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Is CSR reporting always favorable?

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Abstract

Purpose – In addition to their profit maximization objective, firms are often challenged to meet environmental and social demands. The purpose of this paper is to test whether a firm's macroeconomic environment moderates the efficiency of its social and environmental disclosures.

Design/methodology/approach – The study uses the Bloomberg database to collect data on the FTSE 350 listed firms for the years 2007-2012. The sample is split into crisis and post-crisis periods, to study the investor reaction to social disclosures under different economic conditions.

Findings – The results suggest that the effect of corporate social responsibility (CSR) disclosure on future firm performance depends on the surrounding macroeconomic environment. During tight economic situations, market participants become more self-centered and penalize firms diverting scarce resources toward non-profitable societal engagements. Moreover, the findings indicate that firms with a high participation of outside directors and low accounting profit experience negative future performance when engaging in social disclosures during times of crisis.

Practical implications – Corporate governance is a system of interconnected practices that is affected by various firm and environmental characteristics. The results are in line with the premise that, depending on macroeconomic changes and specific firm attributes, CSR reporting may have dissimilar implications across different situations and conditions. Social disclosures and engagements are not always favorable, and should only be utilized in non-recessionary periods by firms possessing certain characteristics in terms of board composition and accounting profitability.

Originality/value – This study identifies key moderating variables which present additional obstacles for firms engaging in CSR during adverse economic conditions. Outsiders' inferior firm-specific expertise, along with the firm's poor accounting performance, present additional financial constraints for firms engaging in CSR activities during economic downturns.

Keywords Financial crisis, Firm performance, Social and environmental disclosure, Outside directors

Paper type Research paper

Introduction

Companies are facing increasing pressure from investors and governments to meet the expectations of their respective societies. Barnett and Salomon (2006) argue that investors not only focus on monitoring a firm's financial performance but they also actively monitor the manner in which a company achieves its goals. Therefore, in setting strategies to maximize shareholders' wealth, boards tend to increase and report on their firms' environmental and social activities, in order to appease stakeholders (Jizi, 2017). Consequently, firms disclose information on their engagement in environmental, social, and governance activities. Unlike mandatory financial disclosures, corporate social responsibility (CSR) disclosures are voluntary and are viewed as acts of transparency (De Villiers and Marques, 2016; Li *et al.*, 2017). However, for shareholders as well as managers, the question remains: will good ethics drive good business performance?

Supporters of CSR embrace the good citizenship image of engaging in social and environmental activities, and propose that firms should be "doing well by doing good"

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(Freeman, 1984). Moreover, engaging in CSR activities provides a positive signal regarding a firm's future cash flows and financial strength, leading to a positive impact on the firm's well-being (Tamayo and Servaes, 2012). On the other hand, Friedman (1970) suggests that a firm's sole social responsibility is to increase shareholder wealth. Managers are appointed to act on behalf of shareholders, and thus should always have shareholder wealth as their top priority (Jensen, 2002).

Research addressing the relationship between social engagement and firm performance generally does not take into consideration macroeconomic changes and their impact on the behavior of both firms and investors. Serwer (2009) describes the first decade of the 2000s as the "decade from hell" due to the catastrophic financial crisis that took place between 2007 and 2009[1]. Barnor (2009) argues that the 2007-2009 period was the first recession where CSR was a mainstream business practice, which opens up opportunities to study the relationship between CSR and the financial crisis. Our research investigates the effect of the macroeconomic environment on the association between social disclosures and shareholders' wealth. Specifically, we focus on firms' future performance, since CSR activities and their expected benefits are long term in nature (De Villiers *et al.*, 2011; Veronica Siregar and Bachtiar, 2010).

A financial crisis weakens a firm's financial position, tightening its already scarce resources. Accordingly, firms may face higher levels of scrutiny from their shareholders regarding the efficiency of their resource allocation and spending on various company projects. During tight economic situations, people may also become more self-centered as they are increasingly concerned about losing their job and life savings. Thus, they would rather have a firm focus on value-enhancing activities rather than spending limited resources on engaging in and disclosing social and environmental activities. Therefore, it is interesting to investigate the differences in investors' perceptions, if any, toward social disclosures during normal and adverse macroeconomic conditions. Will the presence of a crisis trigger investors to think more about their own well-being rather than about the welfare of the society?

Our findings suggest that firms do not alter their CSR reporting strategies in response to macroeconomic changes. That is, financial limitations do not induce firms to direct resources away from societal activities toward more profitable projects. Furthermore, for 2007-2009, our preliminary tests suggested a negative relationship between social disclosure and future firm performance. However, further examination indicates that this negative relationship stands only for firms with high outsider participation on their boards. Outside directors' participation in corporate boards increases information asymmetry, which is likely to be amplified during a recession. In other words, outsiders may lack the firm-specific information that is necessary to direct a company's scarce resources efficiently throughout a crisis.

In addition to the limitations presented by the crisis and outsiders' participation, we examine whether firms subject to yet another constraint, low accounting performance, are penalized more for their CSR disclosures. Accordingly, we split our sample into four subgroups based on both the percentage of outside directors and the level of accounting performance. The results indicate that, during a financial crisis, societal reporting has a converse effect on shareholders' welfare for firms with a high percentage of outsiders and poor accounting performance. Low accounting performance presents an additional impediment for firms engaging in CSR, as market participants may view societal spending during crisis as an unnecessary expense. Such firms are penalized more than others for spending their even more scarce resources on social disclosures, showing that investors' perceptions of CSR reporting are more consistent with Milton Friedman's (1970) assessment.

Consistent with a "doing well by doing good" view, during normal economic conditions, CSR reporting promotes the firm's good citizenship image and has a favorable impact on shareholders' well-being, for firms with high outsider participation and above-average accounting performance. Firms operating in normal economic conditions and achieving above-average accounting performance are less financially constrained, and thus can better explain and promote their societal engagements. Consequently, the heightened monitoring efficacy achieved through the high participation of outside directors in corporate boards enhances the legitimacy and signaling power of social disclosure. In such a case, the monitoring benefits of outsiders outweigh their advising deficiencies.

The rest of the paper is organized as follows: the second section reviews the literature and develops the hypotheses, the third section presents the data and descriptive statistics, the fourth section reports our empirical findings, and the fifth section concludes the paper.

Literature review and hypothesis development

Gössling and Vocht (2007) define CSR as the commitment of firms to be held responsible for their environmental and social activities in a way that goes beyond financial activities. The debate on CSR engagements was initiated by the work of Friedman (1970, 1984). Friedman (1970) suggests that a firm's sole responsibility is to maximize shareholder wealth. Supporters of this theory believe that spending time and money on social activities is a waste of valuable firm resources. On the other hand, Freeman (1984) was the first Researcher to provide a complete framework for the stakeholder theory. In addition to shareholders, Freeman argued that other interest groups such as customers, employees, suppliers, and communities share a stake in the corporation and they expect to receive personal benefits in return. Ideally, a successful manager should be able to see a common path reaching the interests of all stakeholders without neglecting any group of stakeholders.

Jensen (2002) suggests that the stakeholder theory challenges the concept of maximizing shareholder wealth, which is the main objective of most modern corporations. According to Jensen, the main problem with the stakeholder theory is that it does not give managers a clear objective to aim for, resulting in conflicts and inefficiencies. Friedman's (1970) argument is based on the fact that managers are employed on the shareholders' behalf to act in their best interest. Thus, Heath and Norman (2004) claim that the stakeholder theory intensifies agency problems between managers and shareholders. Moreover, opponents of CSR claim that business managers are only equipped to handle operations and finance, and are not experts in addressing social problems (Davis, 1973). Additionally, giving consideration to CSR issues in managers' strategies and daily operations dilutes the primary objective of a business and opens up new endeavors.

The UK is one of the pioneers in encouraging firms to engage and report on their social activities. For firms, CSR reporting is a mechanism to discharge their social contract with the relevant public audience (Gray *et al.*, 1988). Social reporting mainly addresses the matters related to society, the environment, employees, and customers (Gray *et al.*, 1995; Jizi *et al.*, 2014). Reporting voluntarily on social, environmental, and governance practices seeks to demonstrate the impact of firms' activities on the society's welfare (Reverte, 2009). Despite the voluntary nature of CSR disclosure and the diversity of media used to communicate firms' social and environmental engagements, listed firms were initially required to disclose information on their future development. The Companies Act 2006 (UK) required firms to disclose in the directors' report information necessary to understand the performance of the business and its future development (Durie, 2009). As part of the forward-looking statements, firms were encouraged to provide greater communication related to employees, society, and the environment (Durie, 2009). In 2013, the Companies Act was amended to require all listed companies to report on human rights issues, gender representation across the company, and greenhouse gas emissions.

The impact of firms' reporting on their social and environmental activities is subject to the effective communication of firms' acknowledgment of society's needs and their own unselfishness (Godfrey *et al.*, 2009). Therefore, in regular economic conditions, where shareholders' interest in maximizing profits is met, firms are likely to encourage CSR activities and report on them to improve social well-being and manage stakeholder relations. However, if firms are facing financial pressure, the scarcity of resources and the increased pressure of shareholders to safeguard their wealth might limit a firm's ability to engage in and report on CSR activities. In such a case, investors are expected to think traditionally and to be inclined to support Friedman's (1970) argument that "the one and only one social responsibility of business [is] to increase its profit." Therefore, we hypothesize the following:

H1. In a crisis period, firms will report less on their environmental and social engagements.

CSR and firm performance

With all the increased attention to CSR and its importance to the society, Brown (1998, p. 271) suggests that for some investors the fundamental question remains "Social performance may be good for society, but does it pay?" Although several researchers suggest a positive association between social and financial performance, results in the literature have not been conclusive (Murray *et al.*, 2006). One stream of literature empirically relates CSR reporting to better financial performance (El Ghoul *et al.*, 2011), lower risk levels (Salama *et al.*, 2011), and enhanced reputation (Aguilera *et al.*, 2006). Even in the cases where shares are purchased at a premium, a firm's reputation for corporate social performance positively influences stock prices (Brown, 1998).

Cormier *et al.* (2011) show that CSR disclosure reduces information asymmetry, reducing stock volatility. Similarly, El Ghoul *et al.* (2011) document reduced risk and a wider investors' base for firms having higher social disclosure scores. The absence of a relationship between CSR disclosure and firm performance is also documented by Murray *et al.* (2006), who examine a sample of UK firms between 1988 and 1997. They argue that stock participants think traditionally when building investment decisions and that a firm's CSR profile is not considered in their equity valuation. Moreover, Hassel *et al.* (2005) find that environmental investments of listed Swedish firms are inversely related to the firms' market values. The authors suggest that environmental investments signify increase costs, leading to lower earnings without having a positive effect on a firm's performance.

Carroll and Shabana (2010) argue that failing to account for situational contingencies and mediating factors led to the absence of a conclusive explanation of the CSR-firm performance relationship. They encourage further research to understand these factors and their influence on the CSR-firm performance link. During financial distress, market participants are expected to be more sensitive to financial decisions and fund allocation. The main obligation for management is fulfilling the economic responsibility of offering goods and services demanded by the society at a profit (Carroll, 1979). Solving social issues in not the responsibility of business units, but of legislatures and governments (Friedman, 1970). Therefore, reporting on firms' social activities might be perceived as reporting on activities motivated by self-interest, which increases skepticism (Mohr *et al.*, 2001). Concerns over misusing a company's scarce resources during a crisis and the lack of reliability in the disclosed CSR information are likely to undermine CSR validity, so CSR disclosure may be perceived as window dressing (Cormier *et al.*, 2011). Therefore, it is expected that during a financial crisis, investors are likely to view social involvement as a waste of firms' scares resources, and consequently that disclosing such involvement will negatively influence firm performance:

H2. During a crisis, higher levels of ESG disclosure will have a negative effect on future firm performance.

Outside directors and firm performance

Scholars highlight the role of outside directors in promoting and disclosing CSR activities (Jamali *et al.*, 2008). In line with agency theory, boards with a higher percentage of outsiders demonstrate a better ability to direct a firm's efforts toward long-term value-maximizing activities, with a higher degree of transparency (Jizi *et al.*, 2014). In doing so, outside directors aim at protecting their reputations through improving transparency (Li *et al.*, 2008). An additional motive for outside directors not to focus on short-term performance is their remuneration structure. The compensation of outsiders is not related to short-term financial performance; consequently, they are more inclined to engage in long-term social projects than inside directors (Johnson and Greening, 1999) irrespective of the economic conditions. Insiders focus more on short-term financial performance measures relative to outsiders (Ibrahim *et al.*, 2003), which might be particularly needed in a crisis period to overcome the crisis spillover.

Previous research also suggests that outside directors have limited industry knowledge and firm-specific information (Linck *et al.*, 2008). This weakness elevates the information asymmetry cost and might impact the quality of decision-making. The increased information asymmetry might outweigh the advantage of enhanced monitoring performed by outsiders serving on the board. In that regard, Bhagat and Bolton (2008) report a negative association between board independence and firm value. Dah *et al.* (2014) point out the unexpected consequences of mandating governance regulations in terms of independence levels. Similarly, Erkens *et al.* (2012) find that firms with higher levels of board independence performed worse than firms with lower levels of board independence during the financial crisis. The authors suggest that, during the crisis, there was a positive relationship between the percentage of outside directors and raised equity capital, which caused a wealth transfer from current shareholders to debtholders. Therefore, having a higher proportion of outside directors on a company's board might not be favorable in all situations, especially during times of crisis when information asymmetry is amplified.

Given the lack of firm-specific information and industry knowledge, outside directors are expected to keep on promoting high levels of CSR engagement and reporting during a crisis, to maintain their relationships with powerful public groups. A second hypothesis suggests that reporting on CSR during a crisis may be perceived by stock participants as reporting on additional expenses, which could be cut or channeled to positive NPV investments to improve firms' profitability. Hence, the negative effect of CSR on short-term future performance during a crisis is expected to be more pronounced for firms having a higher proportion of outside directors. Hence, it is hypothesized that:

H3. During a crisis, CSR will negatively influence firm performance for firms having a higher proportion of outside directors.

However, a firm's profitability level might moderate this relationship. In line with agency theory, a relatively higher level of profitability helps firms manage agency problems, as it enhances the investors' trust in the firm's strategic decisions and reflects the firm's ability to grow (Kochhar, 1996). Additionally, maintaining relatively high profitability facilitates dividend distribution, which helps in mitigating moral hazards (Fama and French, 2002). Within the same context, Berger and Di Patti (2006) argue that firms maintaining high profitability are less likely to be impacted by a crisis, as their profit efficiency improves expected return and reduces bankruptcy cost. In contrast, low-profit firms lack resistance to financial stress and are more sensitive to market shocks (Baek *et al.*, 2004). Similar to a high level of outside directors, a low level of profitability presents an additional obstacle for firms engaging in social activities. Hence, the news of higher CSR involvement could be considered by investors as bad news, particularly for firms with low profitability.

A high level of profitability facilitates a firm's engagement in and reporting on social activities (Jizi, 2017). It also signals a balance between the firm's social involvement and maintaining a high return on assets (Li *et al.*, 2008). Consequently, wider CSR disclosure, promoted by the presence of a higher proportion of outside directors, is expected to positively influence performance in highly profitable firms. In contrast, wider CSR disclosure in firms with low profitability is likely to be considered a waste of the firm's scarce resources and poor decision quality, in terms of funds allocation. Therefore, such firms are expected to experience negative returns when disclosing their engagement in CSR activities. Hence, we hypothesize the following:

H4. During a crisis, the wider the CSR disclosure score, the lower the firm performance for firms with low profitability and a high level of outside directors.

Research design

Data and sampling

The study utilizes the Bloomberg database to identify and collect data on the FTSE 350 listed firms for the years 2007-2012 inclusive. However, due to missing ESG and financial data, our sample is reduced to a total of 980 observations. CSR disclosure can be found in firms' annual reports, sustainability reports, websites, and news items, which complicates quantifying the level of each firm's disclosed engagement. Bloomberg provides an environmental, social, and governance (ESG) disclosure score measured based on a wide variety of ESG information communicated through multiple sources, in addition to the Bloomberg survey. The ESG score is a weighted average score that considers the relative importance of each data point and its significance to the firm's industry (Giannarakis *et al.*, 2014). Additionally, the Bloomberg scoring methodology considers the impact of the reported social spending on society rather than the volume of information disclosed. Therefore, firms having low social performance and those that exaggerate in reporting their ESG activities will have low ESG disclosure scores. That is, ESG disclosure measures the effectualness of disclosed social initiatives rather than the quantity of information disclosed. The developed weighted average ESG score ranges from 0 to 100, based on the availability of disclosed information on the data points collected by Bloomberg.

Data on board composition and firms' attributes are also collected from Bloomberg. The crisis variable is a dummy variable that takes a value of 1 if the observation is in the crisis period and 0 if the observation belongs to the period after the financial crisis. Prior literature refers to years 2007, 2008, and 2009 as the crisis period (Grove *et al.*, 2011). The University of Exeter Business School's website is used to obtain data on market risk premium and daily stock prices to compute firms' performance and risk. Abnormal returns based on a Fama and French (1993) three-factor model (ARFF) are computed to proxy for firm performance for the years 2007-2014. We collect data on firm performance for years 2013 and 2014 to prevent losing any observations when doing tests using future performance measures. Therefore, the following model is employed to compute the abnormal return for a given firm i in a certain year t:

$$r_{id} - r_{fd} = \alpha_i + \beta\left(r_{Md} - r_{fd}\right) + \mathrm{sSMB}_d + \mathrm{hHML}_d + \varepsilon_{id} \tag{1}$$

where the intercept (α_i) is the company's abnormal return (ARFF), and r_{id} is firm i's return in day d for a given year. r_{fd} denotes the daily T-bill rate. $r_{Md} - r_{fd}$, SMB_d, and HML_d represent the market risk premium, size factor, and book-to-market factor, respectively. Data on the aforementioned daily factors, devised following Gregory *et al.* (2013), are acquired through the University of Exeter Business School's website[2].

Research methodology

Endogeneity is a growing concern in the CSR literature. The extant literature on social disclosures demonstrates that CSR reporting depends on several firm, industry, and macroeconomic factors. To address the possibly endogenous nature of social disclosures, we employ two-stage least square (2SLS) regression models.

We first run the following regression, in which our measure of CSR disclosure is regressed on the firm, CEO, and governance characteristics hypothesized to determine social reporting:

$$\begin{aligned}\text{ESG Disclosure}_{it} = {}& \alpha_0 + \alpha_1\text{Crisis}_{it} + \alpha_2\text{Outside Directors}_{it} + \alpha_3\text{CEO Duality}_{\text{it}} \\ & + \alpha_4\text{Firm Size}_{it} + \alpha_5\text{ROA}_{it} + \alpha_1\text{Leverage}_{it} + \alpha_6\text{FCF}-\text{to}-\text{Assets}_{it} \\ & + \alpha_7\text{Board Size}_{itt} + \alpha_8\text{Women on Board}_{itt} + \alpha_9\text{Board Avg. Age}_{it} + \varepsilon_{it} \quad (2)\end{aligned}$$

where $i = 1, 2, \ldots, n$ refers to firm i and $t = 2007, 2008, \ldots, 2012$ refers to year t. Consequently, this model serves as the first stage in the 2SLS regression models. The values predicted by the aforementioned model are utilized as the CSR disclosure values in all remaining (second-stage) regression models. We then investigate the effect of the financial crisis on the relationship between CSR reporting and future firm performance. Future firm performance is used since CSR activities and the benefits associated with them are long-term in nature (De Villiers *et al.*, 2011; Veronica Siregar and Bachtiar, 2010). Specifically, we run the following regression model to test *H2*:

$$\begin{aligned}\text{Firm performance}_{it} = {}& \alpha_0 + \alpha_1\text{ESG Disclosure}_{it} + \alpha_2\text{Crisis}_{it} \\ & + \alpha_3\text{ESG Disclosure}^{*}_{it}\text{Crisis}_{it} + \text{Control Variables}_{it} + \varepsilon_{it} \quad (3)\end{aligned}$$

As mentioned earlier, firm performance is the abnormal return at years $t+1$ and $t+2$, calculated following the Fama-French (1993) three-factor model. Crisis is a dummy variable that takes a value of 1 if the observation lies in years 2007 to 2009 and 0 otherwise. α_1 captures the effect of social disclosure on future firm performance during normal economic conditions. The effect of social disclosures on future firm performance during the financial crisis is measured through the summation of both α_1 and α_3. Therefore, a significant α_3 exhibits an additional impact of social disclosure on firm performance during the financial crisis.

We also hypothesize that outsider participation in corporate boards may have a major impact on the value and efficiency of CSR activities. Thus, to test *H3*, we run the previous regression model (Model 3) while splitting our sample into two groups based on the level of outsider participation (low outsiders and high outsiders). Finally, since firm profitability may also act as an additional constraint on firms during a financial crisis, we test *H4* by splitting our sample into four sub-samples based on both outsiders' presence and accounting profitability.

Our sample is divided into ten industries based on Bloomberg's FTSE 350 industry classifications. Thus, we include industry dummies in our regression analysis to account for industry-specific characteristics. We also apply robust standard errors to account for possible heteroskedasticity, following White (1980) (Table I).

Consistent with previous literature, we also include a set of control variables to control for their effect on a firm's future performance (El Ghoul *et al.*, 2011; Makni *et al.*, 2009). Table II presents descriptive statistics for the variables used in this study. The sample is split into two groups based on whether the observation lies in the crisis years (2007-2009) or in the post-crisis period (2010-2012). Comparing ESG disclosure in the crisis (30.56) and the post-crisis (31.18) periods, we observe that firms do not significantly alter their social disclosures based on the economic conditions. Table II also highlights that the percentage of outside directors is not considerably affected by the economic conditions (59.84 percent in the crisis period compared to 61.21 percent in the post-crisis period). We also compute the variance inflation factor (VIF) to test for any multicollinearity problems. The VIF for the overall model is 1.43 with no variable having an individual VIF score of more than 2.1. Thus, it is safe to assume that no multicollinearity problems exist in our model.

Variable name	Variable description
ARFF	The firm's abnormal return measured following Fama-French (1993) three-factor model
Board average age	The average age of the directors on the board
Board size	Number of directors on the board
Crisis	A dummy variable that takes the value of 1 if the observation lies in the years of the financial crisis (2007-2009) and 0 other wise
Duality	A dummy variable that takes the value of 1 if the chairman of the board of directors is also the CEO and 0 otherwise
FCF to assets	The ratio of a firm's free cash flow to total assets
Leverage	Debt divided by the total assets
Log (assets)	The logarithm of total assets in the corresponding year
Percentage outside directors	The number of outside directors on the board to the total number of directors
Percentage women on board	The number of women directors to the total number of directors on the board
ROA	Net income over total assets
Social disclosure	The firm's weighted average disclosure score measuring the extent of environmental, social and governance information

Table I.
Variable definitions

Figure 1 provides a descriptive representation of the relationship between ESG disclosure and future firm performance during different economic conditions. Consistent with our expectations, the level of disclosure is inversely related to future firm performance during a crisis. On the other hand, during normal economic conditions, the level of disclosure seems to have a slightly positive impact on future firm performance. This indicates that in times of crisis, investors prioritize spending the firm's scarce resources on activities that maximize shareholder wealth, while they are less concerned with social activities.

Results and discussion

Descriptive statistics

Figures 2 and 3 provide descriptive figures for the disclosure-performance relationship, based on the percentage of outsiders' presence on corporate boards. Figure 2 shows that, for firms with low levels of board outsiders, the level of social disclosure does not seem to have a significant effect on firm performance. This result is consistent during both the crisis and post-crisis period. On the other hand, Figure 3 suggests that, for firms with high levels of board outsiders, the macroeconomic conditions conversely affect the disclosure-performance relationship. For such firms, increasing social disclosures during the financial crisis seems to have a negative effect on firm performance. However, this relationship turns slightly positive during the post-crisis period. The next section presents regression analysis to test the significance of the findings shown in Figures 1-3.

We begin our regression analysis by examining whether firms deviate from their normal societal reporting in recessionary periods. In Table III, a regression model is employed in which social disclosure is regressed on the crisis dummy variable and various control variables. The coefficient estimate of the crisis dummy variable is not significant. Hence, the null hypothesis that firms reduce their societal engagements during recessionary periods to divert resources toward profit-maximizing projects is rejected.

We also focus in Table III on the outsiders-disclosure relationship, to test whether the presence of outside directors enhances a firm's social reporting. The results indicate a positive relationship between the percentage of outside directors and a firm's social disclosures. This is consistent with Ibrahim *et al.* (2003), who suggest that the presence of outside directors on a company's board triggers a firm to engage in long-term CSR activities.

Table II.
Descriptive statistics

Variables	Post-crisis period (2010-2012) *n*	Mean	SD	Median	Variables	During crisis (2007-2009) *n*	Mean	SD	Median
ARFF	1401	0.047***	0.307	0.051	ARFF	965	0.135	0.369	0.110
ESG disclosure score	855	31.181	12.951	28.512	ESG disclosure score	777	30.566	12.050	28.099
% outside directors	846	62.211**	12.716	55.560	% Outside directors	765	60.842	12.229	55.560
CEO duality	849	0.020	0.140	0.000	CEO duality	769	0.027	0.163	0.000
Log assets	913	9.430***	0.809	9.290	Log assets	887	9.324	0.838	9.196
ROA	912	0.073	0.098	0.056	ROA	887	0.068	0.189	0.047
Leverage	913	0.578**	0.222	0.580	Leverage	887	0.461	1.723	0.660
FCF to assets	913	0.060*	0.087	0.049	FCF to assets	597	0.052	0.093	0.042
Board size	656	11.511	7.423	15.000	Board size	778	11.281	7.422	15.000
Women on board	851	9.827***	9.143	10.000	Women on board	767	7.860	8.616	8.300
Board average age	648	56.546***	3.425	56.670	Board average age	635	55.809	3.325	55.850

Notes: For each variable, we conducted a *t*-test to investigate the mean differences between the crisis and post-crisis periods. *,**,***Significant at the 10, 5, and 1 percent levels, respectively

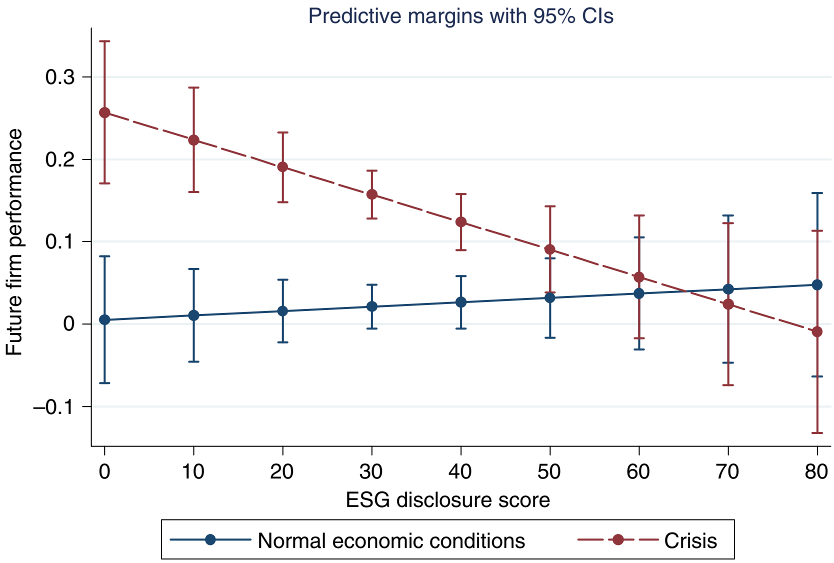

Figure 1.
ESG disclosure and future firm performance

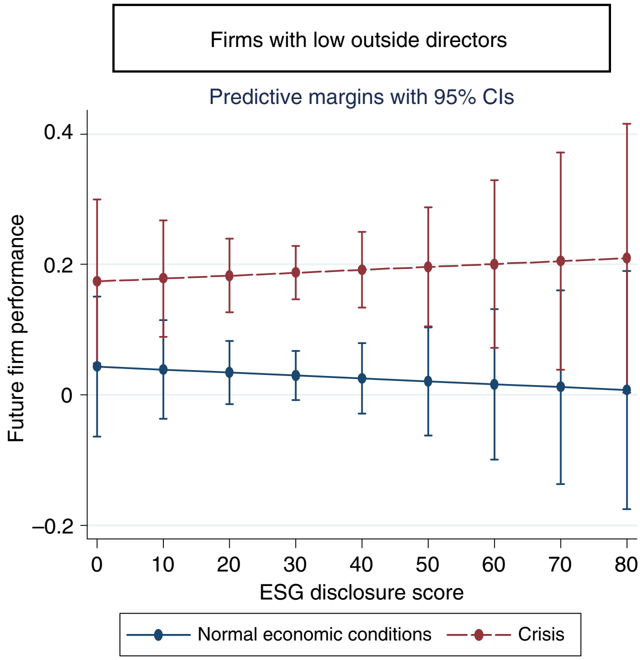

Figure 2.
Low outside directors and disclosure-performance relationship

Our results also indicate that the presence of women on a company's board of directors is positively related to social disclosure. This is in line with Fernandez-Feijoo *et al.* (2014), who find that countries with more gender equality have a higher level of female representation on their boards, leading to higher levels of CSR reporting.

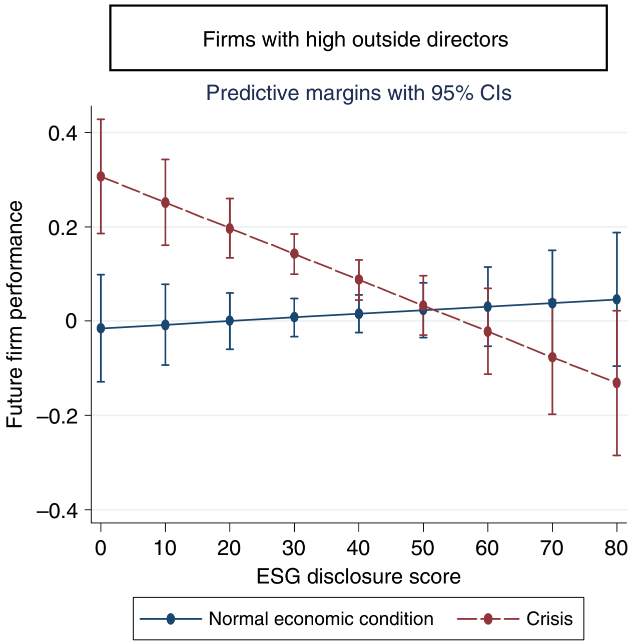

Figure 3.
High outside directors and disclosure-performance relationship

Table III.
Board structure and ESG disclosure

Independent variables	ESG disclosure score
Crisis	1.0327 (0.7194)
% outside directors	0.0499* (0.0311)
CEO duality	−0.6773 (2.2828)
Log assets	8.6646*** (0.5616)
ROA	7.2837* (3.9641)
Leverage	−6.4189*** (1.7929)
FCF to assets	9.4962* (5.5412)
Board size	−0.0841* (0.0514)
Women on board	0.1737*** (0.0428)
Board average age	0.1024 (0.1109)
Constant	−56.3806*** (6.9842)
Number of observations	980
R^2	0.3708
Industry dummies	Yes

Notes: This table investigates the effect of the macroeconomic environment and different board and firm characteristics on the level of social disclosures. The dependent variable is a firm's ESG disclosure, which has a score ranging from 0 to 100 with 0 representing firms with no ESG disclosures and 100 representing firms that disclosing on all data points collected by Bloomberg. Crisis is a dummy variable that takes a value of 1 if the observation lies in the crisis years (2007-2009) and 0 otherwise. Industry dummies are included to control for industry-specific characteristics. Robust standard errors are calculated to account for potential heteroskedasticity following White (1980). *,***Significant at 10, and 1 percent levels, respectively

Smaller boards are also found to have a positive impact on a firm's disclosure. Directors on smaller boards have higher personal responsibility for monitoring a firm's reports and their related disclosures (Ahmed *et al.*, 2006). Firm profitability is likewise positively related to CSR disclosures. Profitable firms have greater access to resources and are expected to engage in social activities as a sign of giving back to their societies (Jizi *et al.*, 2014). On the other hand, firms with low levels of profitability are more constrained and do not have the luxury of engaging freely in social activities, due to facing heightened demands from their creditors and shareholders.

The financial crisis and ESG disclosures. The presence of a financial crisis may change market participants' perceptions regarding a firm's actions and decisions. A firm's social engagement and spending may be regarded as wasteful by its shareholders during economic downturns. Table IV examines the effect of adverse macroeconomic conditions on the association between CSR reporting and future firm performance. The firm's future performance is regressed on social disclosures, the crisis dummy variable, an interaction variable between social disclosures and the crisis dummy variable, and several control variables. The first column uses year $t+1$ abnormal returns as the dependent variable in our regressions, while the second column uses year $t+2$ abnormal returns.

In Column (1), the coefficient estimate for "crisis" is positive and significant. This suggests that, during the crisis, firms with no CSR reporting experienced an improvement in the next year's performance[3]. The non-significant coefficient estimate of "ESG disc" implies that CSR reporting does not impact a firm's future performance during normal economic conditions. The "Crisis-ESG disk" interaction variable is negative and significant. Thus, an increase in social disclosures has a negative effect on future firm performance during economic downturns, as opposed to normal economic periods. We obtain similar results when using t+2 abnormal returns to measure future performance in Column (2).

Our findings suggest that adverse macroeconomic conditions have a converse effect on market participants' perceptions of firms' societal engagements. Economic downturns amplify both shareholders and firms' financial constraints. As financial conditions tighten, individuals tend to become more selfish and prioritize individual benefits over social and

Independent variables	ARFF ($t+1$)	ARFF ($t+2$)
Crisis	0.1094*** (0.0199)	0.0574*** (0.0191)
ESG Disc Score	0.0005 (0.0013)	0.0011 (0.0015)
ESG × Crisis	−0.0049** (0.0021)	−0.0040** (0.0020)
% outside directors	0.0009 (0.0009)	0.0001 (0.0008)
CEO duality	0.0099 (0.0778)	0.0158 (0.0697)
Log assets	−0.0812*** (0.0177)	−0.0485*** (0.0152)
ROA	0.1424 (0.1221)	0.0030 (0.0806)
Leverage	0.1003* (0.0602)	0.0928* (0.0549)
FCF to assets	−0.0439 (0.2041)	0.1465 (0.1641)
Board size	−0.0018 (0.0015)	−0.0015 (0.0014)
% women on board	−0.0015 (0.0012)	−0.0001 (0.0011)
Board average age	−0.0018 (0.0032)	−0.0010 (0.0031)
Constant	0.7822*** (0.2208)	0.5475*** (0.1960)
Number of observations	873	844
R^2	0.0999	0.0884
Industry dummies	Yes	Yes

Notes: This table investigates the effect of ESG disclosures on future firm performance during different economic conditions. Future firm performance ($t+1$ and $t+2$) is the dependent variable measured by the risk-adjusted returns based on Fama and French (1993) three-factor model (ARFF). The ESG disclosure score ranges from 0 to 100 with 0 representing firms with no ESG disclosures and 100 representing firms that disclosing on all data points collected by Bloomberg. Crisis is a dummy variable that takes a value of 1 if the observation lies in the crisis years (2007-2009) and 0 otherwise. Industry dummies are included to control for industry-specific characteristics. Robust standard errors are calculated to account for potential heteroskedasticity following White (1980). *,**,***Significant at 10, 5, and 1 percent levels, respectively

Table IV.
ESG disclosure and firm performance

environmental benefits. Accordingly, shareholders increase their scrutiny of firms' financial decisions and demand a more efficient and effective allocation of resources toward profit-maximizing projects. Market participants seem to penalize firms diverting scarce resources toward non-profitable social activities during a financial crisis. Hence, when facing adverse macroeconomic conditions, investors' perceptions of social disclosures conform to the Milton Friedman's assessment rather than a "doing well by doing good" view. Our results are consistent with Krüger (2015), who finds a negative market reaction to the announcement of positive CSR news for firms suffering from agency problems.

Board outsiders and ESG disclosures. The two main roles of a board of directors are monitoring and advising. The presence of outsiders on corporate boards is expected to provide firms with enhanced monitoring. However, monitoring is costly. The disadvantages of having outside board members are related to information asymmetry, coordination costs, and free-riding problems. During a financial crisis, due to their inferiority with regards to firm-specific information, outsiders' participation on corporate boards may present an additional challenge to firms. Moreover, in times of crisis, both board members and regular firm employees need to exert an additional effort for the firm to cope with the additional financial constraints and limitations. Therefore, the converse effect of free-riding on board efficiency and effectiveness may be more pronounced during economic downturns. Insiders, on the other hand, possess superior information and experience regarding firm-specific attributes, and thus are expected to be better decision makers. Consequently, we examine whether the advantages of having outsiders on corporate boards during economic downturns outweigh their disadvantages.

We have already shown in Table III that an increase in the percentage of outside directors increases social disclosures. But is the positive relation between outsiders' presence and CSR reporting always favorable for firms? We now investigate whether the participation of outside directors impacts the CSR disclosure-firm performance relationship under dissimilar economic conditions. In Table V, we repeat the same regressions employed in Table IV, but we also divide firms into two sub-groups: low outsider firms (percentage of board outsiders is below average[4]); and high outsider firms (percentage of board outsiders is above average). Column (1) shows that, for low outsider firms, the coefficient estimates for ESG disc, and the Crisis-ESG disc interaction term are not significant.

As for high outsider firms, Column (2) demonstrates that the coefficient estimate for ESG disc is not significant. The negatively significant interaction variable implies that, for high outsider firms, during adverse macroeconomic conditions social reporting has a negative effect on year $t+1$ performance. Analogous findings are attained in Columns (3) and (4) when employing the $t+2$ abnormal performance as the dependent variable. Table V implies that the results highlighted in Table IV are mainly driven by firms with high participation by outside board members. Accordingly, whether from free-riding or information asymmetry, the disadvantages of outsiders in terms of their effect on the social disclosure-firm future performance association seem amplified when facing adverse financial conditions.

Furthermore, to strengthen the validity of our results, we conduct a t-test for differences in the coefficient estimates of both the ESG disc score and the ESG $\times$ crisis interaction between the low- and high-outsiders sub-groups. This is performed when using the $t+1$ and $t+2$ future performance measures as dependent variables in our regressions. "*a*" denotes a 1 percent significant difference between coefficients in the low- and high-outsiders sub-groups. We show that, during the non-crisis period, the coefficient estimate on social disclosure is significantly more positive in the presence of high outsiders on corporate boards. Moreover, the coefficient estimate on the interaction variable is significantly (at the 1 percent level) more negative in the sub-group of high outsiders. That is, during crisis, the social disclosure-future performance relationship is adversely affected by high outsiders' boards as opposed to low outsiders' boards.

Independent variables	Lead ARFF ($t+1$) Low outsiders	High outsiders	Lead ARFF ($t+2$) Low outsiders	High outsiders
Crisis	0.1416* (0.0705)	0.0887 (0.0679)	0.0623 (0.0606)	0.0601 (0.0372)
ESG disclosure score	−0.0001 (0.0008)	0.0011a (0.0016)	0.0008 (0.0016)	0.0011a (0.0015)
ESG × crisis	0.0003 (0.0033)	−0.0088*a (0.0045)	−0.0027 (0.0022)	−0.0049*a (0.0026)
% outside directors	0.0013 (0.0013)	0.0028 (0.0016)	0.0021 (0.0017)	−0.0004 (0.0009)
CEO duality	0.0124 (0.1282)	−0.0048 (0.0676)	0.1086 (0.1125)	−0.1446*** (0.0265)
Log assets	−0.0844** (0.0300)	−0.0736*** (0.0140)	−0.0860*** (0.0233)	−0.0303 (0.0274)
ROA	0.3057 (0.2987)	0.0732 (0.1760)	−0.1016 (0.1227)	0.0779 (0.0999)
Leverage	0.0191 (0.0479)	0.1873** (0.0738)	0.1036* (0.0496)	0.1355 (0.1209)
FCF to assets	−0.1141 (0.2856)	−0.0686 (0.2213)	0.3150 (0.2993)	0.0457 (0.2071)
Board size	−0.0012 (0.0027)	−0.0010 (0.0015)	−0.0011 (0.0018)	−0.0019 (0.0014)
% Women on board	−0.0018** (0.0007)	−0.0015 (0.0018)	0.0011 (0.0016)	−0.0009 (0.0016)
Board avg. age	0.0002 (0.0033)	−0.0052*** (0.0015)	0.0017 (0.0048)	−0.0031 (0.0019)
Constant	0.7469* (0.3971)	0.7536*** (0.2224)	0.5541 (0.3272)	0.4377 (0.3043)
Number of observations	417	456	398	446
R^2	0.0957	0.1021	0.0565	0.0597
Industry dummies	Yes	Yes	Yes	Yes

Notes: This table investigates the effect of ESG disclosures on future firm performance for different levels of board outsiders. The sample is split into two sub-groups: low outsiders' firms (% of board outsiders is below average); and high outsiders firms (% of board outsiders is above average). Similar to Table IV, ARFF ($t+1$ and $t+2$) is used as the dependent variable. The ESG disclosure score ranges from 0 to 100 with 0 representing firms with no ESG disclosures and 100 representing firms that disclosing on all data points collected by Bloomberg. Crisis is a dummy variable that takes a value of 1 if the observation lies in the crisis years (2007-2009) and 0 otherwise. Industry dummies are included to control for industry-specific characteristics. Robust standard errors are calculated to account for potential heteroskedasticity following White (1980). *,**,***Significant at 10, 5, and 1 percent levels, respectively

Table V. ESG disclosure and firm performance under different levels of board outsiders

Shareholders seem to renounce societal activities, in times of crisis, more in firms with high outside directors' participation, since these firms seem to lack the necessary expertise to alter their behavior, decisions, and resource allocation to cope with the challenges presented by the tightened financial conditions. In other words, the possibility of outsiders lacking the necessary firm-specific experience to make crucial financial decisions may be especially detrimental when firms are already facing financial and economic constraints.

Accounting performance and ESG disclosures. Firms with poor accounting performance are expected to be more financially constrained than those achieving adequate accounting performance. Poor accounting performance makes a firm's already limited resources even more scarce. These firms experience a heightened need to effectively and efficiently allocate their resources toward value-enhancing investments, to improve performance and thus appease shareholders. Therefore, in addition to a financial crisis and boards being dominated by less firm-experienced outsiders, poor accounting performance may present an additional obstacle.

The previous section suggests that, during adverse financial conditions, firms with high outsider participation in their corporate boards experience a negative association between social disclosures and firm future performance. We employ a similar analysis in Table VI, but we further divide firms into low and high accounting performance. Low (high) accounting performance firms are those firms with below (above) average ROA. That is, we now run regressions for the following four sub-groups: low outsiders and low ROA firms, low outsiders and high ROA firms, high outsiders and low ROA firms, and high outsiders and high ROA firms.

In Table VI, Columns (1) and (2) demonstrate that for low outsider firms, regardless of whether ROA is low or high, CSR reporting has no significant impact on the firm's future performance during non-recessionary periods. Moreover, the interaction variable suggests

Independent variables	Lead ARFF (t+1) Low outsiders Low ROA	High ROA	High outsiders Low ROA	High ROA
Crisis	0.0922 (0.0612)	0.2175** (0.0748)	0.0240 (0.0668)	0.1677* (0.0869)
ESG Disk Score	−0.0033* (0.0018)	0.0013 (0.0022)	0.0027 (0.0027)	0.0004 (0.0021)
ESG × crisis	0.0042 (0.0033)	−0.0005 (0.0037)	−0.0084** (0.0029)	−0.0091 (0.0072)
% outside directors	0.0014 (0.0024)	0.0013 (0.0028)	0.0051* (0.0027)	0.0005 (0.0013)
CEO duality	0.0996 (0.2478)	−0.0298 (0.0492)	−0.0196 (0.0932)	−0.0168 (0.0646)
Log assets	−0.0788* (0.0400)	−0.0900*** (0.0194)	−0.1053*** (0.0192)	−0.0334 (0.0209)
ROA	0.4974* (0.2404)	−0.4617 (0.3203)	−0.0122 (0.1475)	−0.1448 (0.2414)
Leverage	0.1241 (0.1261)	−0.1433 (0.1057)	0.3427** (0.1164)	0.1196 (0.1367)
FCF to assets	−0.0792 (0.3988)	−0.0950 (0.3155)	−0.9659 (0.6286)	0.2461 (0.2603)
Board size	0.0015 (0.0016)	−0.0037 (0.0032)	−0.0003 (0.0031)	0.0002 (0.0030)
% women on board	−0.0033** (0.0013)	−0.0016 (0.0014)	−0.0001 (0.0026)	−0.0019 (0.0018)
Board average age	0.0006 (0.0044)	−0.0027 (0.0052)	0.0075 (0.0045)	−0.0129* (0.0061)
Constant	0.5901 (0.4383)	1.1456** (0.4754)	0.1282 (0.4498)	0.9694*** (0.2338)
Number of observations	258	159	274	182
R^2	0.0838	0.1820	0.1146	0.1954
Industry dummies	Yes	Yes	Yes	Yes

Notes: This table investigates the effect of ESG disclosures on future firm performance for different levels of board outsiders and firm profitability. The sample is split into four sub-groups: low outsiders and low ROA firms; low outsiders and high ROA firms; high outsiders and low ROA firms; and high outsiders and high ROA firms. ARFF ($t+1$) is used as the dependent variable. The ESG disclosure score ranges from 0 to 100 with 0 representing firms with no ESG disclosures and 100 representing firms that disclosing on all data points collected by Bloomberg. Crisis is a dummy variable that takes a value of 1 if the observation lies in the crisis years (2007-2009) and 0 otherwise. Industry dummies are included to control for industry-specific characteristics. Robust standard errors are calculated to account for potential heteroskedasticity following White (1980). *,**,***Significant at 10, 5, and 1 percent levels, respectively

Table VI.
ESG disclosure and firm performance at high and low profitability

that the crisis has no significant effect on the ESG disc-future performance relationship. Thus, firms with a low percentage of directors lacking firm-specific knowledge do not experience an adverse effect of CSR reporting on shareholders' wealth. Even if a firm's current accounting performance is low, market participants may view the presence of a high percentage of insiders (and thus a low percentage of outsiders) as a positive signal that resources are allocated efficiently toward enhancing the firm's well-being. In such a case, investors will relate the poor accounting performance to the presence of a crisis rather than blaming it on the poor allocation of resources by outside directors. In other words, CSR disclosure is not viewed as an inexperienced and inappropriate allocation of resources in low outsider firms.

As for firms with high outsider participation and low ROA, Column (3) shows that the association between social disclosure and future performance is not significant during normal economic conditions. The coefficient estimate on the interaction variable is negative and significant, suggesting that relative to the non-crisis period, social disclosures have a converse effect on future performance during a financial crisis. Accordingly the financial limitations, which are presented by the crisis and generate low accounting performance, seem to be specifically detrimental to CSR reporting when corporate boards are dominated by board members with limited firm-specific expertise. In such a case, consistent with Milton Friedman's proposition, market participants deem engagement in societal activities as a non-necessary and wasteful utilization of the firm's resources.

Column (4) suggests that, for high outsider and high ROA firms, coefficient estimate on social disclosures is positively associated with future performance. During normal economic conditions, for firms with above-average accounting performance and high outsider participation, CSR reporting is positively associated with future firm performance. Firms achieving above-average accounting performance and operating in a favorable macroeconomic environment seem to encourage social welfare more, which favors their engagement in social activities. For this sub-group of firms, societal engagements promoted by outsider-dominated boards send a positive signal regarding the firm's good citizenship image and financial strength, and thus has a favorable impact on the firm's welfare. This is in conformance with the "doing well by doing good" hypothesis. Table VII employs the same regression model as that used in Table VI but this time ARFF ($t+2$) is used as the dependent variable. The results of Table VII are qualitatively similar to those presented in Table VI.

Conclusion

Changes in the world economy have increased firms' responsibilities beyond maximizing shareholder wealth, offering more attention to CSRs. In recent years, research into firms' engagement in ESG activities has examined their determinants and consequences on a firm's reputation, risk, and performance. However, previous results are equivocal and lack homogeneity. Moreover, despite the growing literature on the ESG disclosure-firm performance nexus, the literature on moderating factors and investor reaction to a firm's social practice during dissimilar economic conditions remains lacking.

We propose that a firm's macroeconomic environment moderates the efficiency of social disclosure. In the presence of a financial crisis, environmental and social disclosures have a negative effect on a firm's future performance. We also demonstrate that a high level of board outsiders and a low accounting profit present additional obstacles to firms engaging

	Lead ARFF ($t+2$)			
	Low outsiders		High outsiders	
Independent variables	Low ROA	High ROA	Low ROA	High ROA
Crisis	−0.0241 (0.0421)	0.1481** (0.064)	0.0036 (0.0295)	0.117** (0.0438)
ESG	0.0003 (0.0037)	−0.0008 (0.0015)	0.0017 (0.0028)	0.0007 (0.0016)
Crisis × ESG	−0.0001 (0.0042)	−0.0018 (0.0061)	−0.0074* (0.0036)	−0.0037 (0.0023)
% outside directors	0.0009 (0.0015)	0.0016 (0.0031)	−0.0006 (0.0014)	−0.0011 (0.0019)
CEO duality	0.1397 (0.1848)	0.1263*** (0.031)	−0.2092 (0.1507)	−0.1478** (0.0563)
Log assets	−0.0705** (0.028)	−0.1170*** (0.0243)	−0.0155 (0.0263)	−0.0473 (0.037)
ROA	−0.0906 (0.1241)	−0.6095** (0.1893)	−0.0846 (0.1191)	0.4231* (0.1971)
Leverage	0.1914** (0.0571)	−0.0368 (0.0936)	0.0702 (0.1008)	0.126 (0.1872)
FCF to assets	0.2088 (0.349)	0.0247 (0.2218)	0.4605 (0.5601)	−0.1226 (0.3621)
Board size	−0.0021 (0.0029)	−0.002 (0.0024)	0.001 (0.0017)	−0.0057** (0.0022)
Women on board	−0.001 (0.0017)	0.0028 (0.0022)	−0.0021 (0.0023)	0 (0.0021)
Board average age	−0.0033 (0.0055)	0.0095 (0.0083)	−0.0055 (0.0048)	−0.0025 (0.0059)
Constant	0.7587* (0.3649)	0.5464 (0.4262)	0.496 (0.404)	0.5827 (0.5395)
Number of observations	228	192	231	193
R^2	0.0511	0.1279	0.0693	0.1223
Industry dummies	Yes	Yes	Yes	Yes

Notes: This table investigates the effect of ESG disclosures on future firm performance for different levels of board outsiders and firm profitability. The sample is split into four sub-groups: low outsiders and low ROA firms; low outsiders and high ROA firms; high outsiders and low ROA firms; and high outsiders and high ROA firms. ARFF ($t+2$) is used as the dependent variable. The ESG disclosure score ranges from 0 to 100 with 0 representing firms with no ESG disclosures and 100 representing firms that disclosing on all data points collected by Bloomberg. Crisis is a dummy variable that takes a value of 1 if the observation lies in the crisis years (2007-2009) and 0 otherwise. Industry dummies are included to control for industry-specific characteristics. Robust standard errors are calculated to account for potential heteroskedasticity following White (1980). *,**,***Significant at 10, 5, and 1 percent levels, respectively

Table VII. ESG disclosure and firm future performance at different levels of outside directors and profitability in CSR activities during recessions. Our findings indicate that firms with high outsider director levels and low accounting profit experience negative returns when engaging with social disclosures during times of crisis. Outsiders seem to favor engaging in societal activities irrespective of the financial and economic situation the firm is facing. However, during economic downturns, market participants experiencing financial distress are likely to prioritize their own welfare over the society's well-being. Similarly, a firm spending its scarce resources on social disclosures during recession and while having a low accounting profit is also penalized by investors. On the other hand, during normal economic conditions, firms with a high level of outside directors and high accounting profit experience positive future returns when disclosing their engagement in CSR activities.

Our results are of particular importance to managers and policymakers. While social disclosures and a high level of outside directors can be beneficial to firms in certain cases, they can also have a detrimental effect on firm performance during a crisis. The study provides corporate managers and policymakers empirical evidence on the influence of ESG disclosure on firm performance under different financial conditions. Our results show that one size of a social agenda does not fit all firms, and hence corporate managers need to know when and to what extent they can invest and communicate their ESG activities to maximize their firms' benefits. Overall, corporate governance should be thought of as a system of interconnected practices that can be effective in specific conditions based on various firm and environmental characteristics. Outsiders' inferiority with respect to having the firm-specific expertise and information to cope with firm-level challenges outweighs the benefits of additional monitoring during a financial crisis.

Following previous research, we focus in this study on the financial crisis as it represents a recent event that had a devastating effect on the macroeconomic environment (Sufian, 2009). In addition to the financial crisis, other macroeconomic factors (e.g. inflation, GDP growth) that can play a role in determining a firm's macroeconomic environment. While these factors are beyond the scope of this research, it would be interesting for future research to test if such factors moderate the disclosure-performance relationship. In other words, will the presence of other macroeconomic barriers, in addition to the crisis, inflate the negative results found in this research?

Notes

1. Such a crisis increases agency problems, as managers tend to extract private benefits and act in opportunistic manners (Johnson *et al.*, 2000). Dah (2016) finds that managerial entrenchment increases during economic recessions, leading to a negative effect on firm performance.
2. http://business-school.exeter.ac.uk/research/areas/centers/xfi/research/famafrench/files/
3. This is expected since, relative to the crisis, future performance mostly pertains to the post-crisis period.
4. Using the median instead of the mean as a cut-off point for low and high percentages of outsiders provides qualitatively similar results.

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