

# Socially Responsible Firms<sup>1</sup>

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## ABSTRACT

In the corporate finance tradition starting with Berle & Means (1923), corporations should generally be run so as to maximize shareholder value. The agency view of corporate social responsibility (CSR) considers CSR as a managerial agency problem and a waste of corporate resources, since corporate insiders do good with other people's money. We evaluate this agency view using large-scale datasets with global coverage (59 countries) on firm-level corporate engagement and compliance with respect to environmental, social, and governance issues. Using an instrumental variable approach, we document that CSR ratings are higher for companies with fewer agency problems (using standard proxies such as having lower levels of free cash flow and higher dividend payout and leverage ratios). Moreover, CSR is associated with increased executive pay-for-performance sensitivity and the maximization of shareholder value.

**Key words:** corporate social responsibility, agency problems, value enhancement, corporate governance

**JEL codes:** G30, G32, M14

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# Socially Responsible Firms

*“If the unity of the corporate body is real, then there is reality and not simply legal fiction in the proposition that the managers of the unit are fiduciaries for it and not merely for its individual members, that they are... trustees for an institution [with multiple constituents] rather than attorneys for the stockholders.”*

*E. Merrick Dodd, Jr. Harvard Law Review, 1932*

## I. Introduction

The desirability of corporations engaging in “socially responsible” behavior has long been hotly debated among economists, lawyers, and business experts. Back in the 1930s, two American lawyers, Adolf A. Berle Jr and E. Merrick Dodd Jr., had a famous public debate on the issue of “to whom are corporations accountable?” Berle argued that the management of a corporation should only be held accountable to shareholders for their actions whereas Dodd argued that corporations were accountable to both the society in which they operated and their shareholders (Macintosh, 1999). The lasting interest in this debate reflects the fact that the issues it raises touch on the basic role and function of corporations in a capitalist society.

Two general views, often reflecting the issues raised in the Berle-Dodd debate, on corporate social responsibility (CSR) prevail in the literature. The CSR “value-enhancing view” argues that socially responsible firms, such as firms that promote efforts to help protect the environment, promote social equality, improve community relationships, can and often do adhere to value-maximizing corporate governance practices. Indeed, well-governed firms are more likely to be socially responsible. In short, CSR can be consistent with shareholder wealth maximization as well as achieving broader societal goals. Some proponents of the value-enhancing view further argue that firm value maximization can incorporate stakeholder value, and not merely shareholder value (e.g., Edmans, 2011; Deng, Kang, and Low, 2013). The opposite view on CSR begins with Milton Friedman’s (1970) well-known claim that ‘the only social responsibility of corporations is to make money’. Extending this view, several researchers argue that CSR is often simply a manifestation of managerial agency problems inside the firm (Benabou and Tirole, 2010; Cheng, Hong, and Shue, 2013; Masulis and Reza, 2014) and hence problematic (“agency view”). That is to say, socially responsible firms tend to suffer from agency problems which enable managers to engage in CSR that benefits themselves at the expense of shareholders (Krueger, 2013). Furthermore, managers engaged in time-consuming CSR activities may lose focus on their core managerial responsibilities (Jensen, 2001). Overall, according to the agency view, CSR is generally not in the interests of shareholders. Friedman even suggested that to think that business should do anything

other than making a profit is to “harm the foundations of a free society” (1970). Of course, reality might lie somewhere between the value-enhancing and agency views of CSR. Some CSR related corporate policies may be shareholder value-enhancing whereas others may be driven by agency problems.

The empirical literature testing these two views is mixed and thus has left the issues raised in the Berle-Dodd debate largely unresolved. For instance, a number of papers document that firm participation in certain social issues—such as not engaging with ‘sin’ industries, avoiding nuclear energy, and charity giving—is negatively associated with shareholder wealth maximization (e.g., Hillman and Keim, 2001; Brown, Helland, and Smith, 2006; Navarro, 1988; Brammer and Millington, 2008; Di Giuli and Kostovetsky, 2013). In a recent study based on the KLD dataset, Cheng et al. (2013) find empirical evidence supporting the argument that managers of large US firms enjoy private benefits from investing in CSR. On the other hand, other papers document – largely using the same KLD dataset – that a higher CSR score is on average associated with lower idiosyncratic risk and a lower probability of financial distress (Lee and Faff, 2009; Goss, 2009), a lower cost of capital (Goss and Roberts, 2011; El Ghouli, Guedhami, Kwok, and Mishra, 2011; Dhaliwal, Li, Tsang, and Yang, 2011; Albuquerque, Durnev, and Koskinen, 2013), more positive sell-side analysts’ recommendations (Ioannou and Serafeim, 2010a; Bushee, 2000; Bushee & Noe, 2001; Eccles, Krzus, and Serafeim, 2011), and higher abnormal returns and long-term post-acquisition returns (Deng et al., 2013).

The CSR empirical literature to date has two major limitations. First, much of the literature is largely focused only on the *ex post* effects of CSR. That is, the principal research focus is measuring shareholders’ reactions to CSR as captured by abnormal stock returns (e.g., Dimson, Karakas, and Li, 2013), the cost of capital (e.g., El Ghouli et al., 2011), and ownership changes (e.g., Cheng et al., 2013), or on the financial consequences of CSR spending (e.g., Lee and Faff, 2009). However, both the value-enhancing and agency views are concerned to a significant extent with managerial incentives, which are *ex ante* in nature. More specifically, in the agency view, the managerial incentive to engage in CSR is a reflection of the generally poor incentives of managers at socially responsible firms, i.e. these firms suffer from agency problems. These agency problems then manifest themselves in the form of CSR activities. Conversely, according to the value-enhancing view, well-run firms, meaning firms where management is generally properly incentivized, will tend to have managers engaging in appropriate CSR conduct. In this way, the debate over CSR connects up with the general corporate finance literature on agency problems and *ex ante* managerial incentives, a fact that we will exploit in our empirical analyses. Second, the objective function being maximized is often implicitly assumed in the literature to be exclusively shareholder wealth maximization, without any independent importance being placed on third party effects. In this regard, it is worth noting that in many countries firms are required by law or social norms

to be not only concerned with shareholders. Given differing opinions concerning the appropriate objective function within the literature, an important research question is whether well-governed firms are more likely to be socially responsible.

In this paper, we take a comprehensive look at the CSR agency and value-enhancing views around the globe. By means of a rich and partly proprietary CSR dataset with global coverage across a large number of countries and covering thousands of the largest global companies, we test these two views by examining whether traditional corporate finance proxies for firm agency problems, such as capital spending cash flows, managerial compensation arrangements, ownership structures, and country-level investor protection laws, account for firms' CSR activities. While other studies using within-country quasi-experiment approach (e.g., Hong, Kubik, and Scheinkman, 2012; Cheng et al., 2013) focus on the *marginal effect* of variation in agency problems, our data and empirical setting allow us to examine its *average effect*. Based on this comprehensive analysis we fail to find evidence that CSR conduct is a function of firm agency problems. Rather, consistent with the value-enhancing view, well-governed firms are more likely to be socially responsible. CSR is associated with increased managerial pay-for-performance and maximization of firm value, which suggests that CSR in general is not inconsistent with shareholder wealth maximization.

The paper proceeds as follows: Section II identifies several proxies drawn from the corporate finance literature for firm agency problems and their possible relationship to CSR. Section III describes the samples and specifications we will use when testing the CSR agency view. Section IV reports and discusses the empirical results. Section V concludes.

## **II. Agency Theory and CSR: Hypotheses**

Agency problems manifest themselves through non-value-maximizing investment choices (Shleifer & Vishny, 1989; La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 2000) and managerial pay that is not tied to performance (Bebchuk and Fried, 2003). Economists have focused on possible mechanisms constraining these agency problems, such as contract design, incentive systems, and internal controls (see Holmstrom and Tirole (1989), Prendergast (1999), and Bebchuk and Weisbach (2010) for reviews), as well as on external mechanisms such as labor, capital, and product markets (Fama, 1980; Fama and Jensen, 1983), and institutional arrangements, including legal rules (La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 1997, 1998, 2000, 2002).

To assess whether CSR should be regarded as an agency cost or a value-enhancing strategy, we try to explore the underlying mechanisms based on *ex ante* managerial incentives, which connects the quality of corporate governance to CSR. More specifically, in better governed firms, managers are better incentivized and their interests and behavior are more aligned with that of shareholders. Therefore, under the value-enhancing view if CSR is beneficial to shareholders, it is also more likely to be carried out by managers. In addition, if CSR improves firm performance, managers are compensated for good performance and thus also have greater incentive to engage in CSR. That is, good corporate governance induces more CSR activities. In contrary, under the agency cost view CSR is detrimental to shareholder value but is more favored by managers to extract private benefits, i.e., bad corporate governance induces more CSR activities. We further elaborate these mechanisms below.

### *Ex Ante Agency Problems*

First, we will explore in our analysis hypotheses based on agency theory at the firm-level in the spirit of Jensen and Meckling (1976) and Jensen (1986), which has played a foundation role in the corporate governance literature (Morck & Yeung, 2005). Agency theory focuses on managers' ex-ante incentives. According to this literature, agency problems can be particularly acute when the firm generates substantial free cash-flows in excess of those required to finance all positive NPV projects (Servaes and Tamayo, 2014) leading to serious agency problems (Berle and Means, 1932; Jensen and Meckling, 1976; Myers and Rajan, 1998). When liquid assets are abundant, firms do not have to submit to the scrutiny of the capital markets that occurs when new capital is needed, and the managers have discretion to invest the funds as they please. On the other hand, dividends (La Porta et al., 2000; Morck and Yeung, 2005) and debt (Jensen and Meckling, 1976; Jensen, 1986), given their demands on cash flow, can constrain managers from diverting cash or committing cash to unprofitable projects that generate private benefits to insiders. When cash is tight managers will be motivated to run the firm efficiently, which can increase shareholder value (La Porta et al., 2000).

This literature focusing on free cash flow creating an agency problem suggests a causal effect running from corporate liquidity and leverage to managerial incentives to divert firm value (Jensen, 1986). This suggests the following hypothesis reflecting the CSR agency view: a higher level of CSR is induced by higher cash holdings, free cash flows, and capital expenditure, and lower leverage and dividend payout. This hypothesis is consistent with the contention that CSR usually requires long-term investments that do not necessarily contribute to shareholder value maximization but do contribute to managers' private benefits of control (Cheng et al., 2013). In contrast, the CSR value-enhancing view suggests the opposite hypothesis: CSR should be associated with fewer agency concerns and better managerial decisions, thus higher leverage and lower liquidity (cash and free-cash flows) (Krueger, 2013).

The latter hypothesis is consistent with the agency theory that when cash is tight, the firm tends to be better governed as the manager is motivated to run the firm efficiently. Both hypotheses, it is worth noting, are based on the ex-ante incentives of managers as identified in the corporate finance literature: the abundance or scarcity of cash creates bad or good managerial incentives.

Second, we consider this *ex ante* agency literature from a managerial incentive-performance perspective in the spirit of Jensen and Murphy (1990), and hence investigate hypotheses concerning the relationship between CSR and managerial pay-for-performance. In the corporate finance literature, executive compensation helps align the interests of managers and of shareholders, and higher pay-performance sensitivity leads to less severe agency problems (and thus shareholder value-enhancement). Therefore, weak managerial pay-for-performance can be viewed as a proxy for agency problems at the firm (“pay without performance”, Bebchuk and Fried, 2003). Accordingly, the CSR value-enhancing view would hypothesize that CSR is associated with stronger pay-for-performance sensitivity whereas the agency view would predict the opposite.

#### *Investor Protection Laws and CSR*

Of course, CSR and agency problems can emerge simultaneously as they are both choices of the firm in some sense. This simultaneity (or endogeneity) creates an obvious empirical challenge for investigating the relationship between CSR and firm agency problems. Several studies resort to policy and market-wide shocks as quasi-experiments to help identify a causal relationship between CSR and agency proxies (e.g., Hong et al., 2012; Cheng et al., 2013; Flammer, 2013), but this approach is hard to apply in a multi-country context. Therefore, we employ exogenous variation in country-level laws as instrumental variables for firm-level agency problems. The relevant country-level laws are those that provide legal protection of shareholder rights (La Porta et al., 2000). Broadly speaking, the laws that aim at addressing agency problems and investor expropriation, concern corporate decision-making and voting (corporate law), information disclosure in securities transactions (securities law), and regulation of related parties transactions (anti-self-dealing law), as well as the effectiveness of their enforcement (La Porta et al., 2006; Djankov et al., 2008).

If these country-level laws help constrain firm-level agency problems, then being a firm in a country with such laws can be viewed as a proxy for fewer firm-level agency problems. Just as with free-cash flow, leverage, pay-for-performance, and dividend payouts, we will therefore use country-level laws as a proxy for firm-level agency problems in exploring the CSR agency and value-enhancing views. Again, the CSR value-enhancing view would hypothesize that firms in countries with strong legal protections will

engage in more CSR relative to firms in countries with weak protections. The CSR agency view would predict the opposite.

### *Large Shareholders and CSR*

In countries other than the United States, the U.K., and Australia, large firms typically have shareholders that own a significant fraction of equity (La Porta, Lopez-de-Silanes, & Shleifer, 1999; Claessens, Djankov, Fan, & Lang, 2002). It is worth noting that ownership patterns are very stable in general, especially outside the United States, and are shaped largely by the companies' histories and their founding/controlling families (La Porta et al., 2002). Therefore, large shareholders' ownership concentration could also be considered as largely exogenous to particular decisions of a firm (Faccio and Lang, 2002).

The association between the level of concentrated ownership and firm-level agency problems is theoretically unclear. On the one hand, ownership in the hands of one or a few large shareholders could create agency problems between controlling and minority shareholders (Bozec & Laurin, 2008; Bebchuk & Weisbach, 2010). The concern is diversion of firm value from the minority to the controlling shareholder. The possibility of diversion, and hence this type of agency problem, can be heightened as the firm's free cash flow increases and leverage and dividend payouts decrease (as there is now more to divert). On the other hand, the controlling shareholders can effectively steer manager decision making, and hence also function as a mechanism to curb managerial agency problems. In either way, however, large shareholders' ownership can shape the degree to which agency problems are present within the firm, and can also be used as proxy for firm-level agency problems. Once again, country-level laws (corporate, securities, and anti-self-dealing laws) can help constrain the agency problem created by controlling shareholders and thus can be used a proxy for agency costs for this reason.

## **III. Data and Methodology**

### *CSR Data*

Our data provide information on both the legally mandated and the voluntarily initiated aspects of CSR. Our primary data on CSR are from MSCI's Intangible Value Assessment (IVA) database and the Vigeo corporate ESG database. Both databases are built by means of different proprietary data sources and employ different rating metrics, which enables us to cross-validate our results. The IVA indices measure a corporation's environmental and social risks and opportunities, and are compiled using company profiles, ratings, scores, and industry reports, and are available from 1999 to 2011. Its coverage comprises the top 1,500 companies of the MSCI World Index (expanding to the full MSCI World Index

over the course of the sample period); the top 25 companies of the MSCI Emerging Markets Index; the top 275 companies by market cap of the FTSE 100 and the FTSE 250 (excluding investment trusts); and the ASX 200. For this large sample with global coverage, MSCI constructs a series of 29 Environmental, Social, and Governance (ESG) scores<sup>2</sup> covering the following categories: (1) Strategic governance, which relates to traditional corporate governance concerns and whether the firm adopts or has the ability to adopt certain strategic governance strategies; (2) Human capital, which concerns labor relations as well as employees' motivation and health safety; (3) Stakeholder capital, which concerns relationships with customers, suppliers, and local communities; (4) Products and services that relates to product safety and intellectual capital product development; (5) Emerging markets, which concerns issues related to human rights, child and forced labor, and oppressive regimes arising from firms' trade and operations in emerging markets; (6) Environmental risk factors, which include environmental-based liabilities based on operating risks, industry-specific carbon risks, and performance in leading sustainability risk indicators; (7) Environmental management capacity, which includes environmental audit, accounting, reporting, training, certification, and product materials; (8) Environmental opportunity factors such as the firm's competence in embedding certain environmental opportunities in their strategies. Among all these 29 sub-dimensions, *Labor Relations*, *Industry-Specific Carbon Risk*, *Environmental Opportunity* categories receive the highest weights in a firm's global rating (they add up to 80%). Furthermore, the IVA ratings are complemented with the *RiskMetrics EcoValue21 Rating* and the *RiskMetrics Social Rating* scores, which are provided by RiskMetrics Group (now part of MSCI) and capture the environmental and social aspects of CSR, respectively. Companies in the sample are rated from CCC to AAA, which we then transform into numeric ratings from 0 to 6. The whole IVA sample (including the RiskMetrics ratings) covers 91,373 firm-time observations from 59 countries.

The Vigeo corporate ESG data set focuses more on CSR compliance, as it applies a check-the-box approach to rate how a firm and the country where it operates comply with the conventions, guidelines, and declarations by international organizations such as UN, ILO, and OECD. The Vigeo ratings cover six evaluation categories: (1) environment, (2) human rights, (3) human resources, (4) business behavior (which concerns relationship with suppliers and customers), (5) community involvement, and (6) traditional corporate governance. These six domains are further broken down into 38 ESG criteria (sustainability drivers and risk factors) based on universally defined social responsibility objectives and

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<sup>2</sup> A key ESG issue is defined as an environmental and/or social externality that has the potential to become internalized by the industry or the company through one or more of the following triggers: (a) Pending or proposed regulation; (b) A potential supply constraint; (c) A notable shift in demand; (d) A major strategic response by an established competitor; (e) Growing public awareness or concerns. Once up to five key issues have been selected, analysts work with sector team leaders to make any necessary adjustments to the weightings in the model. Each key issue typically comprises 10-30% of the total IVA rating. The weightings take into account the impact of companies, their supply chains, and their products and the financial implications of these impacts, illustrated in the Appendix. On each key ESG issue, a wide range of data are collected to address the question: "To what extent is risk management commensurate with risk exposure?"



managerial action principles. The range of indices used by Vigeo include: Euronext Vigeo World 120, Euronext Vigeo Europe 120, Euronext Vigeo Eurozone 120, Euronext Vigeo US 50, Euronext Vigeo France 20, Euronext Vigeo United Kingdom 20 and Euronext Vigeo Benelux 20, and are updated every six months. The whole Vigeo sample covers 7,048 firm-time observations from 28 countries and 36 sectors. Both the MSCI sample and the Vigeo sample cover the well-established equity indices of the largest companies across the world, rather than just select a specific sample of firms that engage in CSR.

An important note is that for both the MSCI and Vigeo samples, firms are rated relative to their industry peers from both domestic and international markets, thus the ratings do not depend on the cross-country difference in jurisdiction, regulation, and the local CSR situation. This makes our cross-country data more credible and helps guaranteeing that our CSR ratings are not biased by country-specific characteristics. In addition, we supplement our proprietary CSR data with the publicly available ASSET4 data from Thomson Reuters—also with global coverage—to further verify our results. The detailed descriptions of the MSCI IVA and the Vigeo ESG samples are shown in Appendix 1a and 1b, and their country distributions (as well as that of ASSET4) are shown in Appendix 2a-c.

Finally, we obtained a cross-sectional dataset on country-level sustainability ratings from Vigeo, which rates each country based on the laws and regulations that fulfill the country's (1) environmental responsibility (commitment to and performance in environmental protection), (2) institutional responsibility (rule of law and governance), and (3) social responsibility and solidarity (commitment to protecting human rights, political and economic freedom, and other social issues). These three country-level domains echo the firm-level 'E', 'S', and 'G', respectively. The metrics of the Vigeo country-level sustainability index and the MSCI firm-level ESG ratings are different: the latter measures corporate CSR engagement and compliance, whereas the former measures a country's legal and regulatory framework in sustainability and is thus not just an aggregation of firm-level CSR data (see Appendix 3 for definitions).

### *Empirical Strategy*

Our empirical strategy is to test the effects of proxies for agency problems on CSR. Based on our earlier discussion of the academic literature, we utilize five such agency proxies (putting aside for the moment managerial compensation): *a.* capital expenditure (CapEx); *b.* cash holdings; *c.* free cash flow measured as EBIT after tax minus the change in net assets (CapEx, minus depreciation and amortization, plus or minus the change in net working capital); *d.* dividend payout ratio; and *e.* leverage, measured as the ratio of total debt over total equity. Higher values of the first three variables (*a—c*) are related to agency costs caused by excessive capital spending, and higher values of the last two (*d* and *e*) relate to mechanisms that can curb managerial agency problems.

Of course, the issue of endogeneity is as always important to consider. Country-level laws and ownership structures, as discussed, can help address this difficult issue by serving as instrumental variables (IV). The effects of law and ownership on our five agency proxies have been well documented in the literature. For example, countries with better investor protection (e.g., common law countries) have significantly fewer cash holdings (Dittmar, Mahrt-Smith, & Servaes, 2003), lower free cash flows, lower investment sensitivity to cash flows (McLean, Zhang, & Zhao, 2012), higher leverage adjustment speeds (Öztekin & Flannery, 2012), and higher payouts (La Porta et al., 2000). Given this, we conduct a two-stage least square (2SLS) model in which the agency proxies are regressed on country-level laws and ownership concentration in the first stage. Subsequently, the predicted value of each proxy enters into the second stage regression where CSR is the dependent variable. This model also includes other firm-level covariates (ROA, equity market-to-book ratio, interest coverage, short-term investment to cash flow sensitivity, financial slack as measured by the current ratio). The approach of using country-level variables as IVs for firm-level endogenous variables has been applied in many studies (for example, Ayyagari, Demirgüç-Kunt, & Maksimovic, 2011) that consider cross-country variations in the dependent variables (CSR activities in our case).

The country-level legal protection data come from well-established sources. Regarding the country-level laws, we use the anti-director rights index (ADRI) which was first developed by La Porta et al. (1998) and revised in Djankov et al. (2008) and Spamann (2010). For securities law, we use the private enforcement index concerning information disclosure and liabilities standard developed by La Porta et al. (2006). Since public enforcement was not found to play a significant role in investor protection as in La Porta et al. (2006), we do not use it as an IV (the Sargan-Hansen test also suggests that it is not a valid IV). For the regulations on self-dealing, we use the anti-self-dealing index (ASDI) developed by Djankov et al. (2008), which contains *ex ante control of self-dealing*, *ex post control of self-dealing*, and *public enforcement* variables. As suggested by Djankov et al. (2008), the ASDI is better grounded in theory than the anti-director rights index, and focuses more on insiders' related-party transactions. We further include the one-share one-vote index (mandatory proportionality of voting and cash flow rights) and the mandatory dividend index (percentage of net income that the company law or commercial code requires firms to distribute as dividends among ordinary shareholders) as used in Spamann (2010). We conducted the Sargan-Hansen over-identification test on the overall validity of our instrumental variables: almost all test statistics fail to reject the null hypothesis that the IVs are valid. Therefore, our identification strategy and the results are robust. Given that our CSR data is constructed in a way so as to be comparative to industry peers (that is, the industry effect has already been eliminated by construction), we do not control for industry fixed effects but rather cluster standard errors at the industry level.

Turning to managerial compensation, we test the relation between CSR and managerial pay-for-performance by regressing executive pay on the CSR indicators, the performance indicators, and their interactions, along with other firm-level and country-level covariates. In the literature, executive compensation is usually measured as both the cash-based pay (salaries and bonuses) and equity-based pay (stock options, restricted stock of Long Term Incentive Plans). The average total compensation of all available executives on BoardEx's Compensation Reports is taken as our dependent variable. The main independent variables include the different ESG ratings, Tobin's Q, and their interactions. Following the traditional literature on the determinants of executive compensation (e.g., Gomez-Mejia, Larraza-Kintana, and Makri, 2003), we also include a set of control variables, such as return of assets (ROA), the number of employees ( $Ln(employee)$ ) as a proxy for the physical size of the company, the leverage ratio as proxy for creditors' involvement into the firm, the number of analysts following the company ( $Ln(analyst\ coverage)$ ) as a proxy for market discipline, and the percentage of a company's shares owned by the largest shareholder. Industry- and time- fixed effects and controlled for in all regressions. The descriptive statistics of our variables are provided in Table 1.

[Insert Table 1 about Here]

## IV. Results

### *Descriptive Results: Correlations*

We first correlate the country-level sustainability ratings—the country's environmental responsibility, institutional responsibility, and social responsibility and solidarity—with the firm-level CSR ratings from the MSCI IVA, the Vigeo ESG, and the ASSET4 ESG databases. We do this so as to see whether our firm-level CSR measurements are significantly related to country-level sustainability ratings. The Pearson correlations coefficients between these firm- and country-level sustainability indices are shown in Table 2. On average, the coefficients are around 20 to 30 percent, which are high given that the country-level and the firm-level ratings use completely different rating metrics. The correlation between Vigeo's 'human resource concern' and 'country institutional responsibility' is as high as 47 percent, which implies that corporate behavior benefiting its employees and properly putting its human resources into service is largely governed by the rule of law and country governance. Such high correlations imply that our firm-level CSR measurements are in fact closely related to country-level societal sustainability ratings.

We also measure for a US subsample the correlation between our firm-level CSR ratings with Bebchuk, Cohen, & Ferrell's (2009) entrenchment index (the E-index) which is believed to drive corporate governance quality. The E-index consists of 6 governance provisions—staggered board, limits to shareholder amendments of the bylaws, supermajority requirements for mergers, supermajority requirements for charter amendments, poison pills and golden parachutes. The correlations between the E-index and the CSR scores for our US subsample are rather low (merely 6%) and negative, which suggests that CSR is not adopted by an entrenched management and hence expresses an agency problem. We perform a more thorough analysis of this issue in the regression analysis of the next section.

[Insert Table 2 about Here]

### *Regression Results*

In Table 3, we examine the relationship between CSR and our five agency proxies: cash holdings, free cash flow, CapEx, dividend payout ratio, and leverage. The agency view predicts a positive relation between CSR and the first three proxies and a negative relationship for the last two. The value-enhancing view on CSR predicts the opposite.

Panel A shows the regression results for the MSCI IVA sample, and Panel B shows those for the Vigeo ESG sample. In both panels, the five proxies are instrumented by the country-level legal shareholder protection measures and the firm-level ownership concentration. One important note is that the correlations between the five proxies are rather small, ranging from -0.8% to 23% for both the MSCI IVA and the Vigeo ESG samples, thus mitigating multicollinearity concerns. In the second stage, CSR ratings are regressed on the five “predicted” agency proxies as estimated from the first stage, and on the other control variables, with bootstrapping-adjusted standard errors. As we are interested in testing the CSR agency view (in relation to the CSR value-enhancing view), we only report the second-stage results. The dependent variables in Panel A are the *Overall IVA Ratings* (covering all ESG dimensions), the *RiskMetrics EcoValue Ratings* (focusing on ecological efficiencies), the *RiskMetrics Social Ratings* (focusing on social issues), as well as the three sub-indices that receive the highest weights: *Labor Relations*, *Industry-specific Carbon Risks*, and *Environmental Opportunities*, and three aggregate subscores: *Strategic Governance* (including traditional governance), *Human Capital*, and *Stakeholder Capital*. We switch between using ROA and Tobin's Q (measured by the equity market-to-book ratio), and between unwinsorized and winsorized dividend payout ratio to cross-validate our results. The dependent variables in Panel B are the *Overall Vigeo ESG*, *Environment*, *Human Resource*, *Human Rights*, *Community Involvement*, *Customers & Suppliers*, and *Corporate Governance*.

In Panel A, the coefficients on the three liquidity-focused agency proxies—cash holdings, free cash flows, and capital expenditures—are mostly negative and statistically significant, whereas the coefficients on the financial constraint-focused agency proxies – dividend payouts and leverage are mostly positive. These findings therefore do not support the CSR agency view. The economic significance is large, although it should be interpreted with caution, because the IVs mostly are at the country-level (within a range of 0-5) while the endogenous variables are at the firm-level (Ayyagari et al., 2011): one percent decrease in the cash holdings to assets ratio or in free-cash flows to assets ratio leads to an average change of more than half a grade in the ESG ratings, and a one percent change in the CapEx to assets ratio induces a 1 grade change in the ESG rating in most cases. For Panel A, we find strong support for the ‘doing good when doing well’ hypothesis, as the coefficients on either ROA or market-to-book ratios are mostly positive. In addition, the financial constraint proxies are mostly negatively correlated with the ESG ratings, while financial slack (as measured by the current ratio) are mostly positively associated with the ESG ratings. Similar patterns are observed in Panel B where the Vigeo ESG ratings are the dependent variables, and time fixed effects are controlled for—at the rating date level for columns (1)—(5) and at the year-level for columns (6)—(7) so as to check the robustness. Once again, these results do not support the CSR agency view. Again, we are cautious in interpreting the economic magnitudes of coefficients from 2SLS, given that we use country-level variables as IVs. The main focus is on the sign of coefficients which directly links to our theoretical predictions.

We note that for human resources and human rights, country-level legal protection indices seem to be weak instruments as the p-values of the Sargan-Hansen test are below 0.1, which may indicate that the legal protection of investor rights can also affect human resource and human rights through other channels than the agency channel. However, the results for other CSR indicators are mostly consistent with the previous results, with the economic effects being large.

In terms of causation, the interpretation of our results ought to be done with care. Still, given our identification strategy and the Sargan-Hansen’s test statistics which support the validity of our IVs, we tend to interpret them as follows: well-governed firms suffer less from agency concerns: when cash is tight—less cash reserves, free cash flows and capital spending, and more dividend payouts and interest payouts— managers are motivated to run the firm more efficiently and care more about the long run through engaging in CSR activities, and are more willing to disburse earnings to shareholders and other stakeholders.

[Insert Table 3 about Here]

In Table 4 we examine the relationship between CSR, executive compensation, and firm performance. The dependent variable is the average compensation of executives at the firm, and the independent variables include CSR scores, Tobin's Q, and their interaction term, together with other control variables that are used in the previous literature on executive compensation. Again, Panel A reports the results with CSR measured by MSCI's IVA ratings, while Panel B reports the results with CSR proxied by Vigeo's ESG ratings. As mentioned before, the agency view argues that CSR activities will be associated with reduced managerial pay-for-performance sensitivity, and thus predicts a negative effect of the interaction between CSR and performance on managerial pay. The value-enhancing view argues that CSR strengthens pay-for-performance, and thus predicts a positive sign of the interaction term.

The results on pay-for-performance again reject the agency view, but support the value-enhancing view. The coefficients on the interaction terms between CSR (overall IVA, environmental, social) performance and firm valuation (Tobin's Q) are consistently positive, which indicates that engaging in CSR is actually associated with increased pay-for-performance sensitivity. The economic effects are non-trivial: the effects of performance on pay (scaled by total assets) in more socially responsible firms (with one-grade higher in CSR ratings) are on average 10% higher than less socially responsible firms. The coefficient on the interaction term is not statistically significant in the regression with social ratings with the CSR measure, which may potentially imply that social issues such as human rights are relatively peripheral to firm performance, thus are not priced in managerial compensation. The coefficients on leverage are mostly negative, which confirm to the disciplinary role of debt: leverage can reduce the likelihood of managerial entrenchment through monitoring by creditors and the threat that the CEO loses his job following bankruptcy-induced liquidation.

[Insert Table 4 about Here]

Our interpretation of these regression results largely hinges on the assumption that our instruments are valid, that legal protection of shareholder rights and ownership concentration affect CSR through addressing agency concerns, rather than via other channels. With respect to our instruments, one may argue—as do, for example, Demsetz and Lehn (1985) and Demsetz and Villalonga (2001)—that ownership structure might also be endogenously determined and is thus also a choice variable. To deal with the potential endogeneity of ownership to corporate policies, we also instrument the ownership variable with legal protection indices that were used before—ADRI, ASDI, private enforcement of securities law, the revised one-share one-vote rule (mandatory proportionality of voting and cash flow) index, the revised mandatory dividend index, and the direct ownership of large shareholders. Reverse causality is not of concern because legal protection is clearly exogenous to CSR. In unreported tests, the

results are very similar to those in Table 3, in that liquidity-focused agency proxies are mostly negatively correlated with CSR, while the coefficients on dividend payouts and leverage have a positive sign.

Even if legal protection were a weak instrument and were to affect CSR through unobservable channels other than the agency channel (for example, through difficult to quantify cultural norms), the coefficients' signs still would not support the agency view. Even if other unobservable factors exist, the CSR agency view will still predict a positive and significant correlation between the abundance of cash and CSR; as long as the coefficients are not positive and significant, the agency view is unsubstantiated. As a robustness check, we more directly test the agency view in relation to the value-enhancing view without an IV setting in the next section.

#### *Country-level investor protection and firm-level CSR*

As mentioned above, although our instruments pass the Sargan-Hansen test, one may still question whether the legal protections of shareholder rights at the *country level* are really valid instruments for the agency problems of cash at the *firm level*. If country-level factors can induce firm-level agency conflicts through multiple channels, an omitted variable bias may still exist making causal interpretation of the relationship between cash flows and CSR less credible.

As the main purpose of this paper is to evaluate whether CSR investments result from agency problems, we also measure the “direct” correlation between legal protection and CSR (setting aside for a moment the instrumental approach as performed in previous section, which may be considered as problematic). The reason is straightforward: in countries with stronger legal protections of shareholder rights, agency problems are also likely to be lower. If CSR activities are due to agency problems, they should also be lower. That is, the CSR agency cost view predicts a negative association between legal protection and CSR. To test this hypothesis, we regress CSR ratings on various legal protection indices and report the results in Table 5. We proxy the degree of shareholder-orientation embedded in company law by means of the ADRI index as adjusted by Spamann (2010). The legal rules on constraining insiders' self-dealing are proxied by the ASDI and the public enforcement index, developed by Djankov et al. (2008). We do not report the parameter estimates of the control variables which comprise cash holdings (scaled by total assets), leverage ratio, ROA, Tobin's Q, financial constraints, interest coverage, current ratio, ownership dispersion (the Bureau van Dijck's independence indicator), as well as industry- and time-fixed effects, to save space.

According to the CSR agency view, stronger legal protection of shareholder rights, as proxied by ADRI (the aggregation of six shareholder protection rules) and other legal indices, should reduce the incentive and ability of corporate insiders (directors and officers) to extract private benefits through

CSR-related spending. In contrast, the CSR value-enhancing view predicts that CSR-spending is positively related to shareholder protection, as managers under stricter laws are motivated to generate more shareholder value through CSR projects. Both company law (the adjusted ADRI) and anti-self-dealing regulation (ASDI) in fact significantly, positively predict firms' CSR engagement (Panel A, the MSCI IVA sample). As a robustness test, we include the original ADRI from LLSV (1998) and the revised ADRI from Djankov et al. (2008), and decompose the anti-self-dealing index into *ex ante private control* which concerns the approval process and mandatory extensive disclosure, and *ex post private control* which concerns the ease of proving wrongdoing (for definitions, see the Appendix and Djankov et al. (2008)), into our models and find that our above results survive. The persistent positive correlations between corporate law and CSR suggest that when legal rules are stronger in disciplining corporate behavior towards "good conduct" for investors, especially minority shareholders (as both ADRI and anti-self-dealing indices mainly concern minority shareholder protection against corporate insiders and controlling shareholders), firms are also more likely engage in social responsibilities. Furthermore, the coefficients of explanatory variables of these tests do not differ much from those in the 2SLS regressions, indicating that agency concerns are the main/only channel through which legal protection of shareholder rights affect CSR. In Panel B where the dependent variables are the Vigeo ESG ratings that focus more on CSR compliance (rather than on the CSR practice or engagement of Panel A), company law (the adjusted ADRI) still plays a positive role, but the anti-self-dealing rules do not. The insignificance of the coefficients on the anti-self-dealing index and the public enforcement of self-dealing index is not that surprising, given that the two indices measure transactions while *compliance* to CSR standards mainly concerns the firm's daily operations, such as sticking to labor regulations and obtaining an ISO14000 certification, rather than (intercorporate) transactions that are measured by the anti-self-dealing index.

[Insert Table 5 about Here]

#### *Large shareholders' ownership and control and CSR*

Similar concerns on IV validity may apply to ownership concentration. Therefore, we investigate the direct relationship between large shareholder ownership structure and CSR in this section. The previous tests mostly concern managerial agency problems, but controlling shareholders can also engage in rent extraction which constitutes another type of agency problem ("large shareholder agency problem"). With respect to CSR spending, prior research suggests that large shareholders may have conflicting interests with minority shareholders (Barnea and Rubin, 2010; Benabou and Tirole, 2010; Cheng et al., 2013). However, the existence of both the convergence-of-interest effect and the entrenchment effect (of major shareholders) complicates the relationship between large shareholders' ownership stakes and CSR practice. In general, CSR is costly for shareholders if perceived as an agency problem, and therefore



higher cash-flow rights (ownership stakes) should lead - other things equal - to lower CSR expenditure, because large shareholders also internalize the costs of CSR (e.g. McConnell and Servaes, 1990). Consequently, one would expect a negative relationship between large shareholders' ownership and CSR practice when their ownership stakes are high, which is more likely to be driven by the incentive effect derived from cash flow rights (ownership stakes). Some argue, in contrast, that higher insider ownership makes these insiders more powerful in decision making thus more entrenched, resulting in an increased ability of insiders to overinvest in CSR. Therefore, the relation between large shareholders' ownership and CSR performance is non-monotonic in nature, which makes a direct testing of large shareholders' ownership on CSR difficult to interpret from the agency cost perspective.

One way to circumvent this problem is to disentangle the incentive and entrenchment effects of large shareholders on CSR, which is usually achieved through separating control rights from cash flow rights. Controlling shareholders can establish control over firms with only minimal cash-flow rights (ownership) when a deviation from the 'one share, one vote' rule applies (La Porta et al., 1999; Bebchuk, Kraakman, & Triantis, 2000; Claessens, Djankov, and Lang, 2000; Claessens et al., 2002; Faccio and Lang, 2002; Lins, 2003). According to Bebchuk et al. (2000), such separation can create agency costs an order of magnitude larger than the costs associated with a controlling shareholder who also has a majority of the cash-flow rights in her own corporation. A similar approach has been used by Claessens et al. (2002), in which they separate the largest shareholder's voting rights and cash flow rights, and find that firm value increases with the cash-flow ownership of the largest shareholder, consistent with a positive incentive effect, but firm value falls when the control rights of the largest shareholder exceed its cash-flow ownership, consistent with an entrenchment effect.

We test the effects of the largest shareholder's voting rights in excess of its cash-flow rights on CSR and use the ASSET4 sample, which comprises standardized data on largest shareholder's voting rights and cash flow rights for a set of global companies. Our model specifications follow those of Claessens et al. (2002), Morck et al. (1988), and Bebchuk et al. (2009) in that we capture the non-monotonic effects of large shareholders' cash flow rights. What we have done in addition is that we control for country, industry, and year fixed effects (whereas the earlier only controlled for industry dummies). Our main explanatory variables are: *Wedge1*, which is the difference between the largest shareholder's voting and cash flow rights (voting rights minus cash flow rights), and *Wedge2*, which is the ratio of voting rights and cash flow rights. The inclusion of both Largest Shareholder Ownership and its square captures the non-monotonic effects of the controlling shareholder. To control for "doing good by doing well", we include the Equity Market-to-Book Ratio as a control but also test other standard control variables (used by Claessens et al. (2002) and Bebchuk et al. (2009)). In view of CSR as a large shareholder agency

problem, the controlling shareholders can use their majority voting rights to expropriate minority shareholders by approving CSR projects that only benefit themselves. Therefore, a positive association between CSR and control wedge is expected under the agency view.

The results from the GLS regressions are shown in Table 6. Some interesting observations can be made: First, throughout all specifications, the coefficients on both Wedge1 and Wedge2 are positive and significant. A ten-percent increase in the difference between voting and cash flow rights on average reduces the CSR rating by one. This negative sign does not support the agency view which considers CSR spending as a result of controlling shareholders' entrenchment and expropriation of minority shareholders. Second, the effect of the largest shareholder's ownership seems to be non-monotonic on different aspects of CSR, as the coefficients on largest shareholder's ownership are all negative and significant, while that on the square of ownership are all positive. This is consistent with the previous literature that both incentive and entrenchment mechanisms of controlling shareholders affect corporate outcomes. The simplified specifications (only controlling for equity market-to-book ratio) and the more complex ones (including also other traditional financial controls) yield both qualitatively and quantitatively similar results, although the sample size for the latter shrinks. These results also hold for various ESG subindices which we do not report for reasons of conciseness. In terms of control variables, the positive coefficients on Equity Market-to-Book mostly support the "doing good by doing well" hypothesis. Firm size and year since incorporation also have positive loadings on CSR, indicating that larger and more established companies are more likely to engage in social issues. Overall, the direct effects of controlling shareholder's ownership and control (wedge between voting and cash flow rights) imply that CSR is not likely to be used as a self-serving tool for controlling shareholders to extract private benefits, shirk, or build empires, though large shareholders do reduce their spending on CSR due to the internalization of its costs. This reflects that a CSR policy is expensive, but does not by itself provide support for the agency view.

[Insert Table 6 about Here]

### *CSR, Agency Problems, and Shareholder Value*

Finally, we consider the association between CSR, agency problems and shareholder value altogether in a cross-country setting, which has not been explored in the extant literature of "doing well by doing good". To further explore the role of CSR in facilitating value-enhancement and triangulate our previous results, we test whether CSR could counter-balance the negative effects of agency problems and poor corporate governance on firm value. To do so, we utilize the rich coverage of corporate governance provisions in the ASSET4 ESG sample, and construct a global entrenchment index ("global

E-index”) as a proxy for poor governance. Our global E-index is constructed following the structure of the original US-based E-index as in Bebchuk et al. (2009). We have tried our best to mimic the exact construct of the original E-index by applying the same governance provisions across countries; only slight differences relative to the original US index occur due to data availability in Datastream. The provisions in our global E-index include the presence of: (1) a poison pill; (2) a golden parachute; (3) a classified board, (4) other anti-takeover devices, and (5) supermajority requirements for both amending charters and amending bylaws.<sup>3</sup> It is worth noting that ‘classified board’ is a general term which refers to the situation that the terms of board directors can be different from each other, while another concept, namely ‘staggered board’, refers to the situation when the terms of board directors are uniform. Though these are different entries in Datastream, such difference does not seem to matter for our regression results.

We conduct our test on a panel dataset of more than 4,700 largest public firms from 60 countries in the ASSET4 sample from 2002 to 2013. The dependent variable for all specifications is Tobin’s Q, defined as the ratio of market value of equity to the book value of equity, winsorized at the 5% level. The key explanatory variables are the global E-index, the CSR rating (which is measured by ASSET4’s overall CSR score, environmental score, and social score, respectively), and an interaction between the E-index and CSR (Entrenchment Index  $\times$  CSR). If CSR enhances firm value, it can counterbalance the negative impact of managerial agency problems as proxied by the E-index. Therefore, we expect a negative coefficient of the E-index, a positive coefficient of CSR, and a positive coefficient of their interaction. We use standard financial controls, such as firm size (measured as  $\text{Log}(\text{Assets})$ ), the largest shareholder’s cash flow rights and its square, return on equity (ROE), leverage ratio, capital expenditure, dividend per share, as well as year dummies, country dummies, and industry dummies (based on Thomson Reuter’s industry classification). Panel A shows the results from the whole ASSET4 sample (worldwide sample). While some may be concerned that the entrenchment index is more relevant for dispersed ownership structure, we also show in Panel B the results from the subsample of companies in the U.S., U.K., and Australia, and in Panel C the results from the subsample of more countries with dispersed ownership as classified by La Porta et al. (1999), which further includes Canada, Ireland, Switzerland, and Japan.

The coefficients on the three measures of our global E-index are mostly negatively associated with Tobin’s Q throughout all panels, which is in line with that of the original E-index and confirms that our

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<sup>3</sup> Inevitably, there are missing values for some firms in some years from Datastream, and we either treat these missing values as “missing” (Entrenchment Index 1), or treat these missing values as “zeros” (Entrenchment Index 2). As a further robustness check of our “global E-index”, we create Entrenchment Index 3 by replacing “classified board” in Entrenchment Index 2 by “staggered board”.

new index functions similarly with respect to firm value. The main effects of various CSR ratings are mostly positive in Panel A, suggesting that higher CSR rating is associated with higher firm value. The most interesting results are on the interaction term between CSR and the global E-index: for almost all CSR ratings (environmental, social, and overall), the coefficients are positive and statistically significant. This reinforces our earlier findings supporting the value-enhancing view rather than the agency view, and suggests that CSR rather than being an agency problem, can actually attenuate the negative effects of agency problems (managerial entrenchment) on firm value. Similar results are found in Panels B and C when we focus on dispersed ownership countries, which confirm our previous findings based on the world sample. Of course, potential endogeneity issues may still exist, and unfortunately there might be no readily single instrumental variable that capture all aspects of CSR as well as of “entrenchment”. Therefore, our interaction results should be interpreted with caution. Nevertheless, corporate charters and bylaws are very stable over time (Bebchuk et al., 2009), which could partly eliminate endogeneity concerns, and the pure correlations between “CSR × Entrenchment” at least offer no ground for justifying the agency view.

[Insert Table 7 about Here]

## V. Conclusion

In most Anglo-American countries, there is consensus that corporate governance is about “how investors get the managers to give them back their money” (Shleifer & Vishny, 1997: 738). Corporate social responsibility, because of its focus on stakeholders in addition to shareholders, is often considered as cash diversion and an agency problem. In contrast to this view, is the value-enhancing CSR view in which CSR activities can be consistent with maximizing firm value. In this debate it is important to note that legal rules and ownership structures are very different outside the Anglo-American world, which significantly influences the executives’ incentives, the fiduciary duties of the management and the board of directors, as well as the decision making process. The debate on the role of corporate social responsibility therefore often reflects the varieties of capitalism across countries and the boundaries of the firm.

In this paper, we utilize public and proprietary data on corporate compliance and engagement in stakeholder issues to comprehensively trade off the prominent agency view against the value-enhancing view of CSR. Our empirical set-up is well-grounded in fundamental economic theory: incentives, information asymmetry, and control. We do not find empirical evidence that CSR is associated with ex ante agency concerns, such as abundance of cash and a weak connection between managerial pay and corporate performance. Rather, higher CSR performance is closely related to tighter cash—usually a

proxy for better-disciplined managerial practice in the traditional corporate finance literature (Jensen, 1986)—and higher pay-for-performance sensitivity. In addition, firms in countries with better legal protection on shareholder rights receive higher CSR ratings. Moreover, the relation between CSR and large shareholders' ownership exhibits a non-monotonic relationship. Furthermore, CSR can counterbalance the negative effects of managerial entrenchment, and lead to higher shareholder value as proxied by Tobin's Q. Our empirical results (based on an instrumental variables-estimation) suggest that good governance causes high CSR, and that a firm's CSR practice is consistent with shareholder wealth maximization. Therefore, our findings support the positive stance on CSR, which is also found in Dimson et al. (2013), Deng et al. (2013), and Ioannou & Serafeim (2010, 2012).

While the vast majority of the literature has emphasized the agency costs of managerial entrenchment and large shareholders' control, as well as their economic consequences such as distorting resource allocation and impeding economic growth, our empirical findings show that these costs are at least not made through CSR activities. Rather, as shown in our results based on the self-constructed global entrenchment index, CSR engagement can actually counterbalance the negative impact of entrenchment and agency problems on firm value. In fact, the high correlations of CSR ratings and country-level sustainability ratings (which incorporate economic development and governance) may imply that CSR activities in general are conducive to achieving sustainable development (Moon, 2007). Of course, none of this is to say that more CSR is always better. Undertaking some CSR activities may indeed be driven by managerial utility considerations, such as the satisfaction of some personal or moral imperative of the manager, rather than the enhancement of shareholder wealth (Moser and Martin, 2012). Moreover, shareholders always internalize the costs of CSR expenditures, and as their ownership stakes increase, they reduce spending on CSR. Our main argument is that *in general*, corporate social responsibility need not to be inevitably induced by agency problems, but can actually preserve a core value of capitalism—generating more returns to investors—through enhancing firm value and shareholder wealth.

If we take the evidence in this paper at face value, several policy implications emerge for the improvement of corporate governance, particularly in the area of corporate social responsibility. Undoubtedly, governments have their responsibility of dealing with market failures and externalities, but the government may not always be incentivized and effective in achieving this goal—governments can be corrupt, inefficient, and even predatory to private sectors (Shleifer and Vishny, 1998), in which case they fail to provide public goods. Therefore, corporate social responsibility in private sectors—the private provision of public goods (Kitzmueller and Shimshack, 2012)—becomes necessary for preserving social welfare. While many researchers believe that such private provision of public goods

may be associated with agency problems that divert shareholder wealth and even undermine the foundations of capitalist spirits, we cast doubt on such belief. Corporate governance reforms should take into account of such positive externalities.

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**Table 1. Descriptive Statistics**

Variables	<i>Panel A. MSCI IVA sample and Vigeo ESG sample</i>											
	<i>MSCI IVA sample</i>						<i>Vigeo ESG sample</i>					
	Obs.	Mean	Median	Std. dev.	Min.	Max.	Obs.	Mean	Median	Std. dev.	Min.	Max.
Cash holdings (scaled by assets)	77,061	0.075	0.045	0.086	0	0.994	5,995	0.076	0.051	0.081	0	0.787
Free cash flows (scaled by assets)	65,728	0.059	0.057	0.073	-1.362	1.565	4,804	0.105	0.094	0.068	-0.368	0.611
Capital expenditure (scaled by assets)	67,091	0.052	0.042	0.046	0	1.037	4,984	0.049	0.040	0.043	0	0.498
Dividend payout ratio	55,670	0.816	0.288	13.766	-70.176	598.420	3,744	0.573	4.817	0.364	-82.172	211.000
Leverage ratio (winsorized)	78,004	0.615	0.613	0.208	0.228	0.955	5,877	6.466	0.094	118.485	0	3967.62
ROA (winsorized)	74,993	0.050	0.043	0.044	-0.02	0.149	5,876	0.050	0.040	0.057	-0.414	0.517
Equity market-to-book (winsorized)	76,417	2.820	2.247	1.875	0.790	8.045	6,766	2.571	1.935	1.938	0.620	8.020
Tobin's Q (winsorized)	72,949	0.677	0.445	0.688	0.042	2.702	5,904	0.326	0.322	0.198	0.028	0.712
Financial constraints (winsorized)	62,076	0.264	0.006	0.495	0	1.832	4,738	0.296	0.035	0.500	0	1.784
Interest coverage (winsorized)	73,948	17.093	5.975	29.411	0.414	122.817	5,821	12.891	5.388	19.369	0.471	79.452
Financial slacks (current ratio)	63,342	1.721	1.365	1.572	0.038	184.984	4,852	0.850	0.774	0.472	0	6.527
Direct ownership of large shareholders	54,746	35.572%	23.12%	33.918%	0	100%	6,755	35.314%	23.560%	34.268%	0	100%
Largest shareholder's total ownership	37,005	22.914%	12.46%	23.274%	0	100%	4,282	23.531%	11.615%	24.147%	0	100%
Independent director ratio	31,019	0.719	0.727	0.175	0	1	5,052	0.770	0.800	0.155	0	0.962
Female CEO	74,996	0.014	0	0.119	0	1	5,539	0.017	0	0.128	0	1
CEO's international work	74,998	0.437	0	0.496	0	1	5,540	0.424	0	0.494	0	1
CEO's overseas education	74,986	0.195	0	0.396	0	1	4,874	0.337	0	0.473	0	1
Total compensation (thousand USD)	24,049	859.509	404.750	2559.806	5.417	75001	1,611	1089.324	483.500	1956.063	3	16668
Employees	71,697	41,917	17,245	82,271	0	2,100,000	5,535	58,897	25,898	102,827	0	2,100,000
Analyst coverage	67,289	14.421	13	7.852	1	54	3,764	18.075	17	8.576	1	51
Investment opportunities	67,049	0.093	0.047	0.797	-0.043	170.824	4,983	0.085	0.046	0.141	-0.003	2.669
Blockholders' direct ownership	54,746	0.356	0.231	0.339	0	1	6,755	0.353	0.236	0.343	0	1
Largest shareholder's total ownership	37,005	0.229	0.125	0.233	0	1	4,282	0.235	0.116	0.241	0	1
Adjusted anti-director rights index	89,765	3.371	4	1.184	2	5	7,006	3.757	4	1.098	2	5
Anti-self-dealing index	89,947	0.617	0.650	0.212	0.170	1	7,047	0.546	0.500	0.240	0.2	1
Public enforcement of anti-self-dealing	89,947	0.197	0	0.339	0	1	7,047	0.331	0	0.403	0	1
Private enforcement of securities law	89,799	0.772	0.747	0.217	0.18	1	7,006	0.655	0.705	0.226	0.18	1
Revised one-share one-vote index	89,765	0.135	0	0.342	0	1	7,006	0.102	0	0.302	0	1
Mandatory (waivable) dividend (percentage)	89,765	0.233	0	2.837	0	50	7,006	0.285	0	3.144	0	35

**Table 1 (Cont). Descriptive Statistics**

	Obs	Mean	Median	Std. dev.	Min.	Max.
Wedge1 (voting minus cash flow rights)	20,573	1.165%	0	7.245%	-89.84%	99.99%
Wedge2 (voting over cash flow rights)	20,562	4.039	1	170.790	0	10000
Largest Shareholder's Ownership	23,797	22.029%	13.6%	19.578%	0	100%
Largest Shareholder's Voting Rights	20,716	23.590%	14.3%	20.881%	0	100%
Equity Book-to-Market (winsorized)	46,583	2.359	1.800	1.757	0.500	7.280
Firm Size (Total Assets)	31,133	3612965	6123	2.15×10 <sup>8</sup>	0	3.06×10 <sup>10</sup>
Firm Age	23,374	34.740	23	31.655	0	185
Annual Sales Growth Rate (winsorized)	46,799	12.627%	8.16%	21,157%	-19.070%	69.830%
CapEx to Sales Ratio (winsorized)	29,015	0.017	0.001	0.044	2.54×10 <sup>-6</sup>	0.185
Leverage	31,061	21.081%	15.932%	382.758%	-0.034%	67392%
Dividend Per Share (winsorized)	47,541	4.014	0.345	9.940	0	41
ROE	31,082	0.117	0.118	2.331	-212.5	141.742
Entrenchment Index 1	12,132	1.245	1	1.227	0	5
Entrenchment Index 2	53,472	0.690	0	1.037	0	5
Entrenchment Index 3	53,472	0.889	0	1.239	0	5

**Table 2. Correlation between Corporate ESG and Country Sustainability**

The MSCI IVA Rating, RiskMetrics EcoValue21 Rating, and RiskMetrics Social Rating are firm-level ESG scores provided by MSCI IVA. The Overall Country Score, Country Environmental Responsibility, Country Institutional Responsibility, and Country Social Responsibility and Solidarity are country-level sustainability indices provided by Vigeo. Overall Country Score is the average of the other three responsibility domain scores. \*\*\* stands for statistical significance at 1% level.

	<i>Overall country score (with bonus)</i>	<i>Country environmental responsibility</i>	<i>Country institutional responsibility</i>	<i>Country social responsibility and solidarity</i>
<b>MSCI IVA</b>				
MSCI IVA overall rating	0.29***	0.21***	0.28***	0.26***
RiskMetrics EcoValue21 rating	0.31***	0.31***	0.28***	0.25***
RiskMetrics Social rating	0.29***	0.21***	0.28***	0.26***
<b>Vigeo ESG</b>				
Overall Vigeo rating	0.23***	0.10***	0.29***	0.11***
Human resources rating	0.40***	0.004	0.47***	0.35***
Environmental rating	0.31***	0.11***	0.33***	0.25***
Customers & suppliers	0.14***	-0.001	0.18***	0.09***
Corporate governance	0.04***	0.11***	0.14***	-0.20***
Community involvement	0.17***	-0.005	0.23***	0.10***
Human rights	0.19***	0.07***	0.22***	0.14***
<b>ASSET4 ESG</b>				
CSR score	0.13***	0.05***	0.13***	0.15***
Environmental score	0.26***	0.22***	0.25***	0.21***
Social score	0.21***	0.13***	0.21***	0.17***

**Table 3. CSR and Agency Concerns: Two Stage Least Square Regressions**

2SLS regression results for various ESG ratings. In the 1<sup>st</sup> stage regression (not reported), the dependent variables are cash holdings, free cash flows, capital expenditure, dividend payout ratio, and leverage, respectively, and the independent variables are the country-level revised anti-director rights index (ADRI) as in Spamann (2009), anti-self-dealing index (ASDI) as in Djankov et al. (2008), the private enforcement of securities law index as in La Porta et al. (2006), the revised one-share one-vote rule (mandatory proportionality of voting and cash flow) index as in Spamann (2010), the revised mandatory waivable dividend index as in Spamann (2010), and the direct ownership of large shareholders who hold more than 5% of the firm's equity. In the second stage, the dependent variables are various ESG ratings, and the independent variables are the "predicted" cash holdings, free cash flows, CapEx, dividend payouts, and leverage, together with other control variables. Standard errors are adjusted for the second stage and clustered at the industry level. \*, \*\*, \*\*\* stand for significant at the 10% level, 5% level, and 1% level respectively.

<i>Panel A. Dependent variables are ESG ratings (overall ratings and subdimensional ratings) from the MSCI IVA sample</i>									
<i>Dependent variable (2<sup>nd</sup> stage):</i>	<i>IVA rating</i>	<i>EcoValue rating</i>	<i>Social rating</i>	<i>Labor relations</i>	<i>Industry carbon risk</i>	<i>Environ. Opportunity</i>	<i>Strategic governance</i>	<i>Human capital</i>	<i>Stakeholder capital</i>
Cash holding (scaled)	-0.216 (0.197)	-0.287*** (0.082)	-0.061 (0.101)	0.110 (0.073)	-0.358*** (0.080)	-0.056 (0.038)	0.118 (0.104)	0.241** (0.112)	0.063 (0.086)
Free cash flow (scaled)	-0.801* (0.432)	-1.091*** (0.247)	-2.096*** (0.482)	-1.425*** (0.311)	-0.221 (0.218)	-0.629*** (0.119)	-1.050*** (0.271)	-0.512*** (0.161)	-0.344*** (0.100)
Capital expenditure (scaled)	-2.317* (1.295)	-2.176*** (0.370)	-1.418** (0.634)	-0.832* (0.436)	-0.407* (0.243)	-0.806*** (0.154)	-0.282 (0.247)	-1.038** (0.425)	-0.986*** (0.302)
Dividend payout ratio (winsorized)	-1.914 (1.594)	-0.062 (1.344)	12.700*** (4.490)	6.910** (3.047)	4.195*** (1.344)	0.169 (0.628)	5.732*** (2.009)	9.343** (3.703)	5.248** (2.433)
Leverage (winsorized)	0.433** (0.219)	0.144*** (0.062)	0.209** (0.098)	0.127* (0.067)	0.029 (0.031)	-0.017 (0.628)	0.016 (0.032)	0.064 (0.050)	0.050* (0.030)
ROA	1.007** (0.515)	1.005*** (0.201)	1.881*** (0.387)	1.284*** (0.248)	0.168 (0.186)	0.548*** (0.096)	0.992*** (0.270)		
Market-to-book equity								0.582* (0.332)	0.433* (0.228)
Financial constraints	-0.340 (0.235)	-0.108*** (0.031)	-0.279*** (0.083)	-0.014 (0.031)	-0.095*** (0.025)	-0.032** (0.015)	-0.077 (0.056)	-0.209* (0.108)	-0.246*** (0.077)
Interest coverage	0.070 (0.048)	0.047*** (0.015)	0.017 (0.023)	-0.002 (0.016)	0.034*** (0.008)	-0.001 (0.006)	-0.021*** (0.007)	0.022 (0.014)	0.027*** (0.009)
Financial slack	1.885 (1.320)	0.592* (0.338)	1.066*** (0.388)	0.426 (0.272)	1.183*** (0.232)	-0.274* (0.153)	-0.206 (0.161)	-0.360 (0.332)	-0.198 (0.221)
CapEx-to-sales ratio	36.451 (26.793)	29.775*** (8.485)	-7.899 (21.128)	-8.537 (14.477)	5.947 (5.453)	5.127 (3.866)	-12.270* (6.614)	17.227* (9.931)	17.661** (7.025)
Ln(GDP per capita)	-0.505 (0.686)	-1.061*** (0.315)	-0.321 (0.477)	-0.100 (0.332)	0.499*** (0.191)	-0.363** (0.144)	0.378** (0.156)	-0.430 (0.344)	-0.678*** (0.239)
Globalization index	-0.027 (0.045)	0.042*** (0.012)	-0.006 (0.017)	0.006 (0.012)	-0.036*** (0.007)	0.034*** (0.007)	0.017 (0.011)	0.028 (0.024)	0.024 (0.018)
Constant	-7.990 (7.915)	13.460*** (4.159)	-2.460 (3.238)	0.348 (2.170)	1.489 (3.101)	12.796*** (2.008)	-0.178 (3.939)	4.196 (4.767)	9.571** (3.748)
Sargan-Hansen test P-value	0.326	0.423	0.509	0.167	0.434	0.654	0.613	0.959	0.608
No. observations	14981	26697	18878	18912	22812	26090	14765	14709	14705
Wald Chi-squared	36.25	217.16	136.69	146.46	145.19	238.95	412.9	101.53	128.49

**Table 3 (Cont). CSR and Agency Concerns: Two Stage Least Square Regressions**

2SLS regression results for various ESG ratings. In the 1<sup>st</sup> stage regression (not reported), the dependent variables are cash holdings, free cash flows, capital expenditure, dividend payout ratio, and leverage, respectively, and the independent variables are the country-level revised anti-director rights index (ADRI) as in Spamann (2009), anti-self-dealing index (ASDI) as in Djankov et al. (2008), the private enforcement of securities law index as in La Porta et al. (2006), the revised one-share one-vote rule (mandatory proportionality of voting and cash flow) index as in Spamann (2010), the revised mandatory waivable dividend index as in Spamann (2010), and the direct ownership of large shareholders who hold more than 5% of the firm's equity. In the second stage, the dependent variables are various ESG ratings, and the independent variables are the "predicted" cash holdings, free cash flows, CapEx, dividend payouts, and leverage, together with other control variables. Standard errors are adjusted for the second stage and clustered at the industry level. \*, \*\*, \*\*\* stand for significant at the 10% level, 5% level, and 1% level respectively.

<i>Panel B. Dependent variables are ESG ratings (overall and subdimensional ratings) from the Vigeo corporate ESG sample</i>							
<i>Dependent variable (2<sup>nd</sup> stage):</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>Overall ESG</i>	<i>Environment</i>	<i>Human resources</i>	<i>Community involvement</i>	<i>Human rights</i>	<i>Customer &amp; supplier</i>	<i>Corporate governance</i>
<i>Agency concerns</i>							
Cash holding (scaled)	-0.497 (1.671)	0.804 (1.988)	4.111 (3.811)	-1.817 (2.541)	-0.406 (1.985)	-0.762 (1.454)	-10.474 (7.556)
Free cash flow (scaled)	-2.723* (1.430)	-4.341** (1.701)	-6.092* (3.261)	0.176 (2.175)	-3.698** (1.699)	-2.758** (1.224)	1.552 (6.360)
CapEx (scaled)	-3.258 (2.469)	-0.327 (2.938)	4.618 (5.631)	-7.001* (3.755)	0.969 (2.933)	-0.904 (2.173)	-23.217** (11.291)
Dividends payout (winsorized)	0.136 (0.178)	0.258 (0.212)	0.323 (0.407)	0.205 (0.271)	0.124 (0.212)	-0.090 (0.161)	0.173 (0.835)
Leverage	0.785*** (0.264)	0.195 (0.314)	1.421** (0.603)	0.702* (0.402)	0.886*** (0.314)	0.372* (0.219)	0.891 (1.136)
<i>Control variables</i>							
ROA	2.969*** (1.041)	3.329*** (1.238)	3.848 (2.373)	1.232 (1.583)	3.528*** (1.236)	2.830*** (0.947)	4.207 (4.918)
Financial constraints	-0.459 (0.597)	0.315 (0.710)	1.208 (1.361)	-0.570 (0.908)	0.558 (0.709)	-0.104 (0.510)	-4.575* (2.651)
Financial slack	-14.458 (10.451)	2.372 (12.434)	-1.280 (23.835)	-20.341 (15.894)	-18.142 (12.417)	-8.706 (9.883)	-73.506 (51.924)
CapEx-to-Sales ratio	0.366 (0.549)	-0.451 (0.653)	-1.273 (1.252)	1.394* (0.835)	-0.494 (0.652)	-0.145 (0.489)	4.509* (2.540)
Ln(GDP per capita)	2.857 (5.354)	-8.402 (6.371)	1.526 (12.212)	2.007 (8.143)	3.914 (6.361)	4.367 (4.240)	11.291 (22.033)
Globalization index	0.169 (0.371)	0.156 (0.441)	0.599 (0.845)	-0.064 (0.563)	0.123 (0.440)	0.239 (0.347)	-0.918 (1.801)
Constant	-40.795 (92.024)	86.301 (109.491)	-158.932 (209.883)	-2.717 (139.954)	-58.098 (109.335)	-30.309 (80.498)	124.078 (418.261)
Sargan-Hansen test P-value	0.996	0.449	0.086	0.850	0.035	0.187	0.263
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. observations	2164	2164	2164	2164	2164	2164	2164
Wald Chi-squared	162.41	157.28	70.04	112.35	102.53	61.83	37.13

**Table 4. CSR and Executive Pay-for-Performance**

The dependent variable is the average pay for all executives that are recorded in the BoardEx database, scaled by total assets. Robust standard errors are clustered at the firm level. The dependent variable for each specification is the equity-based compensation.

*Panel A. The MSCI Intangible Value Assessment sample*

<i>Different ESG indices as independent variables:</i>	<i>IVA rating</i>	<i>EcoValue rating</i>	<i>Social rating</i>	<i>Labor relations</i>	<i>Industry carbon risks</i>	<i>Environ. Opportunities</i>	<i>Strategic governance</i>	<i>Human capital</i>	<i>Environment (Overall)</i>	<i>Stakeholder capital</i>
Tobin's Q × CSR	0.010 (0.064)	0.170*** (0.059)	-0.039 (0.064)	0.258*** (0.069)	0.302*** (0.084)	0.260*** (0.053)	0.195*** (0.048)	0.207*** (0.047)	0.306*** (0.051)	0.150*** (0.044)
CSR	-0.153 (0.521)	0.232 (0.446)	-0.563 (0.400)	-0.680** (0.329)	0.237 (0.384)	-0.196 (0.353)	1.473* (0.883)	1.014 (0.808)	0.865 (0.736)	-0.027 (0.541)
Tobin's Q	-0.001 (0.002)	-0.003 (0.002)	-0.002 (0.002)	-0.005** (0.002)	-0.005*** (0.002)	-0.005** (0.002)	-0.002 (0.002)	-0.002 (0.002)	-0.003 (0.002)	-0.002 (0.002)
ROA	0.990*** (0.131)	1.012*** (0.140)	1.245*** (0.153)	1.013*** (0.151)	0.932*** (0.135)	0.858*** (0.141)	0.795*** (0.121)	0.769*** (0.129)	0.750*** (0.120)	0.868*** (0.130)
Leverage	-0.137*** (0.028)	-0.108*** (0.038)	-0.101*** (0.035)	-0.133*** (0.045)	-0.105*** (0.039)	-0.131*** (0.050)	-0.158*** (0.033)	-0.176*** (0.032)	-0.175*** (0.034)	-0.164*** (0.031)
Analyst coverage	-0.075 (0.082)	-0.018 (0.070)	0.046 (0.072)	-0.035 (0.074)	-0.001 (0.082)	-0.018 (0.071)	-0.208*** (0.074)	-0.160** (0.080)	-0.173** (0.077)	-0.115 (0.084)
Ln(Employees)	-6.972*** (0.795)	-8.608*** (0.725)	-8.029*** (0.714)	-8.261*** (0.672)	-7.394*** (0.739)	-8.486*** (0.672)	-7.365*** (0.868)	-7.329*** (0.862)	-7.311*** (0.816)	-7.017*** (0.809)
Largest shareholder's ownership	0.046 (0.030)	0.096*** (0.028)	0.085*** (0.030)	0.104*** (0.029)	0.068*** (0.026)	0.102*** (0.029)	0.084** (0.036)	0.064** (0.030)	0.066** (0.030)	0.057* (0.029)
Independent director ratio	-0.462*** (0.049)	-0.376*** (0.049)	-0.384*** (0.053)	-0.398*** (0.052)	-0.343*** (0.050)	-0.388*** (0.049)	-0.464*** (0.049)	-0.456*** (0.046)	-0.461*** (0.049)	-0.465*** (0.047)
CEO gender (male)	-9.898*** (2.612)	-0.386 (4.411)	-0.319 (4.412)	-1.563 (4.262)	-9.930*** (2.349)	-1.295 (4.436)	-10.529*** (3.177)	-11.958*** (2.838)	-11.304*** (2.429)	-12.592*** (2.601)
CEO overseas work	-3.437*** (0.785)	-2.490*** (0.884)	-1.327 (0.842)	-1.236 (0.853)	-1.197 (0.927)	-2.317*** (0.884)	-3.790*** (0.825)	-3.166*** (0.788)	-3.159*** (0.800)	-3.247*** (0.808)
CEO overseas education	4.353*** (0.900)	2.147** (0.968)	2.619*** (1.020)	2.639*** (1.013)	1.958* (1.052)	2.021** (0.992)	4.489*** (0.917)	4.271*** (0.897)	4.801*** (0.959)	4.282*** (0.886)
Constant	78.049*** (4.206)	62.863*** (5.434)	61.935*** (5.383)	65.908*** (4.903)	62.324*** (4.370)	65.355*** (5.338)	72.331*** (5.254)	73.417*** (5.251)	74.433*** (5.287)	80.129*** (4.443)
No. of obs.	4419	5929	5234	5244	5399	5817	4357	4357	4419	4357
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	25.2%	35.4%	33.5%	33.9%	32.1%	35.4%	25.6%	25.5%	25.6%	25.3%

**Table 4 (Cont). CSR and Executive Pay-for-Performance**

The dependent variable is the average pay for all executives that are recorded in the BoardEx database, scaled by total assets. Robust standard errors are clustered at the firm level. The dependent variable for each specification is the equity-based compensation.

<i>Panel B. The Vigeo Corporate ESG sample</i>							
<i>Different ESG indices as independent variables:</i>	<i>Overall ESG</i>	<i>Environment</i>	<i>Human resource</i>	<i>Human rights</i>	<i>Community involvement</i>	<i>Customers &amp; suppliers</i>	<i>Corporate governance</i>
Tobin's Q × CSR	0.011** (0.004)	0.009** (0.005)	0.008 (0.005)	0.011*** (0.004)	0.011** (0.005)	0.014*** (0.004)	0.020*** (0.004)
CSR	-0.001 (0.037)	-0.025 (0.021)	-0.045* (0.025)	-0.022 (0.030)	-0.012 (0.028)	-0.085*** (0.031)	-0.015 (0.024)
Tobin's Q	0.033 (0.153)	0.088 (0.063)	0.138 (0.150)	0.023 (0.153)	-0.014 (0.177)	0.019 (0.157)	-0.241 (0.185)
ROA	0.322*** (0.093)	0.352*** (0.094)	0.369*** (0.095)	0.328*** (0.089)	0.316*** (0.084)	0.342*** (0.093)	0.223*** (0.082)
Leverage	0.087 (0.062)	0.088 (0.063)	0.089 (0.063)	0.089 (0.063)	0.087 (0.064)	0.096 (0.064)	0.094 (0.062)
Ln(Employees)	-1.931*** (0.560)	-1.848*** (0.535)	-1.751*** (0.536)	-1.867*** (0.557)	-2.013*** (0.548)	-1.744*** (0.519)	-1.919*** (0.546)
Analyst coverage	-0.181*** (0.054)	-0.173 (0.055)	-0.175*** (0.053)	-0.180*** (0.054)	-0.171*** (0.055)	-0.159*** (0.054)	-0.173*** (0.054)
Largest shareholders' ownership	-0.000 (0.010)	0.0004 (0.010)	0.001 (0.010)	0.0005 (0.010)	0.0004 (0.010)	0.003 (0.010)	0.006 (0.010)
Independent director ratio	-0.141*** (0.034)	-0.138*** (0.033)	-0.132*** (0.034)	-0.139*** (0.034)	-0.138*** (0.034)	-0.132*** (0.032)	-0.113*** (0.034)
CEO overseas work	0.426 (0.571)	0.347 (0.571)	0.275 (0.577)	0.381 (0.572)	0.035 (0.571)	0.390 (0.573)	0.741 (0.571)
CEO overseas education	-1.602** (0.626)	-1.650*** (0.626)	-1.852*** (0.613)	-1.650*** (0.631)	-1.639*** (0.630)	-1.545** (0.618)	-1.419** (0.627)
Female CEO	2.087 (6.375)	2.220 (6.354)	2.168 (6.231)	2.113 (6.339)	2.534 (6.523)	2.117 (6.192)	0.738 (6.314)
Constant	27.138*** (3.766)	27.419*** (3.834)	27.474*** (3.771)	27.683*** (3.767)	27.475*** (3.778)	28.478*** (4.051)	24.548*** (3.776)
No. of obs.	487	487	487	487	487	487	487
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	71.0%	70.9%	70.9%	71.0%	71.2%	71.3%	72.0%



**Table 5. Direct Effects of Legal Protection of Shareholder Rights on CSR**

The dependent variables are various ESG indices, and the key explanatory variables are the adjusted anti-director rights index (ADRI), anti-self-dealing index (ASDI), and the public enforcement of the anti-self-dealing regulation. Control variables include legal origins (French, German, and Scandinavian; the English origin is taken as benchmark and omitted from regressions), logarithm of GDP per capita, return on assets (ROA), Tobin's Q, financial constraints, interest coverage, current ratio, the ownership dispersion indicator, investment opportunities, and year and industry dummies. Standard errors are clustered at the country level and reported in the parentheses. \*, \*\*, \*\*\* stand for significant at the 10% level, 5% level, and 1% level respectively.

<i>Panel A. Dependent variables are ESG ratings (overall ratings and subdimensional ratings) from the MSCI IVA sample</i>																		
	<i>IVA rating</i>			<i>EcoValue rating</i>			<i>Social rating</i>			<i>Labor relations</i>			<i>Industry-specific carbon risks</i>			<i>Environmental opportunities</i>		
Adjusted ADRI	0.297***			0.333***			0.269***			0.243***			0.221***			0.151***		
	(0.110)			(0.060)			(0.055)			(0.070)			(0.053)			(0.046)		
ASDI	1.329			1.966***			1.184			1.003			1.302**			0.967***		
	(1.325)			(0.676)			(1.174)			(0.940)			(0.489)			(0.307)		
Public enforcement		0.753***			0.158			0.725***			0.523***			0.004				-0.018
		(0.229)			(0.211)			(0.208)			(0.169)			(0.202)				(0.128)
No. of obs.	25449	25549	25549	48858	48958	48958	32495	32483	32483	32504	32604	32604	40508	40606	40606	47976	48075	48075
Control variables		Yes			Yes			Yes			Yes			Yes				Yes
Year FE		Yes			Yes			Yes			Yes			Yes				Yes
Industry FE		Yes			Yes			Yes			Yes			Yes				Yes
R-squared	13.5%	12.2%	12.9%	18.3%	17.5%	16.3%	10.7%	9.5%	10.4%	14.0%	13.2%	13.5%	41.3%	41.6%	41.2%	27.3%	27.2%	27.0%

  

<i>Panel B. Dependent variables are ESG ratings (overall and subdimensional ratings) from the Vigeo corporate ESG sample</i>																		
	<i>Overall ESG</i>			<i>Environment</i>			<i>Human resources</i>			<i>Customers &amp; suppliers</i>			<i>Human rights</i>			<i>Community involvement</i>		
Adjusted ADRI	1.969***			2.789***			3.363***			0.980			2.558***			2.622***		
	(0.585)			(0.520)			(1.123)			(0.674)			(0.811)			(0.762)		
ASDI	-5.395			7.104			0.665			-3.116			-4.828			-7.227		
	(9.169)			(10.904)			(11.472)			(9.148)			(9.046)			(10.608)		
Public enforcement		-0.323			-2.337			0.698			-1.623			0.908				1.325
		(1.516)			(1.711)			(2.255)			(1.376)			(1.688)				(1.384)
No. of obs.	3586	3610	3610	3586	3610	3610	3586	3610	3610	3586	3610	3610	3586	3610	3610	3586	3610	3610
Control variables		Yes			Yes			Yes			Yes			Yes				Yes
Year FE		Yes			Yes			Yes			Yes			Yes				Yes
Industry FE		Yes			Yes			Yes			Yes			Yes				Yes
R-squared	33.8%	32.2%	32.2%	28.5%	27.3%	27.4%	41.7%	39.7%	39.8%	18.7%	18.2%	18.3%	24.5%	23.0%	23.0%	27.7%	26.7%	26.7%

**Table 6. Direct Effects of Large Shareholders' Ownership and Control on CSR**

The dependent variables are various ESG indices from the ASSET4 sample, and the key explanatory variables are the largest shareholder's cash flow rights (ownership) and its square, and the wedge between the largest shareholder's voting rights and cash flow rights. Wedge1 stands for voting rights minus cash flow rights, wedge2 stands for the ratio of voting rights to cash flow rights. Control variables include market-to-book ratio of equity (winsorized at 5%), the logarithm of total assets (size), the logarithm of firm age, annual sales growth rate (winsorized at 1%), and CapEx to sales ratio (winsorized at 1%). All regressions control for country, industry, and time fixed effects. Robust standard errors are clustered at the firm level and reported in parenthesis. \*, \*\*, \*\*\* stand for significant at the 10% level, 5% level, and 1% level respectively.

	<i>Dependent variables are ESG ratings (overall ratings, environmental ratings, and social ratings) from the ASSET4 sample</i>											
	<i>Overall CSR Rating</i>				<i>Environmental Rating</i>				<i>Social Rating</i>			
<b>Ownership and Control</b>												
Wedge1 (Voting Rights - Ownership)	-0.118*** (0.032)		-0.089** (0.036)		-0.072** (0.031)		-0.066* (0.036)		-0.088*** (0.031)		-0.079** (0.035)	
Wedge2 (Voting Rights/ Ownership)		-0.002*** (0.0002)		-0.001*** (0.0004)		-0.002*** (0.0002)		-0.002*** (0.0003)		-0.001*** (0.0002)		-0.001** (0.0004)
Largest Shareholder Ownership	-0.274*** (0.054)	-0.278*** (0.054)	-0.310*** (0.073)	-0.315*** (0.073)	-0.223*** (0.053)	-0.215*** (0.054)	-0.234*** (0.079)	-0.232*** (0.078)	-0.175*** (0.054)	-0.181*** (0.054)	-0.223*** (0.076)	-0.226*** (0.076)
Largest Shareholder Ownership Square	0.002*** (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.003*** (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.002** (0.001)	0.002*** (0.001)	0.001** (0.0006)	0.001** (0.0006)	0.002** (0.001)	0.002** (0.001)
<b>Control Variables</b>												
Equity Market-to-Book	0.129 (0.134)	0.121 (0.135)	0.375** (0.189)	0.376** (0.189)	-0.046 (0.132)	-0.052 (0.132)	0.352* (0.181)	0.350* (0.182)	0.168 (0.135)	0.162 (0.136)	0.470** (0.197)	0.472** (0.198)
Log(Size)			7.261*** (0.486)	7.265*** (0.486)			7.689*** (0.462)	7.691*** (0.461)			7.195*** (0.474)	7.199*** (0.473)
Log(Age)			3.940*** (0.614)	3.962*** (0.615)			2.647*** (0.607)	2.657*** (0.607)			2.919*** (0.617)	2.945*** (0.617)
Annual Sales Growth Rate			0.002 (0.005)	0.002 (0.005)			-0.015*** (0.005)	-0.015*** (0.005)			-0.013** (0.006)	-0.013** (0.006)
CapEx to Sales Ratio			-0.077** (0.034)	-0.077** (0.033)			0.012 (0.040)	0.012 (0.040)			-0.048 (0.038)	-0.048 (0.037)
Constant			-64.214*** (7.664)	-64.822*** (7.665)			-44.976*** (8.071)	-45.233*** (8.046)			-39.148*** (7.384)	-39.790*** (7.372)
No. of Observations	18905	18894	9064	9060	19467	19456	9193	9189	19467	19456	9193	9189
Country, Industry, Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	20.5%	20.4%	42.0%	41.8%	28.3%	28.3%	45.1%	45.0%	24.2%	24.2%	41.9%	41.8%

**Table 7. CSR, Entrenchment, and Firm Value: ASSET4 Sample**

The dependent variable is Tobin's Q (the ratio of equity market capitalization to equity book value) winsorized at 5% level for all regressions. Entrenchment Index 1 is the sum of the following dummy variables from Datastream: the presence of (1) a poison pill, (2) a golden parachute, (3) a supermajority requirement for amending bylaw and charter, (4) a classified board, and (5) other anti-takeover provisions, treating non-available values as missing. Entrenchment Index 2 has the same composition as Entrenchment Index 1, but treating non-available values as zeros. Entrenchment Index 3 has the same composition as Entrenchment Index 2 (also treating non-available values as zeros), except that "classified board" (directors' terms can be different) is replaced by "staggered board" (directors' terms are uniform). CSR is measured by ASSET4's overall CSR rating for columns (1)—(3), ASSET4's aggregate environmental rating for columns (4)—(6), and ASSET4's aggregate social rating for columns (7)—(9). All specifications include country fixed effects, industry fixed effects, and year fixed effects. Standard errors are clustered at the firm level and reported in parentheses.

<i>Panel A. The World Sample</i>									
<i>Dep. var. = Tobin's Q winsorized 5%</i>	<i>Overall CSR rating</i>			<i>Environmental rating</i>			<i>Social rating</i>		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Entrenchment Index 1	-0.0724 (0.0474)			-0.0761** (0.0384)			-0.0864** (0.0429)		
Entrenchment Index 2		-0.0767** (0.0318)			-0.0707*** (0.0274)			-0.0780*** (0.0299)	
Entrenchment Index 3			-0.0689** (0.0296)			-0.0618** (0.0254)			-0.0805*** (0.0275)
CSR	0.0023 (0.0015)	0.0021** (0.0010)	0.0022** (0.0011)	0.0007 (0.0015)	0.0005 (0.0010)	0.0007 (0.001)	0.0013 (0.0015)	0.0016* (0.0010)	0.0014 (0.0010)
CSR × Entrenchment Index	0.0009 (0.0007)	0.0011** (0.0005)	0.0008* (0.0004)	0.0014** (0.0006)	0.0012*** (0.0004)	0.0009** (0.0004)	0.0014** (0.0006)	0.0013*** (0.0004)	0.0011*** (0.0004)
Log(Assets)	-0.2287*** (0.0379)	-0.2775*** (0.0284)	-0.2772*** (0.0283)	-0.3385*** (0.0372)	-0.2694*** (0.0275)	-0.2692*** (0.0275)	-0.3437*** (0.0376)	-0.2784*** (0.0280)	-0.2784*** (0.0280)
Largest Shareholder Ownership	-0.0004 (0.0058)	0.0017 (0.0042)	0.0015 (0.0042)	-0.0014 (0.0058)	0.0007 (0.0042)	0.0005 (0.0042)	-0.0012 (0.0058)	0.0009 (0.0042)	0.0008 (0.0042)
Largest Shareholder Ownership Square	0.0001 (0.0001)	-0.0000 (0.0001)	-0.0000 (0.0001)	0.0001 (0.0001)	0.0000 (0.0001)	0.0000 (0.0001)	0.0001 (0.0001)	0.0000 (0.0001)	0.0000 (0.0001)
Leverage	-0.0044 (0.0040)	0.0008 (0.0029)	0.0008 (0.0029)	-0.0046 (0.0040)	0.0005 (0.0029)	0.0005 (0.0029)	-0.0045 (0.004)	0.0005 (0.0029)	0.0005 (0.0029)
Dividend Per Share	0.0001 (0.0001)	-0.0000 (0.0001)	-0.0000 (0.0001)	0.0002 (0.0001)	0.0000 (0.0001)	0.0000 (0.0001)	0.0001 (0.0001)	-0.0000 (0.0001)	-0.0000 (0.0001)
ROE	0.0161 (0.0146)	0.0227 (0.0150)	0.0226 (0.0150)	0.0164 (0.0147)	0.0230 (0.0150)	0.0229 (0.0150)	0.0162 (0.0147)	0.0229 (0.0151)	0.0229 (0.0151)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. observations	6527	16077	16077	6566	16278	16278	6566	16278	16278
R-squared	25.3%	25.4%	25.4%	25.1%	25.0%	25.0%	25.4%	25.3%	25.3%

**Table 7 (Cont). CSR, Entrenchment, and Firm Value: ASSET4 Sample**

The dependent variable is Tobin's Q (the ratio of equity market capitalization to equity book value) winsorized at 5% level for all regressions. Entrenchment Index 1 is the sum of the following dummy variables from Datastream: the presence of (1) a poison pill, (2) a golden parachute, (3) a supermajority requirement for amending bylaw and charter, (4) a classified board, and (5) other anti-takeover provisions, treating non-available values as missing. Entrenchment Index 2 has the same composition as Entrenchment Index 1, but treating non-available values as zeros. Entrenchment Index 3 has the same composition as Entrenchment Index 2 (also treating non-available values as zeros), except that "classified board" (directors' terms can be different) is replaced by "staggered board" (directors' terms are uniform). CSR is measured by ASSET4's overall CSR rating for columns (1)—(3), ASSET4's aggregate environmental rating for columns (4)—(6), and ASSET4's aggregate social rating for columns (7)—(9). All specifications include country fixed effects, industry fixed effects, and year fixed effects. Standard errors are clustered at the firm level and reported in parentheses.

<i>Panel B. The Subsample of Dispersed Ownership Countries: U.S., U.K., and Australia</i>									
<i>Dep. var. = Tobin's Q winsorized 5%</i>	<i>Overall CSR rating</i>			<i>Environmental rating</i>			<i>Social rating</i>		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Entrenchment Index 1	-0.0516 (0.0528)			-0.0418 (0.0422)			-0.0629 (0.0479)		
Entrenchment Index 2		-0.0847** (0.0419)			-0.0600* (0.0341)			-0.0810** (0.0387)	
Entrenchment Index 3			-0.0822** (0.0390)			-0.0540* (0.0317)			-0.0900** (0.0353)
CSR	0.0022 (0.0020)	0.0022 (0.0017)	0.0020 (0.0019)	0.0021 (0.0020)	0.0011 (0.0016)	0.0014 (0.0018)	0.0015 (0.0021)	0.0014 (0.0017)	0.0006 (0.0019)
CSR × Entrenchment Index	0.0006 (0.0008)	0.0012* (0.0006)	0.0011* (0.0006)	0.0008 (0.0007)	0.0012** (0.0006)	0.0009 (0.0006)	0.0011 (0.0008)	0.0014** (0.0006)	0.0015** (0.0006)
Control Variables and Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. observations	4649	8782	8782	4676	8872	8872	4676	8872	8872
R-squared	25.1%	23.2%	23.2%	25.1%	22.9%	22.9%	25.3%	23.1%	23.1%
<i>Panel C. The Subsample of Dispersed Ownership Countries: U.S., U.K., Australia, Canada, Ireland, Switzerland, and Japan</i>									
<i>Dep. var. = Tobin's Q winsorized 5%</i>	<i>Overall CSR rating</i>			<i>Environmental rating</i>			<i>Social rating</i>		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Entrenchment Index 1	-0.0731 (0.0497)			-0.0599 (0.0402)			-0.0827* (0.0449)		
Entrenchment Index 2		-0.0967*** (0.0357)			-0.0691** (0.0298)			-0.0936*** (0.0327)	
Entrenchment Index 3			-0.0886*** (0.0327)			-0.0587** (0.0274)			-0.0962*** (0.0296)
CSR	0.0018 (0.0018)	0.0017 (0.0013)	0.0015 (0.0014)	0.0016 (0.0017)	0.0011 (0.0013)	0.0013 (0.0014)	0.0008 (0.0017)	0.0011 (0.0013)	0.0005 (0.0014)
CSR × Entrenchment Index	0.0010 (0.0008)	0.0014*** (0.0006)	0.0012** (0.0005)	0.0011* (0.0007)	0.0012** (0.0005)	0.0009** (0.0004)	0.0015** (0.0007)	0.0016*** (0.0005)	0.0016*** (0.0005)
Control Variables and Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. observations	5373	11426	11426	5412	11572	11572	5412	11572	11572
R-squared	25.4%	25.2%	25.2%	25.4%	24.6%	24.7%	25.5%	24.9%	24.9%

## Appendix 1a. MSCI Intangible Value Assessment Data Description

<i>IVA Factor</i>	<i>IVA Subscore</i>	<i>weight</i>	<i>Key Metrics</i>
Strategic governance	SG1) Strategy	<2%	Overall governance; rating composed of total scores of non-Key Issues
	SG2) Strategic Capability	<2%	Management of CSR issues, partnership in multi-stakeholder initiatives
	SG3) Traditional Governance Concerns	<2%	Board independence, management of CSR issues, board diversity, compensation practices, controversies involving executive compensation and governance.
Human capital	HC1) Workplace Practices	<2%	Workforce diversity, policies and programs to promote diversity, work/life benefits, discrimination-related controversies
	HC2) Labor Relations	20%	<i>KEY ISSUE: Labor Relations</i> Benefits, strikes, union relations, controversies, risk of work stoppages, etc.
	HC3) Health & Safety	<2%	H&S policies and systems, implementation and monitoring of those systems, performance (injury rate, etc.), safety-related incidents and controversies
Stakeholder capital	SC1) Stakeholder Partnerships	<2%	Customer initiatives, customer-related controversies, firm's support for public policies with noteworthy benefits for stakeholders
	SC2) Local Communities	<2%	Policies, systems and initiatives involving local communities (esp. indigenous peoples), controversies related to firm's interactions with communities
	SC3) Supply Chain	<2%	Policies and systems to protect supply-chain workers' and contractors' rights, initiatives toward improving labor conditions, supply-chain-related controversies
Products and services	PS1) Intellectual Capital/Product Development	<2%	Beneficial products and services, including efforts that benefit the disadvantaged, reduce consumption of energy and resources, and production of hazardous chemicals; average of two scores
	PS2) Product Safety	<2%	Product quality, health and safety initiatives, controversies related to the quality or safety of a firm's products, including legal cases, recalls, criticism
Emerging markets	EM1) EM Strategy	<2%	Default = 5, unless there is company specific exposure that is highly significant
	EM2) Human Rights/Child and Forced Labor	<2%	Policies, support for values in Universal Declaration of Human Rights, initiatives to promote human rights, human rights controversies
	EM3) Oppressive regimes	<2%	Controversies, substantive involvement in countries with poor HR records
Environmental risk factors	ER1) Historic Liabilities	<2%	Controversies including natural resource-related cases, widespread or egregious environmental impacts
	ER2) Operating Risk	<2%	Emissions to air, discharges to water, emission of toxic chemicals, nuclear energy, controversies involving non-GHG emissions
	ER3) Leading/Sustainability Risk Indicators	<2%	Water management and use, use of recycled materials, sourcing, sustainable resource management, climate change policy and transparency, climate change initiatives, absolute and normalized emissions output, controversies
	ER4) Industry Carbon Specific Risk	25%	<i>KEY ISSUE: Carbon</i> Targets, emissions intensity relative to peers, estimated cost of compliance
Environmental management capacity	EMC1) Environmental Strategy	<2%	Policies to integrate environmental considerations into all operations, environmental management systems, regulatory compliance, controversies
	EMC2) Corporate Governance	<2%	Board independence, management of CSR issues, board diversity, compensation practices, controversies involving executive compensation and governance.
	EMC3) Environmental Management Systems	<2%	Establishment and monitoring of environmental performance targets, presence of environmental training, stakeholder engagement
	EMC4) Audit	<2%	External independent audits of environmental performance
	EMC5) Environmental Accounting/Reporting	<2%	Reporting frequency, reporting quality
	EMC6) Environmental Training & Development	<2%	Presence of environmental training and communications programs for employees
	EMC7) Certification	<2%	Certifications by ISO or other industry- and country-specific third party auditors
	EMC8) Products/Materials	<2%	Positive and negative impact of products & services, end-of-life product management, controversies related to environmental impact of P&S.
Environmental opportunity factors	EO1) Strategic Competence	<2%	Policies to integrate environmental considerations into all operations and reduce environmental impact of operations, products & services, environmental management systems, regulatory compliance
	EO2) Environmental Opportunity	35%	<i>KEY ISSUE: Opportunities in clean technology</i> Product development in clean technology, R&D relative to sales and trend, innovation capacity
	EO3) Performance	<2%	Percent of revenue represented by identified beneficial products & services

## Appendix 1b. Vigeo Corporate ESG Data Description

<i>Key domain</i>	<i>Subdimension</i>	<i>Description</i>
Environment	ENV1.1	Environmental strategy and eco-design
	ENV1.2	Pollution prevention and control
	ENV1.3	Development of Green products and services
	ENV1.4	Protection of biodiversity
	ENV2.1	Protection of water resources
	ENV2.2	Minimizing environmental impacts from energy use
	ENV2.3	Environmental supply chain management
	ENV2.4	Management of atmospheric emissions
	ENV2.5	Waste management
	ENV2.6	Management of environmental nuisances: dust, odor, noise
	ENV2.7	Management of environmental impacts from transportation
	ENV3.1	Management of environmental impacts from the use and disposal of products/services
Human resources	HRS1.1	Promotion of labor relations
	HRS1.2	Encouraging employee participation
	HRS2.1	Career Development
	HRS2.2	Training and Development
	HRS2.3	Responsible management of restructurings
	HRS2.4	Carrer management and promotion of employability
	HRS3.1	Quality of remuneration systems
	HRS3.2	Improvement of health and safety conditions
	HRS3.3	Respect and management of working hours
Business behavior <i>(Customer &amp; supplier)</i>	C&S1.1	Product safety
	C&S1.2	Information to customers
	C&S1.3	Responsible Contractual Agreement
	C&S2.1	Integration of CSR in purchasing processes
	C&S2.2	Sustainable Relationship with suppliers
	C&S2.3	Integration of environmental factors in the supply chain
	C&S2.4	Integration of social factors in the supply chain
	C&S3.1	Prevention of corruption
	C&S3.2	Prevention of anti-competitive practices
	C&S3.3	Transparency and integrity of influence strategies and practices
Human rights	HR1.1	Respect for human rights standards and prevention of violations
	HR2.1	Respect for freedom of association and the right to collective bargaining
	HR2.2	Elimination of child labour
	HR2.3	Abolition of forced labour
	HR2.4	Non-discrimination
Community involvement	CIN1.1	Promotion of social and economic development
	CIN2.1	Social impacts of company's products and services
	CIN2.2	Contribution to general interest causes
Corporate governance	CGV1.1	Board of directors
	CGV2.1	Audit and Internal Controls
	CGV3.1	Shareholders' Rights
	CGV4.4	Executive Remuneration



## Appendix 2b.Vigeo ESG Country Coverage

Country	Overall ESG score	Environment score	Human resource score	Human rights score	Community involvement score	Customers & suppliers score	Corporate governance score	Firm-year obs.	Firm obs.
Australia	34.91	25.12	22.08	34.71	32.86	37.69	56.72	154	72
Austria	28.72	23.95	29.32	35.22	29.40	32.02	40.28	57	16
Belgium	35.45	36.78	38.65	38.49	39.10	41.28	41.25	120	22
Bermuda	30.00	21.00	33.00	38.00	55.00	19.00	39.00	1	1
China	14.80	4.80	6.20	20.60	25.60	23.60	22.00	5	3
Canada	35.20	26.29	24.70	37.53	38.07	41.45	51.54	133	52
Denmark	29.60	27.62	29.59	36.18	30.75	35.76	34.30	97	27
Finland	40.15	40.49	41.72	42.55	33.24	42.37	50.89	123	24
France	42.40	41.22	47.18	48.15	47.53	45.91	43.66	1038	121
Germany	40.55	43.29	43.91	46.25	42.25	44.37	45.11	508	75
Greece	27.61	26.54	27.81	30.10	33.32	34.37	29.67	57	12
Hong Kong, China	23.36	15.22	15.31	25.05	22.50	27.06	35.53	96	43
Iceland	21.50	5.75	8.00	22.25	9.75	33.75	39.00	4	4
Ireland	27.08	22.85	25.59	30.04	31.95	35.07	51.56	97	18
Italy	36.75	34.28	40.97	41.62	39.85	42.94	12.09	291	52
Japan	25.19	27.47	19.39	31.87	26.25	33.46	16.37	655	290
Luxembourg	33.31	29.03	35.90	40.00	43.30	40.57	44.60	30	5
Netherlands	42.65	43.19	42.35	45.35	47.67	48.55	53.85	288	47
New Zealand	29.43	28.86	17.43	27.14	19.86	29.14	48.86	7	3
Norway	40.94	34.00	39.90	48.14	38.96	41.10	51.60	67	19
Portugal	35.86	35.15	37.90	37.60	42.97	43.08	36.00	61	10
Russia	32.00	31.00	20.00	18.00	16.00	43.00	56.00	2	1
Singapore	25.62	16.16	14.35	23.84	23.84	27.89	44.19	37	17
Spain	36.52	36.40	38.60	40.91	40.85	41.97	41.87	259	51
Sweden	37.10	35.76	32.99	45.71	32.41	42.29	42.08	194	43
Switzerland	37.02	35.79	32.45	40.49	36.04	40.72	44.44	301	54
United Kingdom	42.24	39.47	33.14	42.04	45.85	42.65	64.77	1,157	255
United States	32.69	23.57	18.37	37.28	33.59	38.58	49.86	1,209	449



## Appendix 2c. ASSET4 ESG Country Coverage

Country	Overall CSR rating	Environmental rating	Social rating	Firm-year obs.	Firm obs.	Country	Overall CSR rating	Environmental rating	Social rating	Firm-year obs.	Firm obs.
Abu Dhabi	19.65	38.32	25.68	12	1	Kuwait	18.92	24.30	36.60	48	4
Austria	43.29	38.13	38.77	4,020	335	Luxembourg	55.00	58.48	52.83	60	5
Australia	44.46	51.84	50.40	252	21	Malaysia	42.32	41.12	50.21	540	45
Belgium	53.16	54.88	49.63	336	28	Mexico	38.96	46.03	49.47	324	27
Brazil	55.02	55.19	67.72	1,008	84	Morocco	21.57	20.13	53.42	36	3
Canada	47.59	37.64	38.65	3,864	322	Netherlands	75.30	68.86	75.36	540	45
Channel Islands	52.05	49.82	53.02	24	2	New Zealand	49.47	45.42	42.40	144	12
Chile	33.41	43.66	45.61	252	21	Nigeria	7.18	10.89	19.71	12	1
China	25.59	33.38	32.78	984	82	Norway	56.90	55.26	58.87	300	25
Colombia	34.40	34.52	40.94	108	9	Oman	27.00	27.42	33.00	12	1
Cyprus	39.18	30.20	36.71	12	1	Peru	41.33	31.05	34.41	12	1
Czech Republic	48.56	48.72	60.01	48	4	Philippines	39.59	36.07	40.79	252	21
Denmark	48.45	56.43	52.69	324	27	Poland	33.22	33.62	42.06	312	26
Dubai	37.39	44.24	33.76	12	1	Portugal	67.52	66.20	73.95	144	12
Egypt	14.55	19.29	27.22	132	11	Quatar	10.77	12.87	24.64	24	2
Finland	72.26	73.25	66.86	324	27	Russian Federation	37.52	39.92	50.64	408	34
France	71.45	75.70	76.36	1,212	101	Saudi Arabia	19.22	32.12	25.65	72	6
Germany	58.25	67.07	67.16	1,068	89	Singapore	34.66	33.58	35.60	648	54
Greece	35.42	47.10	49.62	300	25	South Africa	66.17	56.74	73.06	1,092	91
Hong Kong, China	30.27	33.72	35.51	1,800	150	South Korea	47.12	62.00	56.77	1,212	101
Hungary	73.29	76.18	80.80	48	4	Spain	66.26	68.54	73.82	696	58
Iceland	29.02	20.45	36.06	36	3	Sri Lanka	51.25	51.09	66.59	12	1
India	47.16	51.60	57.93	960	80	Sweden	62.79	66.58	63.91	660	55
Indonesia	45.46	41.95	60.83	300	25	Switzerland	57.88	58.71	56.98	852	71
Ireland	43.04	42.65	39.33	216	18	Taiwan, China	29.02	44.74	36.30	1,536	128
Israel	38.44	42.65	39.33	168	14	Thailand	55.76	47.93	56.73	264	22
Italy	52.92	53.05	62.93	708	59	Turkey	44.33	48.36	52.90	288	24
Japan	38.18	61.62	45.47	5,196	433	United Kingdom	64.32	59.63	63.16	4,776	398
Jordan	52.16	60.71	62.99	12	1	United States	51.91	40.22	44.17	14,436	1203
Kazakhstan	34.92	15.74	27.17	12	1	Zimbabwe	11.75	38.42	35.57	12	1

### Appendix 3. Variable Definitions

<i>Variables</i>	<i>Description</i>
Anti-director rights index (ADRI)	The anti-director rights index (ADRI) was first developed in La Porta <i>et al.</i> (1998) as a measure of investor protection against corporate management, and later on revised in Djankov <i>et al.</i> (2008) and Spamann (2010). All the three ADRI's consist of the same six key components: (1) proxy by mail allowed; (2) shares not blocked before shareholder meeting; (3) cumulative voting/ proportional representation; (4) oppressed minority protection; (5) preemptive rights to new share issues; (6) percentage of share capital to call an extraordinary shareholder meeting. Each component is a dummy variable and the ADRI is formed by aggregating the value of all six components. The index ranges from 0 to 6, whereby a higher value of the index indicates stronger shareholder protection. Source: LLSV (1998); La Porta <i>et al.</i> (2008); Spamann (2010).
Anti-self-dealing index (ASDI)	The anti-self-dealing index (ASDI) was developed by Djankov <i>et al.</i> (2008) and is an average of ex ante and ex post private control of self-dealing. The ex ante private control of self-dealing transactions includes approval by disinterested shareholders and ex ante disclosure by the buyer, the insider, and independent review. The ex post private control of self-dealing transactions include the disclosure in periodic filings and the ease of proving wrong doing (holding the insider and the approving body civilly liable, as well as access to evidence). Source: Djankov <i>et al.</i> (2008)
One-share one-voting index (mandatory proportionality of voting and cash flow)	Equals one if the company law or commercial code of the country requires that ordinary shares carry one vote per share, and zero otherwise. Equivalently, this variable equals one when the law prohibits the existence of both multiple-voting and nonvoting ordinary shares and does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares owned, and zero otherwise. "Ordinary shares" means all shares that do not carry a preference of any kind, neither for dividends nor for liquidation. For voting rights, a literal interpretation is adopted, under which the equal number of votes, not the proportionality of votes and cash-flow rights is decisive. In addition, strict proportionality between voting and cash-flow rights is required. Source: LLSV (1998), Spamann (2010).
Mandatory (waivable) dividend index	Equals the percentage of net income that the company law or commercial code requires firms to distribute as dividends among ordinary stockholders. It takes a value of zero for countries without such a restriction. The shareholder assembly can waive the right to the dividend. Source: LLSV (1998); Spamann (2010).
Public enforcement of anti-self-dealing	Index of public enforcement if all disclosure and approval requirements have been met. Ranges from 0 to 1. One-quarter point when each of the following sanction is available: (1) fines for the approving body, (2) jail sentences for approving body, (3) fines for the insider, (4) jail sentences for the insider. Source: Djankov <i>et al.</i> (2008).
Private enforcement of securities law	The combination of the disclosure requirements index and the liability standard index. The disclosure requirements index includes six sub-dimensions: (1) prospectus; (2) compensations of directors and key officers; (3) shareholders ownership structure; (4) insider ownership; (5) irregular contracts; and (6) transactions between the securities issuer and its directors, officers, and/or large shareholders (i.e., "related parties"). Source: La Porta, Lopez-de-Silanes, and Shleifer (2006).
Public enforcement of securities law	The index of public enforcement is the average of five subindices related to the "Supervisor" of securities regulation: (1) supervisor characteristics index, including appointment, tenure, and focus; (2) rule-making power index, including the power of the supervisor to issue regulations regarding primary offerings and listing rules on stock exchanges; (3) investigative powers index, including document and witness; (4) orders index, including orders issuer, orders distributor, and orders accountant; (5) criminal index, including criminal director, criminal distributor, and criminal accountant. Source: La Porta, Lopez-de-Silanes, and Shleifer (2006).
GDP per capita	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. Source: World Bank.
Cash holding	The amount of cash and cash equivalent on the balance sheet, scaled by total assets. Source: Compustat.
Free cash flows	Computed as EBIT multiplied by (1 – tax rate), and plus the Depreciation & Amortization, and then minus Change in Working Capital, and then minus Capital Expenditure, finally scaled by total assets. Source: Compustat.
Capital expenditure	The capital expenditure recorded on the balance sheet, scaled by total assets. Source: Compustat.
Dividend payout ratio	Calculated as the common dividends divided by net income, as recorded on the company's financial statement. Source: Datastream.
Leverage	Calculated as the book value of total liabilities divided by book value of total equity of the company (MSCI and Vigeo samples), or the book value of total liabilities divided by the book value of total assets of the company (ASSET4 sample). Source: Compustat.

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Total compensation	Executives' compensation including salaries and cash bonuses, stock options, equity-linked LTIP cash plan, equity-linked LTIP option plan, equity-linked LTIP share plan, LTIP share matching plan, etc. The score is then calculated by averaging the equity based compensation of all executives reported in BoardEx for the focal company. Source: BoardEx Director Report.
Analyst coverage	The number of analyst forecast reports for the focal company. Source: I/B/E/S.
Employee	The total number of employees of the company. Source: Compustat.
Market capitalization	The total market value of equity of the company. Source: Datastream.
Blockholders' direct ownership	The cumulative direct ownership of all shareholders who directly hold over 5% of the company's shares. Source: Datastream and Orbis.
Largest shareholder's total ownership	The total ownership (both direct and indirect) held by the largest shareholder of the company. Thw ownership data are cross-sectional and reflect the most recent information at the time of collecting these data. Source: Datastream and Orbis.
Control wedge	The ratio of the voting rights to the ownership for the largest shareholder of the company. Wedge1 stands for the difference between the voting rights and the cash flow rights of the largest shareholder. Wedge2 stands for the ratio of the voting rights to the cash flow rights of the largest shareholder. Source: Datastream.
Independent director ratio	The ratio of the number of all independent directors to the number of all directors on the board. Source: BoardEx.
Female CEO	The dummy variable equals one if the CEO of the company is female. Source: BoardEx.
CEO international work	The dummy variable equals one if the CEO of the company worked in another country before the current position. Source: BoardEx.
CEO overseas education	The dummy variable equals one if the CEO received education degrees overseas. Source: BoardEx.
ROA	Return on assets: net income divided by total assets. Source: Compustat.
Tobin's Q	The ratio of the market value of equity to the book value of equity of the company. Source: Compustat.
Financial constraints	Measured by the ratio of the change in short-term investment to the change in operational cash flow. Source: Compustat.
Interest coverage	Earnings before interests and taxes (EBIT) divided by interest expenses. Source: Compustat.
Financial slack	Current debts divided by current assets. Source: Compustat.
CapEx to sales ratio	The ratio of capital expenditure to the total sales revenue, a measure following Berger and Ofek (1995). Source: Compustat.
Firm size	The book value of total assets of the firm. Source: Compustat.
Firm age	The number of years since the firm's year of incorporation. Source: Datastream.
Dividend per share	Rolling 12 month dividend per share (adjusted). It is intended to represent the anticipated payment over the following 12 months and for that reason may be calculated on a rolling 12-month basis, or as the "indicated" annual amount, or it may be a forecast. Special or once-off dividends are generally excluded. Dividends per share are displayed gross, inclusive of local tax credits where applicable, except for France, Belgium, Ireland and the UK, where dividends per share are displayed net. Source: Datastream.
ROE	Return on equity: net income divided by total assets. Source: Compustat.
Annual sales growth rate	One-year annual growth rate of sales revenue of the firm. Source: Datastream.
Largest shareholder's ownership	The percentage ownership of the single biggest owner (by voting power). Source: Datastream (ASSET4).
Sustainable country rating	Country-level sovereign ESG scores and benchmarks based on 120 ESG risk and performance indicators in three domains: (1) environmental protection, (2) social protection and solidarity, (3) rule of law and governance. Countries are graded on a scale of 100 on their commitment and performance in these indicators (e.g., ratification of the Kyoto convention, the Vienna convention, the Stockholm convention, CO2 emissions per head, Gini index, etc). Source: Vigeo.

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Entrenchment Index 1	Following the original Entrenchment Index with US coverage by Bebchuk, Cohen, & Ferrell (2009), the Entrenchment Index 1 is constructed for firms from 64 countries across the world during the period 2002-2013, and is the sum of the five dummy variables from Datastream's ASSET4 sample based on the presence of: (1) a poison pill, (2) a golden parachute, (3) a supermajority requirement for amending bylaw and charter, (4) a classified board, and (5) other anti-takeover provisions. Non-available values are treated as missing. Source: Datastream.
Entrenchment Index 2	Following the original Entrenchment Index with US coverage by Bebchuk, Cohen, & Ferrell (2009), the Entrenchment Index 1 is constructed for firms from 64 countries across the world during the period 2002-2013, and is the sum of the five dummy variables from Datastream's ASSET4 sample based on the presence of: (1) a poison pill, (2) a golden parachute, (3) a supermajority requirement for amending bylaw and charter, (4) a classified board, and (5) other anti-takeover provisions. Missing values are treated as zeros. Source: Datastream.
Entrenchment Index 3	Following the original Entrenchment Index with US coverage by Bebchuk, Cohen, & Ferrell (2009), the Entrenchment Index 1 is constructed for firms from 64 countries across the world during the period 2002-2013, and is the sum of the five dummy variables from Datastream's ASSET4 sample based on the presence of: (1) a poison pill, (2) a golden parachute, (3) a supermajority requirement for amending bylaw and charter, (4) a staggered board (the terms of board members are uniform), and (5) other anti-takeover provisions. Missing values are treated as zeros. Source: Datastream.

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