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Ciciretti, Rocco; Dalò, Ambrogio; Ferri, Giovanni

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# Dissecting the European ESG Premium vs the US: Is It All About Non-financial Reporting?

*Rocco Ciciretti, Ambrogio Dalò, and Giovanni Ferri*

## 2.1 INTRODUCTION

The European Union has been moving toward sustainable transition for some time and the pace has now accelerated, first with the European Green Deal (EGD) and then with strong green (e.g., Next Generation

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G. Ferri (✉)

Department of Law, Economics, Politics and Modern Languages, LUMSA  
University of Rome, Rome, Italy  
e-mail: [g.ferri@lumsa.it](mailto:g.ferri@lumsa.it)

R. Ciciretti

Department of Economics and Finance and RCEA, Tor Vergata University,  
Rome, Rimini, Italy  
e-mail: [rocco.ciciretti@uniroma2.it](mailto:rocco.ciciretti@uniroma2.it)

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EU) and social (e.g., SURE) sustainable connotations included in the relaunch programs from the COVID-19 crisis. Optimists think that, in addition to being necessary to safeguard the future, becoming sustainable gives Europe a real competitive advantage in a world where demand will increasingly shift in consumption toward green products and in investment toward financial assets issued by sustainable businesses. Pessimists, on the other hand, believe that EU policies for sustainable transition impose huge and unjustified costs. Who is right? Let's try to answer by evaluating whether European companies have gained an advantage over US companies, the latter having been also held back by Trump's parenthesis, in a very emblematic and dynamic segment, that of sustainable finance.

Sustainable finance consists of various components: the most dynamic is that of SRI funds—Sustainable & Responsible Investment Funds—whose investment strategies typically use ESG ratings. This is an area of strong growth and the estimates in circulation place ESG investments at stratospheric levels: They could reach \$35 trillion in 2025. Therefore, given this impetuous growth, today competitiveness also depends on how companies are positioned to tap into sustainable finance markets. In fact, for a company, the ESG rating measures performance in managing environmental risks (E—Environmental), social ones (S—Social), and those of its own administration (G—Governance).

Well, comparing US companies listed in the S&P500 with a similar group of listed European companies, we show that on average EU-listed companies enjoy 14% higher ESG ratings than US companies (64.43 for European companies versus 56.37 for the US ones). If we want to break it down, the advantage of European companies is maximum in the E—Environmental component (+22.5%; 63.08 against 51.48), intermediate in the S—Social component (+16.0%; 68.35 against 58.90), and negligible in the G—Governance component (+0.4%; 59.88 against 59.66). Furthermore, it is shown that the EU advantage does not depend on the different sectoral composition of EU companies which, at the most, would assign European companies +0.64% compared to US companies.

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A. Dalò

Faculty of Economics and Business, University of Groningen, Groningen,  
The Netherlands

e-mail: [a.dalo@rug.nl](mailto:a.dalo@rug.nl)

Instead, the EU advantage is found to be related to the fact that EU companies more often than their US counterparts are committed to providing sustainability reports and provide better quality sustainability reports. In fact, even before the enforcement achieved in 2018 of Directive no. 2014/95/EU on non-financial reporting, between 2011 and 2017 almost two thirds of the European listed companies considered in the analysis (62.29%) prepared sustainability reports according to the GRI (Global Reporting Initiative) scheme while less than half (44.86%) of the US ones did that. Furthermore, by evaluating the quality of the GRI reports—that is, how much companies choose more or less advanced reporting methods—it is estimated that the average European report is 8.51% more accurate than the US one.

These results confirm that EU policies in favor of sustainability can bear fruit by offering European companies advantages in accessing sustainable finance. So, at least in this area, the optimists seem to be right.

The rest of the chapter is structured as follows. Section 2.2 recaps the perception of this EU vs US gap as we can find in the extant literature. Section 2.3 develops the two main hypotheses to be tested. Then, Sect. 2.4 outlines the empirical study undertaken with a methodology section—explaining how the data was collected and analyzed—and the presentation of our core findings based on descriptive evidence but also on econometric analysis. Finally, Sect. 2.5 summarizes our main results, warns about some caveats, and articulates possible new avenues for future research.

## 2.2 THE PERCEPTION OF THE EU–US GAP IN TERMS OF ESG RATINGS BY THE EXTANT LITERATURE

In recent years, we can observe that, on average, ESG scores are higher for European vs US companies. This fact is mentioned in various works, reports, and working papers that are quite heterogeneous in terms of ratings used, nature of the observer—whether scholars or investment practitioners—and period considered. In a study center on developed markets, Peiró-Signes and Segarra-Oña (2013) examine ASSET4's ratings for the period 2006–2010 and find that European companies—being the best performing regional group of all—have average and median ESG scores significantly higher than US ones. Besides, for the total ESG scores, the gap attains for both the environmental and social scores—while the governance score is slightly higher for US companies. [The article reports

these average ratings: European companies vs US companies: Total ESG score 0.685 vs 0.526; E score 0.632 vs 0.409; S score 0.687 vs 0.443; G score 0.633 vs 0.724.] Following this finding, Bannier et al. (2019) focus expressly on a US-Europe comparison, report further evidence, from data by the same provider on a longer period (2003–2017), and narrow on the highest-capitalized listed companies. They find that the mean ESG total score is lower for the US (50.8) vs the European sample (56.7), with better mean environmental and social scores for Europe and analogous average governance score. In Nitsche and Schröder's (2019) research on SRI funds by three different ratings (Oekom, Sustainalytics, and ASSET4), the fact that EU companies generally receive higher scores is used as an assumption to explain skewed results in the reported mean scores. Using company-level scores from Sustainalytics, Morningstar's (2019) *Sustainability Atlas*, shows that—while the US lags behind in the fourth quintile—Europe is home to the most sustainable countries and adds: “This is somewhat expected, since those nations have always been ahead of the curve on this front.”

For practitioners, asset management company KBI Global Investors (2019) points at this trend in its broader regional analysis of ESG performance, by MSCI ESG ratings for 2018. The study shows that Europe has a higher concentration of stocks with a higher ESG score than North America. In particular, in Europe (North America), 71.4% (35%) of companies achieved above-average ESG scores. On Sustainalytics and MSCI data in the context of an analysis on sustainable bonds, Barclays (2018) notes that European issuers tend to have higher ESG ratings than US issuers. Also Hill (2020) supports Barclays's findings to draw conclusions in its review on sustainable investment. In addition, the asset manager Nordea Markets (2018), in a paper on the potential for Scandinavian companies from the increased trends in SRI, shows the average ESG scores for the regional groups of Nordic, European, and North American companies (MSCI data over 2005–2017). Besides illustrating other data, the report clearly shows that the average score for European companies is stably and significantly higher than the American one over the whole period. Some analysts stress the same issue in a ‘white paper’ for the asset management company Legg Mason, showing how European stocks take over American ones in the highest deciles of the score distribution according to all three ratings used—MSCI, Thomson Reuters/ASSET4, Sustainalytics—over 2012–2018 (LaBella et al., 2019).

In each of these cases, the issue arises in comparing ESG ratings across regions. As said above, a geographic bias has been acknowledged by critics, some of whom identify an advantage for European companies due to EU rules on non-financial disclosure. More in detail, as explained by Barclays's report, as the lack of disclosure can depress ESG ratings, companies based in Europe can more easily obtain high ESG ratings since they have to follow stricter non-financial disclosure rules. Also, LaBella et al. (2019) explain their results by saying: "rating agencies show a clear bias favoring developed markets outside of the US, particularly European companies [...]. The source of this bias may not fully reflect the quality of ESG practices, but rather the existence and quality of formal reporting requirements in various jurisdictions." Along the same lines, Beloe (2016) claims: "European companies [...] tend to have a culture of greater disclosure on ESG issues and in some countries ESG disclosure is mandatory. As a consequence, ESG ratings tend to be much higher in Europe. In one case, the average percentile score for European companies is nearly 20 percentage points higher than the average percentile score in the US. Perhaps European companies are actually better at managing ESG issues, but this gap is so huge that at least some of it is likely to be due to differences in disclosure."

Doyle (2018) reports a specific example which helps visualize how the geographic bias can affect ESG comparisons in US vs Europe. By focusing on auto manufacturers, he compares Sustainalytics scores for the BMW Group (Europe) and Tesla (US) in 2016. BMW has a high rating (74, ranked at 93rd percentile) despite many controversies on anti-competitive and illegal marketing practices, violations of intellectual property, and of employee and human rights, even of animal rights, and allegations of collusion with other European carmakers on various technologies and systems to evade environmental and safety regulations. Instead, Tesla, despite being the world leader in the technology to curb cars' carbon emissions, has a low rating (54, ranked at 38th percentile) below every European carmaker, even below those ones facing major environmental violations. Though this is anecdotal evidence, the example is a warning light on the true lead of European companies in ESG practices.

Although pundits seem to agree that the gap in mean ESG scores in EU vs US reflects a geographical bias, partly due to different regulations, we still need to fully understand the linkages. For instance, authors neither provide evidence proving this causality, nor cite other relevant supportive works. Also, the cited studies hinge on empirical analyses averaging ESG

ratings of many companies, whose reporting practices are not put in context to allow a direct connection. For these reasons, this intuition cannot be taken for granted and we will investigate it in the hypotheses through this work.

In conclusion, the perceived gap in ESG scores questions whether European companies are actually ‘more sustainable’ than their US counterparts. Indeed, in practice and in academia, there is growing reliance on ESG ratings to reflect the level of ‘sustainability’ of a company, and by this reasoning, this gap in the average ESG scores should automatically imply that European companies are more sustainable, i.e., that their ESG performance is systematically better than the US ones. At the same time, we have reviewed some issues about origins, methodological features, and challenges of ESG ratings which allow one to assume that the inherent sustainability of companies, or ESG performance, may not be the only factor explaining this difference with respect to two regions which are comparable in terms of market development and of CSR traditions.

Therefore, the next sections will address the issue of the gap between average ESG scores of European vs US companies. In particular, two hypotheses are presented to explain the possible origin of this gap, and then an empirical section will bring some findings building on these hypotheses.

## 2.3 THE ESG SCORE GAP BETWEEN EU AND US COMPANIES: HYPOTHESIS DEVELOPMENT

Here we focus on two among the possible factors behind the identified ‘gap’ in mean ESG scores of EU vs US companies: (i) differences in the sectoral mix; (ii) differences in sustainability disclosure. These two hypotheses build on the literature and on recent developments of the ESG rating industry. While logically separate, (i) does not exclude (ii) they may reinforce or abate each other.

### 2.3.1 *Sectoral Composition of Regional Groups of Companies*

A first possible cause of the gap between the mean ESG scores of the two areas concerns the industries or sectors to which the rated companies belong. Indeed, for any given rating agency, the overall universe of all rated companies is distributed across several industries. This distribution

can be uneven in terms of sectoral composition, because—as mentioned above—the issuance of ESG ratings is determined by investors’ demand and does not imply particular efforts of representativeness.

### 2.3.1.1 *Relevance of the Industry/Sector*

The importance of duly accounting for different industries/sectors in interpreting ESG scores emerges for both scholars and practitioners. Capelle-Blancard and Petit (2015, p. 4) identify the issue studying how ESG ratings operationalize CSR concepts. In their words, “Previous work [in the literature] has implied that ‘one size fits all’. This hypothesis seems debatable at least: Environmental issues, for example, are likely more important in the Oil & Gas than in the Banking sector. [...] Unsurprisingly, banks are mainly criticized for their bad corporate governance, while they have good environmental reputations. Conversely, firms in the Basic-resource and Oil & Gas sectors are mostly criticized for environmental damage. Last, large retailers (included in the Consumer goods and services sector) have a poor social record. Composite equal-weight scores thus misrepresent the differences between sectors.” Indeed, they claim that the key question is how to apply the weights to the industries.

Using industry weights is an evolution on early contributions in the CSR literature which insisted on the uniqueness of the industries, in terms of internal competencies or external pressure, as an obstacle to meaningful comparisons across studies or to generalizations beyond the boundaries of a specific study (Griffin & Mahon, 1997; Rowley & Berman, 2000). At the same time, weights can offer nuances and overcome the rigid separation into ‘controversial’ sectors vs ‘non-controversial’ ones, the former including ‘sinful’ industries such as tobacco, gambling, alcohol, and industries involved with emerging environmental, social, or ethical issues, i.e., weapons, nuclear, oil, cement, and biotech (Cai et al., 2012). Indeed, by using weights ESG ratings manage to capture the CSR efforts made by companies in these areas, previously discarded a priori, while reflecting their possibly problematic nature (e.g., Ktat, 2017). Hence, the advantage of weighting according to the industries is that it still allows large cross-sectional comparisons and, simultaneously, allows to maintain the particularities of different sectors to the eyes of the researchers (Capelle-Blancard & Petit, 2015).

Practitioners seem interested too in integrating industries in composite scores. Already in 2010, the first surveys on investment professionals by the consulting firm SustainAbility (in the research project *Rate the Raters*)



noted that “evaluating companies across sector, geography, revenue and different issues is very difficult [...]; many ratings insufficiently consider the context of certain companies, industries and issues” (SustainAbility, 2010a). In their inventory of rating providers, SustainAbility (2010b) claims that “it is difficult—perhaps meaningless—to compare companies from different sectors and geographies on the same set of criteria. Ranking an investment bank against a food retailer against a pharmaceutical company across a common set of criteria is a considerable challenge, as each type of company faces a different set of key issues.” But, they noted, “the ‘universal’ rating—one which spans multiple issues, industries and/or regions—remains the norm”; their best practices advise that ESG raters “[offer] details on criteria, weightings and scoring schemes” and that “ratings must be based predominantly on sector-specific criteria and weightings” (SustainAbility, 2011).

The relevance of such recommendations has become evident over time, with practice evolving along those lines. With the development of the ESG rating industry, today the most prominent agencies do attribute a ‘universal,’ overall rating to each company, but most raters also provide separated scores by the three themes (E, S, G) and often add further details in the form of reports (e.g., company, country, and industry reports), highlighting pertinent ESG issues and other qualitative information which can help to put the rating in context. While the way to report this deeper research can vary, the ultimate focus is on synthetic scores to convey the main findings and allow comparing rated entities.

In particular, from the analyses *by industry* carried out by rating agencies, we know the mean ESG score of any industry: It is obtained by aggregating the ESG scores of all the companies which fall in the industry and belong to the universe of the same rater. The raters themselves often calculate industry averages, with the specific aim to capture aggregate performances and identify time trends.

Table 2.1 shows the average ESG scores of a set of industries based on the sector reports and articles made publicly available by three different rating agencies: Vigeo Eiris, Sustainalytics, and ASSET4. [Note that scales vary by ESG rater: Each different rating can be mapped between 0 and 100 but each agency has special categories to rank the numeric value, hence a comparison across scores of different providers is not meaningful; the focus here is on the ranking of different industries according to their average ESG score, conveyed by the order of each column.] We chose 8 industries—which do not exhaust the areas investigated by the

three raters—based on the availability of public reports and on the correspondence of industry categories. [In particular, they are the totality of industries covered by Sustainalytics’ materials on the rater’s website. By searching the same industry coverage for the other two raters, a common basis has been found around these 8 groups.] The ranking of these mean ESG scores across raters identifies some industry patterns. For instance, the ranks of Utilities and Household/Personal Products vs Real Estate are, respectively, high and low.

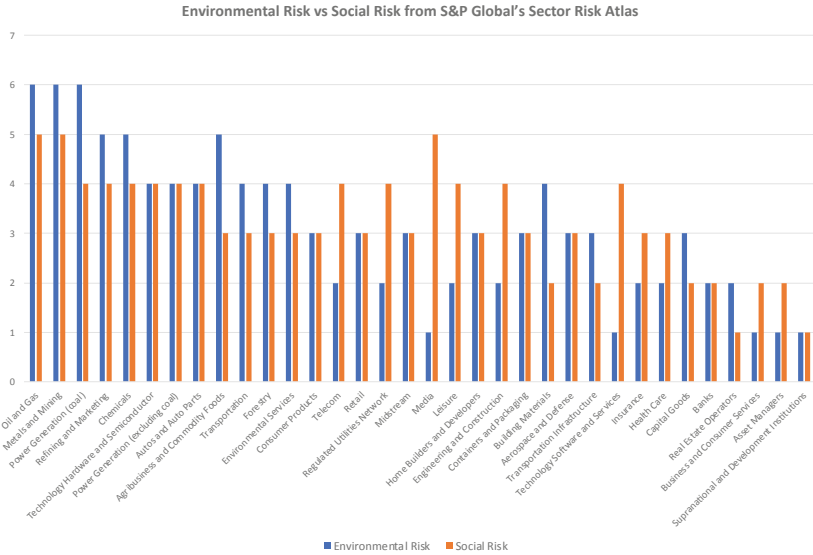
The similarities in industry rankings we can see in Table 2.1 may reflect similar ways to interpret ESG-related risks, as integrated in an agency’s rating methodology through its weighting. The ESG Risk Atlas by S&P Global offers a comprehensive view on this, reviewing the relative environmental and social exposures of a wide range of industries (Fig. 2.1).

Although other agencies might provide different views, the example of systematization above points out that, irrespective of the rating agency, single industries face inherently different ESG issues impacting on their weighting system, ultimately playing a role in the scores of individual companies. Given the relevance of industries for ESG assessments, we must complain that the studies, cited above, identifying the Europe–US

**Table 2.1** Industries/sectors ranked by average ESG score, sorted by rating agency

<i>Vigeo Eiris</i>	<i>Sustainalytics</i>	<i>ASSET4</i>
Utilities (35.5)	Household/Personal Products (65)	Aerospace and Defense (73.8)
Household/Personal Products (35)	Aerospace and Defense (63)	Utilities (59.4)
Mining and Metals (33.6)	Utilities (61)	Household/Personal Products (55.8)
Banks (32)	Mining and Metals (59)	Pharmaceuticals and Biotechnology (51.5)
Aerospace and Defense (31.2)	Banks (58)	Insurance (50)
Insurance (29.7)	Insurance (57.8)	Banks (46.4)
Real Estate (29.1)	Real Estate (57)	Mining and Metals (44.7)
Pharmaceuticals and Biotechnology (27)	Pharmaceuticals and Biotechnology (56.7)	Real Estate (33.5)

Source Our reworking of data from the agencies’ sector reports



**Fig. 2.1** Environmental risk vs social risk from S&P Global’s sector risk Atlas (*Source* Adapted by the authors based on S&P Global [2019])

gap in average ESG scores generally use the overall-ESG scores to make the comparison—in some cases observing also the individual themes E, S, and G—failing to consider how possibly different industry mixes in the two regions might affect the comparison.

*2.3.1.2 Hypothesis Development: Sectoral Composition*

Given that industries/sectors play a role in ESG ratings, the gap between European and US companies’ scores might somehow depend on a different sectoral composition of the two regional groups of companies. In accordance with the findings emerging from literature and practice, we formulate the following hypothesis:

**Hypothesis 1** A homogeneous distribution across industries/sectors might result in a smaller gap in average ESG ratings between European and US companies.

### 2.3.2 *Sustainability Reporting Practices*

A second factor which may contribute to the gap between the average ESG scores of European and US companies corresponds to their practices of sustainability reporting (also called ‘sustainability disclosure,’ ‘ESG reporting,’ or ‘ESG disclosure’). We investigate this element to deepen the intuition proposed by some authors who have observed the geographical gap and have claimed that different regulations and traditions on non-financial disclosure lead to better sustainability reporting by European companies, ultimately delivering higher ESG ratings than at their US counterparts. Because this link has only been implied so far, here we explore and deepen its arguments and ultimately formulate a hypothesis for the empirical analysis.

#### 2.3.2.1 *The Regulatory Framework: Mandatory vs Voluntary Sustainability Reporting*

As concerns the regulatory framework for corporate sustainability, sustainability reporting is mandatory in most European countries, while in the US it is still largely voluntary. In European legislation, Directive n. 2014/95/EU, the subsequent norms and the following guidelines have recently promoted a marked improvement in sustainability reporting especially for larger companies or groups. By amending to the Accounting Directive 2013/34/EU, the 2014 Directive has made it mandatory to report non-financial information for companies whose size is above a certain threshold (i.e., more than 500 employees, and either total assets exceeding EUR (euro—€) 20 million or a net turnover exceeding EUR 40 million). This requires a suitable report focusing on the business model, policies pursued or implemented, sustainability risks, and Key Performance Indicators (KPIs), with a minimum coverage of: environmental and social matters, respect for human rights, anti-corruption and bribery issues, and diversity on the boards of directors. The underlying rationale is to give an incentive to, notably prominent, companies behave more responsibly, and at the same time, increasing attention is addressed to financial investors and other external stakeholders. All this context facilitates generating and elaborating ESG data (Taliento et al., 2019). As to materiality, the threshold for ESG reported data is not necessarily linked to financial considerations: according to Article 1 of the Directive, in fact, a company should report any ESG data that is “necessary for an understanding of the development, performance, position and impact

of its activity.” The first fiscal year in which reports complying with the 2014 Directive have been issued was 2017, after a number of European countries had implemented different reporting criteria, sometimes even stronger than the Directive. For instance, Italy not only implemented the Directive (through D.Lgs. 254/2016) requiring ESG data disclosure as of 2017 for medium and large cap issuers, but also introduced criteria to distinguish the degree of detailed reporting required based on the type of entity. Many EU member States such as France, Netherlands, Denmark, and Sweden had already developed some partial form of mandatory requirement for ESG disclosures prior to the Directive, mainly for state-owned companies. Yet, the 2014 Directive marked a significant expansion (Camilleri, 2017).

In the US, requirements for sustainability reporting are minimal: unlike in Europe, companies’ ESG data are only considered material and subject to mandatory reporting if there is a clear financial consideration for them. For instance, the Security and Exchange Commission (SEC) issued in 2010 the SEC Guidance on Climate Change Disclosure according to which such non-financial data should be disclosed if related to a public company’s “financial condition, liquidity and capital resources, changes in financial condition and results of operations” (US SEC, 2010). Other examples of specific SEC-regulated ESG issues are board diversity, conflict minerals, and resource extraction. Over the years, efforts increased to get the SEC to adopt widespread mandatory and standardized disclosure requirements related to ESG information (Fisch, 2019). Many large institutional investors, academics, lawyers, and proxy advisors backed a petition to the SEC, calling for rulemaking to define standards for comprehensive corporate disclosure of ESG information; however, the US House of Representatives Financial Services Committee roundly rejected legislative proposals to require widespread ESG disclosure by companies (Temple-West, 2012). Meanwhile, a new bill named the ‘ESG Disclosure Simplification Act’ (H.R.4329) was introduced by the Financial Services Committee in 2019; if passed by the House, it would require public companies to disclose ESG information in their proxy statements. Hence, nowadays many US companies either issue comprehensive sustainability reports on a voluntary basis, or only incorporate the ESG information deemed material to investors, under existing securities law, in mandated financial reports. NASDAQ’s ‘ESG Reporting Guide 2.0’ (2019), is an example of “support resource for companies” which volunteer to disclose their ESG information.

### 2.3.2.2 *The Determinants of Sustainability Reporting*

These divergent regulatory trends certainly help explain the different context across the Atlantic. Yet, much of the development of sustainability reporting has been voluntary, and such past tradition also contributes to the explanation. As reconstructed by Ioannou and Serafeim (2017), both in the US and in Europe, voluntary non-financial reporting was first introduced during the 1960s and 1970s, as a result of renewed awareness of the responsibility of business organizations toward society and the environment. In the 1990s, there was a significant growth in the issuance of voluntary corporate sustainability reports in developed markets, due to enhanced pressure and expectation by society for more corporate transparency and accountability. Later on, social and environmental challenges (e.g., poverty, inequality, climate change, resource depletion) renewed pressure on companies by investors, shareholders, and other stakeholders to adopt more systematic approaches to risk management and sustainability reporting. Then, as a consequence of several high-profile corporate scandals and the global financial crisis, a general feeling of distrust grew toward companies' ability to self-regulate. At the same time, investors and information intermediaries in capital markets began to integrate ESG data in their valuation models, creating additional demand for sustainability reporting.

One of the most popular perspectives, *legitimacy theory*, hinges on the notion of a 'social contract' between a business and society. In this view, companies issue sustainability reports "to present a socially responsible image so that they can legitimize their behaviors to their stakeholder groups" (Branco & Rodrigues, 2006, p. 236). For legitimacy theory reporting alleviates societal pressure, since failure to comply with their 'social contract' can possibly lead to sanctions such as less financial capital, fines, and less demand for their products.

Indeed, *stakeholder theory* is another prominent theory to manage the complex and conflicting relationship of companies with their shareholders and external stakeholders. Phillips et al. (2003, p. 481) claim: "Attention to the interests and well-being of those who can assist or hinder the achievement of the organization's objectives is the central admonition of the theory." In this context, governments and regulatory bodies, besides creditors, have also been identified in literature as 'influencers' of CSR activities because companies rely on sustainability reporting as a strategy to address the concerns of their external stakeholders (Roberts, 1992).

These theories should not be seen as competing, but rather complementary. Indeed, most researchers describe stakeholder theory as the dominant and most useful theory in explaining sustainability reporting practice. Also, Tamimi and Sebastianelli (2017) argue that all these theories may be seen as broadly similar, given that they all focus on the different kinds of pressure that stakeholders exert on companies and, above all, on how sustainability reporting is employed by companies to communicate their CSR activities, in order to affect positive perceptions.

To sum up, though governmental regulations can play a role, as pointed out by agency theory and partly by stakeholder theory, many factors need to be considered. Indeed, the theoretical framework around sustainability reporting sheds light on broader motivations and incentives which can lead companies—and have led them for decades before regulations—to disclose their ESG information in a voluntary manner, regardless of legal obligations. Hence, for our case study, these elements dismiss that the presence of regulations mandating sustainability reporting entails an automatic advantage for European companies in terms of disclosure quality and prevents a meaningful comparison between them and US companies. Rather, still within this framework, with specific reference to US public companies and their motivations for voluntary sustainability reporting, Christensen et al. (2019) confirm that firm size is a relevant factor in the US, since greater public scrutiny and relatively lower costs incentivize companies to engage in reporting; also dispersed ownership, with the consequent high information asymmetry, is associated with more efforts in disclosure; interestingly, the correlations found suggest that in sustainability reporting the economic drivers may overlap with those of other traditional, non-CSR voluntary disclosure.

### 2.3.2.3 *Sustainability Performance vs Sustainability Reporting: Emphasis on the Quality of Reporting*

The theoretical framework of sustainability reporting regards also its quality. Indeed, sustainability reports are not always credible or effective: For example, stakeholders may fear that information is disclosed only when it is favorable. The voluntary disclosure theory focuses exactly on this, originating from managers' tendency to cleverly release voluntary information on which they have control to enhance organizational economic benefits (Deswanto & Siregar, 2018). Along this view, since sustainability-compliant reputation can raise the present value of future

cash flows, corporations tend to increase disclosures of social and environmental information if they get good ESG performance. In contrast, bad-performing companies tend to elude voluntary reporting to reduce costs and avoid being seen in bad light (Clarkson et al., 2008; Dawkins & Fraas, 2011). Thus, for reporting, we must keep in mind the ambiguity of this performance-disclosure relationship.

### 2.3.2.4 *Recent Trends and Standards of Sustainability Reporting*

The *Survey of Corporate Responsibility Reporting* (KPMG, 2017) shows that 74% of large and mid-cap companies around the world issued sustainability or integrated reports in 2017, while the share reached 95% among the 250 largest companies worldwide (G250). On a sample of companies in the EU and US leading stock indices sustainability reporting expanded from about 5% in 2006 to 77% in 2015 (Stolowy & Paugam, 2018).

Advances in reporting practices have been favored by the growing diffusion of authoritative guiding principles and standards, such as United Nations Global Compact; OECD Guiding Principles on Business and Human Rights; International Organization for Standardization (ISO); Global Reporting Initiative (GRI); and International Integrated Reporting Council.

GRI is by far the most widely used framework around the world. The share of companies using GRI is 63%, in the global sample of KPMG (2017), while it is 75% in the G250. In the US, as of 2018, 60% of all reporting companies within the S&P 500 adopted the GRI framework (Si2 and Investor Responsibility Research Center Institute—IRRCI, 2018). The diffusion of the GRI should improve the availability of ESG data worldwide: According to the international multi-stakeholder organization promoting GRI since 1997, their standards are “designed to enhance the global comparability and quality of information on [economic, environmental and social] impacts, thereby enabling greater transparency and accountability of organizations” (GRI, 2020, p. 3).

Our analysis below uses GRI standards since their widespread use in Europe and the US allows comparisons on sustainability reporting practices. Besides, GRI’s features allow to deepen and detail the quality of sustainability reporting and to grasp differences among users: As highlighted by recent survey data (KPMG, 2017; Si2 and IRRCI, 2018), if reporting companies specify their standard, their adherence to the standard can vary from the mere reference to it, to a more detailed articulation.



While the GRI presents an intricate map of corporate sustainability reporting, its structure also provides room for flexibility by allowing companies to report ‘based on’ or ‘in accordance with’ the guidelines. This is also related to the evolutionary process of the GRI: the first official guideline was released in 2000, and updated versions were issued in 2002 (G2 guidelines), in 2006 (G3), in 2011 (G3.1), in 2013 (G4), and in 2016 (Standards). Along this evolution, new elements were added (GRI, 2020); a company’s choice to adopt the latest updated version of the standards can signal its commitment to a strengthened reliability and ultimately, to sustainability.

In conclusion, based on trends and standards in reporting practices, noting whether and to what extent listed companies apply GRI standards can give proxy the quality of their sustainability reporting.

### 2.3.2.5 *Hypothesis Development: Sustainability Reporting Practices*

By establishing a parallel with the existing literature on credit ratings, Christensen et al. (2019) note that low-quality sustainable reporting can reduce ESG ratings. This risk can be reduced by voluntarily adopting standards as a common baseline emphasizing materiality, thus with less discretion regarding what to report (Kotsantonis & Serafeim, 2019). This is in line with our evidence above that more and more listed companies are applying those standards, namely the GRI.

In accordance with the findings from the literature and practice, we devise the following hypothesis:

**Hypothesis 2** Companies with high-quality sustainability reports obtain higher ESG scores.

## 2.4 EXPLORING THE GAP: RESULTS AND DISCUSSION

### 2.4.1 *Methodology*

As said, while logically independent, the two hypotheses that we formulated do not exclude each other, and may reinforce or abate each other. Can we explain the gap by a different sectoral mix in EU vs US (Hypothesis no. 1) and/or through different sustainability reporting practices (Hypothesis no. 2) across the Atlantic?

Our empirical analysis relies on ESG ratings expressed as actual numbers.

The ESG ratings of companies broken down into their ‘E,’ ‘S,’ and ‘G’ components and covering a span of four years—extracted from the database Thomson Reuters Eikon—were functional to our analysis. In particular, this data included information on the sector of the companies observed, allowing to verify Hypothesis no. 1. The rest of the data, functional to test Hypothesis no. 2, was hand-collected from the GRI database (<https://database.globalreporting.org>), picking the necessary information to compute the *GRI score* covering the years 2008–2018—referred to the financial years 2007–2017. The *GRI score* is used to indicate the quality of sustainability reporting, where the database keeps track not only of the GRI-compliant companies, but also of non-GRI reports and missing reports as well. This index thus gives a nuanced picture of the quality of sustainability reporting, beyond the mere acknowledgment of the presence, or lack of, a sustainability report for each company. The use of the *GRI score* is based on D’Apice et al.’s (2020).

The entire list of S&P 500 Index companies was used (505 in total) for the US, while for Europe a group of 468 companies from 22 countries [Austria, Belgium, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovenia, Spain, Sweden, UK] was drawn from the 610-company list used by D’Apice et al. (2020) focusing on the top-capitalized companies in the EU-28 stock exchanges for which ESG ratings were available in the Thomson Reuters database.

The analysis concerning Hypothesis no. 1 involves mean ESG scores, divided by geographical area (EU vs US), by sector, and by theme (ESG, ‘E,’ ‘S,’ ‘G’). Mean values of ESG ratings were calculated for the period 2015–2018, instead of referring to a single year, to minimize potential errors or data gaps.

For the analysis on Hypothesis no. 2, as in D’Apice et al. (2020), the *GRI score* was computed in the following way for each year:

- Any company absent from the GRI database was assigned a score of 0.00;
- Any company present in the database, but classified as “non GRI” was given a score of 0.25;
- Any company classified as “citing GRI” was given a score of 0.50;

- Any company classified as “GRI compliant”, but below the frontier standard was given 0.75 (over the years, the frontier standard corresponded to GRI3.1 between 2007 and 2013, and to GRI4 between 2014 and 2017);
- Any company classified as “GRI compliant” at the frontier standard was given 1.00.

The GRI data are then aggregated in different ways to highlight results. Furthermore, to show the relationship between the *GRI score* and ESG ratings (articulated in all their themes), correlation coefficients are calculated.

## 2.4.2 Results and Discussion

### 2.4.2.1 Hypothesis 1: Sectoral Composition

As highlighted above, the geographical comparison of ESG ratings is usually based on mean values. In Sect. 2.3, we have seen the relevance of the distribution across sectors/industries. Here we compare the two groups of companies based in the US vs EU, considering their sectoral composition, through mean values.

Table 2.2 shows the synthetic, ‘overall’-ESG scores of each sector through the mean of the scores of each company belonging to it. Comparing the two regional groups, it is possible to calculate the geographical gap.

There is indeed an important gap between the US and the EU companies: all sectors combined, weighted by their own share in the respective regional groups, determine a premium for the EU group of 8.06 points, i.e., 14% more than the US group’s mean ESG. The gap concerns all sectors but is larger in some—e.g., Energy (24%), Consumer Non-Cyclicals and Industrials (19%)—and narrower in others—e.g., Consumer Non-Cyclicals (8%), Financials (10%), and Healthcare (9%).

To explore the gap in more detail, Table 2.3 shows the breakdown of the ESG rating into its ‘E,’ ‘S,’ ‘G’ elements (themes) and the related geographical differences. This shows quite clearly how the Governance theme is not, on average, responsible for the gap in the overall-ESG ratings: the advantage of EU over US companies in terms of total ‘G’ score is negligible (0.22 points). Instead, the total ‘E’ and ‘S’ scores show even higher geographical gaps than the overall-ESG scores. While the EU

**Table 2.2** Mean ESG scores by sector and by geographical area and their gap

<i>Sectors</i>	<i>Mean ESG EU</i>	<i>Mean ESG US</i>	<i>Gap in mean ESG</i>	<i>Ratio EU/US</i>
Basic Materials	68.90	62.14	6.76	1.11
Consumer Cyclical	63.13	52.99	10.14	1.19
Consumer Non-Cyclicals	69.24	64.14	5.10	1.08
Energy	69.90	56.59	13.31	1.24
Financials	61.11	55.75	5.36	1.10
Healthcare	62.59	57.18	5.41	1.09
Industrials	63.16	53.02	10.14	1.19
Technology	63.65	56.13	7.52	1.13
Telecommunications Services	63.34	54.67	8.67	1.16
Utilities	66.89	60.45	6.44	1.11
<b>All Sectors (weighted)</b>	<b>64.43</b>	<b>56.37</b>	<b>8.06</b>	<b>1.14</b>

premium can vary according to the sector, the same sectors whose overall-ESG score gap was the largest (Industrials, Energy, Consumer Cyclical) also show the biggest geographical differences in Environmental and Social performances. Indeed, the case of Utilities shows large gaps both in the ‘E’ (11.82) and ‘S’ themes (12.27) but also a large negative gap in ‘G’ (−10.33): the relatively better ‘G’ scores attributed to the US over Europe in this sector partly compensate the effects of the other two themes on the average overall-ESG rating. The same applies to Basic Materials.

To sum up, these results suggest that the pattern of higher ESG ratings for Europe holds true in ‘E’ and ‘S’ mean scores by all sectors, even if to a varied extent, while the Governance component of ESG ratings does not contribute to the overall EU vs US gap in most sectors. At the same time, the existence of sectoral differences in ESG ratings reinforces the case to account for the sectoral composition of the EU and US groups of companies in the samples used for the comparison, as shown in Table 2.4. Indeed, if the companies forming the two groups (EU and US) are distributed unevenly across sectors, the gap in ESG ratings might also be attributable to this fact, and not only to the possible differences in ESG performance.

Some differences emerge between the two groups. For instance, Basic Materials covers 5% of the US sample, while it reaches 12% in the EU

**Table 2.3** Mean 'E,' 'S,' and 'G' scores by sector and geographical area and their gap

Sectors	Mean 'E' Environment		Gap in Mean 'E'		Mean 'S' Social		Gap in Mean 'S'		Mean 'G' Governance		Gap in Mean 'G'	
	EU	US	EU	US	EU	US	EU	US	EU	US	EU	US
Basic Materials	68.93	59.75	9.17		72.03	61.29	10.74		63.69	67.58	-3.89	
Consumer Cyclicals	62.59	49.11	13.48		68.74	56.23	12.51		55.40	54.27	1.13	
Consumer Non-Cyclicals	70.54	62.86	7.68		72.00	66.61	5.39		64.52	63.05	1.47	
Energy	71.02	53.36	17.66		73.46	54.32	19.14		63.10	65.21	-2.12	
Financials	58.11	46.13	11.99		62.84	59.18	3.66		61.57	60.75	0.81	
Healthcare	56.93	49.55	7.37		68.95	63.60	5.35		58.98	56.44	2.53	
Industrials	60.55	49.58	10.98		68.74	54.37	14.37		58.28	59.61	-1.33	
Technology	60.19	50.56	9.63		70.92	60.40	10.52		57.66	57.49	0.17	
Telecomm. Services	59.89	52.43	7.47		68.11	57.41	10.70		56.89	50.89	6.00	
Utilities	71.43	59.61	11.82		68.13	55.87	12.27		57.53	67.86	-10.33	
<b>All Sectors (weighted)</b>	<b>63.08</b>	<b>51.48</b>	<b>11.60</b>		<b>68.35</b>	<b>58.90</b>	<b>9.44</b>		<b>59.88</b>	<b>59.66</b>	<b>0.22</b>	

**Table 2.4** Sectoral composition of regional groups of companies

<i>Sectors</i>	<i>No. Companies US</i>	<i>Sector Share US (%)</i>	<i>No. Companies EU</i>	<i>Sector Share EU (%)</i>
Basic Materials	27	5	54	12
Consumer Cyclical	79	16	67	14
Consumer Non-Cyclicals	37	7	36	8
Energy	26	5	27	6
Financials	95	19	105	22
Healthcare	59	12	30	6
Industrials	76	15	72	15
Technology	74	15	22	5
Telecommunications Services	4	1	24	5
Utilities	28	6	31	7
<b>All sectors</b>	<b>505</b>	<b>100</b>	<b>468</b>	<b>100</b>

group. Financials are the largest sector in both groups, but with different shares: 19% for US vs 22% for EU. Technology and Healthcare are more represented among the US companies than in Europe, accounting for 15 and 12%, respectively, against 6 and 5%. Besides, while Telecommunications Services counts only 1% for American companies, the EU counterpart is 5%.

Table 2.5 shows the effect of a homogeneous composition on the average ESG rating in the context of the EU–US comparison. To achieve a homogeneous distribution between the two groups of companies, new average scores are calculated by weighting the average sectoral ESG ratings of the US companies to the corresponding sector share of EU companies: Hence, a ‘hypothetical’ US group is designed. This allows a more precise comparison of the ratings, eliminating the differences due to the different distribution across sectors.

By comparing this rating to the original score of the US group of companies, equal to 56.37 (Table 2.2), we note that the hypothetical score obtained through a homogeneous sectoral composition is now only slightly higher by 0.36 or +0.64%.

In conclusion, by applying the same sectoral composition to US and EU companies, there is no significant reduction in the ESG rating gap. Hence, the distribution across sectors of the companies sampled for the

**Table 2.5** Calculation of ESG scores for a hypothetical US group of companies

<i>Sectors</i>	<i>Sector share EU (%)</i>	<i>Mean ESG US</i>
Basic Materials	12	62.14
Consumer Cyclical	14	52.99
Consumer Non-Cyclicals	8	64.14
Energy	6	56.59
Financials	22	55.75
Healthcare	6	57.18
Industrials	15	53.02
Technology	5	56.13
Telecommunications	5	54.67
Services		
Utilities	7	60.45
<b>All Sectors (weighted)</b>		<b>56.73</b>

EU–US comparison does not explain the identified gap in ESG ratings and Hypothesis no. 1 is not supported.

#### 2.4.2.2 *Hypothesis 2: Sustainability Reporting Practices*

The information collected from the GRI database allows to observe some trends in the sustainability reporting practices of the sampled companies over the years 2008–2018 (referring to fiscal years 2007–2017).

The first two columns of Table 2.6 show the evolution of sustainability reporting practices for US and EU top-capitalized companies by highlighting, for each of the two groups and each year, the share of companies issuing a GRI sustainability report. These results are obtained by extracting from each sample every company obtaining any *GRI score* higher than 0, i.e., regardless of the quality of reporting. Apart from a general progress of sustainability reporting, it can be noted that the advantage of the EU companies over the US (around 20%) remains stable over the years until 2016 [where the data collection for 2017 might be still incomplete at the time we painstakingly collected the data manually from the GRI database].

However, it is necessary to nuance the sustainability reporting behavior by considering its quality. Indeed, as noted above one of the determinants of this reporting can be the legitimization of poor sustainability performance; therefore, the simple fact of issuing a report does not say enough

**Table 2.6** Percentage of GRI reporting companies and mean GRI score—years 2007–2017

	<i>% GRI reporting companies</i>		<i>Mean GRI score</i>	
	<i>US</i>	<i>EU</i>	<i>US</i>	<i>EU</i>
2007	12	35	0.69	0.69
2008	15	39	0.69	0.69
2009	20	42	0.70	0.70
2010	30	49	0.65	0.68
2011	36	53	0.70	0.75
2012	42	59	0.68	0.74
2013	45	63	0.62	0.67
2014	46	67	0.66	0.74
2015	49	71	0.72	0.75
2016	42	69	0.69	0.74
2017	54	54	0.67	0.76

about the intention to convey one's sustainability/ESG performance in a transparent manner, while the quality of the information delivered can make the difference in this respect. By considering the different *GRI scores* obtained by the companies, the two last columns of Table 2.6, we note that EU companies generally exhibit higher reporting quality. Here, a Transatlantic gap seems to emerge since 2010, when US companies have been distinctly more willing to issue non-GRI reports, less standardized or comparable, and arguably less complete of ESG data.

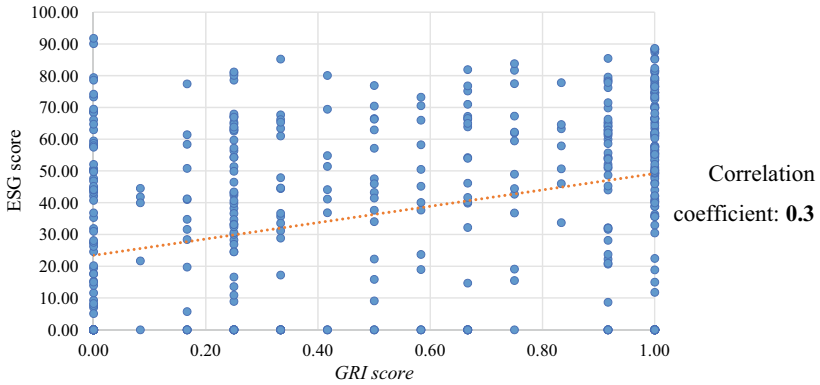
Company-level GRI scores are then useful to test Hypothesis no. 2, according to which the EU–US gap in ESG ratings can (also) be explained by the fact that companies issuing high-quality sustainability reports obtain higher ESG scores. This hypothesis is verified by calculating the correlation between GRI scores and ESG ratings. This analysis concerns FF.YY. 2015–2017 to focus on the most recent years; an average of the values of these three years was calculated for both numerical variables for each company, in order to minimize potential errors or data.

These results show significant positive correlations between the quality of sustainability reporting (expressed by the *GRI score*) and the ESG rating (Figs. 2.2 and 2.3). These findings confirm the hypothesis with respect to the companies having a high *GRI score*: For example, in the

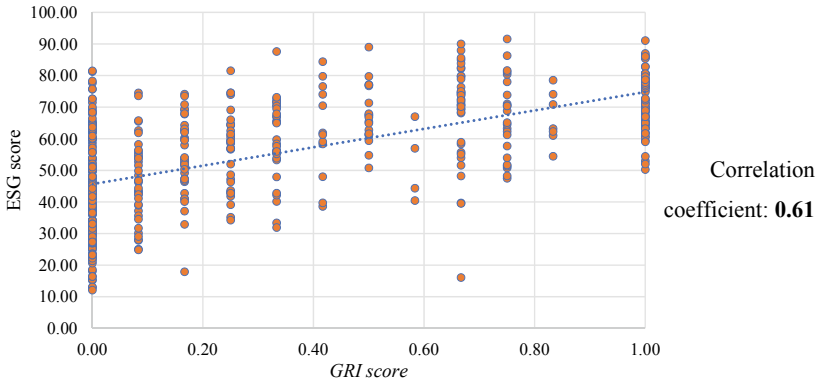


graphs—and more distinctly for the US—the companies with highest-quality sustainability reports (*GRI score* = 1.00) are more concentrated around high ESG ratings (e.g., >40.00).

Moreover, the correlation is stronger for the US than for the EU companies. This finding is expected in light of voluntary disclosure theory, seen above: where there is no reporting obligation, as in the US, those



**Fig. 2.2** Correlation between quality of sustainability reporting and ESG score, EU companies



**Fig. 2.3** Correlation between quality of sustainability reporting and ESG score, US companies

issuing high-quality sustainability reports are generally the companies with the best ESG performance—ideally represented by the highest ESG ratings—because they can easily be transparent about their operations, releasing more complete and accurate ESG data. Instead, where sustainability reporting is mandatory, such as in the EU, the quality of the report of a company is less likely to reflect its sustainability/ESG performance. Hence, it is not surprising that the *GRI score* is less correlated to the ESG rating for EU companies.

In conclusion, the two findings that, vis-à-vis their US homologues, EU companies more frequently engage in sustainability reporting and have, on average, higher reporting quality does help explain the Transatlantic gap in ESG ratings, supporting Hypothesis no. 2.

### 2.4.3 *Robustness Checks Through Econometric Analysis*

The results we obtained through the previous descriptive approach are now put to the test of an important robustness check. Specifically, we run our econometric regressions to verify whether our previous results are confirmed.

Table 2.7 reports the results of OLS regressions based on the data presented above where for each company the dependent variable is either the total ESG rating or the E rating or the S rating or the G rating. Among the regressors, we have included a set of the usual determinants of firm performance. Namely, the set includes the book-to-market ratio (BtM), the operating profitability (OP), the assets growth rate (INV), and the log of the market capitalization (ME). Each specification includes the time, sector, and firm fixed effects, with t-statistics in square brackets and standard errors clustered at firm-level. Nevertheless, given the scope of this chapter, our utmost interest is on three further independent variables: the GRI score (GRI) defined as above, D\_EU a dummy variable taking one if the firm is European and zero otherwise, and the interaction variable  $GRI \times D\_EU$  obtained multiplying GRI by D\_EU.

Interestingly, three results stand out. First, we confirm the positive and statistically significant effect of the GRI score where companies engaging more effectively in non-financial disclosure obtain higher levels of ESG, E, S, and G. Second, D\_EU has a positive and significant coefficient pointing out that EU companies tend to have higher sustainability ratings even after controlling for the usual determinants of firm performance and for

time, sector and firm fixed effects. Last, the interaction variable takes a negative value and is generally significant.

By and large, this is in line with the findings of D'Apice et al. (2021) of a stronger role of the GRI score in promoting higher ESG ratings for US-Based holdings vs EU-based holdings, where the fact that non-financial reporting is mandatory for larger sized companies in the EU makes this reporting less informative of a true pro-green corporate approach. On the same line, Clarkson et al. (2013) find “a signaling role for voluntary environmental disclosures. Accordingly, transparent voluntary environmental disclosures increase firm value provided that they are perceived as credible by investors and convey information incremental to what investors already know about the firm’s environmental performance. A second potential role for such disclosures is to lower the firm’s cost of capital as a consequence of reducing information asymmetry about environmental performance. To serve this role, once again, they have to be viewed as credible and convey incremental information.”

## 2.5 CONCLUSIONS

Comparing US companies listed in the S&P500 with a similar group of listed European companies, we have shown that on average EU-listed companies enjoy 14% higher ESG ratings than US companies (64.43 for European companies versus 56.37 for the US ones). Breaking it down, the advantage of European companies is maximum in the E—Environmental component (+22.5%; 63.08 against 51.48), intermediate in the S—Social component (+16.0%; 68.35 against 58.90), and negligible in the G—Governance component (+0.4%; 59.88 against 59.66).

Looking for the determinants of such EU advantage, we could rule out the different sectoral composition of EU companies which, at the most, would give EU companies a minor advantage on US companies. Instead, we could detect a strong EU advantage in terms of quality sustainable reporting. Between 2011 and 2017 almost two thirds of the EU-listed companies included in the sample (62.29%) submitted GRI reports compared to only 44.86% of the US companies. Moreover, the quality of the GRI reports was 8.51% more accurate for the EU vs the US companies. Considering that this larger diffusion of sustainability reporting is also due to the partly mandatory legal set-up, we could envisage that the EU directives were partly at the basis of the ESG advantage of the European companies.

Finally, once accounting for firm performance variables and for sector, time and firm controls, our econometric analysis confirmed both that EU-listed companies enjoy on average higher ESG ratings than US listed companies and that more and better GRI reporting associates with higher ESG ratings for all firms considered in the analysis. However, we also found a minor negative effect. Namely, the positive impact of engaging in more accurate GRI reporting is smaller for EU companies compared to their US counterparts. Thus, the message is clear. Although the partly mandatory nature of the sustainability reporting gives an advantage to EU companies, that advantage has its own limits. Namely, compulsory GRI reporting is less informative of a commitment by companies to engage in the green transition. Therefore, the US companies subscribing to GRI reporting in their constituency, where sustainable reporting is not mandatory, are able to give a stronger signal of their green commitment than it happens for EU companies.

Some caveats are in order. First, we used Asset4 data and, thus, our analysis might not be entirely generalizable to other ESG ratings issued by different providers. Second, the EU vs US advantage might be unstable over time and what we measured up to 2017 could have already changed in more recent years.

As to possible new avenues for future research enticed by our results, we might suggest three areas. First, it would be interesting to distinguish between financial and non-financial companies since financial regulators have been scaling up faster than other regulators to encompass green assets ratios and other ways to consider how the climate crisis builds new types of risks for their supervised entities. Second, the bulk of our analysis used GRI reporting as the only proxy for sustainable reporting. However, even though the GRI continues to be the most widespread sustainability reporting framework, it would be interesting to study whether using other non-financial reporting frameworks to proxy for firms' approach to the green transition would lead to analogous results. Finally, it could be interesting to analyze whether a company's ESG rating tends to increase not only in terms of the quality of its GRI reporting but also if that company subscribes to more non-financial reporting schemes thus possibly showing a higher engagement to the sustainable transition.

## ANNEX

**Table 2.7** Panel regression of EGS over GRI score

	(1) <i>ESG</i>	(2) <i>E</i>	(3) <i>S</i>	(4) <i>G</i>
GRI	0.0676*** [7.1761]	0.0797*** [7.2984]	0.0941*** [8.8934]	0.0789*** [6.0868]
GRI × D_EU	-0.0446*** [-3.4061]	-0.0693*** [-4.2838]	-0.0346** [-2.0987]	-0.0277 [-1.4037]
D_EU	0.0273*** [7.0236]	0.0429*** [8.2243]	0.0311*** [6.3977]	0.0188*** [3.1324]
BtM	0.0143* [1.9251]	0.0173** [2.2227]	0.0281** [2.8717]	0.0177 [1.2112]
OP	-0.0001** [-2.4313]	0.0000 [-1.0669]	0.0000 [0.3254]	0.0000 [-0.6106]
INV	-0.0047* [-1.739]	-0.0129*** [-3.9365]	-0.0137*** [-4.402]	-0.0030 [-0.6044]
log(ME)	0.0094* [1.7084]	0.0161** [2.0989]	0.0747*** [12.8401]	0.0471*** [6.0098]
Const	0.2330*** [2.6142]	0.0711 [0.573]	-0.7274*** [-7.4418]	-0.2581* [-1.9454]
R <sup>2</sup> adj	0.3710	0.2822	0.1668	0.0474
Obs	5141	4644	5141	5141

The table reports the model's estimated coefficients, where the dependent variable is the overall-ESG score or the single E, S, and G dimensions. The independent variables are instead the GRI score (GRI), a dummy variable taking one if the firm is European and zero otherwise, the book-to-market ratio (BtM), the operating profitability (OP), the assets growth rate (INV), and the log of the market capitalization (ME). Each specification includes the time, sector and firm fixed effects, with t-statistics in square brackets and standard errors clustered at firm-level.

*Note* \*\*\* 1%; \*\* 5%; \* 10%

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