

# CSR under the pressure of financial shocks\*

Monica Kabutey<sup>†</sup>, Syrena Shirley<sup>‡</sup> and Anywhere Sikochi<sup>§</sup>

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## Abstract

This study examines how the COVID-19 pandemic influenced firms' interactions with customers and suppliers. Customer-supplier relationships are essential because the success of interconnected firms affects the sustainability of the entire supply chain. We use the economic shock of COVID-19 to evaluate if socially responsible firms truly adhere to responsible business practices (i.e. prioritize stakeholders) when faced with financial pressure. Using a difference-in-differences design, we find that socially responsible firms take longer to pay their suppliers though they do not appear to relax payment terms for customers during COVID. These strategies contradict the principles of stakeholder theory, which focuses on understanding and addressing the interests of all stakeholders. Overall, our findings show that socially responsible firms focus more on safeguarding their own liquidity rather than stakeholder priorities during crisis periods.

**Keywords:** stakeholder orientation, CSR, financial shocks, COVID-19, trade credit

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<sup>†</sup>California State University Long Beach

<sup>‡</sup>Corresponding author. Columbia Business School. Email: sts2173@gsb.columbia.edu

<sup>§</sup>Harvard Business School

# 1 Introduction

The COVID-19 pandemic presented unprecedented challenges to corporate governance, testing the ability of corporate leaders to balance corporate purpose with stakeholder capitalism amidst a severe global economic downturn (Johnstone-Louis et al., 2020; Afzali et al., 2022). Crises pressure firms to trade-off between maintaining their role as good corporate citizens and ensuring financial stability (Madsen and Rodgers, 2015; Lee et al., 2013). At the onset of the COVID-19 pandemic in early 2020, firms encountered an impending liquidity crisis, triggered by multiple factors. Among these were significant disruptions in their supply chains coupled with a sharp decline in consumer demand (Acharya and Steffen, 2020; Harapko, 2023; Fahlenbrach et al., 2021). As a result, the COVID-19-induced shock provides an ideal setting to test the impact of unanticipated economic pressure on firms' commitments to corporate social responsibility (CSR). It is unclear whether or how firms made the difficult trade-offs across stakeholder groups as they navigate the pandemic. In this study, we focus on customers and suppliers to assess how socially responsible firms interact with these stakeholders during the COVID-19 crisis.

Interactions between customers and suppliers are reflected through the trade credit decisions implemented by firms. These policies, which determine the terms<sup>1</sup> and timing of payments between businesses, serve as a critical tool for managing liquidity. Trade credit serves as an essential source of short-term financing for corporations, particularly when access to bank credit is constrained (Chod et al., 2019; Chen et al., 2023; Petersen and Rajan, 1997). The effective management of trade credit not only highlights the importance of customers and suppliers in the corporate decision-making process but also emphasizes the symbiotic nature of these relationships. By prioritizing trade credit policies, firms strategically place customer-supplier interactions at the forefront of their operational considerations. This is crucial as the success of interconnected firms within a supply chain depends on the viability of the entire supply chain (Ersahin et al., 2023).

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<sup>1</sup>We do not examine specific terms of trade credit agreements in this study.

Research suggests that firms evaluate both their own solvency and that of their stakeholders such as trade credit partners, particularly when faced with financial constraints (Johnstone-Louis et al., 2020). On one hand, firms may choose to extend more trade credit to ensure the survival of the production network (Ersahin et al., 2023). This can be achieved by shortening supplier payment times or lengthening the time for customer payments. On the other hand, firms can exploit trade credit to manage their own working capital by pushing their suppliers to extend the time for paying their trade credit bills (Strom, 2015; Fabbri and Klapper, 2016; Shumsky and Trentmann, 2018). Firms can also push their customers to promptly settle outstanding balances or face unfavorable credit terms. These actions result in suppliers being forced to wait months to get paid or customers being forced to pay right away.

Anecdotal evidence suggests that corporate decisions relating to customers and suppliers differed during the COVID-19 pandemic. For example, major retailers like Macy's and food industry giants such as Mondelez negotiated longer payment terms with their suppliers (Broughton, 2021). This strategy allowed these companies to boost their liquidity for operations and strengthen their working capital. While this strategy helped these firms maintain operational viability, it also placed significant financial strain on their suppliers, who had to adjust to delayed payments, potentially compromising the financial stability of these suppliers. Unlike Macy's and Mondelez, Lockheed Martin (defense company) and Micron Technology (chip manufacturer) took into account their impact on suppliers and paid suppliers early. These divergent strategies highlight a critical question: do companies, particularly those deemed socially responsible, prioritize customers and suppliers in corporate decisions during crises?

Stakeholder theory emphasizes the significance of recognizing and addressing the interests and welfare of employees, customers, shareholders, suppliers, and government in a fair and balanced manner (Freeman, 1984; Flammer and Kacperczyk, 2019). By embracing this approach, firms are committed to pursuing sustainable and ethically responsible business

practices that promote long-term success while positively impacting the broader society. Following stakeholder theory, in crisis periods, it is expected that socially responsible firms incorporate their impact on their customers and suppliers. Such firms can exhibit leniency to customers by extending the time required for customers to make payments. In addition, firms may shorten the time they take to pay their own suppliers, or maintain previously agreed upon terms. Such decisions can help customers and suppliers to weather difficult periods. The ultimate choices are not clear cut because, even socially responsible firms have their own working capital position to manage to ensure their survival. The impact of covid on customer and supplier relationships is unclear as firms balance their stakeholder, operating and financial decisions.

Evaluating supplier and customer decisions by firms' committed to CSR is important in light of growing criticism that firms are using CSR as a marketing gimmick without meaningful CSR activities (Wu et al., 2020; Raghunandan and Rajgopal, 2021). Despite the criticisms, by 2020, assets under management geared towards investing in high CSR firms reached US\$35.3 trillion and in total equating to 36% of all professionally managed assets across major economic regions (Global Sustainable Investment Alliance, 2021). Leading up to the pandemic, high-CSR firms enjoyed many capital market benefits including greater capital access (e.g., Dhaliwal et al., 2011; El Ghouli et al., 2011; Goss and Roberts, 2011; Cheng et al., 2014; Lins et al., 2017), higher firm valuation (Lins et al., 2017), more favorable credit ratings and ultimately lower borrowing costs (Jiraporn et al., 2014; Attig et al., 2013).<sup>2</sup> While these benefits arise in normal times, it is commonly believed that true character is revealed when faced with extreme pressure (Powell, 2020). Therefore, it is unclear whether firms will continue to support CSR initiatives with suppliers and customers during times of crisis.

To conduct our empirical analyses, we first classify firms as high CSR or low CSR using

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<sup>2</sup>CSR status is often determined by Environmental, Social, and Governance (ESG) scores provided by third-party ratings agencies. ESG scores are used extensively in the academic literature to measure CSR performance (e.g., Chatterji et al., 2016; Lins et al., 2017; Bae et al., 2021; Berg et al., 2022).

Environmental, Social, and Governance (ESG) scores leading up to the onset of the COVID-19 pandemic. Prior research has indicated disagreements in ratings provided by third-party rating agencies (Chatterji et al., 2016; Berg et al., 2022; Christensen et al., 2022). Therefore, we classify a firm as high CSR if the firm’s ESG is considered high by at least two out of three ratings agencies - Refinitiv, S&P and Sustainalytics. For each rating agency, based on the data distribution, we treat firms as high CSR if their ESG score is above 50% (out of 100%). Next, we use a difference-in-differences design to evaluate changes in trade credit policies following COVID-19.<sup>3</sup>

We document significantly different trade credit responses between high CSR and low CSR firms following the onset of the pandemic. We show that high CSR firms increase the days to pay suppliers (days payable outstanding, DPO) and decrease the days to collect from customers (days sales outstanding, DSO). This contradicts predictions that socially responsible firms would support suppliers and customers by paying their suppliers more promptly and allowing longer payment days to their customers. Taken together, we interpret these findings as evidence that during COVID, high CSR firms managed their own liquidity through trade credit policies potentially at the expense of their stakeholders.

The corporate response to crises can be short, medium, or long term (Johnstone-Louis et al., 2020). Therefore, we also examine the persistence in the changes in trade credit with customers and suppliers following the onset of the COVID-19 pandemic. Despite economic recovery during COVID, we find that high CSR firms continue to lengthen the time to pay suppliers well into the last quarter of 2022. In terms of customer relationships, the results are more short term. Our findings indicate that the significant decrease in customer payment time occurs within the first two quarters of the COVID-19 pandemic.

External CSR ratings are used in our previous analyses, but it is possible that firms’ corporate strategies don’t correspond with these ratings. Therefore, we also examine whether our findings remain when firms’ public commitment to CSR is evaluated. In 2019, the Busi-

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<sup>3</sup>We consider the quarterly and annual periods from 2017 through 2019 as the period before COVID and 2020 through 2022 as during COVID (i.e. the COVID period).

ness Roundtable (BRT), an association of chief executive officers (CEOs) of U.S. leading firms, released a statement on the purpose of a corporation signed by over 180 CEOs who committed to leading their companies for the benefit of all stakeholders—customers, employees, suppliers, communities and shareholders (Roundtable, 2019). Did these firms’ actions with customers and suppliers during the pandemic match their highly publicized commitment to stakeholders? Interestingly, despite public commitments to stakeholders, BRT firms had statistically significant faster collections from customers (shorter days sales outstanding) during COVID. Moreover, BRT firms appear to take longer to pay suppliers before COVID, and our results show that this behavior did not change during COVID.

Our study contributes to the recent literature examining corporate actions during COVID. Alves et al. (2021) examine voluntary CEO pay cuts and dividend suspensions during COVID. They find that CEOs of firms that suspend dividends during COVID receive stronger investor support through say on pay voting patterns. Relatedly, Afzali et al. (2022) examine determinants of decisions to cut management pay during COVID to share the pain of the crisis. The primary determinants for management cutting pay during COVID include corporate decisions to lay off employees, suspend or reduce dividends and their exposure to the pandemic. Lester et al. (2022) show that firms’ financial flexibility prior to the pandemic affects the actions they take during the crisis period. Specifically, strong financial flexibility reduces the likelihood of workforce reductions. Our study differs from these as we focus on customers and suppliers, and incorporate firms’ CSR ratings to provide insights into further actions firms make in their corporate responses to COVID.

Our findings are mostly consistent with Bebchuk et al. (2023) who uses the mergers and acquisitions setting to descriptively examine corporate stakeholder commitment. Bebchuk et al. (2023) show that corporate leaders fail to negotiate protections for employees, customers, suppliers, or other stakeholders making corporate acquisitions though target shareholders and executives benefit from the acquisitions. We complement this study by explicitly considering firms CSR status leading up to the pandemic to empirically understand whether

corporate trade credit actions differ across firms that were previously considered high CSR or low CSR firms prior to the pandemic.

We also contribute to the discourse about greenwashing in firms' CSR activities and commitment. A growing body of research proposes that firms' proclamations of stakeholder-orientation are not backed by any hard data on these firms' operations (Raghunandan and Rajgopal, 2021; Bebchuk and Tallarita, 2020), but rather support the longstanding notion that firms' actions primarily maximize the firm's profits for the shareholders (Friedman, 1970). Overall, our findings support the greenwashing narrative as we show that high CSR do not prioritize stakeholders such as suppliers and customers when they are under liquidity pressure in the wake of the COVID-19 pandemic..

In the context of examining CSR activities during a crisis, our study complements existing evidence regarding CSR-related disclosures of how firms intended to respond to a crisis in Karaibrahimoglu (2010), Mahmud et al. (2021), and Parmelee and Greer (2023). Our study differs as we empirically examine the firms' actual CSR outcomes rather than initiatives announced in press releases and other disclosures in the wake of the pandemic. Focusing on capital market consequences of CSR during crisis, the empirical evidence is mixed. Johnstone-Louis et al. (2020) shows that firms with high ESG scores generated higher buy-and-hold abnormal returns during the initial stock market dip and recovery at the onset of the COVID-19 pandemic. This is consistent with other studies showing that high CSR firms outperform during crises such as COVID-19 and the 2008–2009 financial crisis (Ding et al., 2021; Lins et al., 2017). Meanwhile, Bae et al. (2021) examine the benefits of CSR but do not find evidence that CSR affected stock returns during the COVID-19 market crisis. Our study differs as we focus on the CSR-related actions and outcomes during the onset of the COVID-19 pandemic and not firm performance.

Lastly, our study contributes to the trade credit literature by showing how COVID-19 affects corporations interactions with their customers and suppliers during an economic crisis. Our paper complements and extends the findings of Love et al. (2007), who examine

trade credit in certain emerging economies following the 1997 Asian crisis. They find a short term increase in trade credit immediately after the crisis with reversal in subsequent periods. Kestens et al. (2012) also finds a similar decline in trade credit for Belgian firms after the 2008 financial crisis.

## 2 Hypotheses Development

### 2.1 Stakeholder Theory

Our study explores firms' interactions with some of their primary stakeholders during the economic crisis induced by the COVID-19 pandemic. Primary stakeholders encompass employees, customers, government entities, and capital providers such as shareholders and suppliers (Chakravarthy et al., 2014). These primary stakeholders play integral roles in the operations and performance of the firm (Clarkson, 1995), influencing its strategic decisions and overall success. We focus on customers and suppliers to provide insights into these critical stakeholder relationships during COVID.

Stakeholder theory posits that the fundamental social objective of a firm is to create and equitably distribute wealth among all of its primary stakeholders, without exhibiting bias towards any particular group to the detriment of others (Freeman, 1984; Flammer and Kacperczyk, 2019). Recognizing and addressing the interests and welfare of employees, customers, shareholders, suppliers, and government in a fair and balanced manner is a crucial aspect of stakeholder theory. By embracing this approach, firms aim to pursue sustainable and ethically responsible business practices that foster long-term success while positively impacting the broader society.

Prior research shows that firms considered more socially responsible experience a wide range of benefits. These benefits include greater capital access (e.g., Dhaliwal et al., 2011; El Ghouli et al., 2011; Goss and Roberts, 2011; Cheng et al., 2014; Lins et al., 2017), higher firm valuation (Lins et al., 2017), more favorable credit ratings and ultimately lower bor-



rowing costs (Jiraporn et al., 2014; Attig et al., 2013). Considering these benefits, socially responsible firms may be better able to prioritize stakeholders during the economic crisis induced by COVID-19. Still, it remains unclear whether corporate actions regarding suppliers and customers align with corporate social responsibility during times of crisis as firms must protect their own financial and operational survival.

## **2.2 Customer and Supplier Relationships**

Following the outbreak of the COVID-19 pandemic, many firms encountered financial impediments attributable to disruptions in their supply chains and decline in demand (Harapko, 2023; Chetty et al., 2024; Fahlenbrach et al., 2021). As a result, firms were compelled to implement cost-cutting measures to safeguard their financial viability. In times of crisis, the expeditious reduction of expenses and preservation of financial resources is important for firms' survival so that they can continue to generate value for their owners (Lowe, 1998; Campello et al., 2010). However, during crises, firms may encounter pressure to balance corporate citizenship and financial stability by containing costs (Madsen and Rodgers, 2015; Lee et al., 2013).

Firms can seek to efficiently manage working capital (current assets and current liabilities) to strengthen their liquidity position. Strong working capital results can be achieved by negotiating payment terms with trade credit partners (suppliers and customers). Customer-supplier stakeholders stand out as firms are both trade credit borrowers (through accounts payable) and trade credit lenders (through accounts receivable) decisions. Specifically, firms can lengthen the time to pay suppliers while simultaneously shortening the time for customer payments to boost liquidity. Therefore, supplier-customer relationships can be crucial for firms' success as they navigate a crisis.

Trade credit is an important financial instrument available to corporations especially when bank credit is limited (Chod et al., 2019; Chen et al., 2023; Petersen and Rajan, 1997). Dass et al. (2015) suggest that trade credit enables suppliers to gain a product market

competitive advantage by giving firms more favorable trade credit terms. Over time, the suppliers establish relationships with their customers and can win new customers, culminating in increased sales, more profits, and greater firm value (Martínez-Sola et al., 2013; Box et al., 2018; Gyimah et al., 2020). Recent studies examine determinants and consequences of trade credit decisions. Determinants of trade credit decisions include geographic proximity (Ouyang et al., 2024), operating shocks affecting suppliers (Ersahin et al., 2023), social performance (Wei et al., 2023; Xu et al., 2020), financial reporting such as mandatory IFRS adoption (Li et al., 2021) or conditional conservatism, economic policy uncertainty (Jory et al., 2020) and competition among suppliers (Chod et al., 2019). Meanwhile Chen et al. (2023) empirically show that trade credit affects operational decisions such as those related to inventory.

The viability of the entire supply chain is important for the success of interconnected firms within a production network (Ersahin et al., 2023). Accordingly, customers and suppliers may consider the effect of their decisions on the whole supply chain. Therefore, more trade credit may be granted to trade credit partners to ensure the survival of the production network. Lockheed Martin Corp (defense company) and Micron Technology (chip manufacturer) serve as examples of this choice. They shortened the time to pay suppliers to help suppliers weather the pandemic (Broughton, 2021). Alternatively, firms can exploit trade credit to manage their own working capital through two approaches. First, firms can push their suppliers to extend the time for paying their trade credit bills (Strom, 2015; Fabbri and Klapper, 2016; Shumsky and Trentmann, 2018). Macy's (retailer) and Mondelez International (food company) provide anecdotal evidence of this strategy. Both companies negotiated longer payment terms with suppliers to improve working capital in the wake of the COVID-19 pandemic (Broughton, 2021). Second, firms can push their customers to promptly settle outstanding balances or face unfavorable credit terms. These two approaches lead to suppliers having to wait for months to receive payment or customers having to pay right away. Such trade credit decisions during COVID matter as some suppliers or customers

could be small businesses with limited capital resources. Overall, navigating the pandemic required challenging choices as companies evaluated their own position and that of their customers and suppliers.

Corporate leadership teams were able to demonstrate their commitment to customers and suppliers through the economic crisis caused by the COVID-19 pandemic (Johnstone-Louis et al., 2020; Afzali et al., 2022). Following stakeholder theory, leads to expectations that socially responsible firms will prioritize customers and suppliers during economic crises. Thus, one can expect socially responsible firms to prioritize timely payments to suppliers in the wake of an impending liquidity crisis. In addition, socially responsible firms can be expected to extend more favorable credit terms to their customers. However, it remains unclear how socially responsible firms handle trade credit policies following COVID as they balance stakeholder and their own firms' needs. Therefore, we formulate our hypotheses, in the null form, as outlined below.

H1: There is no difference in trade credit with suppliers after the start of COVID-19 for socially responsible firms.

H2: There is no difference in trade credit with customers after the start of COVID-19 for socially responsible firms.

## **3 Data and research design**

### **3.1 Data**

Our initial sample consists of the universe of Compustat Fundamental Quarterly firm-quarters for firms located in the United States for the sample period from the first quarter of 2017 (2017Q1) to the fourth quarter of 2022 (2022Q4), constituting a three-year window around the onset of the COVID-19 pandemic. Following existing literature, we eliminate firm-quarters for financial firms because of inherent differences in regulation or transparency between non-financial and financial firms, making it difficult to compare these types of firms

(e.g., Mitton, 2008). We also require that each firm in the sample has at least one observation in the period before and in the period after the onset of COVID-19.

We eliminate observations with missing values for firm characteristics that we use as primary control variables in our regressions, namely total assets, asset tangibility, profitability, market to book ratio, debt ratio, default barrier, and cash. Firm characteristics are obtained from Compustat Quarterly. Next, we eliminate observations with missing values for our measure of corporate social responsibility, ESG rating. Finally, we drop remaining observations with missing values for all of our primary dependent variables, namely accounts payable, accounts receivable, and cash conversion cycle.

To perform our analyses on the effects of CSR on corporate behavior, we combine our Compustat sample with measures of CSR based on ESG ratings from Refinitiv, S&P, and Sustainalytics via WRDS. Refinitiv is regarded as one of the most comprehensive ESG data providers, covering over 88% of the global market cap, across more than 700 different ESG metrics, with a history going back to 2002. S&P data represents the Trucost and S&P Global ESG dataset that provides company level, dimension level, and criteria level scores based on the S&P Global Corporate Sustainability Assessment (CSA) process and publicly available sources. Sustainalytics provides environmental, social, and governance research, ratings, and data. Data comes from a variety of sources, including company reports, regulatory filings, public documents, news and media coverage, NGOs, and industry associations. We obtain our measure of CSR based on the weighted total ESG scores from the North America Legacy files, which end on December 31, 2019.

These steps yield a final sample consisting of 37,651 observations corresponding with 1,637 unique firms with requisite Compustat data and CSR measures. Of this, 37,552 observations have sufficient data to compute days payable outstanding and 37,597 to compute days sales outstanding.

### 3.2 Measuring firms' interaction with suppliers and customers

To assess how firms interact with suppliers and customers in the wake of a liquidity crisis, we explore the firm's days sales outstanding (*DSO*) and days payable (*DPO*). These variables measure the number of days it takes customers to pay a firm and the number of days a firm takes to pay its suppliers, respectively. Following prior literature (Laik and Mirchandani, 2023), we measure these variables using Compustat quarterly data over the previous four quarters as follows:<sup>4</sup>

$$DSO = (\%mean(rectq)/\%sum(saleq)) * 365$$

$$DPO = (\%mean(apq)/\%sum(cogsq)) * 365$$

where *rectq* is accounts receivable, *saleq* is revenue greater than zero, *apq* is accounts payable, and *cogs* is cost of goods sold.<sup>5</sup>  $\%mean$  indicates the average over the previous four quarters and  $\%sum$  indicates the sum over the previous four quarters.<sup>6</sup>

### 3.3 Measuring high CSR

We measure CSR using ESG ratings. Given that prior literature documents significant disagreement in the ESG ratings, we employ three ESG rating scores from Refinitiv, S&P, and Sustainalytics. Refinitiv ESG scores range from 0 to 1, while the scores for S&P and Sustainalytics range from 0 to 100. All the scores can be transformed to 0% to 100%, with 0% indicating the lowest ESG rating and 100% indicating the highest rating. We conjecture that if at least two of the three rating scores are high for a given firm, then there is consensus regarding the firm's CSR ratings (i.e. lower likelihood of disagreement).

Given the distribution of the ESG scores in each of the three rating agency scores in our sample, we pick scores above 50% as high CSR and those at or below 50% as low CSR and

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<sup>4</sup>In subsequent analyses we also use data at the annual level similar to (Chen et al., 2023). These annual analyses do not require aggregating data over multiple periods.

<sup>5</sup>If accounts receivable and accounts payable are missing, we assume these are not present for the firm and thus fill in with zero. But if revenue is missing, zero, or negative, we exclude from the analyses.

<sup>6</sup>See WRDSAPPS FINRATIO - <https://wrds-www.wharton.upenn.edu/pages/support/manuals-and-overviews/wrds-financial-ratios/financial-ratios-sas-code/>.

categorize an observation (firm-quarter) as *HighCSR* if at least two of the three scores are greater than the 50% as follows:

$$\text{HighCSR} = 1 \quad \text{if} \quad \sum (1_{(Refinitiv>0.50)}, 1_{(S\&P>50)}, 1_{(Sustainalytics>50)}) \geq 2$$

### 3.4 Research design

To test our hypotheses, we employ a difference-in-differences design to examine the changes in trade credit policies with customers and suppliers of high CSR firms relative to other firms after the onset of COVID-19.

We center our analyses around the onset of COVID-19 pandemic as a financial shock for two reasons. First, there were significant financial uncertainties and ambiguities in the capital markets at the onset and subsequent surges of COVID-19. Acharya and Steffen (2020) highlight that local and national governments shuttered major parts of their economies to curb the spread of the infectious disease but these actions also potentially plunged firms into impending liquidity crisis. As a result, COVID-19 exogenously increased firms' liquidity risk. Second, we focus on the COVID-19 pandemic because COVID-19 coincided with a substantial increase in CSR-related debates, discussion, and scrutiny of corporations over social justice, income inequality, harmful products, and poor working conditions. Just before COVID-19, the Business Roundtable, an association of chief executive officers (CEOs) of America's leading companies, released a "Statement on the Purpose of a Corporation" signed by over 180 CEOs who "commit to lead their companies for the benefit of all stakeholders—customers, employees, suppliers, communities and shareholders" (Roundtable, 2019).

To provide evidence for our research objective, in equation (1) we test the association between high CSR and days payable and days sales outstanding after the onset of COVID-19.

$$\begin{aligned} \text{TradeCredit} = & \beta_0 + \beta_1 \text{COVID} + \beta_2 \text{HighCSR} + \beta_3 \text{COVID} * \text{HighCSR} \\ & + \beta_4 \text{LogAssets} + \beta_5 \text{Profitability} \\ & + \beta_6 \text{Market/Book} + \beta_7 \text{DebtRatio} \\ & + \beta_8 \text{DefaultBarrier} + \beta_9 \text{Cash/Assets} + FE + \epsilon \end{aligned} \quad (1)$$

where *TradeCredit*, captures firms interactions with their customers and suppliers, measured by the number of days sales outstanding (*DSO*) and days payable outstanding (*DPO*) for each quarter. *COVID* is a dummy variable equal to one if the firm’s fiscal quarter falls in the period after the onset of the COVID-19, and zero otherwise. The period before the onset of COVID-19 is the first quarter of 2017 through the fourth quarter of 2019 (*COVID=0*). The COVID-19 period begins with the first quarter of 2020 and concludes with the fourth quarter of 2022 (*COVID=1*). *HighCSR* is a dummy variable equal to one if the firm quarter has high CSR scores for at least two of the third-party rating agencies for the most recent assessment year prior to the start of COVID-19.<sup>7</sup> Our primary variable of interest is the interaction between *COVID* and *HighCSR*, *COVID \* HighCSR*. *COVID \* HighCSR* captures differences in the trade credit outcomes following COVID.

The vector of firm characteristics controls for factors that may further explain firms’ trade credit decisions. For example, firms with higher default risk or nearing default may alter stakeholder decisions especially during a time when the capital markets are liquidity-constrained (Yinqing Zhao et al., 2014; Acharya and Steffen, 2020). Firms’ existing cash balances may impact whether firms are able to cover costs such as employee payroll or supplier payments. Overall, cash balances and other measures of a firm’s financial health may affect a firm’s ability to weather a financial crisis (Lins et al., 2017), and thus affect whether a firm maintains support for CSR activities. Accordingly, we control for firm size (*LogAssets*), asset tangibility (*Tangibility*), operating performance (*Profitability*), growth opportunities (*Market/Book*), default risk (*DebtRatio*, *DefaultBarrier*), and current cash balance (*Cash/Assets*). We provide detailed variable definitions in Appendix A.

The onset of the pandemic has differential effects on companies in various time periods, industries and firm circumstances. Accordingly, *FE* represents fixed effects for quarter, industry, and firm to capture invariant factors within quarter, industry, and firm. The coefficient estimates are based on standard errors adjusted for firm clustering. The industry

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<sup>7</sup>*HighCSR* is measured using ESG scores from the one period immediately before COVID-19 and is assigned to all firm-quarters in the sample.

dummies are based on the two-digit Standard Industry Classification (SIC) codes.

## 4 Empirical results

### 4.1 Summary statistics

Table 1 presents the summary statistics for the variables in our regression models. The mean for *COVID* of 0.489 indicate that the sample is almost equally distributed between the period before and after the onset of the COVID-19 pandemic, with 48.9 percent of the sample in the period after the onset of the pandemic. On average, 26.1 percent of the sample represent firm-quarter classified as high CSR firm-quarter (*HighCSR*). That is, 26.1 percent of the firm-quarter have scores above 50 out of 100 for at least two of the ESG ratings in our sample.

Regarding the days payable, firms takes an average of 58 days to pay suppliers based on the mean value for *DPO*. The mean for *DSO* indicates that customers take an average of 57 days to pay their bills to the firm. The mean values of the firm characteristics indicate that the average firm in our sample has total assets of just over \$10.5 million, average profitability just over 2.3 percent, carries an average of 32.5 percent in debt, and has an average cash to assets ratio of 17 percent.

Figure 1 and Figure 2 provide the mean distribution of the days payable and days sales outstanding before and after the onset of COVID. The figures show differences between the policies of high CSR and low CSR firms, and there are discernible changes in these policies in the wake of the COVID-19 pandemic. Next we explore these differences in multivariate analyses.

### 4.2 Regression results

Our primary objective is to investigate the response of socially responsible firms to the financial shock caused by the COVID-19 pandemic through trade credit decisions with sup-



pliers and customers. Therefore, our empirical tests explore how socially responsible firms (high CSR firms) manage relationships with the suppliers and customers during the COVID-19 pandemic relative to less socially responsible firms (low CSR firms). We examine days payable outstanding for the interactions with suppliers and days sales outstanding for the interaction with customers.

#### 4.2.1 Interactions with suppliers

To investigate the interactions with suppliers, we estimate equation 1 with days payable outstanding (*DPO*) as the dependent variable. Greater *DPO* indicates that firms are taking longer to pay their suppliers. We assess whether and how *DPO* changes for high CSR firms relative to low CSR firms during COVID (i.e. the period after the onset of the COVID-19 pandemic).

Table 2 presents the regression results from regressing *DPO* on the indicator variables for COVID and High CSR, and firm characteristics. We alternately include industry and firm fixed effects as indicated in the respective columns. We present our primary sample based on quarterly data in columns (1)–(3) and firm-year sample in columns (4)–(6).<sup>8</sup>

The coefficients on the interaction term *COVID\*HighCSR* capture the changes in *DPO* for high vs low CSR firms. We document consistently positive and statistically significant coefficients across all specifications in columns (1)–(6). For example, the coefficient in column (1) is 3.602 (t-stat = 2.002) with quarter fixed effects, and indicates that high CSR firms increase the number of days to pay suppliers by an average of close to 4 days per quarter relative to low CSR following the onset of COVID-19. The economic magnitude is similar, at about 3 days more for high CSR firms relative to low CSR firms, in column (2) with industry fixed effects (coef. = 3.204, t-stat = 1.851) and in column (3) with firm fixed effects (coef. = 3.065, t-stat = 1.912). The average number of days doubles to about 6 days in columns

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<sup>8</sup>We consider quarterly data as the primary sample and use it for subsequent tests because changes to trade terms can happen quickly during a financial crisis and trade credit terms are often measured in months not in years.

(4)–(6), when we use fiscal year data with year fixed effects only (coef. = 6.226, t-stat = 3.077), industry fixed effects (coef. = 6.067, t-stat = 3.038), and firm fixed effects (coef. = 5.609, t-stat = 2.946).

Research suggests that the corporate response to crises can be short, medium, or long term (Johnstone-Louis et al., 2020). Therefore, we also explore the persistence in the changes in days payable following the onset of the COVID-19 pandemic. Is there a temporary change at the height of the pandemic or does the change persist? To explore this, we re-estimate Equation (1) replacing the *COVID* indicator and *COVID \* HighCSR* interaction with calendar quarter indicators (*20XXQX*) and associated interactions (*20XXQX\*HighCSR*). We exclude 2019Q4 and thus perform our analyses relative to 2019Q4 (the last quarter before COVID).

We present the results in Table 3. The results show a very stark difference between the periods before and after the onset of COVID-19. Relative to 2019Q4, all the coefficients on the quarters 2017Q1–2019Q3 are not statistically different from 2019Q4 across all specifications with quarter fixed effects in column (1), quarter and industry fixed effects in column (2), and quarter and firm fixed effects in column (3). Conversely, the coefficients on the quarters from 2020Q1–2022Q4 are all positive and mostly all statistically different from 2019Q4. Column (1), for example, shows that the increase in the number of days firms take to pay their suppliers persists into the third-year after the onset of COVID-19, albeit with a dip in 2022Q1 and 2020Q2.

Overall, these results show that high CSR firms do not appear to help alleviate potential financial burdens for suppliers arising from late payments of accounts payable. Payment delays can put a strain on the suppliers extending the trade credit by draining their operating cash (Strom, 2015; Gyimah et al., 2020). A delay in payment could indicate that high CSR firm experienced severe financial constraints and therefore, required liquidity through trade credit. However, a Wall Street Journal article suggests that delay in payments persisted well beyond the early periods of the pandemic, despite economic recovery at US firms (Broughton,

2021). Our findings indicate that the delay in payments appear to be driven by firms that may have been expected to protect stakeholders, including suppliers.

#### 4.2.2 Interactions with customers

Next, we investigate how firms interact with their customers after the onset of the pandemic. Specifically, we estimate equation 1 with days sales outstanding (*DSO*) as the dependent variable, and the indicator variable for COVID and High CSR, and firm characteristics as explanatory and control variables. A greater value of *DSO* indicates more favorable payment terms for the customers and lower *DSO* indicates firms are demanding quicker payments from their customers.

We present the results in Table 4, alternately including industry and firm fixed effects as indicated in the respective columns. Similar to Table 2, we present our primary sample based on quarterly data in columns (1)–(3) and firm-year sample in columns (4)–(6) for the baseline *DSO* analyses.

Our coefficient of interest is the interaction term *COVID\*HighCSR*, which captures the changes in *DSO* for high relative to low CSR firms. The results indicate that the coefficients are negative and mostly all statistically significant across all the specifications in columns (1)–(6). In the quarterly data in columns (1)–(3) the negative coefficients are all statistically significant. For example, the coefficient in column (1) is -1.925 (t-stat = -2.133) with quarter fixed effects. This indicates that customers of high CSR firms, relative to low CSR, decrease the number of days to settle accounts receivable by an average of close to 2 days during COVID. The magnitude of the coefficients is similar, close to 2 fewer days for high CSR firms relative to low CSR firms, in column (2) with industry fixed effects (coef. = -1.872, t-stat = -2.142) and in column (3) with firm fixed effects (coef. = -1.976, t-stat = -2.577). The average number of days is slightly lower in columns (4)–(6), when we use fiscal year data with year fixed effects. Of these, the results are weakly significant in column (6) using firm fixed effects (coef. = -1.609, t-stat = -1.829) Results are not significant in columns (4)

and (5) using only quarter fixed effects (coef. = -1.374, t-stat = -1.441), and industry and quarter fixed effects (coef. = -1.156, t-stat = -1.228). Overall the results suggest that, on average, customers of high CSR firms settled outstanding balances in a shorter time frame after the pandemic.

To shed light on persistence of the changes, we also re-estimate equation (1) replacing the *COVID* indicator and *COVID\*HighCSR* interaction with calendar quarter indicators (*20XXQX*) and associated interactions (*20XXQX\*HighCSR*). We exclude 2019Q4 and thus perform our analyses relative to 2019Q4. Table 5 presents the results. Across the different specifications, we document positive (and sometimes significant) coefficients on the quarters before 2019Q4. However, relative to 2019Q4, the coefficients on the quarters during COVID (2020Q1–2022Q4) are all negative, with statistical significant changes in the first two quarters 2020Q1 and 2020Q2. These results are consistent with the baseline results that the number of days sales outstanding decrease in the period after the onset of COVID-19. However, the negative changes in *DSO* appear to be concentrated in the early quarters of COVID-19.

Overall, the evidence shows that high CSR firms use trade credit decisions with their suppliers and customers to manage liquidity. On the one hand, high CSR firms take longer to pay suppliers during COVID. On the other hand, they do not appear to relax payment terms for customers, especially in the early periods of the pandemic when uncertainty was highest.

### **4.3 Emphasis on strengthening own cash flow**

Observing an increase in days payable and a decrease in days sales outstanding during COVID paints a picture of high CSR firms that are more focused on strengthening their own liquidity position than mitigating potential liquidity constraints of their other stakeholders, namely trade credit partners in this case. Consistent with this picture, we investigate the firm’s cash conversion cycle (*CCC*) to capture how the firm focuses on increasing its net

operating cash cycle. *CCC* captures the number of days that a firm is without its cash and can give insights into a firm’s motive for holding cash (De Simone et al., 2019) or its focus on working capital management (Patatoukas, 2012; Chen et al., 2022). As the number of days payable increases, there are fewer days the firm is without cash, which improves the CCC metric. However, the number of days the firm is without cash increases as days of outstanding sales increase. *CCC* also factors in the number of days cash is tied up in inventory. The longer it takes to turn over inventory the greater the number of days the firm is without its cash. Accordingly, *CCC* is computed as the sum of days sales outstanding and days inventory minus days payable (Patatoukas, 2012; De Simone et al., 2019; Chen et al., 2022):

$$CCC = DIO + DSO - DPO$$

Considering this broader measure of how firms manage their operating cash cycle, for all firms, we find a net of 72 days from days its takes to receive customer payments and make payments to suppliers (see Table 1). Figure 3 provides the mean distribution of the cash conversion cycle before and after the onset of COVID.

Table 6 reports the results of changes in cash conversion cycle for high vs low CSR firms after the onset of COVID-19. The negative coefficients in columns (1)–(3) show a statistically significant decline in the cash conversion cycle for high CSR firms after the onset of COVID-19. The results in columns (4)–(6) indicate that the negative coefficients persist for all quarters during the pandemic. We interpret these findings as evidence that high CSR firms focus on their own liquidity preservation. The crisis seems to involve a trade-off between prioritizing stakeholders like customers and suppliers and the firms’ own operations.

## 5 Additional tests

### 5.1 The Business Roundtable firms

We provide further evidence by examining how firm visibility regarding CSR influences the firms' CSR engagement. To achieve this objective, we focus on the Business Roundtable (BRT), a lobbying group made up of CEOs of major U.S. firms. On August 19, 2019, over 180 CEOs in the group signed a public statement on the purpose of a corporation, committing to advance the interests of all of the firms' stakeholders (e.g., customers, employees, suppliers, and communities) along with those of the shareholders. In the wake of COVID-19 a little less than a year later, BRT firms reiterated their commitments to stakeholder interests, and such a commitment before and after the COVID-19 pandemic presents a fruitful setting for studying the value of CSR (Bae et al., 2021). Accordingly, we use BRT firms with these highly publicized CSR commitment as an alternative measure of high CSR firms, and examine whether BRT firms exhibit greater CSR along the primary dimensions examined above.

Table 7 presents the results of estimating the trade credit variables on BRT firm-quarters.<sup>9</sup> We show the results for *DPO* in columns (1)–(3), *DSO* in columns (4)–(6), and *CCC* in columns (7)–(9). The three columns under each variable alternately include quarter, industry and firm fixed effects. The results in columns (1)–(3) show positive but insignificant coefficients on *COVID\*BRTFirms*, indicating that BRT firms do not appear to take more or less aggressive measures towards their suppliers during COVID-19. However, the coefficient on *BRTFirms* is positive and statistically significant in columns (1)–(3), suggesting that BRT firms are consistently taking longer to pay their suppliers. This behavior does not change during COVID-19.

Moreover, the results in columns (4)–(6) show negative and significant coefficients, suggesting that BRT firms take aggressive actions with customers. The negative coefficients

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<sup>9</sup>The number of observations is larger in this sample as we do not restrict firm-quarters to those with an ESG score.

indicate that BRT firms decrease the number of days sales are outstanding as they likely required their customers to pay more quickly. The results in columns (7)–(9) confirm that BRT firms emphasize improvements in net operating cash flow as evidenced by decreasing number of days for cash conversion. Overall, the results suggest that BRT firms appear less stakeholder-focused than we would presume, at least in relation to its interaction with its customers and suppliers.

## 5.2 Other stakeholder actions

It is possible that cost-cutting measures implemented by high CSR firms to safeguard their own financial viability applies to other stakeholders. Therefore, we extend our analyses to examine interactions with stakeholders other than customers and suppliers during COVID. In untabulated analyses, we find that high CSR firms reduced employee headcount, cut dividends and reduced political spending during COVID. Our findings complement Lester et al. (2022), Afzali et al. (2022), Alves et al. (2021) and Bebchuk and Tallarita (2020). Taken together, we interpret these findings as evidence that during liquidity crises high-CSR firms emphasize safeguarding liquidity regardless of how stakeholders may be impacted.

## 6 Conclusion

In this study, we explore how the COVID-19 pandemic impacted the trade credit decisions of firms, particularly examining the alignment of these decisions with Corporate Social Responsibility (CSR) during an economic crisis. The pandemic brought about substantial financial stress, compelling firms to balance maintaining or improving liquidity and fulfilling their CSR obligations, especially in interactions with suppliers and customers. This unique setting provides an opportunity to critically assess whether firms deemed socially responsible genuinely uphold responsible business practices when confronted with financial pressures.

We utilize a difference-in-differences analysis to examine the behaviors of firms classified

as high versus low CSR, based on their Environmental, Social, and Governance (ESG) scores. We specifically analyze changes in trade credit policies with customers and suppliers during COVID, focusing on changes in days sales and days payable outstanding. We find that high CSR firms prolong payments to suppliers while shortening the time to collect receivables from credit customers after the start of the economic pressure of COVID. This behavior contradicts the principles of stakeholder theory, which advocates for the equitable consideration of all stakeholder interests, even in times of crises. Overall, our findings reveal a priority shift in high CSR firms under financial strain: they focus more on safeguarding their own liquidity rather than on stakeholder priorities.



## References

- Acharya, V. V. and S. Steffen (2020). The risk of being a fallen angel and the corporate dash for cash in the midst of covid. *The Review of Corporate Finance Studies* 9(3), 430–471.
- Afzali, M., U. Khan, and S. Rajgopal (2022). Sharing the pain between workers and management: Evidence from the covid-19 pandemic and 9/11 attacks. *Available at SSRN 4053005*.
- Alves, D. L., M. B. Gietzmann, and B. N. Jørgensen (2021). Show me the money-cut: Shareholder dividend suspensions and voluntary ceo pay cuts during the covid pandemic. *Journal of Accounting and Public Policy* 40(6), 106898.
- Attig, N., S. El Ghouli, O. Guedhami, and J. Suh (2013). Corporate social responsibility and credit ratings. *Journal of business ethics* 117, 679–694.
- Bae, K.-H., S. El Ghouli, Z. J. Gong, and O. Guedhami (2021). Does csr matter in times of crisis? evidence from the covid-19 pandemic. *Journal of Corporate Finance* 67, 101876.
- Bebchuk, L. A., K. Kastiel, and R. Tallarita (2023). Stakeholder capitalism in the time of covid. *Yale J. on Reg.* 40, 60.
- Bebchuk, L. A. and R. Tallarita (2020). The illusory promise of stakeholder governance. *Cornell L. Rev.* 106, 91.
- Berg, F., J. F. Koelbel, and R. Rigobon (2022). Aggregate confusion: The divergence of esg ratings. *Review of Finance* 26(6), 1315–1344.
- Box, T., R. Davis, M. Hill, and C. Lawrey (2018). Operating performance and aggressive trade credit policies. *Journal of Banking & Finance*, 89, 192–208.
- Broughton, K. (2021). Some companies are taking longer to pay suppliers despite recovery. *The Wall Street Journal*, June 7, 2021.
- Campello, M., J. R. Graham, and C. R. Harvey (2010). The real effects of financial constraints: Evidence from a financial crisis. *Journal of financial Economics* 97(3), 470–487.
- Chakravarthy, J., E. DeHaan, and S. Rajgopal (2014). Reputation repair after a serious restatement. *The Accounting Review* 89(4), 1329–1363.
- Chatterji, A. K., R. Durand, D. I. Levine, and S. Touboul (2016). Do ratings of firms converge? implications for managers, investors and strategy researchers. *Strategic Management Journal* 37(8), 1597–1614.
- Chen, C. H., S. K. Choy, and Y. Tan (2022). The cash conversion cycle spread: International evidence. *Journal of Banking & Finance* 140, 106517.
- Chen, C. J., N. Jain, and S. A. Yang (2023). The impact of trade credit provision on retail inventory: An empirical investigation using synthetic controls. *Management Science* 69(8), 4591–4608.

- Cheng, B., I. Ioannou, and G. Serafeim (2014). Corporate social responsibility and access to finance. *Strategic management journal* 35(1), 1–23.
- Chetty, R., J. N. Friedman, and M. Stepner (2024). The economic impacts of covid-19: Evidence from a new public database built using private sector data. *The Quarterly Journal of Economics* 139(2), 829–889.
- Chod, J., E. Lyandres, and S. A. Yang (2019). Trade credit and supplier competition. *Journal of Financial Economics* 131(2), 484–505.
- Christensen, D. M., G. Serafeim, and A. Sikochi (2022). Why is corporate virtue in the eye of the beholder? the case of esg ratings. *The Accounting Review* 97(1), 147–175.
- Clarkson, M. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of management review* 20(1), 92–117.
- Dass, N., J. R. Kale, and V. Nanda (2015). Trade credit, relationship-specific investment, and product market power. *Review of Finance* 19(5), 1867–1923.
- De Simone, L., J. D. Piotroski, and R. E. Tomy (2019). Repatriation taxes and foreign cash holdings: The impact of anticipated tax reform. *The Review of Financial Studies* 32(8), 3105–3143.
- Dhaliwal, D. S., O. Z. Li, A. Tsang, and Y. G. Yang (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The accounting review* 86(1), 59–100.
- Ding, W., R. Levine, C. Lin, and W. Xie (2021). Corporate immunity to the covid-19 pandemic. *Journal of financial economics* 141(2), 802–830.
- El Ghoul, S., O. Guedhami, C. C. Kwok, and D. R. Mishra (2011). Does corporate social responsibility affect the cost of capital? *Journal of Banking & Finance* 35(9), 2388–2406.
- Ersahin, N., M. Giannetti, and R. Huang (2023). Trade credit and the stability of supply chains. *SMU Cox School of Business Research Paper* (21-09), 21–13.
- Fabbri, D. and L. F. Klapper (2016). Bargaining power and trade credit. *Journal of Corporate Finance* 41, 66–80.
- Fahlenbrach, R., K. Rageth, and R. M. Stulz (2021). How valuable is financial flexibility when revenue stops? evidence from the covid-19 crisis. *The Review of Financial Studies* 34(11), 5474–5521.
- Flammer, C. and A. Kacperczyk (2019). Corporate social responsibility as a defense against knowledge spillovers: Evidence from the inevitable disclosure doctrine. *Strategic Management Journal* 40(8), 1243–1267.
- Freeman, R. (1984). E.(1984), strategic management: A stakeholder approach. *Boston: Pitman* 46.

- Friedman, M. (1970). The social responsibility of business is to increase its profits. *The New York times*, September 13, 1970, Section SM, Page 12, 12.
- Global Sustainable Investment Alliance (2021). The global sustainable investment review 2020. *Global Sustainable Investment Review*.
- Goss, A. and G. S. Roberts (2011). The impact of corporate social responsibility on the cost of bank loans. *Journal of Banking & Finance* 35(7), 1794–1810.
- Gyimah, D., M. Machokoto, and A. S. Sikochi (2020). Peer influence on trade credit. *Journal of Corporate Finance* 64, 101685.
- Harapko, S. (2023). How covid-19 impacted supply chains and what comes next. *EY-Global*, available at: <https://go.ey.com/3b5SyiL> or [https://www.ey.com/en\\_us/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next](https://www.ey.com/en_us/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next), accessed March 10, 2023..
- Jiraporn, P., N. Jiraporn, A. Boeprasert, and K. Chang (2014). Does corporate social responsibility (csr) improve credit ratings? evidence from geographic identification. *Financial Management* 43(3), 505–531.
- Johnstone-Louis, M., B. Kustin, C. Mayer, J. Stroehle, and B. Wang (2020). Business in times of crisis. *Oxford Review of Economic Policy* 36(Supplement\_1), S242–S255.
- Jory, S. R., H. D. Khieu, T. N. Ngo, and H. V. Phan (2020). The influence of economic policy uncertainty on corporate trade credit and firm value. *Journal of Corporate Finance* 64, 101671.
- Karaibrahimoglu, Y. Z. (2010). Corporate social responsibility in times of financial crisis. *African journal of Business management* 4(4), 382.
- Kestens, K., P. Van Cauwenberge, and H. V. Bauwhede (2012). Trade credit and company performance during the 2008 financial crisis. *Accounting & Finance* 52(4), 1125–1151.
- Laik, J. and P. Mirchandani (2023). Effect of seasonality, sales growth rate, and fiscal year end on cash conversion cycle. *Decision Sciences* 54(1), 43–63.
- Lee, S., M. Singal, and K. H. Kang (2013). The corporate social responsibility–financial performance link in the us restaurant industry: do economic conditions matter? *International Journal of Hospitality Management* 32, 2–10.
- Lester, R., E. Rouen, and B. Williams (2022). Financial flexibility and corporate employment.
- Li, X., J. Ng, and W. Saffar (2021). Financial reporting and trade credit: Evidence from mandatory ifrs adoption. *Contemporary Accounting Research* 38(1), 96–128.
- Lins, K. V., H. Servaes, and A. Tamayo (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *the Journal of Finance* 72(4), 1785–1824.

- Love, I., L. A. Preve, and V. Sarria-Allende (2007). Trade credit and bank credit: Evidence from recent financial crises. *Journal of financial economics* 83(2), 453–469.
- Lowe, K. B. (1998). Downsizing and firm performance: panacea or paradise lost? *Academy of Management Perspectives* 12(4), 130–131.
- Madsen, P. M. and Z. J. Rodgers (2015). Looking good by doing good: The antecedents and consequences of stakeholder attention to corporate disaster relief. *Strategic Management Journal* 36(5), 776–794.
- Mahmud, A., D. Ding, and M. M. Hasan (2021). Corporate social responsibility: Business responses to coronavirus (covid-19) pandemic. *SAGE open* 11(1), 2158244020988710.
- Martínez-Sola, C., P. J. García-Teruel, and P. Martínez-Solano (2013). Trade credit policy and firm value. *Accounting & Finance* 53(3), 791–808.
- Mitton, T. (2008). Why have debt ratios increased for firms in emerging markets? *European Financial Management* 14(1), 127–151.
- Ouyang, C., J. Xiong, L. Liu, and J. Yao (2024). Geographic proximity and trade credit: Evidence from a quasi-natural experiment. *Journal of Corporate Finance* 84, 102535.
- Parmelee, S. D. and C. F. Greer (2023). Corporate responses to the covid-19 pandemic by fortune 500 companies. *Public Relations Review* 49(1), 102285.
- Patatoukas, P. N. (2012). Customer-base concentration: Implications for firm performance and capital markets: 2011 american accounting association competitive manuscript award winner. *The accounting review* 87(2), 363–392.
- Petersen, M. A. and R. G. Rajan (1997). Trade credit: theories and evidence. *The review of financial studies* 10(3), 661–691.
- Powell, J. (2020, April). Coronavirus as the esg acid test. *Financial Times*, April 2, 2020.
- Raghunandan, A. and S. Rajgopal (2021). Do socially responsible firms walk the talk? Available at SSRN: <https://ssrn.com/abstract=3609056>.
- Roundtable, B. (2019). Business roundtable redefines the purpose of a corporation to promote an economy that serves all americans. *Business Roundtable*.
- Shumsky, T. and N. Trentmann (2018, June). Delaying payments to suppliers helps companies unlock cash. *The Wall Street Journal Online*, June 28, 2018.
- Strom, S. (2015, June). Big companies pay later, squeezing their suppliers. *The New York Times*, April 6, 2015.
- Wei, Y., Q. Liu, and J. Luo (2023). How does corporate social responsibility have influence on firms’ access to trade credit. *Accounting & Finance* 63, 1321–1349.

- Wu, Y., K. Zhang, and J. Xie (2020). Bad greenwashing, good greenwashing: Corporate social responsibility and information transparency. *Management Science* 66(7), 3095–3112.
- Xu, H., J. Wu, and M. Dao (2020). Corporate social responsibility and trade credit. *Review of Quantitative Finance and Accounting* 54(4), 1389–1416.
- Yinqing Zhao, J., D. Dwyer, and J. Zhang (2014). Usage and exposures at default of corporate credit lines: an empirical study. *Journal of Credit Risk* 10(1).

## Appendix A - Variable

VARIABLES	Description
COVID	A dummy variable equal to one if the firm's calendar quarter ends in the period after the onset of the COVID-19 (i.e. calendar quarters from 2020Q1–2022Q4), and zero otherwise (the period before the onset of COVID-19, calendar quarters from 2017Q1–2019Q4).
HighCSR	An indicator variable equal to one if firm-quarter is in the high category for CSR score, and zero otherwise. Using the most recent ESG scores prior to 2020Q1, firm quarters are categorized as high CSR if at least two of the three ESG scores from Refinitiv (ESGScore, ranging from 0 to 1), S&P (S_P_Global_ESG_Score, ranging from 0 to 100), and Sustainalytics (total_esg_score, weighted, ranging from 0 to 100) are greater than 50% as follows: $\text{HighCSR} = 1 \quad \text{if} \quad \sum (1_{(Refinitiv>0.50)}, 1_{(S\&P>50)}, 1_{(Sustainalytics>50)}) \geq 2$
DPO	Days payable outstanding measured as the average of accounts payable (APQ) divided by sum of cost of goods sold (COGSQ) over the previous four quarters multiplied by 365 days (Compustat).
DSO	Days sales outstanding measured as the average of accounts receivable (RECTQ) divided by the sum of sales (SALEQ) over the previous four quarters multiplied by 365 days (Compustat)
LogAssets	The natural logarithm of total assets (ATQ) in US\$ millions (Compustat).
Profitability	Operating Income Before Depreciation (OIBDPQ) divided by total assets (ATQ) (Compustat).
Market/Book	The ratio of the market value of assets (market value of equity plus book value of debt) to the book value of assets ( $[\text{PRCCQ} * \text{CSHOQ} + (\text{ATQ} - \text{CEQQ})] / \text{ATQ}$ ) (Compustat).
DebtRatio	Long term debt (DLTTQ) plus short term debt (DLCQ) divided by total assets (ATQ) (Compustat).
DefaultBarrier	An assessment of distance to default, measured as short-term debt (DLCQ) plus one half long-term debt ( $0.5 * \text{DLTTQ}$ ), scaled by total assets (ATQ) (Compustat).
Cash/Assets	Cash and cash equivalents (CHEQ) divided by total assets (ATQ) (Compustat).

Table 1: Summary statistics

This table shows summary statistics for measures of trade credit with customers and suppliers, corporate social responsibility (CSR), and firm characteristics. All continuous variables are winsorized at the bottom 1% and top 99%. All variables are defined in Appendix A.

VARIABLES	N	Mean	SD	Min	P25	P50	P75	Max
COVID	37,651	0.489	0.500	0.000	0.000	0.000	1.000	1.000
HighCSR	37,651	0.261	0.439	0.000	0.000	0.000	1.000	1.000
BRTFirms	37,651	0.057	0.231	0.000	0.000	0.000	0.000	1.000
DPO	37,552	58.149	64.977	2.669	25.723	43.332	65.098	461.112
DSO	37,597	56.863	43.752	0.366	33.721	52.711	70.056	327.311
CashConvCycle	36,858	72.056	100.347	-251.326	18.825	58.696	109.771	487.873
Assets	37,651	10,553	24,798	77.287	803.7	2,322	7,576	169,585
LogAssets	37,651	7.859	1.659	4.348	6.689	7.750	8.933	12.041
Profitability	37,651	0.023	0.040	-0.162	0.015	0.027	0.041	0.122
Market/Book	37,651	2.428	1.929	0.709	1.247	1.730	2.830	11.573
DebtRatio	37,651	0.325	0.229	0.000	0.158	0.310	0.449	1.162
DefaultBarrier	37,651	0.178	0.125	0.000	0.088	0.169	0.245	0.636
Cash/Assets	37,651	0.170	0.198	0.001	0.034	0.094	0.224	0.877

Table 2: Changes in days payable after the onset of COVID-19 for high CSR relative to low CSR firms

This table reports the results from regressing days accounts payable (DPO) on indicator variables for COVID-19 and corporate social responsibility (CSR), along with firm characteristics. Columns (1)–(3) are based on firm-quarter observations and (4)–(6) are based on firm-year observations. The results are presented with quarter (year) fixed effects and alternately with industry and firm fixed effects. All variables are as defined in Appendix A. The standard errors are reported in parentheses and are clustered by firm and quarter. Industry is based on 2-digit Standard Industry Classification. \*,\*\* and \*\*\* respectively indicates 10%, 5% and 1% significance level.

	Firm-Quarters			Firm-Years		
	(1)	(2)	(3)	(4)	(5)	(6)
COVID				-9.631*** (-2.734)	-4.758 (-1.414)	-0.600 (-0.369)
HighCSR	1.915 (0.473)	1.442 (0.361)		2.017 (0.545)	0.544 (0.153)	
COVID*HighCSR	3.602** (2.002)	3.204* (1.851)	3.065* (1.912)	6.226*** (3.077)	6.067*** (3.038)	5.609*** (2.946)
LogAssets	5.906*** (4.631)	5.763*** (4.505)	0.289 (0.130)	4.521*** (3.714)	4.195*** (3.387)	0.739 (0.310)
Profitability	-79.364* (-1.700)	-38.055 (-0.801)	33.375 (1.289)	-54.505*** (-3.426)	-38.372** (-2.402)	-0.240 (-0.015)
Market/Book	0.444 (0.474)	0.312 (0.323)	-0.886 (-1.613)	0.656 (0.703)	0.669 (0.674)	0.456 (0.544)
DebtRatio	-35.323 (-0.916)	-33.986 (-0.906)	20.379 (1.431)	-28.671 (-0.656)	-22.484 (-0.513)	24.397 (1.612)
DefaultBarrier	51.080 (0.703)	54.974 (0.782)	-26.185 (-1.105)	37.613 (0.455)	32.016 (0.387)	-37.716 (-1.441)
Cash/Assets	11.260 (1.093)	-10.704 (-1.073)	-4.770 (-0.688)	11.646 (1.076)	-8.263 (-0.764)	1.739 (0.194)
Observations	37,552	37,552	37,552	9,307	9,307	9,307
Adjusted R-squared	0.023	0.131	0.814	0.025	0.119	0.771
Quarter FE	Yes	Yes	Yes	–	–	–
Year FE	–	–	–	Yes	Yes	Yes
Industry FE	No	Yes	No	No	Yes	No
Firm FE	No	No	Yes	No	No	Yes



Table 3: Changes in days payable by quarter before and after the onset of COVID-19 for high CSR relative to low CSR firms

This table reports the results from regressing days accounts payable (DPO) on indicator variables for COVID-19 and corporate social responsibility (CSR), and firm characteristics. The results are presented alternatively with quarter, industry, and firm fixed effects. All variables are as defined in Appendix A. The standard errors are reported in parentheses and are clustered by firm. Industry is based on 2-digit Standard Industry Classification. \*,\*\* and \*\*\* respectively indicates 10%, 5% and 1% significance level.

VARIABLES	(1)		(2)		(3)	
	coef	tstat	coef	tstat	coef	tstat
HighCSR	1.872	(0.453)	1.545	(0.375)		
2017Q1*HighCSR	0.583	(0.260)	0.447	(0.201)	1.356	(0.637)
2017Q2*HighCSR	0.287	(0.129)	0.226	(0.102)	1.199	(0.565)
2017Q3*HighCSR	0.110	(0.050)	0.193	(0.088)	0.721	(0.341)
2017Q4*HighCSR	-0.441	(-0.207)	-0.573	(-0.273)	0.373	(0.183)
2018Q1*HighCSR	-0.272	(-0.138)	-0.478	(-0.247)	0.193	(0.104)
2018Q2*HighCSR	0.376	(0.197)	0.090	(0.048)	0.739	(0.424)
2018Q3*HighCSR	0.702	(0.394)	0.357	(0.204)	0.661	(0.400)
2018Q4*HighCSR	-0.898	(-0.494)	-1.152	(-0.684)	-0.015	(-0.010)
2019Q1*HighCSR	-0.476	(-0.363)	-0.621	(-0.473)	-0.600	(-0.466)
2019Q2*HighCSR	0.125	(0.122)	0.006	(0.006)	-0.091	(-0.090)
2019Q3*HighCSR	0.398	(0.520)	0.263	(0.348)	0.277	(0.379)
2019Q4*HighCSR [ <i>Benchmark</i> ]						
2020Q1*HighCSR	1.335*	(1.681)	1.488*	(1.914)	1.331**	(2.091)
2020Q2*HighCSR	3.115***	(2.938)	3.149***	(2.969)	3.145***	(3.196)
2020Q3*HighCSR	4.367***	(3.464)	4.416***	(3.504)	4.591***	(3.791)
2020Q4*HighCSR	3.802**	(2.398)	3.327**	(2.115)	3.910***	(2.675)
2021Q1*HighCSR	4.300***	(2.628)	3.535**	(2.191)	4.075***	(2.695)
2021Q2*HighCSR	4.134**	(2.401)	3.536**	(2.085)	3.881**	(2.466)
2021Q3*HighCSR	4.044**	(2.298)	3.369*	(1.947)	3.822**	(2.385)
2021Q4*HighCSR	3.668*	(1.647)	2.793	(1.276)	2.667	(1.315)
2022Q1*HighCSR	2.953	(1.315)	2.126	(0.963)	2.800	(1.377)
2022Q2*HighCSR	3.247	(1.461)	2.410	(1.107)	3.378*	(1.690)
2022Q3*HighCSR	4.404**	(1.968)	3.478	(1.588)	4.055**	(2.036)
2022Q4*HighCSR	4.453**	(1.970)	3.587	(1.626)	3.976**	(1.988)
LogAssets	5.907***	(4.630)	5.763***	(4.503)	0.281	(0.127)
Profitability	-79.293*	(-1.697)	-38.021	(-0.800)	33.465	(1.292)
Market/Book	0.444	(0.473)	0.313	(0.324)	-0.881	(-1.603)
DebtRatio	-35.390	(-0.918)	-34.048	(-0.907)	20.229	(1.417)
DefaultBarrier	51.209	(0.705)	55.079	(0.783)	-25.957	(-1.096)
Cash/Assets	11.271	(1.094)	-10.704	(-1.073)	-4.738	(-0.684)
Observations	37,552		37,552		37,552	
Adjusted R-squared	0.023		0.130		0.814	
Quarter FE	Yes		Yes		Yes	
Industry FE	No		Yes		No	
Firm FE	No		No		Yes	

Table 4: Changes in days sales outstanding after the onset of COVID-19 for high CSR relative to low CSR firms

This table reports the results from regressing days sales outstanding (DSO) on indicator variables for COVID-19 and corporate social responsibility (CSR), along with firm characteristics. Columns (1)–(3) are based on firm-quarter observations and (4)–(6) are based on firm-year observations. The results are presented with quarter (year) fixed effects and alternately with industry and firm fixed effects. All variables are as defined in Appendix A. The standard errors are reported in parentheses and are clustered by firm and quarter. Industry is based on 2-digit Standard Industry Classification. \*,\*\* and \*\*\* respectively indicates 10%, 5% and 1% significance level.

	Firm-Quarter			Firm-Year		
	(1)	(2)	(3)	(4)	(5)	(6)
COVID				-1.383 (-0.385)	1.742 (0.524)	1.933* (1.921)
HighCSR	2.603 (1.064)	2.368 (1.120)		2.797 (1.138)	2.719 (1.306)	
COVID*HighCSR	-1.925** (-2.133)	-1.872** (-2.142)	-1.976** (-2.577)	-1.374 (-1.441)	-1.156 (-1.228)	-1.609* (-1.829)
LogAssets	0.360 (0.490)	0.688 (1.083)	4.296*** (2.933)	1.109 (1.470)	1.108* (1.779)	1.683 (0.943)
Profitability	-202.221*** (-7.721)	-177.894*** (-7.016)	-66.523*** (-4.541)	-76.700*** (-9.253)	-67.556*** (-8.440)	-53.691*** (-6.114)
Market/Book	-0.454 (-0.813)	-1.261** (-2.357)	-0.584 (-1.630)	-0.042 (-0.079)	-0.957* (-1.850)	-0.926* (-1.763)
DebtRatio	-60.001* (-1.719)	-66.679** (-2.388)	-4.950 (-0.491)	-68.334** (-1.965)	-75.725*** (-2.706)	-9.690 (-0.621)
DefaultBarrier	79.656 (1.180)	109.392** (2.015)	1.044 (0.056)	93.419 (1.396)	126.188** (2.327)	-5.149 (-0.180)
Cash/Assets	4.311 (0.682)	-11.873* (-1.864)	-7.054* (-1.913)	1.237 (0.202)	-11.724* (-1.886)	-7.998 (-1.490)
Observations	37,597	37,597	37,597	9,314	9,314	9,314
Adjusted R-squared	0.048	0.256	0.832	0.075	0.275	0.818
Quarter FE	Yes	Yes	Yes	–	–	–
Year FE	–	–	–	Yes	Yes	Yes
Industry FE	No	Yes	No	No	Yes	No
Firm FE	No	No	Yes	No	No	Yes

Table 5: Changes in days sales outstanding by quarter before and after the onset of COVID-19 for high CSR relative to low CSR firms

This table reports the results from regressing trade credit variables, accounts receivable days (DSO) in columns (1)–(6), on indicator variables for COVID-19 and corporate social responsibility (CSR), and firm characteristics. The results are presented alternatively with quarter, industry, and firm fixed effects. All variables are as defined in Appendix A. The standard errors are reported in parentheses and are clustered by firm and quarter. Industry is based on 2-digit Standard Industry Classification. \*, \*\* and \*\*\* respectively indicates 10%, 5% and 1% significance level.

VARIABLES	(1) coef	(2) tstat	(3) coef	(4) tstat	(5) coef	(6) tstat
HighCSR	1.305	(0.513)	1.448	(0.658)		
2017Q1*HighCSR	2.241*	(1.745)	1.680	(1.328)	1.537	(1.288)
2017Q2*HighCSR	2.134*	(1.794)	1.687	(1.436)	2.062*	(1.862)
2017Q3*HighCSR	1.999*	(1.720)	1.488	(1.303)	1.674	(1.547)
2017Q4*HighCSR	1.465	(1.211)	1.010	(0.841)	1.365	(1.174)
2018Q1*HighCSR	2.310**	(2.125)	1.742	(1.641)	1.808*	(1.811)
2018Q2*HighCSR	1.792*	(1.761)	1.138	(1.141)	1.405	(1.522)
2018Q3*HighCSR	1.492	(1.500)	0.875	(0.894)	1.151	(1.280)
2018Q4*HighCSR	0.649	(0.566)	0.390	(0.385)	0.838	(0.959)
2019Q1*HighCSR	0.884	(1.068)	0.671	(0.817)	0.644	(0.844)
2019Q2*HighCSR	0.354	(0.584)	0.196	(0.326)	0.238	(0.429)
2019Q3*HighCSR	0.334	(0.785)	0.236	(0.571)	0.110	(0.298)
2019Q4*HighCSR [ <i>Benchmark</i> ]						
2020Q1*HighCSR	-1.053	(-1.620)	-0.955	(-1.527)	-1.069**	(-2.325)
2020Q2*HighCSR	-1.194*	(-1.735)	-1.276*	(-1.876)	-0.934*	(-1.675)
2020Q3*HighCSR	-0.954	(-1.062)	-0.951	(-1.063)	-0.931	(-1.156)
2020Q4*HighCSR	-0.638	(-0.615)	-0.918	(-0.892)	-0.930	(-0.992)
2021Q1*HighCSR	-0.694	(-0.591)	-1.224	(-1.055)	-1.046	(-0.991)
2021Q2*HighCSR	-0.388	(-0.324)	-0.714	(-0.607)	-0.626	(-0.586)
2021Q3*HighCSR	-0.787	(-0.653)	-1.128	(-0.947)	-1.026	(-0.937)
2021Q4*HighCSR	-0.257	(-0.215)	-0.779	(-0.670)	-0.905	(-0.895)
2022Q1*HighCSR	-0.683	(-0.573)	-1.151	(-0.987)	-1.382	(-1.365)
2022Q2*HighCSR	-0.844	(-0.687)	-1.291	(-1.079)	-1.198	(-1.171)
2022Q3*HighCSR	-0.108	(-0.088)	-0.613	(-0.514)	-0.744	(-0.737)
2022Q4*HighCSR	0.163	(0.136)	-0.370	(-0.316)	-0.170	(-0.166)
LogAssets	0.359	(0.488)	0.687	(1.081)	4.269***	(2.906)
Profitability	-202.227***	(-7.718)	-177.918***	(-7.013)	-66.547***	(-4.541)
Market/Book	-0.453	(-0.810)	-1.260**	(-2.353)	-0.580	(-1.620)
DebtRatio	-59.993*	(-1.718)	-66.666**	(-2.386)	-4.937	(-0.489)
DefaultBarrier	79.627	(1.178)	109.351**	(2.012)	0.944	(0.050)
Cash/Assets	4.298	(0.680)	-11.886*	(-1.865)	-7.064*	(-1.913)
Observations	37,597		37,597		37,597	
Adjusted R-squared	0.047		0.255		0.832	
Quarter FE	Yes		Yes		Yes	
Industry FE	No		Yes		No	
Firm FE	No		No		Yes	

Table 6: Changes in cash conversion cycle before and after the onset of COVID-19 for high CSR relative to low CSR firms

This table reports the results from regressing cash conversion cycle (CCC) on indicator variables for COVID-19 and corporate social responsibility (CSR), along with firm characteristics in columns (1)–(6). Columns (1)–(3) present the average results during COVID. Columns (4)–(6) present changes in CCC by quarter. The results are presented with quarter fixed effects and alternately with industry and firm fixed effects. All variables are as defined in Appendix A. The standard errors are reported in parentheses and are clustered by firm and quarter. Industry is based on 2-digit Standard Industry Classification. \*,\*\* and \*\*\* respectively indicates 10%, 5% and 1% significance level.

	(1)		(2)		(3)		(4)		(5)		(6)	
	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat	coef	tstat
HighCSR	18.189***	(3.059)	0.882	(0.175)			14.423**	(2.345)	-2.267	(-0.431)		
COVID*HighCSR	-9.322***	(-3.966)	-7.658***	(-3.464)	-6.039***	(-3.360)						
2017Q1*HighCSR							4.983*	(1.761)	3.745	(1.383)	2.532	(1.018)
2017Q2*HighCSR							5.324*	(1.931)	4.135	(1.565)	3.218	(1.319)
2017Q3*HighCSR							6.066**	(2.217)	4.875*	(1.856)	3.364	(1.393)
2017Q4*HighCSR							5.869**	(2.132)	4.744*	(1.796)	3.295	(1.319)
2018Q1*HighCSR							5.759**	(2.237)	5.148**	(2.077)	3.761	(1.630)
2018Q2*HighCSR							5.775**	(2.312)	5.028**	(2.102)	3.752*	(1.695)
2018Q3*HighCSR							4.140*	(1.722)	3.689	(1.591)	3.192	(1.468)
2018Q4*HighCSR							2.043	(0.836)	1.223	(0.526)	1.529	(0.741)
2019Q1*HighCSR							3.193*	(1.694)	3.034*	(1.665)	2.671	(1.537)
2019Q2*HighCSR							1.359	(1.023)	1.387	(1.064)	1.450	(1.142)
2019Q3*HighCSR							0.930	(1.107)	0.983	(1.206)	0.943	(1.199)
2019Q4*HighCSR [ <i>Benchmark</i> ]												
2020Q1*HighCSR							-2.765**	(-2.537)	-2.647**	(-2.548)	-2.097**	(-2.459)
2020Q2*HighCSR							-3.862***	(-2.621)	-3.870***	(-2.665)	-3.674***	(-2.719)
2020Q3*HighCSR							-3.408*	(-1.839)	-3.794**	(-2.128)	-3.833**	(-2.309)
2020Q4*HighCSR							-5.280**	(-2.223)	-4.949**	(-2.126)	-4.316**	(-2.259)
2021Q1*HighCSR							-6.250**	(-2.453)	-5.875**	(-2.370)	-4.639**	(-2.199)
2021Q2*HighCSR							-5.401**	(-2.064)	-4.625*	(-1.825)	-3.708*	(-1.718)
2021Q3*HighCSR							-6.966**	(-2.551)	-5.867**	(-2.220)	-4.514**	(-1.980)
2021Q4*HighCSR							-6.025**	(-2.185)	-4.935*	(-1.885)	-3.013	(-1.342)
2022Q1*HighCSR							-6.024**	(-2.200)	-4.127	(-1.585)	-3.193	(-1.474)
2022Q2*HighCSR							-7.297***	(-2.600)	-4.794*	(-1.807)	-3.802*	(-1.736)
2022Q3*HighCSR							-7.684**	(-2.556)	-5.283*	(-1.835)	-3.687	(-1.494)
2022Q4*HighCSR							-5.957*	(-1.934)	-3.329	(-1.155)	-2.448	(-0.989)
Controls	Yes		Yes		Yes		Yes		Yes		Yes	
Observations	36,858		36,858		36,858		36,858		36,858		36,858	
Adjusted R-squared	0.032		0.338		0.873		0.031		0.338		0.873	
Quarter FE	Yes		Yes		Yes		Yes		Yes		Yes	
Industry FE	No		Yes		No		No		Yes		No	
Firm FE	No		No		Yes		No		No		Yes	

Table 7: Analyses using Business Roundtable firms: Changes in trade credit measures after the onset of COVID-19 for high CSR relative to low CSR firms

This table reports the results from regressing days accounts payable (DPO) Columns (1)–(3), days sales outstanding (DSO) Columns (4)–(6) and cash conversion cycle (CCC) Columns (7)–(9) on indicator variables for COVID-19 and BRT Firms, along with firm characteristics. The results are presented with quarter fixed effects and alternately with industry and firm fixed effects. All variables are as defined in Appendix A. The standard errors are reported in parentheses and are clustered by firm and quarter. Industry is based on 2-digit Standard Industry Classification. \*,\*\* and \*\*\* respectively indicates 10%, 5% and 1% significance level.

VARIABLES	DPO			DSO			CCC		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
BRTFirms	22.030*** (2.608)	28.111*** (3.458)		2.419 (0.367)	8.387 (1.487)		-15.344 (-1.463)	-29.778*** (-3.323)	
COVID*BRTFirms	-2.565 (-0.452)	-2.393 (-0.442)	0.568 (0.113)	-5.215*** (-2.735)	-5.685*** (-2.969)	-6.013*** (-3.469)	-9.618 (-1.570)	-9.665* (-1.673)	-10.655* (-1.930)
LogAssets	-4.931*** (-2.699)	-4.186** (-2.328)	-1.134 (-0.126)	-1.745* (-1.663)	-1.854** (-2.378)	4.961 (1.120)	-1.651 (-0.965)	-0.416 (-0.259)	12.491* (1.943)
Profitability	-372.826*** (-6.446)	-363.277*** (-6.149)	-114.533*** (-2.601)	-118.552*** (-7.830)	-115.799*** (-7.380)	-52.045*** (-3.511)	172.941*** (3.863)	186.058*** (4.136)	26.590 (0.812)
Market/Book	3.840*** (3.074)	4.113*** (3.329)	2.420* (1.734)	-1.074*** (-3.435)	-1.009*** (-2.981)	-0.442 (-0.836)	-4.404*** (-4.369)	-4.278*** (-4.175)	-1.575 (-1.634)
DebtRatio	-185.902*** (-5.032)	-174.804*** (-4.740)	-15.445 (-0.497)	-46.077*** (-3.768)	-43.781*** (-3.967)	-25.415*** (-2.605)	70.894** (2.467)	94.501*** (3.398)	12.387 (0.490)
DefaultBarrier	338.732*** (5.080)	328.110*** (4.977)	58.265 (1.207)	44.133** (2.472)	38.367** (2.386)	30.785* (1.906)	-190.331*** (-3.757)	-216.479*** (-4.377)	-48.459 (-1.274)
Cash/Assets	-34.047* (-1.944)	-59.638*** (-2.980)	30.573 (1.101)	20.836*** (2.618)	-6.046 (-0.742)	-6.458 (-0.620)	16.132 (1.055)	-16.595 (-1.003)	-58.961*** (-2.732)
Observations	73,299	73,299	73,299	73,357	73,357	73,357	71,647	71,647	71,647
Adjusted R-squared	0.155	0.231	0.719	0.024	0.201	0.650	0.110	0.228	0.722
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	No	Yes	No	No	Yes	No	No	Yes	No
Firm FE	No	No	Yes	No	No	Yes	No	No	Yes

Figure 1: Days payable around COVID-19 for high and low CSR firms

This figure shows the average days payable for the sample period in our analyses grouped by high or low corporate social responsibility score (CSR). Days payable is computed from the quarterly data from 2017Q1 to 2022Q4 as described in Appendix A.

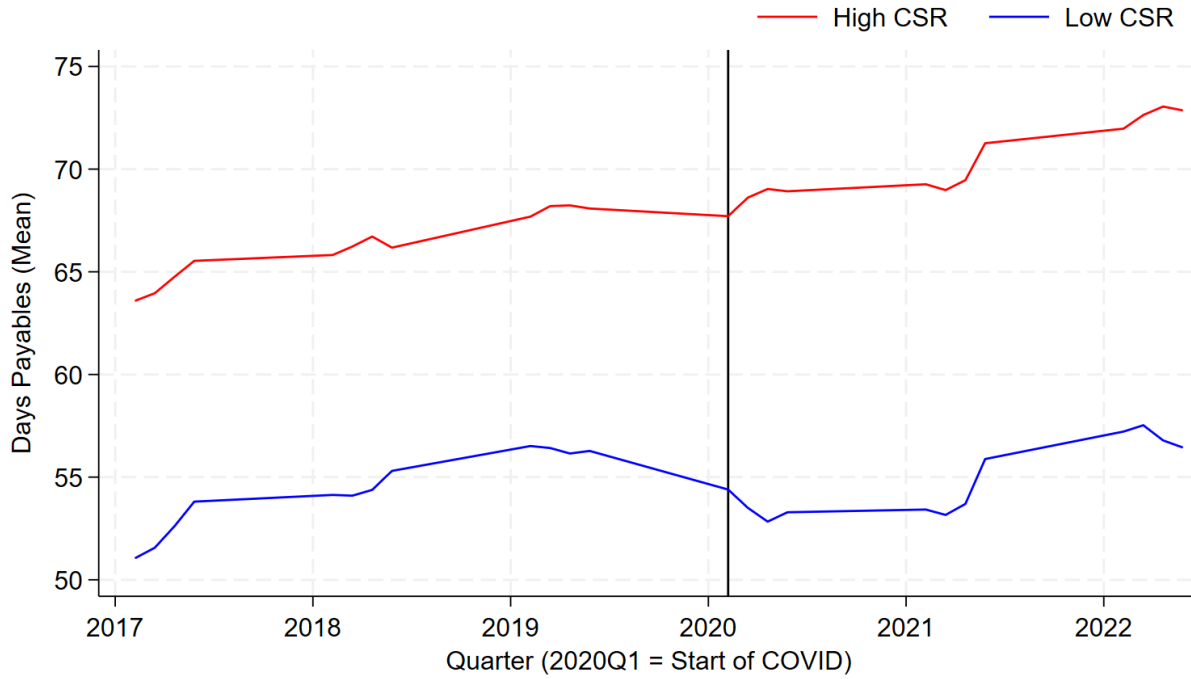


Figure 2: Days sales outstanding around COVID-19 for high and low CSR firms

This figure shows the average days sales outstanding for the sample period in our analyses grouped by high or low corporate social responsibility score (CSR). Days sales outstanding is computed from the quarterly data from 2017Q1 to 2022Q4 as described in Appendix A.

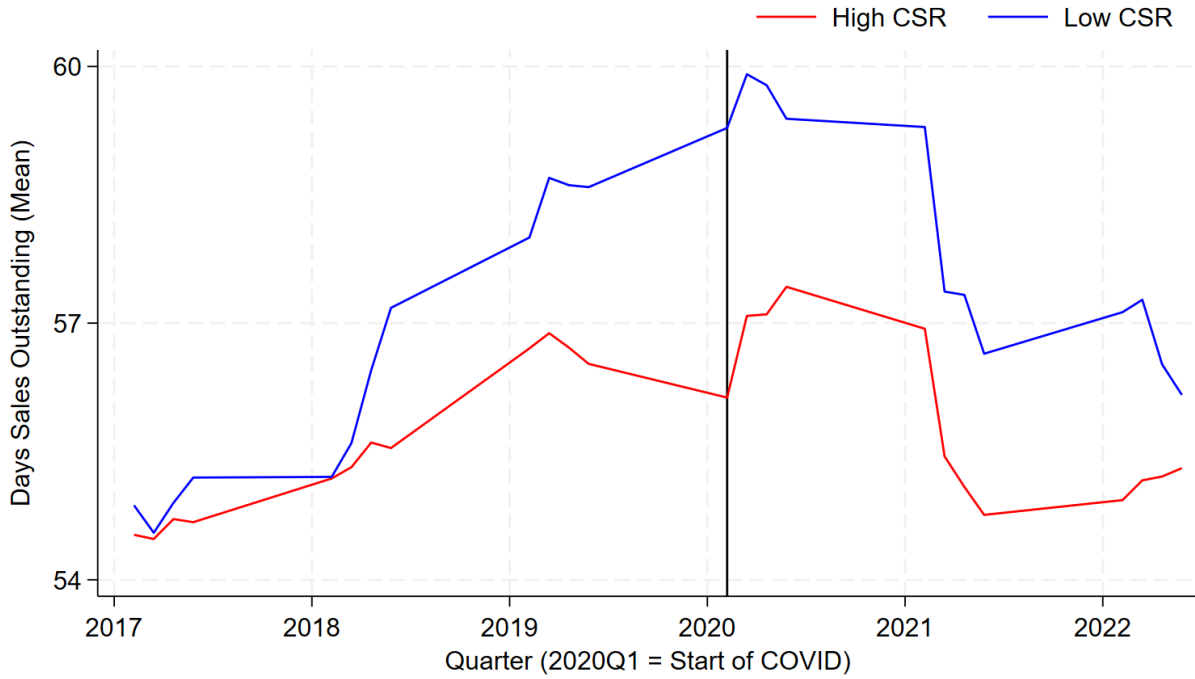


Figure 3: Cash conversion cycle around COVID-19 for high and low CSR firms

This figure shows the average cash conversion cycle (in days) for the sample period in our analyses grouped by high or low corporate social responsibility score (CSR). Cash conversion cycle is computed from the quarterly data from 2017Q1 to 2022Q4 as described in Appendix A.

