interaction term. This supports H2 that, when the Board of Directors nominates a CSR Committee, there is not a correlation between ESG Score and company share price. In other words, the presence of the CSR committee does not play a strongly significant moderating role in the relationship between ESG score and firm market value. This could be considered one of the most interesting findings in this study, as it opens a new view on the CSR committee position. Moreover, this study answers the key management issue: should a CSR committee be appointed in order to gain, from ESG performance, stock market benefits?

In line with our results, the presence of the CSR committee as moderating variable in the relationship between ESG score and market cap has no relevance and significance in assisting practitioners in the field of management in better understanding and reacting to stakeholders expectations, which do not solely focus on economic outputs, but also on company's social and environmental performances.

Some limitations concern the measures used in this study. In particular, to provide more interesting implications, further information regarding the criteria used by Refinitiv to assess the CSR committee score should be gathered. Furthermore, in addition to price closing, future research should consider including other market-based measures as Tobin's q , which is the ratio of a physical asset's market value to its replacement value (Velte, 2018). Additionally, further analysis is required for cross-continent effects. Lastly, future research may investigate the effects of the different ways of handling the zeros in the ESG rating system, in order to investigate if it may be one of the causes behind the conflicting results in the CSP literature.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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