



Contents lists available at ScienceDirect

Journal of Corporate Finance

journal homepage: www.elsevier.com/locate/jcorpfinDoes CSR matter in times of crisis? Evidence from the COVID-19 pandemic[☆]Kee-Hong Bae^a, Sadok El Ghouli^b, Zhaoran (Jason) Gong^c, Omrane Guedhami^{d,*}^a Schulich School of Business, York University, Canada^b Campus Saint-Jean, University of Alberta, Canada^c Department of Accountancy, Faculty of Business, Lingnan University, Hong Kong SAR, China^d Moore School of Business, University of South Carolina, United States of America

ARTICLE INFO

JEL classification:

G32

M14

Keywords:

Stakeholder welfare vs. shareholder value

Corporate social responsibility

Stock return performance

COVID-19 crisis

Valuation channels

ABSTRACT

The debate over how firm stakeholder engagement is tied to preserving shareholder wealth has received growing attention in recent years, especially in the wake of the COVID-19 crisis. Against this backdrop, we examine the relation between corporate social responsibility (CSR) and stock market returns during the COVID-19 pandemic-induced market crash and the post-crash recovery. Using a sample of 1750 U.S. firms and two major sources of CSR ratings, we find no evidence that CSR affected stock returns during the crash period. This result is robust to various sensitivity tests. In additional cross-sectional analysis, we find some supporting evidence, albeit weak, that the relation between CSR and stock returns during the pandemic-related crisis is more positive when CSR is congruent with a firm's institutional environment. We also find that Business Roundtable companies, which committed to protecting stakeholder interests prior to the pandemic, do not outperform during the pandemic crisis. We conclude that pre-crisis CSR is not effective at shielding shareholder wealth from the adverse effects of a crisis, suggesting a potential disconnect between firms' CSR orientation (ratings) and actual actions. Our evidence suggests that investors can distinguish between genuine CSR and firms engaging in cheap talk.

1. Introduction

Whether firms should maximize shareholder value or stakeholder welfare has been debated since the *New York Times* published an influential essay by Milton Friedman in 1970 (Friedman, 1970). This question gained renewed interest during the global financial crisis

[☆] We thank Douglas Cumming (Editor), two anonymous reviewers, Najah Attig, Narjess Boubakri, Ruiyuan Chen, He Wang, and Ying Zheng for their constructive comments and suggestions. Bae and El Ghouli appreciate generous financial support from Canada's Social Sciences and Humanities Research Council (Grant #435-2020-1156).

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of 2008–2009, and more recently in the wake of the current COVID-19 pandemic.¹ At its heart is whether corporate social responsibility (CSR) activities are value-enhancing (e.g., Borghesi et al., 2014; Flammer, 2015; Ferrell et al., 2016),² especially during times of crisis (e.g., Lins et al., 2017; Albuquerque et al., 2020). In this paper, we re-examine the relation between CSR and firm value from the perspective of the COVID-19 stock market crash.

The pandemic led to a sharp increase in governments' and market participants' attention to CSR considerations. For instance, social and environmental issues are at the core of the recovery plan in many countries. The European Parliament recommitted to the European Green Deal, a set of policy initiatives introduced in December 2019 that aim to make Europe climate-neutral by 2050. It is also trying to build post-COVID-19 economic stimulus packages around the goals of the Green Deal. In response to the pandemic, corporations also reiterated their commitments to stakeholder interests as a means of creating and preserving shareholder value. For example, Doug McMillon, President and Chief Executive Officer of Walmart and Chairman of Business Roundtable, states "During a time of tremendous challenge, Business Roundtable CEOs have shown what it means to live the principles we announced almost a year ago. Concurrent health, economic and racial crises have made clear how various systems are connected — and that multi-stakeholder capitalism is the answer to addressing our challenges holistically."³

The increased attention to and demand for CSR caused by the COVID-19 pandemic-induced market crash presents a unique opportunity to test the notion that CSR protects firm value during crisis periods. This idea is rooted in mainstream CSR theories, including stakeholder, institutional, and legitimacy theories, among others.⁴ These theories hold that CSR engagement is driven by a firm's relations with its stakeholders, and it allows the firm to legitimize and sustain relations/reputation with its stakeholders, as well as with the "broader social and political environment" in which the firm exists (e.g., Gray et al., 1995; Deegan, 2002; Lanis and Richardson, 2013, p. 76). Put differently, for firms to survive and grow, they should attend to the interests of various stakeholders and legitimize their activities to sustain congruence between society's and firms' objectives (Frynas and Yamahaki, 2016). The implication of these theories is that CSR activities are value-enhancing when they are genuinely congruent with the demands of stakeholders and the environment.

A few empirical studies present supporting evidence. For instance, Nguyen et al. (2020) find that the presence of long-term investors, which is associated with higher demand for CSR (Kim et al., 2019), increases the value to shareholders of CSR activities. Griffin et al. (2020) show that the positive association between CSR and firm value is stronger when the cultural environment entails a greater demand for CSR. Boubakri et al. (2016) find that, for firms exposed to the U.S. environment (e.g., higher litigation risk and demand for CSR) through cross-listing, better CSR performance is valued more by investors. Servaes and Tamayo (2013) find evidence suggesting that firms undertaking and publicizing CSR activities achieve higher (lower) valuation if these activities and firm reputation are consistent (inconsistent). Thus, one should expect better stock price performance from CSR-active firms during the crisis period if their CSR activities are perceived as genuinely meeting stakeholders' increased demand for CSR that the pandemic has caused. We note that prior studies suffer from endogeneity issue in that the variables employed to proxy for the demand for CSR are likely correlated with the outcome variables. Our study has the advantage of utilizing the unexpected increase in demand for CSR that was caused by the pandemic. The pandemic represents a truly exogenous event, which allows us to circumvent endogeneity issues and provide a cleaner test of the relation between the demand for CSR and its effect on the firm valuation.

Anecdotal evidence suggests that the pandemic has led to heterogeneous firm responses. Some firms, such as Costco, Vodafone, L'Oréal, and LVMH, pledged to help employees (increasing the hourly rate by \$2), customers (offering unlimited mobile data), suppliers (accelerating payments), and the general community (manufacturing hand sanitizer), respectively. In contrast, other firms, such as Marriott International, laid off or furloughed a significant percentage of their workforce, jeopardizing employees' healthcare benefits when they are arguably needed the most. Marriott International is a Business Roundtable member, making its furlough decision inconsistent with their pledge to work for the benefit of all stakeholders, particularly employees. These anecdotes show that it continues to be unclear whether CSR activities can be credibly perceived as value-enhancing investments to meet stakeholders' demands for CSR. Thus, the effect of CSR on stock price performance during the pandemic remains an empirical issue, which we address here.

We examine a sample of 1750 U.S. firms during the crisis (February 18–March 20, 2020) and post-crisis (March 23–June 5, 2020) periods. Our research design closely follows that of Lins et al. (2017), who examine the relation between CSR and stock returns of U.S. firms during the 2008–2009 financial crisis. Given the substantial disagreement across rating agencies documented in prior research,⁵ we rely on two major data providers used extensively in the CSR literature: MSCI ESG Stats (formerly KLD Stats) and Refinitiv (formerly Thomson Reuters' ASSET4). Using MSCI ESG Stats ratings for 2018 and Refinitiv ratings for 2019, we do not find a significant relation between overall CSR score and stock market performance. Further, we do not find a significant relation between CSR

¹ See the Harvard–Oxford debate on "shareholderism" versus "stakeholderism" (Bebchuk and Tallarita, 2020; Mayer, 2020). See also "What companies are for," *Economist*, August 24, 2019.

² Some studies document positive valuation effects of CSR (e.g., Deng et al., 2013; Flammer, 2015, 2020; Ferrell et al., 2016; Cao et al., 2019; Dai et al., 2020; Gao et al., 2020); others suggest that CSR is unrelated to firm value, or can even reduce value due to agency costs (e.g., Bénabou and Tirole, 2010; Cheng et al., 2014; Di Giuli and Kostovetsky, 2014; Masulis and Reza, 2015).

³ <https://purpose.businessroundtable.org>

⁴ See Frynas and Yamahaki (2016) for a comprehensive review of CSR theories. In surveying applications of CSR theories, the authors find that stakeholder, institutional, and legitimacy are the top three theories most commonly adopted in the CSR literature.

⁵ See, for example, Chatterji and Levine (2006), Chatterji et al. (2009), Chatterji et al. (2016), Christensen et al. (2019), Gibson et al. (2019), and Dimson et al. (2020).

strengths and concerns scores (from MSCI ESG Stats) and stock market performance.

When we examine the valuation effect of CSR in the post-crash recovery period, we again find that CSR is unrelated to stock returns in either the MSCI ESG Stats or Refinitiv samples. The lack of a significant relation between CSR and stock returns during or after the crisis period suggests we should be cautious about drawing unambiguous or unconditional inferences about the positive role of CSR in preserving shareholder value.

We conduct several additional tests to further substantiate our main evidence. First, we construct an alternative CSR measure based on the MSCI ESG Stats ratings using alternative weights for the components. We assign a weight of 50% to the environment component, and 12.5% to each of the other four components. The reconstructed CSR measure using MSCI ESG Stats ratings places equal weights on the environment and non-environment components, making it comparable to the CSR measure based on Refinitiv ratings. The results suggest that the alternative CSR measure is not significantly associated with stock returns during either the crisis or recovery period.

Second, to better isolate the role of CSR, we include several firm-level and pandemic-related variables. Specifically, we control for a set of firm-level characteristics, including CEO managerial ability score (Demerjian et al., 2012), logarithm of firm-level political uncertainty in the first quarter of 2020 (Hassan et al., 2019), corporate culture (Li et al., 2020b), and short- and long-term institutional ownership (Kim et al., 2019). We also control for two state-level variables of a firm's headquarters state: the logarithm of the number of confirmed COVID-19 cases in the state, and state government decisions to close workplaces (Hale et al., 2020). Except for short-term institutional ownership, all other additional controls are unrelated to stock returns during the crash period. Importantly, our earlier inferences about the insignificant association between CSR and firm performance during the crash and recovery periods remain unaffected.

Finally, if CSR is associated with better performance during "normal" time, one may view our main evidence of "no results" as high-CSR firms underperforming during the crisis. Testing the relation between CSR and stock returns before the crisis (January 2019–December 2019), we find that CSR ratings are unrelated to pre-crisis period stock returns.

Notwithstanding these results, we follow prior CSR studies and explore the relation between the components of the CSR scores and stock returns. Using the MSCI ESG Stats sample, we find that community, human rights, diversity, and employee relations are all unrelated to stock returns during the crash period. There is only weak evidence, conditional on model specification, that firms with higher environmental ratings realized higher stock returns during the crisis period and lower returns over the recovery period. Using the Refinitiv sample, we find that the social component is unrelated (weakly related) to stock returns during the crisis (recovery) period, while the environment component is weakly related (unrelated) during the crisis (recovery) period.

The pandemic affected industries differentially. We examine the valuation effect of CSR across industries. We find that CSR does not have a significant effect on stock returns during the crisis or recovery periods for most industries except consumer durables (Durables), chemical and allied products (Chemicals), business equipment (Business), and healthcare, medical equipment, and drugs (Healthcare). For these four industries, the MSCI ESG Stats and Refinitiv samples deliver mixed results. During the crash period, high-CSR Durables (Chemicals) earn significantly lower excess returns, but only based on MSCI ESG Stats (Refinitiv) ratings; high-CSR Business and Healthcare earn significantly higher excess returns, but only based on Refinitiv ratings. During the recovery period, only high-CSR Chemicals earn significantly higher excess returns based on Refinitiv ratings.

Next, we examine cross-sectional heterogeneity in the association between CSR and crisis period stock returns. We consider a set of variables that capture a firm's external institutional environment and stakeholders' preferences for CSR. Specifically, we examine the political ideology and social trust of the region where a firm is headquartered, as well as various proxies for institutional owner types. We find evidence that the valuation effect of CSR during the COVID-19 crisis is more positive for firms located in Democratic states. We also find weak evidence that social trust increases the valuation effect of CSR. When we focus on institutional owner characteristics, we find no evidence that institutional investor horizons, norms, or CSR preferences impact the valuation effect during the crash period. Taken together, these results suggest that, during the pandemic-related crisis, CSR materially affected firm value only through the political environment.

Finally, we examine the performance of Business Roundtable member firms during the crisis period. We note that, on August 19, 2019, 181 CEOs adopted a new *Statement on the Purpose of a Corporation* that expanded the scope of a corporation's principal purpose to creating value for all stakeholders (ending a 22-year policy of maximizing only shareholder returns). This explicit commitment to stakeholder interests just prior to the pandemic presents an especially interesting setting to study the value of CSR during a crisis.

We examine whether Business Roundtable companies attained better stock performance during the crisis, and find no differences. Thus, the companies that powerfully demonstrated a commitment to stakeholders just prior to the crisis did not perform any differently during the crisis. This evidence is consistent with the view that the *Statement* "is largely a rhetorical public relations move rather than the harbinger of meaningful change," and "should not be expected, and was largely not intended by its signatories, to bring about major changes in the treatment of stakeholders" (Bebchuk and Tallarita, 2020, pp. 3–4).

Our study relates to a growing literature examining the effects of the COVID-19 pandemic on stock returns (e.g., Alfaro et al., 2020; Bretscher et al., 2020; Fahlenbrach et al., 2020; Pagano et al., 2020; Ramelli and Wagner, 2020). This literature reveals significant heterogeneity in the effects of the crisis, which depend on firm characteristics.

Within this literature, our paper is particularly related to several studies that have focused on the role of CSR engagement. Ding et al. (2020) examine the effect of pre-2020 CSR on the stock price response to the COVID-19 pandemic. They find that high-CSR firms perform better. However, because the authors focus on a cross-country sample, they only used Refinitiv ratings. We extend this literature by examining the valuation effects of CSR during the pandemic-induced stock market crash for a sample of U.S. firms, which allows us to use both Refinitiv and MSCI ESG Stats ratings. We find no evidence that overall CSR affected average firm performance in our sample during the pandemic-related crisis.

Our study is also related to Albuquerque et al. (2020), who show that firms with higher environmental and social performance

displayed better stock return performance during the crash. They also find that customer loyalty (advertising expenditures) and investor segmentation strengthen high-CSR firms' performance resilience. However, they mainly use Refinitiv's 2018 ES ratings, with 2016 MSCI ES data for robustness.⁶

Focusing on the environment dimension, Garel and Petit-Romec (2020) find that the Environment score from Refinitiv (2018) is significantly and positively related to stock returns during the crisis period. In contrast, our findings, which are based on more recent CSR data (2019 for Refinitiv and 2018 for MSCI) suggest that it does not relate to stock returns during the COVID-19 crisis. The environmental component is only marginally related at best. We show that these studies' findings are sensitive to regression specifications and sample composition.

Our paper also relates to Lins et al. (2017). They examine the valuation effects of CSR using the relatively exogenous shock of the 2008–2009 financial crisis, and focus primarily on trust as the channel through which CSR impacts firm value.⁷ They find that high-CSR firms exhibit significantly higher crisis period returns, particularly when headquartered in regions associated with higher levels of social trust. Our findings indicate that the contribution of CSR to shareholder wealth was trivial on average during the COVID-19 stock market crisis. This finding holds using overall CSR scores, the components of CSR, and industry-level CSR scores.

Finally, our study is related to Li et al. (2020a), who find that firms with strong corporate cultures, as measured using conference calls, engage with their communities more and as a result are more resilient to the pandemic. Focusing on CSR engagement prior to the crisis, our findings suggest that pre-crisis CSR may not be effective at shielding shareholder wealth from the adverse effects of a crisis. Given Li et al.'s (2020a) findings and our evidence of a potential disconnect between firms' CSR orientation (ratings) and actual actions, we posit that investors can distinguish between genuine CSR and firms engaging in cheap talk.

The remainder of this paper is structured as follows. In Section 2, we describe our sample and variables. Section 3 reports our empirical results on the relation between CSR and stock market returns around the COVID-19 stock market crisis. We investigate the effects of institutional environment and ownership on the relation between CSR and crisis period returns in Section 4. In Section 5, we examine whether Business Roundtable member firms that signed the *Statement on the Purpose of a Corporation* performed better around the crisis than those that did not. Section 6 concludes.

2. Sample construction

Our sample construction begins with all the U.S. firms in the MSCI ESG Stats and Refinitiv ESG databases. We use the most recent MSCI ESG (2018) and Refinitiv (2019) ratings, and we obtain financial data from Compustat and stock returns from CRSP. Following Lins et al. (2017), we exclude financials and micro-cap firms with market capitalizations below \$250 million as of the last fiscal quarter before January 2020. After excluding firms with missing financial and stock return data, our sample consists of 1750 firms. Appendix A provides definitions of the variables used in the analyses, and Table 1 gives their descriptive statistics.

We construct CSR ratings based on the MSCI ESG Stats database (*CSR_MSCI*) following Lins et al. (2017). Specifically, we first divide the number of strengths (concerns) into five categories—community, diversity, employee relations, environment, and human rights—by the maximum number of strengths (concerns) for that year. We then calculate the net index for each category as the difference between the scaled number of strengths and concerns. By construction, the net index for each category takes a value of between -1 and 1 . *CSR_MSCI* is the sum of the five sub-indices, and so it can range from -5 to 5 . Table 1 shows that, for our sample, *CSR_MSCI* has a mean of 0.47 and ranges from -1.34 to 3.29 .

To construct CSR ratings from the Refinitiv ESG database (*CSR_REFINITIV*), we take the average of Refinitiv's environment and social scores. For our final sample of 1176 firms with *CSR_REFINITIV* ratings data available, *CSR_REFINITIV* has a mean of 0.31 and ranges from 0.01 to 0.95 .

We define the pandemic crisis period as February 18–March 20, 2020. During that time, the U.S. stock market experienced the “worst fall since 1987,”⁸ triggering curbs on trading four times. We calculate the crisis period return as the cumulative weekly stock return over February 18–March 20, 2020. We use two return measures: raw stock returns, and market-adjusted stock returns. For market-adjusted stock returns, we estimate the market model using 60 months of returns over the 2015–2019 period, and the CRSP value-weighted index as the market return. The average raw (market-adjusted) return during the crisis period is -39.40% (-1.76%).

We define the post-crisis period as March 23–June 5, 2020, during which the S&P 500 index recovered about 80% of its staggering 1100-point drop over the crisis period. Similarly to the crisis period stock return, the post-crisis stock return is calculated as the cumulative weekly stock return during the post-crisis period. Consistent with the market recovery, the average raw return for our sample firms during the post-crisis period is 63.49% . We use the same market model estimates as for the crisis period. The average market-adjusted stock return is 8.5% , suggesting that the sample firms outperform the market during the post-crisis.

⁶ The evidence on the effects of CSR on stock returns exploiting the COVID-19 crisis is mixed. Using a sample of Chinese firms, Shan and Tang (2020) find that pre-crisis employee satisfaction is associated with higher stock returns during the crisis. Pástor and Vorsatz (2020) find that mutual funds with higher Morningstar sustainability scores (which are based on Sustainalytics ESG scores) outperformed during the COVID-19 stock market crisis. In contrast, Demers et al. (2020), after saturating their regressions with controls for accounting- and market-based risk proxies, document that Refinitiv's ESG scores are unrelated to crisis period returns.

⁷ Recent studies suggest that CSR enhances firm value by increasing trust between a firm and its stakeholders (Flammer, 2018; Flammer and Kacperczyk, 2019). This can provide insurance-like protection that benefits the firm during tough times (Hong and Liskovich, 2015; Lins et al., 2017; Bae et al., 2019).

⁸ <https://www.bbc.com/news/business-51903195>.

Table 1
Descriptive statistics.

	N	Mean	St. Dev.	Min	Median	Max
Crisis period raw ret.	1750	−0.39	0.18	−0.82	−0.39	0.13
Crisis period mkt-adj ret.	1750	−0.02	0.34	−0.98	−0.02	0.96
Post-crisis period raw ret.	1746	0.64	0.50	−0.10	0.52	2.95
Post-crisis period mkt-adj ret.	1746	0.09	0.39	−0.95	0.03	1.49
CSR_MSCI	1648	0.47	0.54	−1.34	0.50	3.29
CSR_REFINITIV	1176	0.31	0.20	0.01	0.25	0.95
Log(MV)	1750	8.07	1.52	5.65	7.84	12.35
Long-term debt	1750	0.30	0.21	0.00	0.29	1.03
Short-term debt	1750	0.03	0.04	0.00	0.02	0.29
Cash holdings	1750	0.18	0.22	0.00	0.08	0.93
Profitability	1750	0.02	0.04	−0.17	0.03	0.11
B/M	1750	0.40	0.40	−0.54	0.31	2.18
Negative_B/M	1750	0.05	0.23	0.00	0.00	1.00
Momentum	1750	0.30	0.35	−0.54	0.29	1.60
Idiosyncratic risk	1750	0.01	0.02	0.00	0.01	0.10

This table presents the descriptive statistics for the variables. All variables are defined in [Appendix A](#). The sample contains 1750 firms with available CSR data from the MSCI ESG Stats or Refinitiv ESG, financial information from Compustat, and stock returns from CRSP. We exclude financials (SIC codes 6000–6999) and firms with a market value of equity below \$250 million. Stock return and financial variables are winsorized at the 1% level.

[Table 2](#) presents the correlations among stock returns, the CSR measures, and the control variables. Crisis period stock returns are negatively correlated with post-crisis returns. The correlations between *CSR_MSCI* and stock returns are low and only marginally significant. *CSR_REFINITIV* is positively (negatively) correlated with raw stock returns during the crisis (post-crisis) period. The correlation between *CSR_REFINITIV* and market-adjusted stock returns is weaker and only marginally significant. The correlation between *CSR_MSCI* and *CSR_REFINITIV* is only 0.38, suggesting substantial disagreement in CSR ratings between the two rating agencies.

3. Empirical results

3.1. CSR and stock returns during the 2008 financial crisis

We begin by replicating the results in Table II, Panel A, of [Lins et al. \(2017\)](#) and testing the association between firms' stock returns during the 2008 financial crisis and their CSR scores. We run the following specification:

$$R_i = \alpha + \beta_1 CSR_i + \sum \beta_k \text{Control variables} + \sum \beta_m \text{Factor loadings} + \sum \beta_n \text{Industry fixed effects} + \varepsilon_i. \quad (1)$$

The dependent variable is stock returns over the August 2008–March 2009 period. CSR for 2006 is captured by *CSR_MSCI*. Following [Lins et al. \(2017\)](#), in all regressions throughout this study, we control for factor loadings on the Fama–French three factors and the momentum factor and 2-digit industry SIC fixed effects (coefficient estimates not included here for brevity). We winsorize control variables and returns at the 1% level. We report robust standard errors adjusted for heteroskedasticity.

The results, presented in [Appendix B](#), are very similar to those of [Lins et al. \(2017\)](#). This indicates we were able to implement their method correctly.

3.2. CSR and stock returns during the 2020 health crisis

To examine the effect of CSR on firm performance around the COVID-19 crisis, we run specification (1) using recent data. [Table 3](#) presents our baseline results using *CSR_MSCI* for 2018 as the CSR measure. In columns (1)–(4), the dependent variable is stock returns during the crisis period (February 18–March 20, 2020). Stock returns are captured using raw returns in columns (1) and (3), and market model-adjusted returns in columns (2) and (4). In columns (1) and (2), we include only *CSR_MSCI*, factor loadings, and fixed effects as independent variables. The coefficient estimates on *CSR_MSCI* are positive but statistically insignificant.

In columns (3) and (4), following [Lins et al. \(2017\)](#), we add a set of control variables. The results suggest that long-term debt is negatively associated with crisis period returns, while firm size and cash holdings are positively associated. The coefficient estimates on the other control variables are insignificant or mixed. The coefficient estimates on *CSR_MSCI* become negative, but remain insignificant.

In columns (5)–(8), we investigate whether firm CSR is associated with stock returns during the post-crisis recovery period, March 23–June 5, 2020. Specifically, we rerun the analysis in columns (1)–(4), but with stock returns during the post-crisis period as the dependent variable. In all four columns, the coefficient estimates on *CSR_MSCI* are statistically insignificant.

In [Table 4](#), we rerun the tests in [Table 3](#) after decomposing *CSR_MSCI* into *CSR_MSCI_strengths* and *CSR_MSCI_concerns*. *CSR_MSCI_strengths* (*CSR_MSCI_concerns*) is the total number of strengths (concerns) in five areas (community, diversity, employee relations, environment, and human rights), each divided by the maximum number for that category. By construction, *CSR_MSCI* equals

Table 2

Correlation matrix.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) Crisis period raw ret.	1.00														
(2) Crisis period mkt-adj ret.	0.55	1.00													
(3) Post-crisis period raw ret.	−0.66	−0.33	1.00												
(4) Post-crisis period mkt-adj ret.	−0.57	−0.51	0.75	1.00											
(5) CSR_MSCI	0.01 ^a	−0.02 ^a	−0.02 ^a	0.05 ^b	1.00										
(6) CSR_REFINITIV	0.05 ^b	0.04 ^a	−0.06 ^b	−0.01 ^a	0.38	1.00									
(7) Log(MV)	0.16	−0.08	−0.16	−0.15	0.34	0.58	1.00								
(8) Long-term debt	−0.23	−0.15	0.19	0.24	0.08	0.07 ^c	0.09	1.00							
(9) Short-term debt	−0.03 ^a	−0.07	0.04 ^b	0.09	0.07	0.07 ^c	0.08	0.11	1.00						
(10) Cash holdings	0.20	0.21	−0.07	−0.30	−0.07	−0.18	−0.16	−0.31	−0.15	1.00					
(11) Profitability	−0.00 ^a	−0.16	−0.03 ^a	0.09	0.05 ^b	0.15	0.29	0.12	0.07	−0.58	1.00				
(12) B/M	−0.12	0.08	0.13	0.28	0.00 ^a	−0.03 ^a	−0.28	−0.18	−0.03 ^a	−0.29	0.00 ^a	1.00			
(13) Negative_B/M	−0.06 ^c	−0.03 ^a	0.06 ^c	0.06 ^c	0.02 ^a	−0.01 ^a	0.00 ^a	0.47	0.14	−0.01 ^a	0.06 ^c	−0.36	1.00		
(14) Momentum	0.01 ^a	0.06 ^c	−0.03 ^a	−0.35	−0.10	−0.01 ^a	0.12	−0.01 ^a	−0.02 ^a	0.19	−0.09	−0.31	0.01 ^a	1.00	
(15) Idiosyncratic risk	−0.05 ^c	0.22	0.11	−0.15	−0.09	−0.21	−0.38	−0.06 ^c	−0.07	0.50	−0.52	−0.01 ^a	0.07	0.20	1.00

This table presents the correlations among the variables. All variables are defined in [Appendix A](#). Correlations without superscripts are significant at the 1% level. ^a indicates insignificant at the 10% level; ^b and ^c indicate significant at the 10% and 5% levels, respectively.

Table 3
CSR and crisis period returns.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Crisis period ret.				Post-crisis period ret.			
	Raw	Mkt-adj	Raw	Mkt-adj	Raw	Mkt-adj	Raw	Mkt-adj
CSR_MSCI	0.00 (0.50)	0.01 (0.80)	−0.00 (−0.49)	−0.00 (−0.08)	−0.00 (−0.09)	0.00 (0.17)	0.02 (0.60)	0.02 (1.25)
Log(MV)			0.02*** (4.90)	0.02*** (3.41)			−0.04*** (−3.87)	−0.05*** (−6.74)
Long-term debt			−0.15*** (−5.51)	−0.20*** (−4.86)			0.40*** (5.32)	0.38*** (7.14)
Short-term debt			−0.05 (−0.47)	−0.07 (−0.37)			0.37 (1.23)	0.26 (1.31)
Cash holdings			0.18*** (6.00)	0.19*** (3.91)			−0.16* (−1.87)	−0.17*** (−2.71)
Profitability			0.36** (2.24)	0.04 (0.13)			−0.02 (−0.05)	−0.72** (−2.21)
B/M			0.03 (1.40)	0.09** (2.44)			0.03 (0.57)	0.12*** (2.79)
Negative_B/M			0.04 (1.63)	0.10** (2.39)			−0.06 (−0.75)	0.02 (0.35)
Momentum			−0.00 (−0.22)	−0.08*** (−3.22)			−0.04 (−0.86)	−0.20*** (−6.04)
Idiosyncratic risk			−0.01 (−0.01)	−1.27 (−1.55)			−1.08 (−0.90)	−2.24** (−2.41)
Factor loadings	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.257	0.427	0.320	0.464	0.213	0.248	0.249	0.377
Observations	1648	1648	1648	1648	1644	1644	1644	1644

This table presents regression results for the effect of CSR ratings on stock returns around the crisis using CSR data from MSCI ESG Stats. The dependent variables are firm-level stock returns during the crisis period (February 18–March 20, 2020) in columns (1)–(4) and the post-crisis period (March 23–June 5, 2020) in columns (5)–(8). Stock returns are raw returns in odd-numbered columns, and market model-adjusted returns in even-numbered columns. *CSR_MSCI* is the total net CSR score of five sub-indices (environment, employee relations, human rights, community, and diversity) at the end of 2018 from the MSCI ESG Stats database. All other variables are defined in [Appendix A](#). All specifications include factor loadings for the Fama–French three factors and the momentum factor, as well as (2-digit SIC code) industry fixed effects. *t*-statistics based on robust standard errors adjusted for heteroskedasticity are in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Table 4
CSR strengths and concerns and crisis period returns.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Crisis period ret.				Post-crisis period ret.			
	Raw	Mkt-adj	Raw	Mkt-adj	Raw	Mkt-adj	Raw	Mkt-adj
CSR_MSCI_strengths	0.01 (0.72)	0.01 (0.97)	−0.01 (−0.73)	−0.00 (−0.18)	−0.01 (−0.39)	−0.00 (−0.16)	0.02 (0.58)	0.03 (1.60)
CSR_MSCI_concerns	0.01 (0.70)	0.01 (0.39)	−0.01 (−0.53)	−0.01 (−0.28)	−0.06 (−1.13)	−0.05 (−1.26)	−0.01 (−0.24)	0.02 (0.45)
Control variables	No	No	Yes	Yes	No	No	Yes	Yes
Factor loadings	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.257	0.427	0.320	0.463	0.213	0.248	0.248	0.377
Observations	1648	1648	1648	1648	1644	1644	1644	1644

This table presents the regression results on the effect of CSR strength and concern ratings on stock returns around the crisis. The dependent variables are firm-level stock returns during the crisis period (February 18–March 20, 2020) in columns (1)–(4) and the post-crisis period (March 23–June 5, 2020) in columns (5)–(8). Stock returns are raw returns in odd-numbered columns, and market model-adjusted returns in even-numbered columns. *CSR_MSCI_strengths* (*CSR_MSCI_concerns*) is the CSR strength (concern) score of five sub-indices (environment, employee relations, human rights, community, and diversity) at the end of 2018 from the MSCI ESG Stats database. All other variables are defined in [Appendix A](#). All specifications include factor loadings for the Fama–French three factors and the momentum factor, as well as (2-digit SIC code) industry fixed effects. *t*-statistics based on robust standard errors adjusted for heteroskedasticity are in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

CSR_MSCI_strengths minus *CSR_MSCI_concerns*. None of the coefficient estimates on *CSR_MSCI_strengths* or *CSR_MSCI_concerns* is statistically significant.

In [Table 5](#), we use *CSR_REFINITIV* for 2019 as the measure of CSR, and rerun the tests in [Table 3](#). In columns (1)–(4), the dependent variable is crisis-period stock returns. The coefficient estimates on *CSR_REFINITIV* are positive but insignificant in all four columns. In columns (5)–(8), we use post-crisis stock returns as the dependent variable. The coefficient estimates on *CSR_REFINITIV* are negative

Table 5

CSR and crisis period returns: Refinitiv data.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Crisis period ret.				Post-crisis period ret.			
	Raw	Mkt-adj	Raw	Mkt-adj	Raw	Mkt-adj	Raw	Mkt-adj
CSR_REFINITIV	0.03 (1.23)	0.06 (1.60)	0.00 (0.07)	0.07 (1.48)	−0.05 (−0.78)	−0.04 (−0.79)	−0.00 (−0.00)	0.10* (1.76)
Control variables	No	No	Yes	Yes	No	No	Yes	Yes
Factor loadings	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.214	0.462	0.290	0.501	0.204	0.221	0.241	0.351
Observations	1176	1176	1176	1176	1175	1175	1175	1175

This table presents the regression results on the effect of CSR ratings on stock returns around the crisis using CSR ratings from the Refinitiv ESG database. The dependent variables are firm-level stock returns during the crisis period (February 18–March 20, 2020) in columns (1)–(4) and the post-crisis period (March 23–June 5, 2020) in columns (5)–(8). Stock returns are raw returns in odd-numbered columns, and market model-adjusted returns in even-numbered columns. *CSR_REFINITIV* is the average of the environment and social scores at the end of 2019 from the Refinitiv ESG database. All other variables are defined in [Appendix A](#). All specifications include factor loadings for the Fama–French three factors and the momentum factor, as well as (2-digit SIC code) industry fixed effects. *t*-statistics based on robust standard errors adjusted for heteroskedasticity are in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

and insignificant in columns (5)–(7), and positive and marginally significant in column (8).

Our results differ from those of [Albuquerque et al. \(2020\)](#). They show that firms with higher CSR (2018 from Refinitiv) display better stock return performance during the crash period. A few factors contribute to this inconsistency. First, as for the CSR measures, the authors mainly use 2018 Refinitiv's CSR ratings, and employ 2016 MSCI ESG Stats data for robustness. We use more recent data, 2019 for Refinitiv and 2018 for MSCI. Second, regarding the stock return data, they employ Capital IQ data for the crisis period and CRSP data for market beta estimation, while we consistently use CRSP data. Third, the authors include financial companies, which account for about 16% of the sample. We follow [Lins et al. \(2017\)](#) and [Garel and Petit-Romec \(2020\)](#) and exclude financial companies.

Lastly and most importantly, unlike [Albuquerque et al. \(2020\)](#), our empirical analysis control for firm size effects in a more rigorous way. We follow [Lins et al. \(2017\)](#) and use the CRSP value-weighted index as the market proxy, control for SMB factor loading, exclude micro-cap companies, and use the logarithm of market capitalization to proxy for firm size. As presented in [Table 2](#), *Log(MV)* is highly correlated with *CSR_REFINITIV* (0.58), which denotes the importance of controlling for market capitalization. In unreported tests, we find that the positive effect of *CSR_REFINITIV* on crisis period returns that is documented in [Albuquerque et al. \(2020\)](#) is sensitive to excluding micro-cap companies and controlling for *Log(MV)*.

We conduct several robustness tests. First, we construct an alternative CSR measure based on the MSCI ESG Stats ratings, using alternative weights for the components. We assign a weight of 50% to the environment component and 12.5% to each of the other four components. The reconstructed CSR measure using MSCI ESG Stats ratings places equal weights on the environment and non-environment components, making it comparable to the CSR measure based on Refinitiv ratings. The results in columns (1), (2), (7), and (8) of [Table 6](#) suggest that the alternative CSR measure is not significantly associated with excess returns during either the crisis or the recovery period. In unreported tests, we construct dummy variables based on CSR ratings quartiles and repeat the tests in [Tables 3 and 5](#) using CSR dummies to replace CSR ratings as the key explanatory variables as in [Lins et al. \(2017\)](#). We do not find significant results.

Second, to better isolate the role of CSR, we include several additional firm-level and pandemic-related variables. Specifically, we control for a set of firm-level characteristics, including the CEO managerial ability score ([Demerjian et al., 2012](#)), the logarithm of firm-level political uncertainty in the first quarter of 2020 ([Hassan et al., 2019](#)), a dummy variable equal to 1 for firms with strong corporate culture ([Li et al., 2020b](#)), and short- and long-term institutional ownership ([Kim et al., 2019](#)).⁹ We also control for two state-level variables of firms' headquarters states: the logarithm of the number of confirmed COVID-19 cases in the state,¹⁰ and the state government decisions to close workplaces (Hale, Hallas, Hatible, Majumdar, and Pyarali 2020).¹¹

The results are in columns (3)–(6) and (9)–(12) of [Table 6](#). They show that none of the additional control variables is related to a firm's excess return during the crisis or recovery periods, except short-term institutional ownership, which is negatively (positively) associated with firms' excess return during the crisis (recovery) period. Importantly, our earlier inferences about the between CSR–stock return relation during the market crash and post-crash recovery remain unaffected.

In unreported tests, we also examine the association between CSR and stock returns before the crisis (January 2019–December 2019). We find that neither *CSR_MSCI* nor *CSR_REFINITIV* is significantly associated with pre-crisis period stock returns.

⁹ Managerial ability score, corporate culture, and IO data are for 2018.

¹⁰ The number of confirmed cases is as of March 20, 2020. The results are the same if we scale the number of confirmed cases by state population.

¹¹ We use the average of workplace closing scores during the stock market crash period. The score takes a value of 0, 1, 2, or 3, respectively, if a state has no measures, recommends closing, requires closing for certain sectors, or requires closing for non-essential workplaces. The results are similar if we use the stringency index to replace the workplace closing score.

Table 6
Robustness checks.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Crisis period ret.						Post-crisis period ret.					
	Raw	Mkt-adj	Raw	Mkt-adj	Raw	Mkt-adj	Raw	Mkt-adj	Raw	Mkt-adj	Raw	Mkt-adj
CSR_MSCI (alt.weight)	−0.02 (−0.26)	0.03 (0.29)					0.06 (0.32)	0.13 (1.05)				
CSR_MSCI			−0.00 (−0.05)	−0.00 (−0.27)					0.01 (0.26)	0.01 (0.66)		
CSR_REFINITIV					0.01 (0.21)	0.07 (1.43)					0.07 (0.77)	0.13* (1.95)
Log(MV)	0.02*** (4.70)	0.02*** (3.15)	0.02*** (4.08)	0.02** (2.19)	0.02*** (3.25)	0.01 (1.29)	−0.04*** (−3.66)	−0.05*** (−6.52)	−0.04*** (−2.78)	−0.05*** (−5.34)	−0.04** (−2.58)	−0.06*** (−5.55)
Long-term debt	−0.15*** (−5.52)	−0.20*** (−4.88)	−0.13*** (−4.45)	−0.16*** (−3.32)	−0.16*** (−4.60)	−0.21*** (−3.85)	0.40*** (5.33)	0.38*** (7.15)	0.34*** (4.10)	0.33*** (5.63)	0.35*** (3.74)	0.34*** (5.05)
Short-term debt	−0.05 (−0.48)	−0.07 (−0.40)	−0.07 (−0.55)	−0.09 (−0.45)	−0.20 (−1.53)	−0.27 (−1.28)	0.37 (1.24)	0.26 (1.31)	0.43 (1.40)	0.36 (1.57)	0.58 (1.61)	0.50* (1.94)
Cash holdings	0.18*** (5.99)	0.19*** (3.90)	0.19*** (5.07)	0.22*** (3.81)	0.19*** (4.48)	0.24*** (3.58)	−0.16* (−1.86)	−0.17*** (−2.70)	−0.23** (−2.34)	−0.22*** (−2.99)	−0.26** (−2.45)	−0.22*** (−2.75)
Profitability	0.36** (2.25)	0.04 (0.14)	0.38* (1.74)	0.01 (0.01)	0.34 (1.17)	0.11 (0.25)	−0.03 (−0.06)	−0.72** (−2.22)	0.14 (0.24)	−0.67 (−1.61)	0.18 (0.27)	−0.84* (−1.76)
B/M	0.03 (1.40)	0.08** (2.42)	0.02 (1.04)	0.10*** (2.64)	0.03 (1.11)	0.11** (2.32)	0.03 (0.57)	0.12*** (2.79)	0.10 (1.39)	0.16*** (3.00)	0.06 (0.82)	0.14** (2.39)
Negative_B/M	0.04 (1.63)	0.10** (2.39)	0.04* (1.71)	0.11** (2.55)	0.05 (1.50)	0.09* (1.67)	−0.06 (−0.75)	0.02 (0.34)	−0.12 (−1.58)	0.00 (0.07)	−0.08 (−0.80)	0.03 (0.44)
Momentum	−0.00 (−0.19)	−0.08*** (−3.19)	−0.04** (−2.04)	−0.10*** (−3.52)	−0.04* (−1.78)	−0.09*** (−2.71)	−0.04 (−0.89)	−0.20*** (−6.06)	0.06 (1.11)	−0.12*** (−3.11)	0.01 (0.11)	−0.12*** (−2.86)
Idiosyncratic risk	−0.01 (−0.02)	−1.27 (−1.56)	−0.07 (−0.14)	−0.93 (−1.04)	−0.37 (−0.70)	−1.26 (−1.37)	−1.08 (−0.90)	−2.24** (−2.42)	−2.73 (−1.60)	−3.35*** (−2.78)	−1.01 (−0.61)	−3.69*** (−2.91)
Managerial ability score			−0.01 (−0.48)	−0.00 (−0.04)	−0.03 (−0.85)	−0.04 (−0.68)			−0.01 (−0.10)	0.02 (0.37)	−0.01 (−0.10)	0.04 (0.55)
Log (political uncertainty)			0.00 (1.14)	0.00 (0.56)	0.00 (1.06)	0.00 (0.36)			−0.00 (−0.25)	−0.00 (−0.61)	0.00 (0.03)	−0.00 (−0.27)
Strong_culture_dummy			−0.01 (−0.66)	−0.00 (−0.26)	0.01 (0.64)	0.01 (0.64)			0.00 (0.07)	0.01 (0.24)	0.00 (0.08)	0.00 (0.03)
Long-term IO			0.06 (1.19)	0.12 (1.44)	0.06 (0.96)	0.13 (1.32)			−0.21 (−1.28)	−0.05 (−0.38)	−0.24 (−1.27)	−0.04 (−0.27)
Short-term IO			−0.23*** (−4.59)	−0.45*** (−5.57)	−0.26*** (−4.14)	−0.48*** (−5.14)			0.77*** (5.02)	0.50*** (4.83)	0.84*** (4.84)	0.53*** (4.45)
Log(#confirmed cases)			0.00 (0.42)	0.00 (0.65)	0.00 (0.18)	0.00 (0.60)			−0.01 (−0.69)	−0.00 (−0.40)	−0.01 (−0.38)	−0.00 (−0.41)
Workplace closing			0.02 (0.49)	0.04 (0.56)	0.02 (0.31)	0.00 (0.01)			0.11 (0.86)	0.07 (0.72)	0.11 (0.75)	0.05 (0.50)
Adjusted R ²	0.320	0.464	0.323	0.467	0.297	0.503	0.249	0.376	0.250	0.370	0.253	0.367
Observations	1648	1648	1204	1204	878	878	1644	1644	1205	1205	879	879

This table presents the regression results of robustness tests on the effect of CSR ratings on stock returns around the crisis using CSR ratings. The dependent variables are firm-level stock returns during the crisis period (February 18–March 20, 2020) in columns (1)–(6) and the post-crisis period (March 23–June 5, 2020) in columns (7)–(12). Stock returns are raw returns in odd-numbered columns, and market model-adjusted returns in even-numbered columns. *CSR_MSCI* is the total net CSR score of five sub-indices (environment, employee relations, human rights, community, and diversity) at the end of 2018 from the MSCI ESG Stats database. *CSR_MSCI (alt.weight)* assigns a weight of 50% to the net environment score and 12.5% to each of the other four sub-indices (employee relations, human rights, community, and diversity) at the end of 2018 from the MSCI ESG Stats database. *CSR_REFINITIV* is the average of the environment and social scores at the end of 2019 from the Refinitiv ESG database. All other variables are defined in [Appendix A](#). All specifications include factor loadings for the Fama–French three factors and the momentum factor, as well as (2-digit SIC code) industry fixed effects. *t*-statistics based on robust standard errors adjusted for heteroskedasticity are in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

3.3. CSR components and stock returns during the 2020 crisis

We next investigate whether the different components of CSR ratings have differential effects on crisis period returns. In Panel A of Table 7, we regress stock returns on the net scores of the five MSCI rating categories. In columns (1)–(4), the dependent variable is crisis period stock returns. The coefficient estimates on the five *CSR_MSCI* components are insignificant, except for those on *Environment_MSCI* in columns (2) and (4). In columns (5)–(8), we use post-crisis stock returns as the dependent variable. The human rights component is significantly positively associated with post-crisis stock returns in all four columns, while the environment and employee relation components are negatively associated with post-crisis returns, although significant only in columns (5) and (6).

In Panel B of Table 7, we decompose *CSR_REFINITIV* into its two components—environment and social—and rerun the tests in Panel A. The coefficient estimates on social (*Social_REFINITIV*) and environment (*Environment_REFINITIV*) are generally insignificant. The results in Panel B are related to those of Garel and Petit-Romec (2020). They focus on the environment score from Refinitiv (2018) and document a significantly positive relation. In unreported tests, we find that the positive relation is sensitive to regression specifications, and is weakened after excluding micro-cap companies and controlling for *Log(MV)*.

The results in Table 7 suggest that different components of the two CSR ratings have mixed effects on stock returns both during and after the crisis. In Table 8, we present the correlations between the two CSR ratings and their components. The correlations among the five components of *CSR_MSCI* range from 0.01 to 0.36. The correlation between the two components of *CSR_REFINITIV* is 0.66. The cross-rating correlations between components are also low, ranging from 0.02 to 0.54. Table 8 thus shows that the correlations between different components of CSR are generally low.

3.4. Industry analysis

The pandemic affected industries differentially. To examine whether the relation between CSR and stock returns around the crisis varies across industries, we divide the sample into Fama–French 12-industries (excluding the financial industry). For each industry, Table 9 presents the sample size, average stock returns around the crisis, average CSR ratings, and correlation between *CSR_MSCI* and *CSR_REFINITIV*. Among the 11 industries, 10 experienced average raw stock returns of –30% to –45% during the crisis period; the average return for the Energy industry was –56%. The poor performance of energy companies during the crisis was likely due to the Saudi–Russia oil price war in March 2020. In the post-crisis period, the Energy industry recorded an average raw return of 115%, the highest of the 11 industries. The Utilities industry saw the lowest post-crisis raw return, averaging only 24%. The nine remaining industries recorded average post-crisis raw returns of 45% to 76%.

Turning to CSR ratings, the Energy and Utilities industries have higher *CSR_MSCI* scores than other industries; the telephone and television transmission (Telecom), Manufacturing, and Durables industries have lower *CSR_MSCI* scores. As for *CSR_REFINITIV* scores, most industries score between 0.30 and 0.39, except the Chemicals, Telecom, and Others industries, with scores of 0.47, 0.23, and 0.26, respectively. The correlation between *CSR_MSCI* and *CSR_REFINITIV* varies across industries, ranging from 0.11 for Telecom to 0.70 for Energy.

In Table 10, we test specification (1) separately for each of the 11 industries. The table presents industry-level coefficient estimates for CSR. In columns (1) and (2), we use market-adjusted stock returns during the crisis period as the dependent variable. In column (1), we use *CSR_MSCI* as the CSR measure. The coefficient estimate on *CSR_MSCI* is statistically insignificant for all industries except Durables, for which it is negative and significant at the 5% level. In column (2), we use *CSR_REFINITIV* as the CSR measure. The coefficient estimate is only significant for the Chemicals, Business, and Healthcare industries. The coefficient on *CSR_REFINITIV* is negative for Chemicals but positive for Business and Healthcare.

In columns (3) and (4), we repeat the tests in columns (1) and (2) using post-crisis stock returns as the dependent variable. None of the coefficient estimates on *CSR_MSCI* or *CSR_REFINITIV* is statistically significant except for Chemicals in column (4).

The results in Table 10 suggest that the effect of CSR on stock returns during the crisis and recovery periods is generally insignificant, and mixed across industries.

4. The effects of institutional environment and institutional ownership on the relation between CSR and crisis period returns

The institutional and legitimacy theories of CSR predict that CSR activities add value when they are genuinely congruent with the demands of stakeholders and the environment, and are not perceived as simply greenwashing. In this section, we examine whether the relation between CSR and crisis period stock returns is affected by a firm's institutional environment or ownership. We run interaction analyses using the following specification:

$$R_i = \alpha + \beta_1 CSR_i + \beta_2 High_dummy_i + \beta_3 High_dummy_i \times CSR_i + \sum \beta_k Control\ variables + \sum \beta_m Factor\ loadings + \sum \beta_n Industry\ fixed\ effects + \varepsilon_i. \quad (2)$$

The dependent variable is market-adjusted stock returns during the crisis period. *High_dummy* takes the value of 1 if the variable capturing institutional environment or institutional ownership is above the median, and 0 otherwise. The coefficient of interest is on the interaction term, β_3 . The sign of the coefficient indicates whether the valuation effect of CSR during the crisis period is congruent with a firm's institutional environment and institutional owners' CSR preferences. For brevity, we present the coefficient estimates only for *CSR*, *High_dummy*, and their interactions.

Table 7
CSR rating components.

	(1) Crisis period ret. Raw	(2) Mkt-adj	(3) Raw	(4) Mkt-adj	(5) Post-crisis period ret. Raw	(6) Mkt-adj	(7) Raw	(8) Mkt-adj
Panel A. MSCI components								
Environment_MSCI	0.12 (1.53)	0.25** (2.07)	0.08 (0.98)	0.23* (1.80)	−0.34* (−1.86)	−0.33** (−2.42)	−0.23 (−1.19)	−0.09 (−0.67)
Community_MSCI	0.03 (1.31)	0.03 (0.95)	0.03 (1.21)	0.04 (1.11)	−0.04 (−0.75)	−0.06* (−1.77)	−0.03 (−0.60)	−0.03 (−1.13)
Human rights_MSCI	−0.04 (−0.95)	−0.05 (−0.67)	−0.05 (−1.21)	−0.09 (−1.15)	0.43*** (3.44)	0.37*** (4.03)	0.45*** (3.59)	0.35*** (4.01)
Diversity_MSCI	−0.01 (−1.05)	−0.00 (−0.24)	−0.01 (−1.09)	−0.01 (−0.70)	0.00 (0.15)	0.03 (1.22)	−0.00 (−0.05)	0.01 (0.48)
Employee_relation_MSCI	0.04 (1.20)	0.02 (0.49)	−0.02 (−0.49)	−0.02 (−0.43)	−0.16** (−1.98)	−0.16*** (−2.64)	−0.05 (−0.59)	0.01 (0.20)
Control variables	No	No	Yes	Yes	No	No	Yes	Yes
Factor loadings	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.259	0.428	0.321	0.465	0.222	0.262	0.256	0.384
Observations	1648	1648	1648	1648	1644	1644	1644	1644
Panel B. Refinitiv components								
Environment_REFINITIV	0.02 (0.86)	0.05 (1.23)	0.03 (0.89)	0.08* (1.92)	−0.06 (−0.89)	−0.09 (−1.60)	−0.07 (−0.89)	−0.01 (−0.25)
Social_REFINITIV	0.00 (0.10)	0.00 (0.04)	−0.03 (−0.81)	−0.02 (−0.48)	0.03 (0.30)	0.07 (0.95)	0.08 (0.86)	0.12* (1.87)
Control variables	No	No	Yes	Yes	No	No	Yes	Yes
Factor loadings	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.213	0.462	0.289	0.502	0.203	0.221	0.241	0.351
Observations	1176	1176	1176	1176	1175	1175	1175	1175

This table presents the regression results on the effect of the components of CSR ratings on stock returns around the crisis. The dependent variables are firm-level stock returns during the crisis period (February 18–March 20, 2020) in columns (1)–(4) and the post-crisis period (March 23–June 5, 2020) in columns (5)–(8). Stock returns are raw returns in odd-numbered columns, and market model-adjusted returns in even-numbered columns. Panel A presents results for the CSR components from the MSCI ESG Stats database (for year 2018). Panel B presents results for the CSR components from the Refinitiv ESG database (for year 2019). All other variables are defined in [Appendix A](#). All specifications include factor loadings for the Fama–French three factors and the momentum factor, as well as (2-digit SIC code) industry fixed effects. *t*-statistics based on robust standard errors adjusted for heteroskedasticity are in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Table 8
Correlations among components of CSR ratings.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) CSR_MSCI	1.00*								
(2) Environment_MSCI	0.36*	1.00*							
(3) Community_MSCI	0.58*	0.21*	1.00*						
(4) Human rights_MSCI	0.38*	0.08*	0.27*	1.00*					
(5) Diversity_MSCI	0.77*	0.12*	0.08*	0.01	1.00*				
(6) Employee relation_MSCI	0.44*	0.36*	0.12*	0.01	0.18*	1.00*			
(7) CSR_REFINITIV	0.38*	0.53*	0.15*	0.08*	0.22*	0.43*	1.00*		
(8) Environment_REFINITIV	0.34*	0.54*	0.16*	0.12*	0.15*	0.40*	0.93*	1.00*	
(9) Social_REFINITIV	0.36*	0.40*	0.11*	0.02	0.27*	0.37*	0.89*	0.66*	1.00*

This table presents the correlations among CSR ratings and their components. Correlations without superscripts are insignificant at the 10% level. Statistical significance at the 1% level is indicated by *.

The results are in [Table 11](#). The first variable we use to capture a firm's institutional environment is political ideology of the state where a firm is headquartered. [Di Giuli and Kostovetsky \(2014\)](#) find that Democratic-leaning firms exhibit higher CSR scores than Republican-leaning firms. We separate firms located in blue states from those in red states based on the 2020 presidential election results. In row (1), *High_dummy* equals 1 for firms located in blue states, and 0 otherwise. The results suggest that CSR has a more positive effect on stock return performance during the crisis for firms in blue rather than in red states.¹²

We then investigate whether regional social trust can facilitate the impact of CSR on firm performance during the crisis. [Lins et al.](#)

¹² In unreported tests, we interact state-level COVID exposure and the strictness of containment policies (Hale, Hallas, Hatible, Majumdar, and Pyrali 2020) as well as firm-level COVID exposure and risk ([Hassan et al., 2020](#)) with CSR ratings. We do not find evidence that the CSR effect on stock returns changes with these variables.

Table 9
Industry analysis: Descriptive statistics.

Industry	# firms	Crisis period ret.		Post-crisis period ret.		CSR_MSCI	CSR_REFINITIV	CSR rating Corr.
		Raw	Mkt-adj	Raw	Mkt-adj			
Full sample	1750	−0.39	−0.02	0.63	0.09	0.47	0.31	0.38***
Consumer nondurables	81	−0.34	−0.08	0.45	0.09	0.59	0.39	0.58***
Consumer durables	48	−0.45	0.05	0.76	0.15	0.32	0.37	0.18
Manufacturing	192	−0.43	0.02	0.66	0.10	0.38	0.35	0.44***
Energy	75	−0.56	−0.04	1.15	0.49	0.88	0.31	0.70***
Chemicals and allied products	55	−0.36	0.12	0.53	−0.01	0.49	0.47	0.58***
Business equipment	251	−0.35	0.05	0.52	−0.03	0.51	0.35	0.26***
Telephone and television transmission	52	−0.35	−0.09	0.53	0.12	0.27	0.23	0.11
Utilities	70	−0.31	−0.23	0.29	0.07	0.95	0.37	0.42**
Wholesale, retail, and some services	196	−0.41	−0.09	0.75	0.24	0.46	0.30	0.35***
Healthcare, medical equipment, and drugs	147	−0.33	0.10	0.55	−0.03	0.51	0.32	0.55***
Others	583	−0.41	−0.04	0.67	0.06	0.38	0.26	0.29***

This table presents descriptive statistics for the Fama–French 12 industries (except the finance industry). All variables are defined in [Appendix A](#). Descriptive statistics for each industry include the number of firms, crisis- and post-crisis average stock returns, CSR ratings, and correlation between *CSR_MSCI* and *CSR_REFINITIV*. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Table 10
Industry analysis: Regression analysis.

Industry	(1)	(2)	(3)	(4)
	Crisis period mkt-adj ret. CSR_MSCI	CSR_REFINITIV	Post-crisis period mkt-adj ret. CSR_MSCI	CSR_REFINITIV
Consumer nondurables	0.00 (0.08)	0.24 (0.97)	0.00 (0.00)	−0.24 (−1.22)
Consumer durables	−0.20** (−2.18)	−0.09 (−0.37)	0.00 (0.03)	0.27 (0.61)
Manufacturing	−0.05 (−1.48)	−0.07 (−0.56)	0.06 (1.45)	0.20 (1.39)
Energy	0.04 (0.42)	−0.28 (−0.55)	0.07 (0.60)	0.53 (1.12)
Chemicals and allied products	0.07 (1.40)	−0.36** (−2.14)	−0.05 (−0.62)	0.60** (2.79)
Business equipment	0.01 (0.40)	0.16* (1.69)	−0.03 (−1.23)	0.06 (0.64)
Telephone and television transmission	−0.04 (−0.31)	0.48 (1.31)	0.01 (0.03)	−0.06 (−0.20)
Utilities	0.01 (0.37)	0.17 (0.71)	−0.01 (−0.74)	−0.05 (−0.21)
Wholesale, retail, and some services	−0.04 (−0.96)	−0.02 (−0.10)	0.06 (1.14)	0.27 (1.27)
Healthcare, medical equipment, and drugs	0.05 (1.02)	0.22** (2.06)	−0.03 (−0.32)	−0.02 (−0.12)
Others	0.01 (0.41)	0.04 (0.53)	0.01 (0.41)	0.15 (1.22)

This table presents coefficient estimates on CSR ratings for the Fama–French 12 industries (except the finance industry). The dependent variables are market-adjusted stock returns during the crisis period (February 18–March 20, 2020) in columns (1) and (2) and the post-crisis period (March 23–June 5, 2020) in columns (3) and (4). In columns (1) and (3), CSR is measured by *CSR_MSCI*, the total net CSR score of five sub-indices (environment, employee relations, human rights, community, and diversity) at the end of 2018 from the MSCI ESG Stats database. In columns (2) and (4), CSR is measured by *CSR_REFINITIV*, the average of the environment and social scores at the end of 2019 from the Refinitiv ESG database. All other variables are defined in [Appendix A](#). All specifications include control variables, factor loadings for the Fama–French three factors and the momentum factor, and industry fixed effects (SIC 2-digit). *t*-statistics based on robust standard errors adjusted for heteroskedasticity are in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

(2017) find that the positive effect of CSR on stock performance during the 2008 financial crisis is larger for firms located in high-trust regions. This indicates that CSR affects crisis period returns through its effect on trust: CSR helps firms develop trust with stakeholders and shareholders, which pays off when there is a negative shock to the overall level of trust.

In row (2), we divide the U.S. into high- and low-social trust regions based on 2018 General Social Survey results. We set *High_dummy* to 1 for firms headquartered in regions with an above-median level of social trust, and to 0 for the remaining firms. In column (3), the estimate of β_3 is positive and significant at the 10% level; in column (1), the coefficient on *CSR_MSCI* is negative and insignificant. As columns (4)–(6) show, the coefficient estimates on *High_dummy*, *CSR_REFINITIV*, and their interactions are all insignificant. The results in row (2) provide weak evidence that trust influences the valuation effect of CSR during the COVID-19 crisis.

The second variable we consider is shareholder preferences for CSR. As a proxy, we use various measures related to institutional

Table 11

The effects of institutional environment and institutional ownership on the relation between CSR and crisis period returns.

Institutional environment/institutional ownership variable	(1) CSR_MSCI	(2) High_dummy	(3) High_dummy × CSR_MSCI	(4) CSR_REFINITIV	(5) High_dummy	(6) High_dummy × CSR_REFINITIV
(1) Blue state dummy	−0.04 (−1.51)	0.01 (0.45)	0.06** (1.99)	−0.02 (−0.31)	−0.01 (−0.42)	0.13* (1.81)
(2) Regional trust	−0.02 (−1.10)	−0.00 (−0.20)	0.05* (1.72)	0.04 (0.61)	−0.02 (−0.65)	0.07 (1.08)
(3) Total IO	0.01 (0.60)	−0.02 (−1.04)	−0.02 (−0.63)	0.14** (2.25)	−0.00 (−0.04)	−0.09 (−1.40)
(4) Long-term IO	−0.01 (−0.31)	0.01 (0.62)	0.01 (0.42)	0.05 (0.76)	−0.01 (−0.20)	0.07 (1.03)
(5) Short-term IO	−0.01 (−0.51)	−0.05** (−2.50)	0.02 (0.64)	0.10* (1.96)	−0.05* (−1.72)	−0.05 (−0.73)
(6) Norm-constrained IO	−0.01 (−0.50)	−0.02 (−0.85)	0.02 (0.69)	0.01 (0.20)	−0.04 (−1.23)	0.11 (1.52)
(7) Norm-constrained IO – other IO	−0.01 (−0.19)	0.01 (0.80)	0.01 (0.27)	0.01 (0.20)	−0.02 (−0.63)	0.14* (1.91)
(8) High-CSR-oriented IO (MSCI)	0.01 (0.25)	−0.03 (−1.30)	−0.01 (−0.17)	0.08 (1.11)	−0.02 (−0.65)	−0.00 (−0.05)
(9) Low-CSR-oriented IO (MSCI)	−0.00 (−0.06)	−0.03 (−1.51)	0.00 (0.00)	0.07 (1.34)	−0.03 (−0.96)	−0.03 (−0.36)
(10) High-CSR-oriented IO (Refinitiv)	−0.01 (−0.27)	0.00 (0.06)	0.01 (0.29)	0.03 (0.46)	−0.02 (−0.77)	0.06 (0.75)
(11) Low-CSR-oriented IO (Refinitiv)	−0.00 (−0.25)	−0.02 (−0.84)	0.01 (0.31)	0.13** (2.34)	0.03 (0.92)	−0.16** (−2.06)

This table presents the regression results on the effects of institutional environment and institutional ownership on the relation between CSR and crisis period returns. The dependent variable is market-adjusted stock returns during the crisis period (February 18–March 20, 2020). In columns (1)–(3), CSR is measured by *CSR_MSCI*, the total net CSR score of five sub-indices (environment, employee relations, human rights, community, and diversity) at the end of 2018 from the MSCI ESG Stats database. In columns (4)–(6), CSR is measured by *CSR_REFINITIV*, the average of the environment and social scores at the end of 2019 from the Refinitiv ESG database. *High_dummy* is a dummy variable equal to 1 if the variable capturing the institutional environment and institutional ownership is above the sample median, and 0 otherwise. All other variables are defined in Appendix A. Columns (1) and (4) present the coefficients on *CSR*. Columns (2) and (5) present the coefficients on *High_dummy*. Columns (3) and (6) present the coefficients on *High_dummy* × *CSR*. All specifications include control variables, factor loadings for the Fama–French three factors and the momentum factor, and industry fixed effects (SIC 2-digit). *t*-statistics based on robust standard errors adjusted for heteroskedasticity are in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

ownership (IO). In row (3), we use the level of total IO to construct *High_dummy*. The estimates of β_3 are not significant in either column (3) or (6). The coefficient estimate for *CSR_REFINITIV* is positive and significant in column (4), suggesting CSR has a positive effect on firm performance for firms with low institutional holdings. However, this is sensitive to the CSR ratings provider, as the coefficient estimate for *CSR_MSCI* is not significant in column (1).

In rows (4) and (5), we divide IO into long- and short-term based on the investment horizon of the institution (Kim et al., 2019). We then construct *High_dummy* based on the two types. The estimates of β_3 are not significant in either row, suggesting that, during the crisis, neither short- nor long-term institutional investors valued CSR differently.¹³ In row (6), we construct *High_dummy* based on norm-constrained IO (Hong and Kacperczyk, 2009), and find no evidence that norm-constrained institutional investors valued CSR differently during the crisis. In row (7), we construct *High_dummy* based on the difference between norm-constrained IO and other IO (e.g., total IO–norm-constrained IO). The results are weak and mixed.

We also measure the CSR orientation of institutions based on their investment portfolios. For each institution, we calculate the value-weighted average CSR score of all of its investee companies. We define high- (low-) CSR-oriented institutional investors as those with a portfolio average CSR score above (below) the median. For each investee company in our sample, we calculate the percentage of shares held by high- and low-CSR-oriented institutional investors (high-CSR-oriented IO and low-CSR-oriented IO).

In rows (8) and (9), we use *CSR_MSCI* to calculate the portfolio average CSR scores of institutions. In row (8), we set *High_dummy* to 1 for investee companies with high-CSR-oriented IO above the sample median, and 0 otherwise. The estimates of β_3 are negative and insignificant in both columns (3) and (6), indicating that even institutional investors with high CSR orientation did not value it more during the crisis. In row (9), we construct *High_dummy* based on low-CSR-oriented IO, and the results are also not significant.

In rows (10) and (11), we use CSR ratings from Refinitiv to calculate institutions' CSR orientation, and repeat the tests in rows (8) and (9). The results are generally insignificant, except in columns (4) and (6) of row (11). The coefficient estimate for *CSR_REFINITIV* is significantly positive in column (4), and that for *CSR_REFINITIV* interacted with *High_dummy* is significantly negative. This suggests

¹³ In unreported tests, we set *High_dummy* equal to 1 if the firm has more long-term than short-term IO. We find no significant results. We also construct *High_dummy* based on dedicated and transient IO (Bushee, 2001), and again do not find significant.

that firms with below-median low-CSR-oriented IO value CSR during the crisis, while those with above-median low-CSR-oriented IO do not. In general, we find no compelling evidence that long-term, norm-constrained, or CSR-oriented institutional owners valued CSR more during the crash period.

Taken together, the results suggest that, during the pandemic-related crisis, CSR only materially affected firm value through the location channel that drives CSR preferences and assessments.

5. Business roundtable statement on the purpose of a corporation

In our final set of analyses, we focus on Business Roundtable member companies, and explore their stock return performance around the crisis. Business Roundtable is a lobbying group comprising CEOs of major U.S. firms. On August 19, 2019, members signed the *Statement on the Purpose of a Corporation* (“the Statement” hereafter), pledging to promote the interests of various corporate stakeholders (e.g., customers, employees, suppliers, and communities) rather than those of shareholders alone.¹⁴

In Panel A of Table 12, we report mean and median stock performance, CSR, and company characteristics separately for the 103 firms in our sample that signed the Statement (signed firms), as well as for the 1647 firms that did not (other firms). Note that crisis period stock returns do not differ statistically between the two groups, suggesting that the market did not value firms that commit to CSR more highly during the crisis period. The mean (median) post-crisis raw returns of signed firms, however, is 5.44% (9.50%) lower than those of other firms, with the difference significant at the 1% level. For market-adjusted stock returns, the difference in the post-crisis period is smaller and statistically insignificant. The CSR ratings of signed firms are significantly higher than those of other firms, regardless of the data provider.

Turning to firm characteristics, signed firms are significantly larger and more profitable than other firms, and they have more short-term debt, smaller cash holdings, and lower idiosyncratic risk. Book-to-market, long-term debt, and prior stock performance (momentum) are not statistically different across the two groups of firms.

Panel B shows industry composition for signed and other firms. Signed firms have a higher percentage in the Durables, Manufacturing, Energy, Business, Telecom, Utilities, and Wholesale industries; other firms have a higher percentage in consumer nondurables (Nondurables), Chemicals, Healthcare, and Others industries. The imbalance is most severe in Healthcare and Others industries. Compared with other firms, where 43% are in these two industries, only 19% of signed firms are in the same industries.

In Table 13, we examine whether signed firms’ stock return performance differed around the crisis, and whether CSR affects stock returns for these firms. We test the following specification:

$$R_i = \alpha + \beta_1 \text{Signed_firm}_i + \sum \beta_k \text{Control variables} + \sum \beta_m \text{Factor loadings} + \sum \beta_n \text{Industry fixed effects} + \varepsilon_i, \quad (3)$$

where *Signed_firm* is a dummy variable that equals 1 for the 103 firms that signed the Statement, and 0 otherwise.

In column (1), the dependent variable is crisis period market-adjusted stock returns. The coefficient estimate on *Signed_firm* is not significant, suggesting that the firms that signed the Statement did not perform differently during the crisis. In column (2), we use market-adjusted stock returns during the post-crisis period as the dependent variable. The coefficient on *Signed_firm* is insignificant. The results in Table 13 show that, despite higher CSR ratings and pledges to be more socially responsible, companies that signed the Statement did not perform differently around the crisis.¹⁵ This finding is consistent with the view put forward by Bebchuk and Tallarita (2020) that the Statement “is largely a rhetorical public relations move rather than the harbinger of meaningful change” (p. 3).

6. Conclusion

In this paper, we investigate the relation between CSR and stock market returns during the COVID-19 pandemic-induced market crisis. The pandemic is a truly exogenous shock of unprecedented magnitude that has increased attention on firms’ social and environmental engagement, allowing for clean identification of whether CSR is value-increasing during bad times.

We examine a sample of 1750 U.S. firms using CSR data from two providers, MSCI ESG Stats (formerly KLD Stats) and Refinitiv ESG. During the pandemic-induced stock market crash (February 18–March 20, 2020), we find no evidence that CSR affected stock return. This finding holds in the post-crash period and across industries. We also find that the performance of Business Roundtable member firms that unambiguously committed to serving stakeholders’ interests just prior to the pandemic is no different than that of non-member firms. Taken together, our findings suggest that pre-crisis CSR is not effective at protecting shareholder wealth from the adverse effects of a crisis, suggesting a potential disconnect between firms’ CSR orientation (ratings) and actual actions. We conclude that we need to be cautious about drawing unambiguous or unconditional inferences about the value of CSR during a crisis.

¹⁴ See <https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans>.

¹⁵ We find similar evidence when we consider *Fortune100 Best Companies to Work For*.

Table 12

Business Roundtable Statement on the Purpose of a Corporation: Descriptive statistics and industry composition.

Panel A. Descriptive statistics.				
	Signed firms (103 firms)		Other firms (1647 firms)	
	Mean	Median	Mean	Median
Crisis period raw ret.	−0.38	−0.36	−0.40	−0.39
Crisis period mkt-adj ret.	−0.04	−0.06	−0.02	−0.02
Post-crisis period raw ret.	0.49***	0.43***	0.64	0.52
Post-crisis period mkt-adj ret.	0.05	0.01	0.09	0.03
CSR_MSCI	0.80***	0.80***	0.45	0.50
CSR_REFINITIV	0.65***	0.70***	0.29	0.23
Log(MV)	10.41***	10.64***	7.92	7.76
Long-term debt	0.31	0.30	0.30	0.29
Short-term debt	0.04**	0.03***	0.03	0.01
Cash holdings	0.08***	0.05***	0.19	0.09
Profitability	0.03***	0.03***	0.02	0.03
B/M	0.36	0.27	0.40	0.31
Negative B/M	0.05	0.00	0.05	0.00
Momentum	0.28	0.28	0.30	0.29
Idiosyncratic risk	0.00***	0.00***	0.01	0.01

Panel B. Industry composition.		
Industry	Signed firms (103 firms)	Other firms (1647 firms)
Consumer nondurables	4	77
Consumer durables	5	43
Manufacturing	14	178
Energy	7	68
Chemicals and allied products	3	52
Business equipment	22	229
Telephone and television transmission	4	48
Utilities	8	62
Wholesale, retail, and some services	16	180
Healthcare, medical equipment, and drugs	5	142
Others	15	568

This table compares the sample of firms that signed the *Statement on the Purpose of a Corporation* (the Statement) on August 19, 2019 (103 signed firms) with those that did not (1647 other firms). Panel A presents the mean and median stock returns, CSR, and firm characteristics for the signed and other firms. All variables are defined in [Appendix A](#). *t*-tests and Wilcoxon rank-sum tests are conducted. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. Panel B shows the number of signed firms and other firms by industry.

Table 13

Business Roundtable Statement on the Purpose of a Corporation: Regression analysis.

	(1) Crisis period mkt-adj ret.	(2) Post-crisis period mkt-adj ret.
Signed_firm	−0.00 (−0.20)	0.01 (0.24)
Control variables	Yes	Yes
Factor loadings	Yes	Yes
Industry FE	Yes	Yes
Adjusted R^2	0.472	0.369
Observations	1750	1746

This table presents the regression results on the effect of signing the *Statement on the Purpose of a Corporation* (the Statement) on firm-level stock returns around the crisis. The dependent variables are market-adjusted stock returns during the crisis period (February 18–March 20, 2020) in column (1) and the post-crisis period (March 23–June 5, 2020) in columns (2)–(6). *Signed_firm* is a dummy variable that equals 1 for firms that signed the Statement on August 19, 2019 (103 firms), and 0 otherwise. All other variables are defined in [Appendix A](#). All specifications include control variables, factor loadings for the Fama–French three factors and the momentum factor, and industry fixed effects (SIC 2-digit). *t*-statistics based on robust standard errors adjusted for heteroskedasticity are in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Appendix A. Variable definitions

Variable	Definition
Crisis period raw ret	Raw stock returns over the February 18–March 20, 2020 period.
Crisis period mkt-adj ret	Market model-adjusted return over the February 18–March 20, 2020 period using weekly returns. The market model is estimated using 60 months of returns over 2015–2019 and the CRSP value-weighted index as the market return.
Post-crisis period raw ret	Raw stock returns over the March 23–June 5, 2020 period.
Post-crisis period mkt-adj ret	Market model-adjusted return over the March 23–June 5, 2020 period using weekly returns. The market model is estimated using 60 months of returns over 2015–2019 and the CRSP value-weighted index as the market return.
CSR_MSCI	Total net CSR score of five sub-indices (environment, employee relations, human rights, community, and diversity) at the end of 2018 from the MSCI ESG Stats database.
CSR_REFINITIV	Average of the environment and social scores at the end of 2019 from the Refinitiv ESG database.
Log(MV)	Logarithm of the market value of firm equity, calculated as the fiscal year-end number of shares outstanding, multiplied by the closing stock price from Compustat.
Long-term debt	Long-term debt divided by total assets.
Short-term debt	Debt in current liabilities divided by total assets.
Cash holdings	Cash and short-term investments divided by total assets.
Profitability	Operating income before depreciation divided by total assets.
B/M	Book value of equity divided by market value of firm equity.
Negative_B/M	Dummy variable equal to 1 if B/M is negative, and 0 otherwise.
Momentum	Annual raw stock return in 2019.
Idiosyncratic risk	Variance of the market-adjusted return in 2019.
Managerial ability score	CEO managerial ability score (Demerjian et al., 2012).
Log (political uncertainty)	The logarithm of firm-level political uncertainty in the first quarter of 2020 (Hassan et al., 2019).
Strong_culture_dummy	Dummy variable equal to 1 for firms with strong corporate culture, and 0 otherwise (Li et al., 2020b).
Log(#confirmed cases)	The logarithm of the number of confirmed COVID-19 cases in the firm's headquarter state as of March 20, 2020.
Workplace closing	The average of workplace closing scores during the stock market crash period. (Hale, Hallas, Hatible, Majumdar, and Pyarali 2020).
Blue state dummy	Dummy variable equal to 1 for firms located in blue states, and 0 otherwise. Blue states are based on the 2020 presidential election results.
Regional trust	Dummy variable equal to 1 for firms located in high-social-trust regions, and 0 otherwise (Lins et al., 2017). Regional social trust is based on the results of 2018 General Social Survey.
Total IO	Total institutional ownership.
Long-term IO	Long-term institutional ownership (Kim et al., 2019).
Short-term IO	Short-term institutional ownership (Kim et al., 2019).
Norm-constrained IO	Norm-constrained institutional ownership (Hong and Kacperczyk, 2009).
Other IO	Total IO minus norm-constrained IO.
High-CSR-oriented IO	Percentage of shares held by high-CSR-oriented institutional investors. CSR-orientation is calculated based on CSR ratings of all investee companies of the institution. High-CSR-oriented institutional investors are those with a portfolio average CSR score above the median.
Low-CSR-oriented IO	Percentage of shares held by low-CSR-oriented institutional investors. CSR-orientation is calculated based on CSR ratings of all investee companies of the institution. Low-CSR-oriented institutional investors are those with a portfolio average CSR score below the median.
Signed_firm	Dummy variable equal to 1 for firms that signed the <i>Statement on the Purpose of a Corporation</i> on August 19, 2019, and 0 otherwise.

Appendix B. CSR and stock returns during the 2008 financial crisis

	(1)	(2)	(3)	(4)
	Raw	Mkt-adj	Raw	Mkt-adj
CSR_MSCI	0.05*** (3.06)	0.10*** (3.77)	0.03* (1.67)	0.07*** (2.59)
Log(MV)			0.01 (1.17)	−0.01 (−1.01)
Long-term debt			−0.13*** (−3.10)	−0.11 (−1.55)
Short-term debt			−0.29** (−2.42)	−0.17 (−0.90)
Cash holdings			0.18*** (4.29)	0.31*** (4.31)
Profitability			0.33 (1.40)	−0.09 (−0.22)
B/M			−0.15*** (−5.38)	−0.08 (−1.54)
Negative_B/M			−0.05 (−0.98)	0.01 (0.12)
Momentum			−0.02 (−0.71)	−0.27*** (−6.94)

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(continued)

	(1)	(2)	(3)	(4)
	Raw	Mkt-adj	Raw	Mkt-adj
Idiosyncratic risk			−3.56*** (−3.77)	−9.30*** (−5.66)
Factor loadings	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.164	0.392	0.216	0.435
Observations	1691	1691	1691	1691

This table shows regression results on the effect of CSR on stock returns during the 2008 financial crisis. The sample contains 1691 non-financial firms. The dependent variable is firm-level stock returns over the August 2008–March 2009 period, where stock returns are measured using raw returns in columns (1) and (3) and market-adjusted returns in columns (2) and (4). CSR MSCI is the total net CSR score of five sub-indices (environment, employee relations, human rights, community, and diversity) at the end of 2006 from the MSCI ESG Stats database. All other variables are defined in Appendix A. All specifications include factor loadings for the Fama–French three factors and the momentum factor, as well as (2-digit SIC code) industry fixed effects. *t*-statistics based on robust standard errors adjusted for heteroskedasticity are in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

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