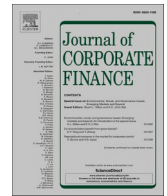




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# Firms and social responsibility: A review of ESG and CSR research in corporate finance

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## ABSTRACT

We review the financial economics-based research on Environmental, Social, and Governance (ESG) and Corporate Social Responsibility (CSR) with an emphasis on corporate finance. In doing so we focus on the most debated and researched issues. Although a firm's ESG/CSR profile and activities are shown to be strongly related to the firm's market, leadership and owner characteristics as well its risk, performance and value, there still exist conflicting hypotheses and results that we show are not resolved, leading to continued questions and a need for more research.

## 1. Introduction

The extent to which corporations benefit or harm social welfare has received increasing attention from many quarters. Corporate actions in this arena are often referred to as Environmental, Social and Governance (ESG), or Corporate Social Responsibility (CSR).<sup>1</sup> Interest in ESG/CSR from the corporate perspective is indicated by the Governance & Accountability Institute which, in 2018, reported that 86% of S&P 500 firms released sustainability or corporate responsibility reports compared with just under 20% in 2011.<sup>2</sup> Investor interest in ESG/CSR is highlighted by the fact that in 2019 alone, 300 mutual funds with ESG mandates received a total of \$20 billion in net flows, which was 4 times the 2018 total.<sup>3</sup> Moreover, there are currently more than 3000 institutional investors and service providers that have signed onto the Principles of Responsible Investment (PRI), an agreement to incorporate ESG/CSR issues into their investment analysis and decision-making processes. Assets under management for these investors has increased from \$6.5 trillion in 2006 to over \$86 trillion in 2019.<sup>4</sup>

Just as there has been increased interest by investors and corporate managers, the academic research in ESG/CSR has expanded

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<sup>1</sup> In this paper, we treat the terms ESG and CSR as if they are interchangeable and use the terminology ESG/CSR.

<sup>2</sup> <https://www.ga-institute.com/press-releases/article/flash-report-86-of-sp-500-indexR-companies-publish-sustainability-responsibility-reports-in-20.html>

<sup>3</sup> <https://www.morningstar.com/articles/961765/sustainable-fund-flows-in-2019-smash-previous-records>.

<sup>4</sup> These signatories, which include most of the largest institutional investors, have signed on to six principles including the first two: (1) We will incorporate ESG issues into investment analysis and decision-making processes, (2) We will be active owners and incorporate ESG issues into our ownership policies and practices (<https://www.unpri.org/pri/about-the-pri>). It should be noted that it does not yet appear to be the case that all of these assets are invested according to the PRI principles (<https://www.morningstar.com/articles/961765/sustainable-fund-flows-in-2019-smash-previous-records>).

greatly. In this paper we review the research in corporate finance on ESG/CSR issues with a focus on the most important and most debated questions. Much of the earliest work in the area was developed in the *Journal of Corporate Finance* so it seems only fitting on the 25th anniversary of the journal to focus our review in the context of corporate finance. Although closely related and important, we do not review the extensive investments literature on ESG-Investing or Socially Responsible Investing (SRI) nor the extensive culture, trust and social capital and climate finance literature. Similarly, there is an extensive literature on corporate governance that we do not address, rather, we emphasize key aspects of governance that the papers we review address in their analyses.<sup>5</sup> Further, in order to keep this review to a manageable length, we restrict our attention primarily to the corporate finance literature that deals with the questions we are addressing. In doing so we acknowledge that we are omitting a wide and influential literature on ESG/CSR that exists in other disciplines.<sup>6</sup>

Before discussing the research on ESG/CSR, we first consider the terminology and its evolution. ESG is an acronym developed in a 2004 report by 20 financial institutions in response to a call from Kofi Anon, Secretary-General of the United Nations.<sup>7</sup> As it implies, ESG refers to how corporations and investors integrate environmental, social and governance concerns into their business models. CSR traditionally has referred to corporations' activities with regard to being more socially responsible, to being a better corporate citizen. One difference between the two terms is that ESG includes governance explicitly and CSR includes governance issues indirectly as they relate to environmental and social considerations. Thus, ESG tends to be a more expansive terminology than CSR. As noted, we do not review the vast literature solely focused on corporate governance, however, our focus on the environmental and social aspects of ESG/CSR allow us to examine the interrelationships between a company's governance structure and its environmental and social activities.

We begin our review by describing the variables that have been shown to be associated with, caused by, or outcomes of ESG/CSR attributes of a firm. These include characteristics of the markets in which the firms operate, the leadership of the firm, and the firm's owners. We then consider how a firm's risk may be related to its ESG/CSR profile, and follow with an analysis of the literature on the relation between ESG/CSR characteristics and firm performance or value.

In corporate finance-related studies, authors have concluded that a large number of characteristics and behaviors are related to firms' ESG/CSR choices, as both dependent and independent variables. While most studies pose a specific and perhaps narrow research question, many, if not all, ultimately speak to a broader issue: are ESG/CSR activities beneficial to shareholders, or an outcome of poor governance? We therefore proceed through our discussion of the literature with this perspective in mind. Finally, we conclude with a discussion of questions that remain unanswered and potential areas in which additional research is needed.

## 2. Firms' ESG/CSR attributes and market characteristics

Several studies examine how firms' ESG/CSR attributes relate to characteristics of the markets in which firms operate. Often these are country- or state-level characteristics based on the geographic locations of firms, or characteristics of the industries in which firms operate. While not always explicit about the direction of causality, the studies we review in this section exclusively use the firm's ESG/CSR performance as the dependent variable.

In Table 1 we list the market characteristics that have been proposed to relate to a firm's ESG/CSR attributes, the direction of the estimated relationship, and we cite the article that examines the characteristic. As the table shows, the market characteristics for which evidence suggests a relationship with ESG/CSR activities are often based on the geographic locations of firms. In fact, Cai et al. (2016) and Liang and Renneboog (2017b) provide evidence that country characteristics appear to be quite important in explaining firm's ESG/CSR activities. Both studies employ cross-country samples in which their measures of ESG/CSR are based on ratings from the MSCI ESG Intangible Value Assessment (IVA) database. Cai, Pan, and Statman show that variation across countries is associated more strongly with country factors than firm characteristics. The authors also provide evidence that economic development, law, and culture play a role in these differences. Specifically they show that firms' IVA ratings are significantly related to a country's economic development (as proxied by per capita income), a country's legal system (as proxied by whether there exist laws that encourage competition and whether there exist strong civil liberties and political rights), and a country's culture (using proxies for harmony and autonomy).<sup>8</sup> Liang and Renneboog (2017b) conclude that legal origin is the strongest predictor of firms' ESG/CSR adoption and performance, more-so than political institutions, regulations, social preferences and a firm's own financial and operational performance.

Evidence also shows that country attributes appear to be less important for companies whose operations span borders or are cross-listed (Cai et al. 2016). Related but distinct from this, Boubakri et al. (2016) find that the act of cross-listing itself causes firms to seek higher ESG/CSR reputations. They test their argument through an identification strategy in which they compare changes in ESG/CSR scores around cross-listing or de-listing events relative to a matched sample of firms that do not experience the cross-listing or de-listing events.

Within-country variation in market characteristics is also important. For example, at the state level in the United States, Di Giuli

<sup>5</sup> See, for example, Benson and Humphrey (2008), Renneboog, Ter Horst, and Zhang (2008a,b), Humphrey et al. (2012), and Guiso et al. (2006).

<sup>6</sup> See, for example, Christensen et al. (2018) for a review of CSR and sustainability reporting standards, Servaes and Tamayo (2017) for a review of the importance of social capital, Renneboog, Ter Horst, and Zhang (2008a, b) for a review of the SRI literature, and Margolis et al. (2007) for a meta-analysis of results in top management journals on the link between CSR and firm performance. We also do not review the extensive fraud, corruption and tax evasion literature. See, also Matos (2020) for a contemporaneous review focused on institutional investors and responsible investing.

<sup>7</sup> See "Who Cares Wins" <https://www.ifc.org>.

<sup>8</sup> For the latter three the authors show the results hold after the variables are orthogonalized against per capita income.

**Table 1**  
Market characteristics and ESG/CSR.

Primary Variable	Independent/Dependent Variable of Interest	Sign	Citation
Country economic development	Independent	+	Cai et al. (2016)
Lack of civil liberties and political rights	Independent	+	Cai et al. (2016)
Harmony	Independent	+	Cai et al. (2016)
Autonomy	Independent	+	Cai et al. (2016)
Country legal origin: Civil	Independent	+	Liang and Renneboog (2017b)
Cross-listing	Independent	+	Boubakri et al. (2016)
Multinational indicator	Independent	+	Cai et al. (2016)
Political leanings of state's citizens	Independent		
Democrat		+	Di Giuli and Kostovetsky (2014)
Republican		–	Di Giuli and Kostovetsky (2014)
Social capital of county	Independent	+	Jha and Cox (2015)
Industry	Independent	+/-	Borghesi et al. (2014)

This table summarizes market characteristics proposed to relate to ESG/CSR in the academic literature on ESG/CSR in corporate finance. For each paper cited, we report the variable of interest and whether it is an independent or dependent variable, as well as the sign of the relation with ESG/CSR, where 0 indicates that no significant relation was found.

and Kostovetsky (2014) present evidence that the political leaning of the state in which the firm has its headquarters affects the firm's KLD scores. At the county level in the United States, Jha and Cox (2015) provide evidence that a firm's KLD score is related to the social capital in the region of its headquarters, where social capital is measured through an index that depends on four components: the census mail response rate, the votes cast in presidential elections, and the number of associations and nonprofit organizations each per 10,000 people. In total these studies provide strong evidence consistent with the view that the characteristics of firms' local markets are important in determining their ESG/CSR activities.

Firms' ESG/CSR practices also tend to have a strong industry component. Using six of the KLD categories (omitting the corporate governance category), Borghesi et al. (2014) find some industries, such as consumer goods and computer hardware, have above-average scores and other industries, such as aircraft and petroleum and natural gas, have below-average scores. The industry effect is so significant that it is common for researchers to use ESG/CSR scores demeaned by industry, rather than the raw scores themselves. In fact, while some rating providers score firms relative to the universe of firms that the data provider covers, others use industry benchmarking when constructing measures of firms' ESG/CSR practices.

### 3. Firms' ESG/CSR practices and boards, executives, and executive compensation

A large literature examines relations between characteristics of firm management and the environmental and social aspects of a firm's ESG/CSR activities. In addition to documenting associations or causal relations, many of these papers ultimately contribute to our understanding of **how a firm's ESG/CSR profile relates to its internal governance**. One of the primary tensions in this literature is **whether ESG/CSR performance is the outcome of well-governed managerial decisions, or it arises when managers are acting in their own interests**. (See, for example, Bénabou and Tirole (2010).) In some sense researchers are using observable characteristics of the board or firm management to proxy for latent internal governance in an effort to further our understanding of the drivers of ESG/CSR actions. Consistent with this, **most of the papers we review in this section use a firm's ESG/CSR scores as the dependent variable**. We focus on several measures of internal governance that have been used previously in the literature, with emphasis on corporate leadership characteristics (boards and management). Table 2 reports the specific characteristics considered in the papers we discuss, the direction of the estimated relationship, and the article citation.

Iliev and Roth (2020) examine the influence of boards on ESG/CSR. Specifically, the authors study U.S. directors who serve on the boards of international firms exposed to changes in environmental and social regulations and reporting requirements. The rationale is that such directors are likely to transmit information about these changes to the U.S. boards on which they also serve, and the information transmission provides a basis for causal inference. The central finding is that the **U.S. firms that have directors exposed to the changes in regulations and reporting requirements experience an increase in ESG/CSR performance (using the MSCI KLD scores) of some 4.4%**. The authors also note that the changes are concentrated in environmental rather than social performance, and that environmental improvements are primarily observed in so-called 'clean' industries. In contrast, the authors also document that firms in 'dirty' industries improve their social but not their environmental performance (which the authors interpret as evidence of greenwashing), and that firms that are financially weaker are less likely to improve their environmental scores, suggesting that the costs of improving ESG/CSR scores could be an important factor.

Other studies provide evidence that **firms' ESG/CSR activities are associated with variation in CEO and board characteristics**. One demographic variable that is commonly found to be significant is **gender**. For example, Borghesi et al. (2014) report that U.S. firms with women as corporate leaders or board members have significantly higher ESG/CSR scores. In addition to finding that S&P 500 firms with female CEOs have more socially responsible corporate practices, Cronqvist and Yu (2017) examine the gender of the CEO's children. The authors propose that CEOs' daughters may exhibit stronger "other-regarding" preferences than their sons, and that CEOs with daughters may internalize the preferences of their children. The authors find that executives with a daughter are employed by firms with ESG/CSR scores about 9.1% higher than the median firm's rating, and the magnitude equals about one quarter of the effect of the firm's CEO being a woman. Hegde and Mishra (2019) conclude that firms with married CEOs have significantly higher aggregate

**Table 2**  
Firm leadership characteristics and ESG/CSR.

Primary Variable	Independent/Dependent Variable of Interest	Sign	Citation
Multinational board members	Independent	+	Iliev and Roth (2020)
Women leaders	Independent	+	Borghesi et al. (2014)
	Independent	+	McGuinness et al. (2017)
	Independent	+	Cronqvist and Yu (2017)
	Independent	+	Dyck et al. (2020)
CEOs with daughters	Independent	+	Cronqvist and Yu (2017)
Married CEOs	Independent	+	Hegde and Mishra (2019)
CEO age	Independent	–	Borghesi et al. (2014)
Political leanings of CEO and board			
Democrat	Independent	+	Di Giuli and Kostovetsky (2014)
Republican	Independent	–	Di Giuli and Kostovetsky (2014)
Political leanings of CEO	Independent	0	Borghesi et al. (2014)
CEO confidence	Independent	–	McCarthy et al. (2017)
Employee geography	Independent	+	Landier et al. (2007)
CEO Pay	Dependent	+	Gillan et al. (2010)
	Independent	+	Ferrell et al. (2016)
	Dependent	+	Jian and Lee (2015)
	Independent	0/–	Borghesi et al. (2014)
	Independent	+	Ikram et al. (2019)
	Dependent	0	Masulis and Reza (2015)

This table summarizes firm leadership characteristics proposed to relate to ESG/CSR in the academic literature on ESG/CSR in corporate finance. For each paper cited, we report the variable of interest and whether it is an independent or dependent variable, as well as the sign of the relation with ESG/CSR, where 0 indicates that no significant relation was found.

ESG/CSR scores, a result driven primarily by the diversity and employee relations sub-scores, and not the other sub-categories (product, community, environment, and human rights).

Work in international settings also provides support for the hypothesis that gender matters in that women in leadership positions are associated with higher ESG/CSR scores. For example, McGuinness et al. (2017) find gender diversity in both the board and executive suite are associated with improved ESG/CSR scores for Chinese firms. More recently, Dyck, Lins, Roth, Towner, and Wagner (2020) study firms across 41 countries and find that the presence of women on boards not only improves environmental performance, but also has a relatively large effect compared to the other firm and board characteristics that they study. Moreover, the gender effects persist in the context of a quasi-exogenous shock - the legal mandate of female board representation - which leads the authors to conclude that the gender effect is causal.

Two other significant CEO attributes that have been documented as being linked to firms' ESG/CSR profiles: CEO age and CEO confidence levels. Borghesi et al. (2014) conclude that younger CEOs are significantly more likely to lead firms with higher ESG/CSR scores. McCarthy et al. (2017) report a negative relationship between CEO confidence and firm ESG/CSR performance. They suggest that this result is attributable to firms' ESG/CSR scores having a hedging component and overconfident CEOs being less likely to hedge.

Focusing on a different type of leadership demographic, and using a restrictive measure of ESG/CSR (employee friendliness), Landier et al. (2007) provide evidence that managers become more employee-friendly when the employees are in close geographic proximity.<sup>9</sup> They attribute this result as being in part due to the observation that managers would have higher private costs in firing employees who are neighbors.

Several studies consider the political stance of the corporate leaders, but arrive at different conclusions. Di Giuli and Kostovetsky (2014) provide evidence that U.S. firms with CEOs, directors, and founders that make larger donations to Democratic (rather than Republican) candidates tend to have higher ESG/CSR scores. The authors also hypothesize that the political views of the firm's stakeholders (employees, suppliers, shareholders, customers, and regulators) can affect firms' ESG/CSR choices. Using geographic clustering of political views as sources of exogenous variation in the firm's internal and external political environments, the authors conclude that the political leanings of firms' founders, directors, and CEOs are related to firms' ESG/CSR choices.

Using the same source of variation as Di Giuli and Kostovetsky (2014), Borghesi et al. (2014) offer an opposing view. They conclude that, **after controlling for CEOs who donate to both Democrats and Republicans, the relation between CEOs who donate to Democrats and their firms' ESG/CSR scores is insignificant.** It is unclear what is causing the differences in results. They could be driven by the presence of non-CEOs in the Di Giuli and Kostovetsky sample (which includes directors and founders) since the Borghesi, Houston, and Naranjo sample is limited to CEOs; they could be driven by the differences in sample periods, Borghesi, Houston, and Naranjo data covers the years 1992 to 2006 and the Di Giuli and Kostovetsky covers the years 2003 to 2009; or they could be driven by the differences in sample firms as the underlying KLD sample firms increase substantially over the period.

The link between **CEO compensation and a firm's ESG/CSR activities has also been examined in a number of publications.** The agency cost view is that CEOs obtain non-pecuniary benefits from corporate spending on ESG/CSR activities and do so at the expense of

<sup>9</sup> Landier et al. (2007) do not use either of the terms ESG or CSR in discussing employee-friendly managers, but they do use the KLD employee strength scores to derive their measure of employee-friendly managers.

shareholders. However, if boards reduce the CEO's pay accordingly, then spending on ESG/CSR activities might be consistent with optimal contracting, or good governance, and not a manifestation of agency problems. Several papers provide evidence consistent with the former view. For example, Gillan et al. (2010) find that CEOs at firms with higher ESG/CSR performance have lower salaries suggesting that, even if ESG/CSR expenditures are indicative of CEO rent seeking they are substitutes for, rather than complements to, CEO pay. Similarly, Jian and Lee (2015) find a negative association between ESG/CSR and CEO pay, and further, that CEOs are rewarded for "normal" levels of ESG/CSR investment, but penalized when ESG/CSR investment deviates from the expected amount. Ferrell et al. (2016) also find that a measure of excess CEO pay is negatively correlated with ESG/CSR scores and conclude that CEOs with high pay that is unrelated to performance invest less in ESG/CSR activities, which supports the good governance view. Further supporting their hypotheses, the authors document a significantly positive link between a firm's pay-for-performance sensitivity and its ESG/CSR scores.

In contrast, some studies do not find a relationship between compensation and measures of ESG/CSR. For example, while Borghesi et al. (2014) report a negative relation between total CEO compensation and an employee subcategory of ESG/CSR investment, they find no evidence of a link between CEO total compensation and a firm's aggregate ESG/CSR score. Using a different measure of ESG/CSR, Masulis and Reza (2015) find no evidence that CEO compensation is lower for firms that make large charitable contributions.

More recently, Ikram et al. (2019) examine proxy statements for S&P 500 firms and report that more than 40% state that ESG/CSR goals are included in executive contracts. Of those, health and safety considerations dominate (with prevalence in the extraction and manufacturing sectors) while customer satisfaction runs a close second (and is particularly dominant in retail). Relatively few sample firms tied pay to sustainability or corporate responsibility. Overall the authors conclude that the variation in ESG/CSR considerations in CEO pay across firms and industries supports an optimal contracting view. Moreover, their results suggest that such contracts are associated with higher future ESG/CSR ratings. An open question is the extent to which the presence of pay criteria focusing on specific items, for example, health and safety concerns or customer satisfaction, might reflect regulatory requirements or a recognition of firm value drivers as opposed to a commitment to ESG/CSR performance per se.

#### 4. Firms' ESG/CSR attributes and ownership characteristics

A number of studies examine links between types of ownership structures and firms' ESG/CSR choices. As in previous sections, the articles discussed here often contribute to our understanding of whether a firm's ESG/CSR activities are in the interest of shareholders or the outcome of agency problems. Many papers examine this question using measures of ownership structure as proxies for external governance, and using a firm's ESG/CSR score as a dependent variable with an interpretation that it exhibits good or poor external governance. Alternatively, other work uses ownership structure as a measure of shareholder preferences, and examines how a firm's ownership structure responds to its ESG/CSR performance, i.e., the ESG/CSR score serves as the independent variable. Therefore, this research examines both directions of causality; either shareholders cause firms to change their ESG/CSR policies or certain ESG/CSR profiles attract certain types of shareholders. Further complicating the issue, researchers also face challenges relating to variables potentially correlated with either ownership or ESG/CSR scores, such as performance and value.

Authors in this area have employed different definitions of ESG/CSR and focus on different types or structures of ownership. Below we separate the research based on whether it studies ownership by institutional investors, families or governments. In Table 3 we detail the ownership variables that have been used in this research along with whether each is considered as an independent or dependent variable, the direction of the estimated relationship, and the article citation.

##### 4.1. Institutional investor ownership

Institutional investors are by far the largest owners of equity securities in the United States, the country on which many of the studies focus. As mentioned earlier, examinations of institutional investor ownership patterns can help us understand shareholder preferences with respect to ESG/CSR, as well as how owners might affect ESG/CSR through their role as monitors. Thus, the relationship between institutional ownership and firms' ESG/CSR activities has generated a large number of studies, not all of which agree on the form or sign of the relationship. In addition, they use different measures of firms' ESG/CSR profiles.

Regarding associations reflective of shareholder preferences, Borghesi et al. (2014) find that institutional ownership is negatively related to firms' ESG/CSR scores and Gillan et al. (2010) provide evidence that during their sample period when firms improve their ESG scores, institutional ownership actually declines. Several studies, however, have shown that this relationship is nuanced. Nofsinger et al. (2019) conclude that, although institutional ownership is not positively related to high environmental and social scores, it is negatively related to low environmental and social scores. Consistent with this result and examining only environmental scores, Chava (2014) finds that institutional ownership is lower for firms with worse environmental profiles. Fernando et al. (2017) also focus on environmental strengths and concerns and conclude that a relationship exists between institutional ownership and the firms' environmental performance, but that it differs across the range of scores. Firms with very high or very low environmental scores, i.e., those with the highest strengths or the greatest concerns, have lower institutional ownership than firms in the middle range of environmental performance.

Two studies focus on categorizations of institutional investors and conclude that the particular type of institutional investor is important for understanding shareholder preferences. Hong and Kacperczyk (2009) show that socially constrained institutions (e.g. pensions) have a distaste for socially irresponsible stocks. As a consequence the authors argue and provide evidence that these stocks tend to be disproportionately held by less constrained institutions (e.g. mutual funds and hedge funds). Researchers have also categorized mutual fund ownership according to the portfolio manager's political stance. Hong and Kostovetsky (2012) find that mutual



**Table 3**  
Ownership characteristics and ESG/CSR.

Primary Variable	Independent/Dependent Variable of Interest	Sign	Citation
Size of instl ownership	Independent	–	Borghesi et al. (2014)
	Independent	+ / –	Nofsinger et al. (2019)
	Independent	+	Chava (2014)
	Independent	+ / –	Fernando et al. (2017)
	Independent	–	Gillan et al. (2010)
Size of social-norm-constrained instl ownership	Independent	+	Chen et al. (2020)
	Dependent	+	Hong and Kacperczyk (2009)
Size of Democratic-leaning instl ownership	Dependent	+	Hong and Kostovetsky (2012)
	Independent	+	Gloßner (2019)
Size of long-term instl ownership	Dependent	+	Starks et al. (2019)
	Independent	+	Dyck et al. (2019)
Instl investor engagement	Independent	+	Dimson et al. (2015)
	Independent	+	Barko et al. (2018)
	Independent	+	Hoepner et al. (2019)
	Independent	+	Dimson et al. (2018)
	Independent	+	Naaraayanan et al. (2019)
	Independent	+	Cao et al. (2019)
	Independent	+	Kim et al. (2019)
	Independent	–	Hwang et al. (2017)
Change in instl ownership horizon	Independent	–	Abeysekera and Fernando (2020)
Change in instl ownership	Independent	+	Gillan et al. (2020)
Family ownership	Independent	–	El Ghoul et al. (2016)
	Independent	+	Hsu et al. (2018)
State ownership	Independent	+	Boubakri et al. (2019)
	Independent	–	McGuinness et al. (2017)

This table summarizes ownership characteristics proposed to relate to ESG/CSR in the academic literature on ESG/CSR in corporate finance. For each paper cited, we report the variable of interest and whether it is an independent or dependent variable, as well as the sign of the relation with ESG/CSR, where 0 indicates that no significant relation was found.

fund managers that donate to Democratic politicians underinvest in socially irresponsible stocks relative to others. This is consistent with research finding similar effects of the political preferences of firm managers and firm investment in ESG/CSR (see discussion of Di Giuli and Kostovetsky (2014) in Section 3).

A number of researchers propose that causality runs in the opposite direction, i.e., that the **presence of institutional shareholders affects managers' ESG/CSR choices**. Gollier and Pouget (2014) construct a theoretical model in which an activist can invest and turn a socially irresponsible firm into a socially responsible firm, reaping a gain in doing so. The empirical studies focus on tests of whether institutional investors, through their equity ownership and engagement, “cause” firms to increase their environmental and social performance. Dyck et al. (2019) employ the BP Deepwater Horizon oil spill as a source of exogenous variation in the importance that institutional investors assign to firms' environmental commitments and find results consistent with this hypothesis.

Several studies employ proprietary information from single institutional investors. For example, Dimson et al. (2015) examine corporate social responsibility engagements by one institutional investor from which they were able to obtain data. They conclude that the investor's actions increase target firms' ESG/CSR activities. Using a different large investor's engagements, Barko et al. (2018) find that the engagement itself is associated with higher ESG/CSR scores for firms that were in the lower ESG/CSR quartiles, but lower ESG/CSR scores for those firms in the highest ESG quartile. With data from still another large investor Hoepner et al. (2019) find that the successful engagements on environmental issues are accompanied by subsequent reductions in downside risk. Similarly, Naaraayanan et al. (2019) examine the unexpected focus on environmental issues by the New York City Pension System's Board Accountability Project and, using plant-level data, provide evidence that target firms subsequently have lower environmentally harmful emissions.

**Peer effects among investors or across firms can be important as well.** Dimson et al. (2018) find that coordinated activism among institutional investors involved with the PRI affects firms' ESG/CSR choices. Most of these investors employed “behind the scenes” engagement strategies (McCahery et al. 2016). Using data from the public engagement strategy of submitting shareholder proposals, Cao et al. (2019) provide evidence that when a firm has a narrow passage of an ESG/CSR proposal and then implements the recommendations of that proposal, its peer firms subsequently adopt similar ESG/CSR practices. Consequently the engagement can affect not only the firm being engaged, but also other firms in the same industry.

Other studies use alternative identification strategies to examine whether institutional investors influence firms' ESG/CSR choices. For example, Chen et al. (2020) use two quasi-natural experiments to identify causal effects of institutional investors on firms' ESG/CSR scores. The authors conclude that increases in institutional ownership resulting from Russell Index reconstitutions increase firm ESG/CSR activities, but that these activities drop when shareholders are distracted by exogenous events (defined as an increase in shareholder proposals). In contrast, the previously discussed Iliev and Roth (2020) study finds that ESG/CSR changes are slower in the presence of concentrated ownership by large institutional investors. Hwang et al. (2017) find that after controlling for firms' ESG/CSR scores, those firms that experience an increase in ownership by “non-socially responsible” investors in a quarter experience positive

excess returns the following quarter. Further, they report that this positive relation is stronger for those stocks with higher ESG/CSR scores, which they interpret to imply that ESG/CSR scores are influenced by institutional owners.<sup>10</sup>

Several studies examine the importance of the investor's horizon, including both how it affects and is affected by ESG/CSR. Kim et al. (2019) employ difference-in-differences estimations to examine whether ESG/CSR scores increase when an institution changes its investment horizon to long-term and conclude that the scores increase after the change. Consistent with this, Gloßner (2019) uses lead-lag regressions of long-term investors, primarily blockholders, and concludes that they have a positive relationship with firms' ESG/CSR scores. In contrast, Starks et al. (2019) argue and provide evidence that long-term institutional investors are attracted to firms with higher ESG/CSR profiles rather than such institutions influencing the firms' choices directly. Supporting this result, they also find that the long-term institutional investors are more patient with short-term poor performance of high ESG firms than other firms in their portfolio.

Overall, the results and conclusions on institutional investor ownership are mixed, which calls for further examination of the preferences and influences of these investors with regard to the ESG/CSR activities of their holdings. In particular, as pointed out in Starks et al. (2019), relationships between institutional investors and ESG/CSR are likely dynamic, suggesting that future research may likely draw conclusions different from the existing literature.

#### 4.2. Family ownership

In consideration of the agency issues involved in ESG/CSR choices and whether these choices benefit shareholders, Abeysekera and Fernando (2020) hypothesize that family firms and non-family firms differ in their agency issues regarding ESG/CSR. The authors expect that management of family firms would align their ESG/CSR choices with shareholder wealth maximization due to the lack of diversification by controlling families. However, the authors also point out that an alternative hypothesis exists as conflicts can arise between family owners and minority shareholders, in which case the family firms could make decisions that do not result in wealth maximization for all shareholders. The authors examine their contrasting hypotheses through empirical tests in which they measure ESG/CSR using the KLD environmental rankings. They conclude that **in decisions about environmental investments, U.S. family firms are more responsible to shareholders than are the non-family firms.** Consistent with this view, Gillan, Sekerci, and Starks (2020) focus on a sample of Swedish firms and find evidence suggesting that family firms cater to investor demand for environmental (but not social) investment. The results of these two papers are somewhat counter to those of El Ghouli et al. (2016) who examine a sample of publicly traded firms from nine East Asian economies. In their sample, the family-controlled firms have lower ESG/CSR performance, which the authors argue is consistent with the expropriation hypothesis of family control (the conflicting interests between family owners and minority shareholders). The authors also provide evidence that these family-controlled firms with lower ESG/CSR performance have greater agency problems and reside in countries with weaker institutions. One issue that remains unanswered is whether these differences in results are due to differences in geography or differences in data and methodology.

#### 4.3. State ownership

Some argue that environmental or social issues should be managed by governments rather than corporations because of governments' superior abilities to handle the issues. In particular, state-owned firms may be better positioned to deal with the market failures and externalities caused by such issues as has been hypothesized by Hsu, Liang, and Matos (2018) and Hart and Zingales (2017). On the other hand, governments and the firms they own could have other incentives that discourage ESG/CSR. The empirical evidence tends to be more consistent with the first hypothesis, although it is not uniformly so. Hsu, Liang, and Matos consider a sample of firms across 45 countries that includes publicly-owned companies with majority government ownership. The authors show that **state-owned firms are more engaged in environmental and social issues than other firms, a result concentrated in energy firms and firms in emerging economies.** They also use a difference-in-difference analysis and find that following the 2009 Copenhagen Accord, state-owned firms improved their environmental performance more than other firms. Consistent with this view, using Asset4 Environmental and Social scores as measures of ESG/CSR and a sample of publicly traded firms from 41 countries that privatized from state ownership, Boubakri et al. (2019) find that **before their privatization, the privatized firms have higher ESG/CSR scores in aggregate, and on both the Environmental and Social dimensions, than other publicly listed firms.**<sup>11</sup> They further find that state ownership and the political environment of the country are influencing factors in this relationship. On the other hand, examining one country's state ownership (China) McGuinness et al. (2017) provide evidence of a nonlinear relationship between state ownership and corporate ESG/CSR profiles. The association is negative at lower state ownership levels and positive when state ownership is higher. Future research might reconcile these somewhat conflicting results.

<sup>10</sup> The authors define non-socially responsible investors to be those with low average portfolio ESG/CSR scores.

<sup>11</sup> Because significant differences exist between the soon-to-be privatized firms and other publicly traded firms, the authors also use a propensity score matching technique, an instrumental variables approach, and the Heckman selection model and find consistent results.

## 5. Firms' ESG/CSR attributes and firm risk

There has long been speculation that ESG/CSR factors can affect the risks faced by firms, and ultimately firms' cost of capital. We deal with some of those issues in the following section on firm value.<sup>12</sup> In Table 4 we report measures of risk and cost of capital that have been considered in the literature, whether each measure is examined as an independent or dependent variable in its association with ESG/CSR, the direction of the relationship, and the article citation.

### 5.1. Risk measures

It has been proposed that ESG/CSR, through a variety of different channels, can affect many types of risk, including systematic risk, regulatory risk, supply chain risk, product and technology risk, litigation risk, reputational risk, and physical risk (Starks 2009). For example, Bénabou and Tirole (2010) observe that **firms with stronger ESG/CSR profiles could have different systematic risk exposures because of their resilience during crisis periods or because there exists a specific ESG/CSR risk factor**. While not an explicit analysis of firm risk, Lins et al. (2017) find that high ESG/CSR firms perform better than low ESG/CSR firms during the 2008–2009 financial crisis, consistent with the resiliency argument. Albuquerque et al. (2019) provide a theory in which, due to a product differentiation strategy, the strong **ESG/CSR firms face a relatively less price elastic demand**, resulting in lower systematic risk. Based on their empirical evidence, Albuquerque et al. (2019) also conclude that the effect of ESG/CSR on systematic risk is stronger for firms with high product differentiation. El Ghoul et al. (2011) hypothesize that **responsible firms will have lower risk because they have a wider investor base relative to irresponsible firms**. Related, Hong and Kacperczyk (2009) find evidence consistent with the view that high ESG/CSR firms have a wider investor base and face lower litigation risk, ultimately leading to a lower cost of capital. Oikonomou et al. (2012) argue that high ESG/CSR firms should have lower risks for a variety of reasons. While they find no relation with KLD social strengths, they do find that firms with high social concerns have higher systematic risk.

Several studies examine bond credit ratings as measures of firms' risk. Jiraporn et al. (2014) use firms' three-digit zip code as an instrument for companies' ESG/CSR scores and find that **ESG/CSR leads to more favorable bond ratings**. Their argument for the instrument is that a firm's credit ratings are related to the firm's neighbors' through investor clientele effects, local competition, and/or social interactions. In related work, Stellner et al. (2015) argue that the impact of ESG/CSR on a firm's credit rating should depend on the country in which the company is located, and the appreciation for ESG/CSR in that country. Examining a sample of corporate bonds from 12 European Union countries, the authors conclude that no statistically significant systematic relationship exists between firms' ESG/CSR and their credit ratings, but that firms with higher ESG/CSR scores benefit from better ratings if they are in a country with above average ESG/CSR in general. Alternatively, the results of these two studies could also be related to the political leanings or social capital literature discussed earlier (Di Giuli and Kostovetsky 2014; Jha and Cox 2015).

Seltzer et al. (2020) provide evidence that a **firm's bond credit ratings and yield spreads are related to environmental scores and to climate regulatory risk**. Firms with poor environmental performance tend to have lower credit ratings and higher yield spreads, particularly if they are located in states with more stringent environmental regulations. The authors use the Paris Agreement as a shock to show support for a causal relationship between climate regulatory risk and bond risk and pricing.

Consistent with a relationship between ESG/CSR and bond credit ratings, which suggests effects associated with firms' default risk, Jagannathan et al. (2018) point out that ESG/CSR-related risks can be rare, large, and non-diversifiable, and in particular, related to firms' downside risk. A case in point is firms' environmental policies. Ilhan et al. (2019) show that firms' equity downside risk, as reflected in option prices, is increasing in firms' carbon intensity. The cost of protecting against this downside risk drops after the election of Donald Trump, which they argue lowered uncertainty in climate policy. Supportive of a relationship between ESG/CSR policies and downside risk, Hoepner et al. (2019) show that activism on ESG/CSR issues, particularly environmental issues, can lower a firm's downside risk.

ESG/CSR practices can also act as insurance against firm-specific legal risk. Hong and Liskovich (2015) provide evidence that firms with higher ESG/CSR ratings receive more lenient settlements from prosecutors and have higher resulting market valuations (using enforcements of the Foreign Corrupt Practices Act in their tests). In addition, schiller finds that suppliers face a lower likelihood of environmental- and social-related lawsuits when their corporate customers have better environmental and social policies.

In contrast to the studies documenting a negative relation between ESG/CSR practices and various types of risks, results in Becchetti et al. (2015) support the view that ESG/CSR increases firms' idiosyncratic risk (but at the same time, reduces stakeholder risk). The authors argue that their result arises because of a loss of flexibility in responding to negative productivity shocks caused by firms' ESG/CSR activities, which in turn leads to a reduction in stakeholders' welfare. This relationship causes the returns of higher ESG/CSR stocks to be less predictable. However, Humphrey et al. (2012) find no differences in idiosyncratic risk when comparing UK firms with high and low corporate social performance ratings.

### 5.2. Cost of capital

A number of theoretical models, many of them quite recent, have analyzed the effects of investor preferences for ESG/CSR

<sup>12</sup> Associations between ESG/CSR and risk (or returns) naturally relate to a broader literature on investor preferences and asset pricing models that incorporate ESG/CSR-related issues as well as literature examining the management and performance of SRI funds. However, we limit our discussion in this section to papers that focus primarily on corporate finance-related issues.



**Table 4**

Risk, cost of capital and ESG/CSR.

Primary Variable	Independent/Dependent Variable of Interest	Sign	Citation
Systematic risk	Dependent	–	El Ghouli et al. (2016)
	Dependent	–	Oikonomou et al. (2012)
	Dependent	–	Albuquerque et al. (2019)
Credit risk	Dependent	–	Jiraporn et al. (2014)
	Dependent	–	Seltzer et al. (2020)
	Dependent	0/–	Stellner et al. (2015)
Legal risk	Dependent	–	Schiller (2018)
	Dependent	–	Hong and Liskovich (2015)
Downside risk	Dependent	–	Hoepner et al. (2019)
	Dependent	–	Ilhan et al. (2019)
Idiosyncratic risk	Dependent	+	Becchetti et al. (2015)
	Dependent	0	Humphrey et al. (2012)
Equity cost of capital	Dependent	–	El Ghouli et al. (2011)
	Dependent	+/-	Breuer et al. (2018)
	Dependent	–	Hong and Kacperczyk (2009)
	Dependent	–	Chava (2014)
Debt cost of capital	Dependent	0/–	Ng and Rezaee (2015)
	Dependent	–	Chava (2014)
	Dependent	–	Goss and Roberts (2011)
	Dependent	–	Ng and Rezaee (2015)
	Dependent	–	Zerbib (2019)

This table summarizes types of risks proposed to relate to ESG/CSR in the academic literature on ESG/CSR in corporate finance. For each paper cited, we report the variable of interest and whether it is an independent or dependent variable, as well as the sign of the relation with ESG/CSR, where 0 indicates that no significant relation was found.

attributes on firms' costs of capitals, generally finding that firms' ESG/CSR performance affects their costs of capital according to the weight of their investors' preferences. In describing these theoretical models we will refer to high ESG/CSR firms as green firms and low ESG/CSR firms as brown firms in line with some of the models. Given a sufficient number of investors wanting green investments in the economy, i.e., in the investor base, most of the models conclude that green firms will have lower costs of capital. The outcomes of these models are consistent with the empirical work that higher ESG/CSR performance leads to lower cost of equity capital by way of tilting the investor base, e.g., [Hong and Kacperczyk \(2009\)](#) and [El Ghouli et al. \(2011\)](#). The earliest theoretical model, [Heinkel et al. \(2001\)](#), derives implications of the share of ethical (or green) investors in the economy for firms' cost of capital. The authors show that negative screening leads polluting firms to be held by fewer investors, in turn leading to lower stock prices and higher costs of capital for these firms. The higher costs of capital may lead the polluting firms to become more socially responsible. The extent to which this phenomenon will occur depends on the proportion of green investors in the economy.<sup>13</sup> While Heinkel, Kraus, and Zechner assume that nonpecuniary preferences are implicitly in the investors' utility functions, [Pastor et al. \(2020\)](#) take an alternative modeling approach and assume that preferences for green and brown stocks are explicitly in the investors' utility functions. Using their general equilibrium model the authors analyze the financial and real effects that arise from such preferences and find that greener firms have lower costs of capital. Similarly, [Pedersen et al. \(2020\)](#) explicitly assume that investors have ESG/CSR preferences in their utility functions and in a different approach assume there exist three types of investors in the economy, those wanting green stocks, those wanting brown stocks and those that are unaware of whether the stocks are green or brown. They show that the green stocks' costs of capital depend on the wealth of the unaware investors. [Baker et al. \(2020\)](#) show that special conditions must exist for green firms to have lower costs of capital, otherwise some investors will want to hedge against high pollution states, which will drive up the interest in the brown firms as a hedge and drive down the cost of capital for the brown firms. The special conditions that they point out that could mitigate these effects are either the existence of investor coordination in investment strategies for green firms or the presence of investors that have non-pecuniary disutility for investing in brown firms.<sup>14</sup>

The empirical work in this area takes a variety of approaches. Breaking down ESG/CSR into its components, [Chava \(2014\)](#) finds that the cost of capital (both equity and debt) is higher for firms with poor environmental profiles. In addition, [Ng and Rezaee \(2015\)](#) conclude that a negative relationship exists between environmental and governance performance and the cost of equity capital, but that no such relationship exists when examining social performance. [Breuer et al. \(2018\)](#) estimate that the relation between ESG/CSR performance and firms' cost of capital is conditional on the investor protection laws in the country in which the firm is located; higher ESG/CSR performance reduces (increases) the cost of capital in countries with strong (weak) investor protection.

Regarding the cost of debt, [Goss and Roberts \(2011\)](#) examine ESG/CSR concerns and find that firms with greater concerns pay higher interest rates on their bank loans. Studies that examine the effects of green bonds on firms' costs of debt have differing results.

<sup>13</sup> At the time the authors wrote their paper, they conjectured that it would take more than 20% of green investors to induce firms to reform but that only 10% of overall assets were controlled by green investors. Given the rapid change in recent years in the percentage of investors interested in green investments, it would be interesting to determine the extent to which the authors' model is reflected in the current data.

<sup>14</sup> [Oehmke and Opp \(2020\)](#) take a still different approach by showing that if a broad mandate among investors exists for cleaner production, then such investors will relax financing constraints in order to induce firms to adopt cleaner technologies.

Based on his evidence, [Zerbib \(2019\)](#) concludes that green bonds are issued at a negative premium, which would suggest that issuing bonds to fund projects with environmental benefits lowers the cost of capital for those projects. In contrast, [Flammer \(2021\)](#) finds no difference in yield spreads between a firm's green bonds and its other bonds, which suggests no lowering of capital costs for green projects.

## 6. Firms' ESG/CSR attributes and firm performance and value

One of the most debated questions in the ESG/CSR/SRI literature of all types is **whether management choices with regard to corporate responsibility affect firm performance and firm value**, and additionally, whether performance or valuations drive ESG/CSR choices. In this section we review this large literature which is obviously directly related to the cost of capital-focused literature discussed in the previous section, but from a slightly different perspective.

A causal effect of ESG/CSR attributes on firm value could plausibly be either positive or negative. Some theoretical studies that focus on the relation between ESG/CSR performance and firm value, e.g., [Bénabou and Tirole \(2010\)](#); [Baron \(2007, 2008\)](#); [Fatemi et al. \(2015\)](#); [Albuquerque et al. \(2019\)](#), imply that **greater ESG/CSR performance can increase firm value**. Researchers have proposed a number of different mechanisms through which ESG/CSR activities could create value for firms, however all essentially fall into one of two categories. First, ESG/CSR activities could create value because they increase shareholder wealth. This type of value creation can be achieved by increasing cash flows (e.g. customers want to buy from firms that have good reputations in corporate responsibility, employees are more productive when they work for such firms, etc.) or by decreasing the discount rate (e.g. affecting the cost of capital as discussed in Section 5). Second, ESG/CSR activities could create firm value through the channel of maximizing shareholder utility. For example, shareholders could value the environmental or social goods produced by high ESG/CSR profile firms in addition to the cash flows they produce. Under this alternative, shareholders receive more utility by owning responsible firms, even if the cash flows are the same as those of irresponsible firms.

In contrast, it has also been argued that ESG/CSR activities could reflect managerial agency problems, and that corporate managers engage in these activities in order to enhance their own utility rather than the welfare of shareholders, e.g., [Bénabou and Tirole \(2010\)](#). This argument reflects the possibility that firms with greater value or performance have the capability to expend resources on ESG/CSR activities, a version of a free cash flow agency problem. In this case the causality is in the opposite direction; high valuations and better financial performance lead to higher ESG/CSR performance.

Both directions of causality predict a positive association between ESG/CSR performance and measures of shareholder wealth. Moreover, this association appears to be widely supported by the data (e.g., higher ESG/CSR performance tends to be most prevalent in larger firms with more resources, and in economically developed countries). Identification of the direction of causality is therefore an important econometric concern. A second important issue is the treatment of selection effects. [Hong et al. \(2012\)](#) argue that selection effects are likely to be larger than direct effects from CSR. They attribute this to the probability that the **manager's marginal return from conducting activities in order to improve their ESG/CSR ratings and lower their cost of capital is likely to be smaller under conditions in which the firm has access to finance, and macroeconomic conditions are such that investors' appetite for risk is higher**.

Ultimately, it is an empirical question whether and how ESG/CSR relates to firm performance and value. A large number of studies in many disciplines have attempted to answer this question. According to a study by [Friede et al. \(2015\)](#) there have been more than 2000 published empirical academic studies in fields such as management, accounting, finance, and economics. The authors conduct a meta-analysis of this literature and conclude: "Roughly 90% of studies find a nonnegative ESG/CFP [Corporate financial performance] relation. More importantly, the large majority of studies reports positive findings."

Studies in finance use a variety of techniques to estimate the relationship between firm performance or value and firms' ESG/CSR choices. Performance and value are measured in several ways, including operating performance, short- or long-run stock returns, and Tobin's  $q$ . [Table 5](#) reports the performance and value variables considered, whether the variable is tested as an independent or dependent variable in its association with the firm's ESG/CSR performance, the direction of the relationship and the article citations. As can be seen from the table, the results from these corporate finance studies are more mixed than the overall conclusions of the [Friede et al. \(2015\)](#) study.<sup>15</sup> In the following discussion we group the corporate finance studies according to the sign of the effect.

### 6.1. Negative effects

Some empirical studies support the view that ESG/CSR activities are not in the interests of shareholders but rather an outcome of agency problems. [Hong et al. \(2012\)](#) argue that good financial performance causes corporate goodness. They provide evidence by examining the differential outcomes of performance shocks across firms that are ex ante constrained versus those firms that are unconstrained. In their analysis they first use the Internet bubble as a positive shock to valuations and find a temporary increase in ESG/CSR performance among firms that become unconstrained relative to firms that were already unconstrained prior to the bubble. They then find that ESG/CSR performance increases along with idiosyncratic stock returns for constrained firms compared to less-constrained firms.

Other papers take alternative approaches but draw similar overall conclusions. [Di Giuli and Kostovetsky \(2014\)](#) examine the

<sup>15</sup> It should also be noted that when the authors divide the studies into nonportfolio and portfolio studies, the results using portfolio studies are generally weaker. Only 15.5% of these studies find a significantly positive association between ESG and CFP, 11% are negative, and the remainder have either neutral or mixed findings.

**Table 5**  
Performance, value and ESG/CSR.

Primary Variable	Independent/Dependent Variable of Interest	Sign	Citation
Financial constraints	Independent	–	Hong et al. (2012)
Revenue growth	Dependent	0	Di Giuli and Kostovetsky (2014)
ROA	Dependent	–	Di Giuli and Kostovetsky (2014)
	Dependent	+	Gillan et al. (2010)
	Dependent	0	Hsu et al. (2018)
	Dependent	+	Lins et al. (2017)
	Dependent	+	Liang and Renneboog (2017a)
	Dependent	+	Iliev and Roth (2020)
	Independent	+	Borghesi et al. (2014)
Free cash flow	Independent	+	Borghesi et al. (2014)
Long-run returns	Independent	+	Hong et al. (2012)
	Dependent	–	Di Giuli and Kostovetsky (2014)
	Dependent	0	Humphrey et al. (2012)
	Dependent	–	Hong and Kacperczyk (2009)
	Dependent	–	Bolton and Kacperczyk (2020)
	Dependent	+	Dimson et al. (2015)
	Dependent	+	Edmans (2011)
	Dependent	+	Lins et al. (2017)
	Dependent	+	Barko et al. (2018)
	Dependent	+	Statman and Glushkov (2009)
Short-run returns	Dependent	–	Masulis and Reza (2015)
	Dependent	+/-	Krüger (2015)
	Dependent	+	Deng et al. (2013)
	Dependent	+	Tang and Zhang (2020)
	Dependent	+	Flammer (2015)
	Dependent	+	Flammer (2021)
Tobin's <i>q</i>	Dependent	+	Gillan et al. (2010)
	Dependent	–	Buchanan et al. (2018)
	Dependent	0	Hsu et al. (2018)
	Dependent	+	Albuquerque et al. (2019)
	Dependent	+/-	Servaes and Tamayo (2013)
	Dependent	+	Gao and Zhang (2015)
	Dependent	+	Liang and Renneboog (2017a)
	Dependent	+	Ferrell et al. (2016)
Cash value	Dependent	+	Chang et al. (2019)
ROE	Dependent	+	Cornett et al. (2016)
Bond values	Dependent	+	Amiraslani et al. (2017)
Bond returns	Dependent	–	Amiraslani et al. (2017)

This table summarizes firm performance and valuations proposed to relate to ESG/CSR in the academic literature on ESG/CSR in corporate finance. For each paper cited, we report the variable of interest and whether it is an independent or dependent variable, as well as the sign of the relation with ESG/CSR, where 0 indicates that no significant relation was found.

relations between changes in firms' ESG/CSR scores (measured using KLD scores) across three years and their revenue growth over that period. They find no significant relationship. They also find a **significant negative relationship between changes in firms' ESG/CSR scores and changes in ROA or stock returns**, measured across 3 years. They interpret these results (with caution) to suggest that “any benefits to stakeholders from social responsibility come at the direct expense of firm value.” They also conclude that when firms expand their ESG/CSR policies, the subsequent result is future stock underperformance and a long-run deterioration in ROA. They argue that the stock underperformance is “a direct market reaction to ESG/CSR with a lag resulting from delays in investors' learning about CSR policy changes.”

Buchanan et al. (2018) use the Bloomberg ESG rating, which measures ESG disclosure quality rather than ESG quality, as their measure of a firm's ESG/CSR attributes. Defining a binary classification of high versus low ESG/CSR performance based on whether the firms disclose or not, they find a negative and significant coefficient estimate on an interaction term between their ESG/CSR measure, crisis indicators and Tobin's *q*. They conclude that **during the financial crisis, agency conflicts became more severe and the consequent costs of ESG/CSR over-investment caused higher-scoring ESG/CSR firms to experience greater declines in firm values**.

Two other studies provide results that bring up questions about the benefits of ESG/CSR activities for all firms and all types of ESG/CSR. Masulis and Reza (2015) conclude that the stock market reacts negatively to the announcement of corporate philanthropic contributions, suggesting that this type of ESG/CSR activity is not valued by investors. Servaes and Tamayo (2013) find an interaction between ESG/CSR attributes and firm value for firms that is contingent on the level of advertising. The authors conclude that, among firms that do not advertise, ESG/CSR investments either hurt or are unrelated to firm value. As discussed below, they provide evidence that ESG/CSR activities benefit firms that advertise.

## 6.2. Ambiguous or no effect

In their examination of state-owned firms, Hsu, Liang, and Matos (2018) conclude that the environmental choices of such firms are not significantly related to shareholder value when measured using either Tobin's  $q$  or long-term profitability. Another study that concludes no relation is Humphrey et al. (2012), which uses a proprietary CSP ratings database for firms in the United Kingdom and concludes that there are no significant differences in the risk-adjusted performance of UK firms with high or low CSP ratings. They conclude that "investors and managers are able to implement a CSP investment or business strategy without incurring any significant financial cost (or benefit) in terms of risk or return."

## 6.3. Positive effects

Several studies document a positive relationship between firms' ESG/CSR ratings and measures of firm financial performance or firm value. Gillan et al. (2010) examine the association between firms' ESG ratings and firm performance using the seven KLD categories and find that companies with higher ESG ratings have higher operating performance and Tobin's  $q$ . Borghesi et al. (2014) find higher KLD scores for firms with stronger operating performance and firms with greater free cash flow. Using six of the seven KLD categories (corporate governance, community, diversity, employee relations, environment and product, omitting human rights), Gao and Zhang (2015) find a positive correlation between firm-level ESG/CSR scores and Tobin's  $q$ . Also focusing on Tobin's  $q$ , Ferrell et al. (2016) find a positive relationship between ESG/CSR scores and firm value, and extend the analysis to show that having higher ESG/CSR performance attenuates the negative relation between managerial entrenchment and value. Iliev and Roth (2020) estimate that director-driven increases in firms' ESG/CSR activities cause improvements in ROA and other measures of operating performance.

According to the findings in Servaes and Tamayo (2013), ESG/CSR performance creates value, but only for firms with high advertising expenses. Albuquerque et al. (2019) also find a relation between firm value and ESG/CSR attributes for firms that advertise. They interpret this to be consistent with the view that firms with high product differentiation benefit from ESG/CSR activities. Still another approach to the value question is that taken by Chang et al. (2019) who analyze the relation between firm value and ESG/CSR practices by examining whether the value of an additional dollar in cash holdings is greater for high-ESG/CSR firms than for low-ESG/CSR firms. They find that an additional dollar of cash results in larger changes in firm value for firms with high ESG/CSR scores than those with low scores, and conclude that ESG/CSR activities result in higher firm value. Liang and Renneboog (2017a) use a global sample of firms and an instrumental variables approach (using peers' donations as instruments for the focal firm's donations) and find that charitable donations cause high firm value and operating performance, which contrasts with the evidence in Masulis and Reza (2015) discussed in Section 6.1.

Several studies provide evidence consistent with the view that ESG/CSR activities create value by documenting that high ESG/CSR-scoring firms have greater values and subsequently, lower stock returns going forward. Hong and Kacperczyk (2009) examine differences in ownership, valuations, and returns of "sin" stocks (stocks associated with alcohol, tobacco, or gaming). They find that the so-called sin stocks (low-ESG/CSR stocks) have low valuation ratios and earn high returns. This is consistent with some investors avoiding sin stocks due to social norms, and resultant pricing effects in segmented markets. Amiraslani, Lins et al. (2017) find high values and low returns to the bonds of high ESG/CSR firms. Bolton and Kacperczyk (2020) find that firms with low CO2 emission intensity have low stock returns. They attribute the result to "local thinking", and conclude that ESG/CSR firms have a low cost of capital.

Other studies draw similar conclusions regarding positive effects of ESG/CSR, but through evidence on a positive relationship with stock returns. For example, Dimson, Karaka, s, and Li (2015) observe positive returns following successful investor engagements that address ESG/CSR concerns. Also examining stock returns, Edmans (2011) supports the view that ESG/CSR actions create value, finding that the sign of the relation between returns and ESG/CSR performance (as measured by employee satisfaction) is positive. He concludes that ESG/CSR firms have high stock returns that slowly diminish over time as intangibles (specifically good treatment of employees) are initially mispriced but become correctly priced as the intangibles transfer into tangible benefits (earnings surprises). Lins et al. (2017) examine the performance of ESG/CSR firms particularly during periods of crises in which trust in corporations is low. They find that ESG/CSR firms have higher operating performance and earn higher returns relative to other firms during periods of low trust. Cornett et al. (2016) examine a sample of U.S. banks and estimate a positive relation between ESG/CSR scores and banks' return on equity.

Statman and Glushkov (2009) examine whether portfolios of firms with higher ratings outperform firms with lower ratings, thus, implying a test of ESG/CSR ratings and firm value. Using KLD ratings for a U.S. firm sample, the authors find a positive relationship between ESG/CSR ratings and firm performance. These results should be contrasted with those of Humphrey et al. (2012) cited earlier who, in the U.K. stock market, find no difference between firms with high or low ESG/CSR ratings and firm financial performance. Barko et al. (2018) study the returns of firms that are targeted by activist shareholders promoting ESG improvements. Their results indicate that firms experiencing these ESG engagements earn higher returns than nonengaged peer firms.

Several papers approach the estimation of a ESG/CSR-value relation by examining short-term market reactions to ESG/CSR events. Krüger (2015) analyzes the stock market reactions to over two thousand positive and negative sustainability events for U.S. firms and finds important differences between the two types of events. In particular, his analysis shows that negative sustainability events result in a strong negative market reaction, with the strongest reactions to events that concern the environment or communities. He does not find any significant market reaction for positive events. However, he also finds that the information content of positive and negative sustainability events is very different. A systematic textual analysis showed that in comparison to positive events, negative events contain more legal and quantitative information, and seem to contain more "hard" information. He concludes that his results are

consistent with the view that unsustainable corporate behavior is costly for shareholders.

Flammer (2015) uses a regression discontinuity design (RDD) to examine the stock reaction to ESG/CSR proposals that pass by a small margin and finds that such “close call” proposals are associated with positive abnormal returns. Additional analysis by Flammer leads her to conclude that these shareholder proposals create value through their effects on labor productivity and sales.

Deng et al. (2013) approach the value effect question by examining merger announcement returns for high versus low ESG/CSR firms. The authors argue that the merger announcement is an unexpected event that allows the researcher to use the announcement returns to potentially mitigate reverse causality problems between ESG/CSR and firm value that are common to the literature. They also argue that the reputation of the firm in following through on its implicit contracts should be related to the firm’s ESG/CSR reputation and expressed during the merger process itself. Based on the positive market reactions to the firms with higher ESG/CSR scores, the authors conclude that ESG/CSR improves firm value.

Two studies take the approach of examining equity market returns upon a firm’s issuance of green bonds (fixed income securities issued to fund environmentally friendly projects). Although contributing to the environment and possibly to a firm’s ESG rating, these bonds are not necessarily issued by firms with high ESG/CSR ratings. Tang and Zhang (2020) examine whether the issuance of green bonds is beneficial to a firm’s existing shareholders. The authors find positive stock market reactions for firms that announce they are issuing green bonds, and subsequently, these firms exhibit increased stock liquidity and increased institutional ownership. Consistent with these results, Flammer (2021) also concludes that the issuance of green bonds is associated with positive stock market reactions and changes in firms’ real ESG/CSR activities.

In general, the corporate finance literature on ESG/CSR and firm value and performance has produced findings that are somewhat mixed. Many, but not all, papers conclude that a positive relation exists between a firm’s ESG/CSR performance and firm value or financial performance. However, even among the papers that draw similar overall conclusions, some do so from opposite results. For example, researchers have concluded a positive causal effect of ESG/CSR from results that indicate ESG/CSR produces high values today and low returns going forward. Others conclude a positive effect from results that indicate low values today and high returns going forward. These contrasting conclusions highlight one example of joint hypotheses problems present in this research topic; conclusions often require assumptions about the efficiency with which ESG/CSR-related information is impounded into prices. Furthermore, it is often necessary to make assumptions regarding the correlation between risk and ESG/CSR attributes, or between the errors in risk models and ESG/CSR attributes. These problems exist in addition to the problems faced by the ESG/CSR literature more generally, such as reverse causality and other sources of endogeneity, and the measurement of a firm’s ESG/CSR performance.

## 7. Future research

Clearly there exists a need for more research regarding corporate finance and firms’ ESG/CSR performance. In this section we describe some of the remaining questions that arise from the existing literature.

With regard to general market characteristics, there are more that could be considered. While Liang and Renneboog (2017b) are very thorough in their consideration of alternative explanations, there are doubtless other aspects of a company’s environment including across countries and within countries that could explain firm-level ESG/CSR choices. For example, the importance of corporate stakeholders in a firm’s ESG/CSR decisions could be examined more closely. Two studies have shown that the supply chain is an important source of pressure for adoption of better ESG/CSR policies. For example, Schiller (2018) and Dai et al. (2020) present evidence that socially responsible customers help instill better subsequent ESG/CSR in their suppliers. Additionally, given that a number of years ago, surveyed CEOs ranked employees as the stakeholder group with the greatest impact on the way they manage societal expectations, research that considers the demographics of employees could provide additional insights.<sup>16</sup> Further, in addition to the state in which the headquarters is based, the political leanings of corporate stakeholders could also explain firms’ choices, as could changes in a country (or state’s) political leaders, or more general changes in the political environment.

There are several common trends in the results across papers we have reviewed that do not have clear explanations regarding the mechanisms through which these trends arise. Thus, there exists a need for further research. A prominent such case is that a number of papers show associations between a firm’s ESG/CSR performance and characteristics of its corporate leaders, such as gender or political leanings. Despite the robust support for these associations, it is less clear what the results imply for the broader question of whether ESG/CSR activities are conducted in shareholders’ interests. For example, the association between gender and ESG/CSR performance can have two contrasting interpretations. On the one hand, this finding would support the agency view in that ESG/CSR scores are associated with differences in CEO preferences, to the extent that gender reflects these preferences. On the other hand, this finding would support the good governance view to the extent that women are better at governing firms.

Disparities exist as well across different research studies on the same central topics. For example, the results for leadership characteristics other than gender or political leanings are more mixed with regard to both the sign and significance of links to the firm’s ESG/CSR performance. Several authors find evidence of negative associations between ESG/CSR scores and CEO pay, while others find no significant differences, or that future ESG/CSR scores improve when ESG/CSR factors are included in the firm’s contract with its executives. A broader focus on the demographics of corporate leaders and how they relate to the characteristics currently used in the literature has the potential to be quite informative to our better understanding of how corporate leadership shapes firms’ ESG/CSR profiles or how the leaders are attracted to particular firms in terms of their ESG/CSR characteristics.

<sup>16</sup> See Bielak et al. (2007). The survey also reports that customers were ranked second by CEOs as the stakeholder group with the greatest impact on the way they manage societal expectations, followed by governments, local communities, regulators, the media, and NGOs.



Disparities also exist in the results across studies of ownership structure. In fact, conflicting findings arise in the roles of the institutional investors, families, and the state as owners. Further work on the preferences and influences of these, and other, shareholders with regard to their preferences for ESG/CSR performance and the related ESG/CSR activities of their holdings is clearly warranted. The evidence also suggests that relations between institutional investors and the ESG/CSR performance of their portfolio firms are likely dynamic. Not only does this provide an opportunity for future work on the role of institutions in the ESG/CSR performance of their portfolio firms, but it also raises a question as to the potential for evolving ESG/CSR preferences for other ownership types.

With regard to risk and cost of capital, with a few exceptions, the empirical evidence **generally supports the view that higher ESG/CSR attributes lower both. In contrast**, there is much **debate in the literature as to the nature of the relation between ESG/CSR performance and firm value** (either in changes or in levels). While there is generally more evidence supporting a positive link between ESG/CSR scores and firm value, even among the studies that “agree” that ESG/CSR performance causes high values, there is disagreement about how this value is reflected in stock prices. Some papers find high value today and low returns going forward because ESG/CSR performance is priced correctly. Others find low values and high returns going forward because ESG/CSR performance is initially mispriced. Thus, **reconciling the disparate findings on ESG/CSR attributes and measures of value remains an important issue for future work to address**.

Across the ESG/CSR literature and within studies, some of the disparate results appear to be related to differences in how ESG/CSR performance is measured (e.g. an aggregate measure of a firm’s ESG/CSR profile, a specific sub-measure, or a focus on a particular issue such as corporate charitable donations, etc), the particular data-set that is used, and the geographic focus. Thus, the extent to which certain aspects of ESG/CSR drive the empirical findings remains an open issue.

Importantly, ESG/CSR studies vary widely in their definitions of key explanatory variables of interest. For example, some define the key governance metric to be board size and independence, while others assume better governance arises from such firm attributes as cash abundance, pay-for-performance measures, or the wedge between voting and control rights, and minority investor protection. Similarly, along the performance dimension, while a number of authors focus on stock returns, others emphasize measures of accounting performance.

There are also several promising areas of inquiry that appear to be under-examined in the literature. For example, while much has been written about ESG/CSR activities and managers and owners, we need to better understand **how leadership qualities affect management choices with regard to ESG/CSR**. And while work on customers and suppliers is starting to appear, **research on stakeholders more generally, such as employees or lenders, and their influence on a firm’s ESG/CSR performance is sparse**.

Finally, researchers continue to face the challenge of establishing causality when focusing on aspects of corporate finance and ESG/CSR performance. Clearly additional methodologies and approaches to deal with this issue are needed.

## 8. Conclusion

In theoretical and empirical work researchers in corporate finance have hypothesized and documented numerous links between ESG/CSR activities and different aspects of the firm: for example, the market in which the firm operates, firm structure (including leadership and ownership), and firm risk and performance. In reviewing this literature we have highlighted that some results are quite robust. However, other results are mixed, suggesting that there exists a role for work seeking to reconcile the differences and add to our understanding of the issues. Additionally, exploring in greater depth the underlying economic drivers of significant results is clearly needed. Is the primary driver of firm-level ESG/CSR performance the firm’s leadership and governance, or do firms with strong ESG/CSR policies adopt or attract certain types of leader or governance policies? To what extent do the demands and preferences of owners or society as a whole dominate firm factors? And while a growing body of evidence suggests that ESG/CSR activities can reduce risk and perhaps increase firm value, this central issue remains one of debate in the literature. The evolving nature of ESG/CSR, innovations in data availability, and the potential for new empirical designs that allow for additional causal interpretations suggests a rich agenda for future work that we hope will inform us further on these questions.

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