The Determinants of Firms' Engagement in Corporate Social Responsibility

Evidence from Natural Experiments

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The Determinants of Firms' Engagement in Corporate Social Responsibility: Evidence from Natural Experiments

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at the

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The CBS PhD School is an active and international research environment at Copenhagen Business School for PhD students working on theoretical and empirical research projects, including interdisciplinary ones, related to economics and the organisation and management of private businesses, as well as public and voluntary institutions, at business, industry and country level.

Abstract

What drives firms' engagement in sustainable, socially, and environmentally responsible actions? As the interest in corporate social responsibility (CSR) and its role in portfolio construction grows, it is critically important for investors to understand the determinants of CSR in order to understand the value of CSR, especially if CSR becomes a new investment factor. In my Ph.D. thesis, I study the determinants of CSR through the use of natural experiments, namely the passage of the American Jobs Creation Act of 2004 (AJCA), the removal of short selling restrictions as part of a Securities and Exchange Commission (SEC) pilot study and the occurrence of extreme weather events. The use of natural experiments allows me to establish a direction of causality, which is pivotal for advancing both the scholarships on sustainability and corporate social responsibility as well as the understanding of investors seeking to include CSR as a component of their portfolios.

The first chapter, "Improved Access to Finance and Firms' Engagement in Corporate Social Responsibility: Evidence from a Natural Experiment", set out to investigate one of the long-standing questions in the field of CSR, the direction of causality between firm financial performance and firms' engagement in CSR. To establish causality, we use the exogenous variation in the firm-level cost of financing induced by a one-off reduction of tax-related costs under the AJCA. Information on firm repatriation activities was collected from thousands of firm filings with the SEC. Results from a sample of U.S. firms for years 2001 through 2007 provide causal evidence that improved access to finance leads to higher CSR engagement. We further investigate whether firms' prior levels of financial constraints and media coverage moderate the relationship between improved access to finance and subsequent engagement in CSR.

The second chapter, "Enemy at the Gates: The threat of Short Selling and Firms' Engagement in Corporate Social Responsibility", explores the link between an increase in the threat of short selling through the removal of short selling restrictions and firms' engagement in CSR. Taking a risk-management perspective of CSR, we argue that firms will improve their CSR when confronting an increase in the threat of short selling. We further theorize that the level of stock held by short-term oriented institutional investors and the firms' level of financing constraints moderate the relationship. To test our hypotheses, we use the exogenous variation in the cost of short selling induced by the SEC's Pilot Program under Regulation SHO of 2004, through which the SEC lifted short selling restrictions for a randomly selected subset of Russell 3000 firms. Results

from difference-in-differences analyses lend support to our hypotheses.

The third chapter, titled "The Inconvenient Mind: Extreme Weather Events and Firms' Engagement in Corporate Social Responsibility," tests whether shortening of manager's temporal and spatial distance to climate change, induced by the occurrence of extreme weather events, causes changes in their firms' engagement in CSR. I account for the moderating effect of managers' political beliefs and further explore whether managers express more concerns about climate change after experiencing an extreme weather event. Results from difference-in-differences analysis show that firms increase their engagement in CSR. However, the increase is driven by the social rather than the environmental component of CSR. I find no evidence for the moderating effect of CEO's political affiliation. Further, I find evidence that extreme weather events are severe and salient enough for managers to discuss them in their reports to investors; however, they do not link the events and the related risks to climate change. Overall, the results suggest that managers respond to the immediate threat of extreme weather when it materializes but not to the more distant and abstract threat posed by climate change.

To my parents, Rusin and Rositza Rusinovi.

In loving memory of Dr. Todorka (Dora) Nedeva.

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Introduction and Summaries

This Ph.D. thesis consists of three essays that thematically center on an essential question in the scholarship of corporate social responsibility (CSR), namely, what are the drivers of firms' engagement in CSR? Influential previous work has shown evidence for the benefits of CSR through improved financial performance, gained social legitimacy, customer loyalty, and employee retention, as well as through its "insurance-like" properties. What remains an interesting avenue to explore is why some companies engage in CSR while others do not. To address this question, I use empirical methods suited for establishing causal relations — difference-in-differences (DiD) methodology.

As the interest in CSR and its role in portfolio construction grows, it is equally important for academics, investors, and legislators to understand the drivers of CSR in order to understand the value of CSR. Acknowledging the direction of causality is pivotal for investment decision making. For example, the link between investing in CSR for its insurance (risk reduction) properties and the moderating role of financial constraints have a direct implication for investors.

Results from a DiD estimation show that financially unconstrained firms increase their CSR to counteract external negative threats. Prior research showing that financially constrained firms have higher stock returns than unconstrained firms (Buehlmaier and Whited, 2018), can provide a risk-based explanation of why investing in high CSR firms may yield lower future portfolio returns. Overall, the findings suggest that firms' financial performance, their need and ability to access external financing or counter external threats determine their engagement in CSR. Moreover, the temporal orientation of owners, long-term oriented vs. short-term oriented institutional investors, as well as firms' exposure to (negative) media coverage affect firms' CSR engagement.

Indeed, firms' internal characteristic, market performance, and economic conditions affect their ability to engage in CSR. However, the last decades have been marked by a significant increase in corporate wealth and concentration of market power. The formation of corporate giants in virtually all industries, from airlines to pharmaceuticals to high-tech firms, has led to weaker productivity and lower share of income being paid to employees, despite rising corporate profits (Diez, Leigh, and Tambunlertchai, 2018). This economic expansion, fueled by globalization and technological change, has been costly to an important stakeholder — the natural environment. Scientific findings confirming the link between human activity and climate change (Christidis, Stott, and Brown, 2011; Tett, Jones, Stott, Hill, Mitchell, Allen, Ingram, Johns, Johnson, and Jones,

2002) come with the growing understanding of anthropogenic warming and its role in the frequency and severity of weather and climate events.

Today, an increasing number of organizations are acknowledging the risks of inaction. Firms' engagement in socially and environmentally responsible activities can play a key role in addressing the challenge ahead. Historically, however, firms have been a significant contributor to the underlying causes of climate change. For example, Exxon funded climate-denying research for more than twenty years after it became aware of the link between fossil fuels and increased levels of CO_2 emissions. Although most firms have ceased their war on the science behind climate change, political polarization of the issue has contributed to a delay in or lack of legislative and societal responses.

The complexity of the threat of climate change, along with the dispersion of the effects over time and geographical space, make the study of physiological mechanisms and how they apply to the context of climate change key to understanding the drivers of individual and organizational engagement with the issue. To address this challenge, I investigate whether experiences of extreme (costly and damaging) weather events shorten managers' cognitive distance to climate change. I find that managers exhibit biases with regards to the abstract nature and the long-time frame of climate change and that their firms respond to the immediate threat posed by an extreme weather event when it materializes, but not to the more distant threat of climate change. Although extreme weather events and the risks and losses associated with them are becoming more prominent, a drastic organizational change of behavior related to engagement in CSR and specifically with the natural environment may not occur. If firms' self-regulation is not to be expected, there is a greater need than ever for national and international regulations of business conduct to reach the targets set by the Paris Agreement.

1 Summaries in English

Improved Access to Finance and Firms' Engagement in Corporate Social Responsibility: Evidence from a Natural Experiment

The first chapter, which is a continuation of work done during my master thesis, provides evidence for a causal relationship between firm financial performance and firms' engagement in CSR. A general challenge for the literature is the potentially endogenous nature of the relationship between CSR investments and firm financial performance due to factors such as reverse causality. Stronger financial performance might be caused by CSR engagement or, alternatively, higher CSR engagement might stem from a better firm performance. Illustratively, Margolis, Elfenbein, and Walsh (2007) conclude in their review that firms' prior financial performance can largely explain the correlation between CSR investments and firm performance, a conclusion in line with that of other (meta-) studies (e.g., Krüger, 2009; Orlitzky, Schmidt, and Rynes, 2003).

To overcome the serious challenge of endogeneity, we use an exogenous variation in firms' cost of internal financing generated by the passage of the American Jobs Creation Act (AJCA) of 2004. The act provided a significant and one-off reduction in tax-related costs to profits repatriated from foreign subsidiaries back to the U.S.-based parent firm (the tax rate was lowered to 5.25 percent from the standard 35 percent). Signing the AJCA into law induced an exogenous variation in firms' internal costs of financing, which allows us to test for a causal relationship between a reduction in firms' internal cost of finance and their engagement in CSR.

We empirically test the relationship between financial performance and CSR investments with a sample of firms listed in the Standard & Poor's 1500 stock market index (S&P 1500) as well as in the KLD social performance database, which we use to measure CSR. Information on firms' repatriation activity is not readily available and was collected from thousands of firm filings using a Python-based crawler and a parser. We use a difference-in-differences (DiD) approach to isolate the effect of the act on firms' CSR engagement.

As the decision to repatriate under the AJCA is made by managers, it is endogenous. To account for this, we estimated a predicted probability of repatriation using logistic regression. The predicted probability allows us to distinguish between firms that could not repatriate (group 1) — for example, because they did not have any foreign earnings—from firms that could repatriate but chose not to (group 2) and from firms that did repatriate (group 3). To correctly identify treatment and control groups, we follow Faulkender and Petersen (2012) and isolate the effect of the act for firms that had an opportunity to repatriate and did repatriate (group 3) as opposed to those that had an opportunity to repatriate but did not repatriate (group 2). The results indicate that reductions in firms' internal cost of financing lead to increases in CSR engagement for firms in group 3.

We extend the main analysis by further accounting for firms' heterogeneity with respect to their level of financial constraints and the level of overall and negative media coverage. We provide causal evidence that the effect of improved access to finance (through reduced cost of capital) on CSR differs based on firms' level of financial constraints prior to the act. Unconstrained firms increased their CSR engagement, whereas constrained firms decreased their CSR engagement in absolute terms and relative to firms that were unconstrained. We also provide a new angle on the use of CSR as a costly signal to stakeholders, as we show how engagement in CSR following the repatriation act increases with the level of overall media attention and negative media attention to the firm.

This working paper makes important contributions to multiple streams of literature. First, we contribute to recent empirical studies on the direction of causality in the relationship between CSR and financial performance. We add to this stream of literature by providing causal evidence that improved financial performance (lower internal costs of financing) affects firm-level CSR engagement. Further, the results of our study indicate the need for future studies on the domain of CSR and financial performance to account for firm-level financial constraints. Second, our study adds to the literature that directly addresses the impact of CSR on firms' financial constraints. Cheng, Ioannou, and Serafeim (2014) show that financial constraints are sensitive to CSR investments in the respect that higher spending correlates with relaxed financial constraints.

In contrast, we provide causal evidence for the reverse relationship and, more importantly, for a multi-directional effect. Reduction in financial constraints increases CSR; however, the effect differs depending on a given firm's level of financial constraints. Initially constrained firms decrease their CSR, whereas unconstrained firms increase their engagement in CSR. Third, we contribute to the literature on the strategic use of CSR as a signaling instrument (see also Flammer, 2020; Su, Peng, Tan, and Cheung, 2016; Jones and Murrell, 2001). More specifically, results from the analysis accounting for firms' prior level of media attention show that CSR is a costly signal since firms with high media coverage and negative media attention increase their CSR engagement following an improvement in their access to financing. If firms could counter the (negative) media attention through CSR and CSR was not costly, they would do so even in the absence of the one-off tax reduction. Overall, the results lend support to CSR being used as a viable and costly signaling tool for firms.

Enemy at the Gates: The Threat of Short Selling and Firms' Engagement in Corporate Social Responsibility

In the second chapter, we test for a causal relationship between the threat of short selling and firms' performance on CSR. Applying the risk-management perspective of CSR, we argue that when faced with an increase in the threat of short-sellers targeting the firm, managers actively counteract the potential pressure on the firm's stock price by increasing the firm's CSR performance.

Researchers have long been interested in understanding and explaining the role of capital markets and different types of investors for firm level-outcomes. Scholars studied, for example, the influence of active and passive investors (Goranova and Ryan, 2014) or of various types of institutional investors (Bushee, 1998). Comparably less research, though, considers one particular type of investor behavior, short selling. In general, short selling can significantly escalate the price pressure on a firm's stocks in situations when the stock is in excess supply, for example, during times of organizational turmoil or economic crises. Indeed, short sellers have been blamed for intensifying the downward price spiral of stocks during the 2007-09 financial crises (Beber and Pagano, 2013). In sum, the evidence suggests that short selling creates significant price pressure on a firm's stock (see also Grullon, Michenaud, and Weston, 2015).

However, firms can adopt certain practices to reduce the potential for, and the effects of short selling, one of which we argue in this paper is to increase firm performance on CSR. We hereby build on the risk management perspective of CSR, which suggests that firms with superior CSR performance are less susceptible to efforts by short sellers to dampen the firms' stock price and thus less attractive targets. We consider two moderators to better understand the heterogeneity in firms' reaction to the threat of short sellers. First, we argue that firms' reaction varies based on the temporal orientation of a firm's institutional owners. We focus on transient institutional investors who are usually seen as short-term oriented and who actively trade on, for example, negative news (Bushee, 1998). Transient institutional investors aim at maximizing short-term returns by holding large, diversified portfolios and are known to actively trade stocks (Bushee, 1998). Thus, the stocks of firms with higher levels of transient institutional ownership are more vulnerable to the activities of short sellers and, therefore, more attractive targets to short sellers.

Second, we build on insights from prior research that CSR investments are very sensitive to financial constraints (Hong et al., 2012; Cheng et al., 2014; Rusinova et al., 2016) and to firms' financial performance in prior years (e.g., Waddock and Graves, 1997; Zhao and Murrell, 2016) to argue that firms with binding financial constraints react to the increase in the threat of short selling by reducing investments into CSR. These firms do not have the financial means to increase CSR investments and will focus more strongly on projects with a short-term payoff.

Identifying the causal effect of short sellers on firms' performance on CSR is challenging due to the endogenous nature of short selling activities. To overcome this, we use a natural experiment, the Pilot Program under Regulation SHO, to identify the causal effect of the threat of short sellers on firm performance on CSR. Short selling is a contested practice that historically has been subject to various restrictions; for example, the uptick rule, which was put in place in 1938. The uptick rule prohibits short sales when stock prices are declining, thereby imposing significant costs on short sellers (Alexander and Peterson, 1999). In 2004, the SEC announced the Pilot Program under Regulation SHO under which the uptick rule is removed for an ex-ante randomly selected one third of the Russell 3000 firms but left intact for the remaining two thirds of firms. This sudden reduction in the cost of short selling for an ex-ante randomly selected sub-sample of firms allows us to use a DiD methodology to test for a causal relationship between the increased threat of short selling and firms' CSR investments. The final sample is the intersection of firms listed in the Russell 3000 index covered by the KLD social ratings data set.

Results from a DiD analysis show that, on average, firms react to the higher pressure to focus on short-term financial performance not by cutting but by increasing investments into projects with long-term pay-offs. We directly extend research on the insurance like properties of CSR, which to-date has predominantly focused on the ex-post insurance effects of CSR (e.g., Shiu and Yang, 2017; Godfrey, Merrill, and Hansen, 2009; Vergne, Wernicke, and Brenner, 2018) and just begun to study the ex-ante insurance effects of CSR (Barnett, Hartmann, and Salomon, 2018; Koh, Qian, and Wang, 2014). Our findings indicate that CSR's insurance-like properties reduce firms' attractiveness to investors who profit from declining share prices. We also provide evidence that institutional investors' temporal orientation and firm financial constraints moderate firms' reaction to the threat of short sellers. With these findings, we extend research that studies the effect of different types of institutional investors on CSR (Dyck, Lins, Roth, and Wagner, 2019; David, Bloom, and Hillman, 2007) and scholarship on the relationship between financial constraints and CSR (Rusinova et al., 2016; Cheng et al., 2014), both of which have not yet considered the impact of the widespread investment practice to sell a stock short.

The Inconvenient Mind: Extreme Weather Events and Firms' Engagement in Corporate Social Responsibility

In the third chapter, I empirically investigate whether the presence of cognitive biases affects firms' engagement in CSR. More specifically, I use the theoretical concepts of time discounting, events occurring in the distant future carry less weight today, and space discounting, events occurring away from home carry less weight in decision making at home, to study firms engagement in CSR in the context of climate change.

Despite the existence of robust scientific findings attributing extreme weather and climate events to human-driven climate change (Schaller, Kay, Lamb, Massey, Van Oldenborgh, Otto, Sparrow, Vautard, Yiou, Ashpole, Bowery, Crooks, Haustein, Huntingford, Ingram, Jones, Legg, Miller, Skeggs, Wallom, Weisheimer, Wilson, Stott, and Allen, 2016; Lewis and Karoly, 2013), this view is not widely reflected in the public debate on the magnitude and causes of climate change (Hassol, Torok, Lewis, and Luganda, 2017). Previous research shows that such low levels of belief certainty, perceived risk, and subsequent engagement with climate change are related to deeply rooted cognitive biases. The complexity of the threat of climate change and its dispersion over time and geographical space makes the use of psychological mechanisms key to understanding the drivers of individual and organizational engagement, or the lack thereof, with activities related to climate change risks. In this study, I explore how changes in temporal and spatial distances to climate change affect firms' engagement with CSR's social and environmental aspects. Further, I relate the study to the upper echelon theory of (Hambrick and Mason, 1984) and argue that CEOs political affiliation is a theoretically important factor that will determine how managers respond to the threat of climate change through their CSR strategies. Republican CEOs are likely to respond differently from non-Republican CEOs due to a difference in prior beliefs on climate change risks.

To conduct the empirical analysis, I test whether the shortening of manager's temporal and spatial distance to climate change causes changes in their firms' engagement in CSR. To rule out potential issues of endogeneity, a research design that provides exogenous shifts in the spatial and temporal distance to climate change-induced risks is necessary. For this purpose, I use the occurrence of extreme weather events. The occurrence of extreme weather events provides an ideal setting for testing the effect of exogenous shocks on managers' temporal and spatial distance to climate change on firms' CSR engagement. To capture more rare and extreme events by construct, I focus on weather events with damages over $250 million per county in a given year. To facilitate the estimation, I employ a dynamic staggered DiD model with treatment and control groups. Firms located in a county hit by an extreme weather event with losses above $250 million will be assigned to treatment, while firms in unaffected counties will serve as a control. The study covers firms listed in the Russell 3000 index and utilizes data from the Spatial Hazard and Loss Database for the United States (SHELDUS), KLD, S& P's Compustat, donations data from the Federal Election Commission (FEC) and finally, firms 10-K filings with the SEC.

Results from the estimation show that firms increase their overall engagement in CSR following an extreme weather event. However, the increase is only in the social component of CSR, which firms may implement quickly and which has an immediate and local instead of long-term and global focus. The empirical method employed allows me to trace the effect over several years, and I find no evidence that firms become more environmentally focused over time as a result of experiencing an extreme weather event. Further, I find no evidence for the moderating role of CEO affiliation with the Republican party on their firms' engagement in CSR.

A possible explanation for the lack of improvement in firms' environmental engagement could be that a connection between extreme weather events and climate change is not formed. Thus, the effect of experiences on climate change perception, concerns, and actions may not be as strong as previous research has suggested. To investigate this, I perform an auxiliary textual analysis on the Management Discussion and Analysis (MD&A) section of firms' 10-K filings. Results from the analysis do suggest that extreme weather events are severe enough to be mentioned when reporting to investors. However, it does not appear that a link between extreme weather and climate change is created.

The findings in this paper contribute to the growing streams of literature studying the effects of individuals' personal experiences and prior beliefs on the perception of and engagement with climate change and climate change risks (Demski, Capstick, Pidgeon, Sposato, and Spence, 2017; Weber, 2016; Broomell, Budescu, and Por, 2015; Myers, Maibach, Roser-Renouf, Akerlof, and Leiserowitz, 2013). While previous studies have predominantly relied on survey methods, this study uses an empirical context and causal inference methodology to study managers' behavior and subsequent firm-level CSR engagement. Further, the results add to the vibrant stream of strategic management literature interested in the effects of time on managerial decision making, mainly focusing on organizational time horizons (Flammer and Bansal, 2017; Ortiz-de-Mandojana and Bansal, 2016; Bansal and DesJardine, 2014). I extend this stream of research by considering another cognitive bias, spatial discounting, and examining its role in organisational engagement in CSR practices. Moreover, I contribute with causal evidence by conducting an empirical analysis linking firms' CSR engagement to their managers' cognitive distance to climate change.

These findings have important implications for policymakers within climate change and the transformation towards a more sustainable global economy. Although extreme weather events are becoming more prominent, the results suggest that a much needed drastic organizational change of behavior related to investments in the environmental component of CSR may not occur. Firms respond to the immediate threat posed by an extreme weather event when it materializes. However, they do not respond to the more distant threat of climate change. If self-regulation of firms is not to be expected, there is a need for national and international regulation of business conduct to reach the targets set by the Paris Agreement.

2 Opsummering

Forbedret Adgang til Finansiering og Corporate Social Responsibility Engagement: Evidens fra et Naturligt Eksperiment

Det første kapitel studerer den kausale sammenhæng mellem virksomheders finansielle formåen og deres investeringer i CSR. En generel udfordring for litteraturen er den potentielt endogene karakter af forholdet mellem CSR-investeringer og virksomheders finansielle resultater på grund af faktorer som omvendt kausalitet. Bedre finansielle resultater kan være forårsaget af investeringer i CSR eller alternativt kan højere CSR investeringer være drevet af bedre virksomhedsresultater. Margolis et al. (2007) konkluderer for eksempel i deres meta-studie, at sammenhængen mellem CSR investeringer og virksomhedsresultater i vid udstrækning kan forklares med virksomheders forudgående finansielle resultater, en konklusion på linje med andre (meta-) undersøgelser (f.eks. Krüger, 2009; Orlitzky et al., 2003).

For at undgå endogenitet i studiet, anvender vi en eksogen ændring i virksomheders omkostninger ved intern finansiering, der opstod som følge af "American Jobs Creation Act" (AJCA) fra 2004. Loven gav en betydelig engangs sænkning af skatte-relaterede omkostninger ved repatriering af overskud fra udenlandske datterselskaber tilbage til det amerikansk baserede moderselskab (skattesatsen blev sænket til 5.25 procent fra den oprindelige 35 procent). Da AJCA blev til lov medførte den en eksogen variation i virksomheders interne finansieringsomkostninger, som giver os mulighed for at teste for kausalitet mellem en reduktion af virksomheders interne finansieringsomkostninger og deres investeringer i CSR. Vi tester empirisk sammenhængen mellem virksomheders finansielle resultater og deres CSR investeringer baseret virksomheder opstillet i Standard Poor's 1500-aktiemarkedsindeks (S&P 1500) såvel som i Kinder, Lydenberg, Domini Co. (KLD) datasæt der indeholder information om virksomheders CSR. Oplysninger om virksomheders repatrierings aktivitet er ikke let tilgængelige i databaser, og blev indsamlet fra tusinder af virksomhederes 10K rapporteringer til Securities and Exchange Comission. Vi anvender en Differens-i-Differens model til at isolere effekten af AJCA på virksomheders CSR investeringer.

Da beslutningen om at repatriere under AJCA træffes af ledere, er den endogen. For at kontrollere for dette prædikterede vi sandsynligheden for repatriering ved hjælp af logistisk regression. Den prædikterede sandsynlighed giver os mulighed for at skelne mellem firmaer, der ikke kunne repatriere (gruppe 1) - for eksempel fordi de ikke havde nogen udenlandsk indtjening - fra virksomheder, der kunne repatriere, men valgte ikke at gøre det (gruppe 2) og fra den kombinerede gruppe af alle de virksomheder der repatrierede (gruppe 3). For korrekt at identificere behandlings- og kontrolgrupper følger vi Faulkender et al. (2012) og isolerer virkningen af AJCA for firmaer, der havde mulighed for at repatriere og som gjorde det (gruppe 3) mod dem, der havde mulighed for at repatriere, men valgte ikke at gøre det (gruppe 2). Resultaterne viser, at en reduktion i virksomheders interne finansieringsomkostninger fører til stigninger i CSR investeringer for virksomheder i gruppe 3.

Vi udvider hovedanalysen i to andre retninger med fokus på finansielle begrænsninger og medie opmærksomhed. Vi finder kausal evidens for, at effekten på virksomheders investeringer i CSR, som følge af reduktionen i omkostninger ved intern finansiering, varierer baseret på virksomheders niveau af finansielle begrænsninger inden lovændringen. Virksomheder der ikke var finansielt begrænsede øgede deres investeringer i CSR, imens finansielt begrænsede virksomheder reducerede deres CSR-investeringer i absolutte termer og i forhold til virksomheder uden finansielle begrænsninger. Vi giver også en ny vinkel på brugen af CSR som et omkostningsfuldt signal til interessenter, da vi viser, hvordan investeringer i CSR efter repatrieringsloven øges med niveauet for den samlede medieopmærksomhed til firmaet, og mere specifikt også med niveauet af negativ medie opmærksomhed.

Vores artikel yder vigtige bidrag til flere områder inden for forskningen i virksomheders brug af CSR. Vi bidrager til nylige empiriske undersøgelser af kausalitetsretningen i forholdet mellem CSR og finansielle resultater. Vi bidrager til denne strøm af litteratur ved at bringe kausal evidens for, at forbedrede finanser (lavere interne finansieringsomkostninger) påvirker virksomheders CSR investeringer. Resultaterne af vores undersøgelse indikerer behovet for at fremtidige studier inden for CSR og virksomheders finansielle resultater, tager højde for deres finansielle begrænsninger. For det andet bidrager vores studie til litteraturen, der direkte adresserer virkningen af CSR-investeringer på virksomheders finansielle begrænsninger. Cheng et al. (2014) viser, at finansielle begrænsninger er følsomme over for CSR investeringer i den henseende, at højere udgifter til CSR korrelerer med lavere finansielle begrænsninger. I modsætning hertil giver vi kausal evidens for det omvendte forhold, og endnu vigtigere, for en effekt der går i flere retninger. Effekten af reduktionen i interne finansieringsomkostninger varierer afhængigt af en given virksomheds niveau af finansielle begrænsninger. Oprindeligt begrænsede virksomheder reducerer deres CSR investeringer, imens virksomheder uden de samme finansielle begrænsninger øger deres CSR investeringer. For det tredje bidrager vi til litteraturen omhandlende virksomheders strategiske brug af CSR som signal instrument (f.eks. Flammer, 2020; Su et al., 2016; Cheng et al., 2014; Jones et al., 2001). Virksomheder er mere tilbøjelige til at investere i CSR, når adgangen til finansiering lettes, hvis de oplever en høj grad af medie opmærksomhed. Dette sammen med de andre resultater yder støtte til at CSR, benyttes som et omkostningsfuldt værktøj til signalering til stakeholders.

Fjenden ved Porten: Truslen fra Short Sellers og Virksomheders Engagement i Corporate Social Responsibility

I andet kapitel tester vi for den kausale sammenhæng mellem truslen om short selling og virksomheders resultater med hensyn til Corporate Social Responsibility (CSR). Vi anvender risikostyrings perspektivet på CSR til at argumentere for at virksomheder vil have en tendens til at øge deres CSR når truslen om short selling stiger, og på denne måde aktivt modvirke et potentielt negativt pres på virksomhedens aktiekurs.

Forskere har længe været interesseret i at forstå og forklare kapitalmarkedernes og forskellige typer af investorers rolle på virksomheders investeringer og ageren. Forskere har tidligere studeret for eksempel påvirkningen fra aktive og passive investorer (Goranova og Ryan 2014) eller af forskellige typer institutionelle investorer (Bushee, 1998). Til sammenligning, har langt mindre forskning fokuseret på den specifikke effekt af short selling. Short selling kan betydeligt eskalere prispresset på en virksomheds aktier i situationer, hvor der i forvejen er negativt pres, for eksempel i tider med organisatorisk uro eller økonomiske kriser. Faktisk får short sellers skylden for at have intensiveret den nedadgående prisspiral på aktier i de finansielle kriser 2007-09 (Beber et al., 2013). Sammenfattende tyder beviserne på, at short selling skaber et betydeligt prispres på en virksomheds aktie (se også Grullon et al., 2015).

Virksomheder kan dog agere på forskellige måder for at reducere risikoen for og virkningen af short selling, og vi argumenterer for at en sådan mulighed består i at øge investeringerne i CSR. Vi bygger herved videre på risikostyringsperspektivet på CSR, hvilket antyder, at virksomheder med høj performance på CSR er mindre modtagelige overfor short sellers forsøg på at bringe virksomhedens aktiekurs ned og dermed mindre attraktive mål. Vi inkluderer to moderatorer for bedre at forstå heterogeniteten i virksomheders reaktion på den øgede trussel fra short sellers. For det første argumenterer vi for, at virksomheders reaktion varierer baseret på den tidsmæssige orientering af dens institutionelle ejere. Vi fokuserer på transiente institutionelle investorer, der normalt betragtes som kortsigtede, og som aktivt handler på for eksempel negative nyheder (Bushee, 1998). Transiente institutionelle investorer sigter mod at maksimere det kortsigtede afkast ved at have store, diversificerede porteføljer og er kendt for aktivt at handle med aktier (Bushee, 1998). Virksomheder hvor transiente investorer udgør en højere andel af virksomhedens ejere er dermed mere udsatte for short sellers og derfor mere attraktive mål.

Vi bygger også videre på tidligere forskning, der viser at CSR investeringer er meget følsomme over for virksomheders finansielle begrænsninger (Hong et al., 2012; Cheng et al., 2014; Rusinova et al., 2016) samt økonomiske resultater i de foregående år (f.eks. Waddock et al., 1997; Zhao et al., 2016), til at argumentere for at virksomheder der er finansielt begrænsede reagerer på stigningen i truslen om short selling ved at reducere investeringer i CSR. Disse virksomheder har ikke de økonomiske midler til at øge investeringerne i CSR og vil koncentrere sig om projekter der har potentiale til at give afkast på kortere sigt.

Short selling aktiviter og virksomheders CSR strategi og investeringer er relaterede, og det er derfor en udfordring at etablere en kausal sammenhæng og overkomme udfordringerne med endogenitet. Vi anvender derfor et kvasi-naturligt eksperiment, pilotprogrammet i forbindelse med implementeringen af regulering SHO, til at identificere den kausale effekt af truslen fra short sellers på virksomheders CSR investeringer. Short selling er en anfægtet praksis, som historisk set har været underlagt forskellige begrænsninger, for eksempel uptick-reglen, der blev indført i 1938. Uptick-reglen forbyder short selling, når aktiekurserne falder, hvilket medfører betydelige omkostninger for short sellers (Alexander et al., 1999). I 2004 annoncerede Security and Exchange Commission (SEC) pilotprogrammet i henhold til forordning SHO, hvorunder uptick-reglen fjernes for en forudgående tilfældig udvalgt tredjedel af Russell 3000-virksomhederne, men forblev for de resterende to tredjedele af virksomhederne. Denne pludselige reduktion i omkostningerne ved short selling for en ex-ante tilfældigt udvalgt delprøve af virksomhederne gør det muligt at anvende en differens-i-differens (DiD) model til at teste for kasualitet mellem den øgede trussel om short-selling og virksomheders CSR-investeringer. Den endelige stikprøve består af virksomheder, der er opført i Russell 3000-indekset, og som er dækket af KLD's sociale rating datasæt.

Resultater fra DiD-analysen viser, at virksomheder i gennemsnit reagerer på den højere trussel fra short sellers, ved at øge investeringerne i projekter med langsigtede afkast og ikke ved at reducere dem. Vi udvider den eksisterende forskning på de forsikringslignende egenskaber ved CSR, som hidtil hovedsageligt har fokuseret på ex-post forsikringsvirkningerne af CSR (f.eks Shiu et al., 2017; Godfrey et al., 2009; Vergne et al., 2018) og først for nyligt er begyndt at undersøge ex-ante forsikringseffekten af CSR (Barnett et al., 2018; Koh et al., 2014). Vores fund viser, at virksomheder anvender CSR for de forsikringsmæssige egenskaber til at fremstå mindre attraktive for investorer, der drager fordel af faldende aktiekurser. Vi finder også evidens for, at den tidsmæssige orientering af institutionelle investorer og finansielle begrænsninger modererer virksomheders reaktion på truslen fra short sellers. Med disse fund udvider vi forskningen, der studerer effekten af forskellige typer af institutionelle investorer på CSR (Dyck et al., 2019; David et al., 2007) samt forskningen i forholdet mellem økonomiske begrænsninger og CSR (Rusinova et al., 2016; Cheng et al., 2014). Begge områder har hidtil ikke studeret virkningen af short selling.

Det Ubelejlige Sind: Ekstreme Vejrhændelser og Virksomheders Engagement i Corporate Social Responsibility

I det tredje kapitel undersøger og tester jeg for eksistensen af kognitive bias, der påvirker virksomheders engagement i Corporate Social Responsibility (CSR). Med udgangspunkt i teorierne om diskontering fra kognitiv forskning, anvender jeg begreberne og teorierne om tidsdiskontering, begivenheder der forekommer i en fjern fremtid bærer mindre vægt i dag, og rumdiskontering, begivenheder der forekommer geografisk langt væk, bærer mindre vægt i virksomheders beslutningsproces hjemme, til at studerere virksomhederes engagement i CSR i kontekst af klimaforandringer.

På trods af eksistensen af robuste videnskabelige studier, der tilskriver ekstreme vejr- og klimahændelser til menneskedrevne klimaforandringer (Schaller et al., 2016; Lewis et al., 2013), er der stadig meget skepsis og lave niveauer af overbevisning herom. Tidligere forskning viser, at sådanne lave niveauer af overbevisning, opfattet risiko og efterfølgende engagement i klimaforandringer er relateret til dybt forankrede kognitive bias. Kompleksiteten af truslen fra klimaforandringer og dets spredning over tid og geografi gør brugen af psykologiske mekanismer centrale til at forstå drivkraften bag både individuelt og organisatorisk engagement, eller manglen herpå, i aktiviteter relateret til klimaforandringer og de medfølgende risici. I denne undersøgelse undersøger jeg, hvordan ændringer i tidsmæssige og rumlige afstande til klimaforandringer påvirker virksomheders engagement i de sociale og miljømæssige aspekter af CSR. Endvidere relaterer jeg undersøgelsen til den øvre echelon teori (Hambrick et al., 1984) og argumenterer for, at administrerende direktørers politiske tilknytning er en teoretisk vigtig faktor, der vil påvirke hvordan ledere reagerer på truslen om klimaforandringer gennem deres CSR strategier. Republikanske administrerende direktører vil sandsynligvis reagere anderledes end ikke-republikanske administrerende direktører på grund af en forskel i forudgående overbevisning om klimaforandringer og tilhørende risici.

For at udføre den empiriske analyse tester jeg, om en forkortelse af lederens tidsmæssige og rumlige afstand til klimaændringer forårsager ændringer i deres virksomheds engagement i CSR. For at forhindre endogenitet er det nødvendigt med en empirisk analyse der tager udgangspunkt i eksogene skift i den rumlige og tidsmæssige afstand til klimaforandringer. Til dette formål anvender jeg forekomsten af ekstreme vejrbegivenheder. Forekomsten af ekstreme vejrbegivenheder giver en ideel ramme for at teste effekten af eksogene chok på ledernes tidsmæssige og rumlige afstand til klimaændringer på virksomheders CSR-engagement. For at fange mere sjældne og ekstreme begivenheder, fokuserer jeg på vejrkatastrofer med skader på over $250 millioner pr. county i et givent år. I selve estimeringen anvender jeg en dynamisk forskudt differens-i-differens model med behandlings- og kontrolgrupper. Virksomheder beliggende i et county, der er ramt af en ekstrem vejrbegivenhed med tab over $250 millioner kommer i behandlings gruppen, imens firmaer i upåvirkede counties vil fungere som kontrol. Undersøgelsen dækker virksomheder, der er opført i Russell 3000-indekset, og bruger data fra Spatial Hazard and Loss Database for United States (SHELDUS), MSCI KLD STATS (KLD), Standard & Poor's Compustat, donations data fra the Federal Election Commission (FEC) samt virksomheders 10-K rapporteringer til Securities and Exchange Commission (SEC).

Resultater fra estimationen viser, at virksomheder øger deres engagement i CSR efter en ekstrem vejrbegivenhed. Stigningen er dog kun inden for den sociale komponent i CSR, som virksomheder kan implementere hurtigt, og som har et øjeblikkeligt og lokalt istedet for langsigtet og globalt fokus. Den anvendte empiriske metode giver mulighed for at spore effekten over flere år, men jeg finder ingen indikationer af, at virksomheder bliver mere miljøfokuserede over tid. Desuden finder jeg ikke noget bevis for, at administrerende direktørers tilknytning til det republikanske parti påvirker deres virksomheds engagement i CSR.

En mulig forklaring på den manglende forbedring i virksomhedernes miljøengagement kan være, at der ikke dannes en forbindelse imellem ekstreme vejrbegivenheder og klimaændringer. Således er effekten af erfaringer på opfattelsen af klimaændringer og tilhørende risici begrænset eller ihvertfald ikke så tydelig som eksisterende forskning indikerer. For at undersøge dette nærmere foretager jeg en kvantitativ tekstanalyse i sektionen Management Discussion and Analyse (MD & A) i virksomhedernes 10-K rapporteringer. Resultater fra analysen antyder, at ekstreme vejrbegivenheder er alvorlige nok til at blive nævnt, når der rapporteres til investorer. Det ser imidlertid ikke ud til, at der oprettes en forbindelse imellem ekstrem vejr og klimaændringer.

Resultaterne i denne artikel bidrager til det område af forskningen, der studerer effekterne af enkeltpersoners personlige oplevelser og forudgående overbevisning på opfattelsen af og engagement med klimaændringer og klimaforandringer (Demski et al., 2017; Weber, 2016; Broomell et al., 2015; Myers et al., 2013). Hvor tidligere undersøgelser overvejende har været afhængige af survey baserede metoder, bruger denne undersøgelse en empirisk kvantitativ tilgang med fokus på etablering af kausalitet, til at studere ledernes CSR engagement på virksomheds niveau. Resultaterne bidrager endvidere til den strøm af strategisk ledelseslitteratur, der er interesseret i tidseffekten på ledelsesmæssig beslutningstagning, hovedsageligt med fokus på organisatoriske tidshorisonter (Flammer et al., 2017; Ortiz-de-Mandojana et al., 2016; Bansal et al., 2014). Jeg udvider denne strøm af forskning ved at studere en anden kognitiv bias, rumlig diskontering, og undersøge dens rolle i organisatorisk engagement i CSR. Desuden bidrager jeg med at teste den kausale effekt ved at udføre en empirisk analyse, der forbinder virksomheders CSR engagement med deres leders kognitive afstand til klimaændringer.

Resultaterne har konsekvenser for beslutningstagere inden for klimaforandringer og transitionen mod en mere bæredygtig økonomi. Resultaterne antyder, at selv om ekstreme vejrbegivenheder bliver mere fremtrædende, kommer der næppe nogen drastisk ændring af adfærd relateret til investeringer i miljøkomponenten i CSR. Virksomheder reagerer på den øjeblikkelige trussel fra en ekstrem vejrbegivenhed, når den realiseres. De reagerer imidlertid ikke på den mere langsigtede trussel fra klimaændringer. Hvis der ikke kan forventes selvregulering af virksomheder, er der behov for national og international regulering af forretningsadfærd for at nå de mål, der er fastlagt i Parisaftalen.

References

Alexander, G. J. and M. A. Peterson (1999). “Short Selling on the New York Stock Exchange and the Effects of the Uptick Rule”. In: *Journal of Financial Intermediation* 8.1, pp. 90–116.

Bansal, Pratima and Mark R DesJardine (2014). “Business sustainability: It is about time”. In: *Strategic Organization* 12.1, pp. 70–78.

Barnett, Michael L, Julia Hartmann, and Robert M Salomon (2018). “Have you been served? Extending the relationship between corporate social responsibility and lawsuits”. In: *Academy of Management Discoveries* 4.2, pp. 109–126.

Beber, Alessandro and Marco Pagano (2013). “Short-selling bans around the world: Evidence from the 2007–09 crisis”. In: *The Journal of Finance* 68.1, pp. 343–381.

Broomell, Stephen B., David V. Budescu, and Han-Hui Por (2015). “Personal experience with climate change predicts intentions to act”. In: *Global Environmental Change* 32, pp. 67–73. ISSN: 09593780. DOI: 10.1016/j.gloenvcha.2015.03.001. URL: https://linkinghub.elsevier.com/retrieve/pii/S095937801500031X.

Buehlmaier, Matthias MM and Toni M Whited (2018). “Are financial constraints priced? Evidence from textual analysis”. In: *The Review of Financial Studies* 31.7, pp. 2693–2728.

Bushee, B. J. (1998). “The Influence of Institutional Investors on Myopic RD Investment Behavior”. In: *The Accounting Review* 73.3, pp. 305–333.

Cheng, Beiting, Ioannis Ioannou, and George Serafeim (2014). “Corporate social responsibility and access to finance”. In: *Strategic Management Journal* 35.1, pp. 1–23.

Christidis, Nikolaos, Peter A Stott, and Simon J Brown (2011). “The role of human activity in the recent warming of extremely warm daytime temperatures”. In: *Journal of Climate* 24.7, pp. 1922–1930.

David, P., M. Bloom, and A. J. Hillman (2007). “Investor activism, managerial responsiveness, and corporate social performance”. In: *Strategic Management Journal* 28.1, pp. 91–100.

Demski, Christina, Stuart Capstick, Nick Pidgeon, Robert Gennaro Sposato, and Alexa Spence (2017). “Experience of extreme weather affects climate change mitigation and adaptation responses”. In: *Climatic Change* 140.2, pp. 149–164. ISSN: 0165-0009. DOI: 10.1007/s10584-016-1837-4. URL: http://link.springer.com/10.1007/s10584-016-1837-4.

Diez, Mr Federico, Mr Daniel Leigh, and Suchanan Tambunlertchai (2018). *Global market power and its macroeconomic implications*. International Monetary Fund.

Dyck, Alexander, Karl V Lins, Lukas Roth, and Hannes F Wagner (2019). "Do institutional investors drive corporate social responsibility? International evidence". In: *Journal of Financial Economics* 131.3, pp. 693–714.

Faulkender, Michael and Mitchell Petersen (2012). "Investment and capital constraints: Repatriations under the American Jobs Creation Act". In: *Review of Financial Studies* 25.11, pp. 3351–3388.

Flammer, Caroline (2020). "Green bonds: effectiveness and implications for public policy". In: *Environmental and Energy Policy and the Economy* 1.1, pp. 95–128.

Flammer, Caroline and Pratima Bansal (2017). "Does a long-term orientation create value? Evidence from a regression discontinuity". In: *Strategic Management Journal* 38.9, pp. 1827–1847.

Godfrey, Paul C, Craig B Merrill, and Jared M Hansen (2009). "The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis". In: *Strategic Management Journal* 30.4, pp. 425–445.

Goranova, Maria and Lori Verstegen Ryan (2014). "Shareholder activism: A multidisciplinary review". In: *Journal of Management* 40.5, pp. 1230–1268.

Grullon, G., S. Michenaud, and J. P. Weston (2015). "The Real Effects of Short-Selling Constraints". In: *The Review of Financial Studies* 28.6, pp. 1737–1767.

Hambrick, Donald C and Phyllis A Mason (1984). "Upper echelons: The organization as a reflection of its top managers". In: *Academy of management review* 9.2, pp. 193–206.

Hassol, Susan Joy, Simon Torok, Sophie Lewis, and Patrick Luganda (2017). *(Un)Natural Disasters: Communicating Linkages Between Extreme Events and Climate Change*. URL: https://public.wmo.int/en/resources/bulletin/unnatural-disasters-communicating-linkages-between-extreme-events-and-climate.

Hong, Harrison, Jeffrey D Kubik, and Jose A Scheinkman (2012). "Financial constraints on corporate goodness". In: *Working paper*.

Jones, Ray and Audrey J Murrell (2001). "Signaling Positive Corporate Social Performance An Event Study of Family-Friendly Firms". In: *Business & Society* 40.1, pp. 59–78.

Koh, P.-S., C. Qian, and H. Wang (2014). "Firm litigation risk and the insurance value of corporate social performance". In: *Strategic Management Journal* 35.10, pp. 1464–1482.

Krüger, Philipp (2009). *Corporate social responsibility and the board of directors*. Working Paper.

Lewis, Sophie C. and David J. Karoly (2013). "Anthropogenic contributions to Australia's record summer temperatures of 2013". In: *Geophysical Research Letters*. ISSN: 00948276. DOI: 10.1002/grl.50673.

Margolis, Joshua D, Hillary Anger Elfenbein, and James P Walsh (2007). "Does it pay to be good? A meta-analysis and redirection of research on the relationship between corporate social and financial performance". In: *Ann Arbor* 1001, pp. 48109–1234.

Myers, Teresa A, Edward W Maibach, Connie Roser-Renouf, Karen Akerlof, and Anthony A Leiserowitz (2013). "The relationship between personal experience and belief in the reality of global warming". In: *Nature climate change* 3.4, pp. 343–347.

Orlitzky, Marc, Frank L Schmidt, and Sara L Rynes (2003). "Corporate social and financial performance: A meta-analysis". In: *Organization Studies* 24.3, pp. 403–441.

Ortiz-de-Mandojana, N. and P. Bansal (2016). "The long-term benefits of organizational resilience through sustainable business practices". In: *Strategic Management Journal* 37.8, pp. 1615–1631.

Rusinova, Vanya and Georg Wernicke (2016). "Access to finance and corporate social responsibility: evidence from a natural experiment". In: *Academy of Management Proceedings*. Vol. 2016. 1. Academy of Management Briarcliff Manor, NY 10510, p. 17174.

Schaller, Nathalie, Alison L. Kay, Rob Lamb, Neil R. Massey, Geert Jan Van Oldenborgh, Friederike E.L. Otto, Sarah N. Sparrow, Robert Vautard, Pascal Yiou, Ian Ashpole, Andy Bowery, Susan M. Crooks, Karsten Haustein, Chris Huntingford, William J. Ingram, Richard G. Jones, Tim Legg, Jonathan Miller, Jessica Skeggs, David Wallom, Antje Weisheimer, Simon Wilson, Peter A. Stott, and Myles R. Allen (2016). "Human influence on climate in the 2014 southern England winter floods and their impacts". In: *Nature Climate Change*. ISSN: 17586798. DOI: 10.1038/nclimate2927.

Shiu, Y.-M. and S.-L. Yang (2017). "Does engagement in corporate social responsibility provide strategic insurance-like effects?" In: *Strategic Management Journal* 38.2, pp. 455–470.

Su, Weichieh, Mike W Peng, Weiqiang Tan, and Yan-Leung Cheung (2016). "The signaling effect of corporate social responsibility in emerging economies". In: *Journal of business Ethics* 134.3, pp. 479–491.

Tett, Simon FB, Gareth S Jones, Peter A Stott, David C Hill, John FB Mitchell, Myles R Allen, William J Ingram, Tim C Johns, Colin E Johnson, Andy Jones, et al. (2002). "Estimation of natural and anthropogenic contributions to twentieth century temperature change". In: *Journal of Geophysical Research: Atmospheres* 107.D16, ACL–10.

Vergne, J.-P., G. Wernicke, and S. Brenner (2018). "Signal incongruence and it's consequences: A study of media disapproval and CEO overcompensation". In: *Organization Science* 29.5, pp. 755–987.

Waddock, Sandra A and Samuel B Graves (1997). "The corporate social performance–financial performance link". In: *Strategic management journal* 18.4, pp. 303–319.

Weber, Elke U. (2016). "What shapes perceptions of climate change? New research since 2010". In: *Wiley Interdisciplinary Reviews: Climate Change*. ISSN: 17577799. DOI: 10.1002/wcc.377.

Zhao, X. and A. J. Murrell (2016). "Revisiting the corporate social performance-financial performance link: A replication of Waddock and Graves". In: *Strategic Management Journal* 37.11, pp. 2378–2388.

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Chapter 1

Improved Access to Finance and Firms' Engagement in Corporate Social Responsibility: Evidence from a Natural Experiment

with Dr. Georg Wernicke

Abstract

In this paper, we test for a causal relationship between improved access to finance and firms' engagement in corporate social responsibility (CSR). To establish causality, we use the exogenous variation in firm-level capital constraints induced by the American Jobs Creation Act (AJCA) of 2004. The act provided a significant one-off reduction in tax-related costs to profits repatriated from foreign subsidiaries back to the U.S.-based parent firm. The tax cut lowered the price of internal financing and improved overall access to finance for firms repatriating under the act. Results from a sample of U.S. firms for the years 2001 through 2007 provide causal evidence that improved access to finance leads to higher CSR engagement. We further investigate whether firms' prior levels of financial constraints and (negative) media coverage moderate the relationship between improved access to finance and subsequent engagement in CSR.

1 INTRODUCTION

Anecdotal evidence suggests a positive relationship between improved access to finance and engagement in corporate social responsibility (CSR). Just before Google's highly anticipated IPO in 2004, which brought in an estimated $23 billion, Larry Page, one of its founders, vowed to dedicate about 1% of Google's equity, 1% of Google's yearly profits, and a significant amount of employees' time to socially responsible projects. However, while the example of Google is illustrative, a fundamental question which at large remains unanswered is whether the positive relationship between improved access to finance and engagement in CSR is causal?

In recent decades, the academic literature has paid a significant amount of attention to CSR, with a great number of studies looking at the relationship between CSR engagement and various measures of firm financial performance. Despite being voluminous, this literature has thus far produced equivocal results (Margolis, Elfenbein, and Walsh, 2007). The endogenous nature of the relationship poses a general challenge to determining the direction of causality. For example, better financial performance might stem from greater CSR engagement (Cheng, Ioannou, and Serafeim, 2014) or higher CSR engagement might be caused by better prior firm financial performance. The complex relationship between these elements is illustrated in the conclusion of the review by Margolis et al. (2007) that firms' prior financial performance can to a large extent explain the correlation between CSR and firm performance. More importantly, the effect of financial performance on CSR activities is stronger than the reverse. Although this is a critical finding for a better understanding of the complex relationships between CSR and firm performance, it is one that "tend[s] to get overlooked" (Margolis et al., 2007, p. 24). In this paper, we apply a signaling theoretical framework to study the effect of improved access to financing on firms' engagement in CSR.

We use an empirical context that allows for an exogenous variation in firms' cost of internal financing, namely the American Jobs Creation Act (AJCA) of 2004. The act provided a significant and one-off reduction in tax-related costs to profits repatriated from foreign subsidiaries back to the U.S.-based parent firm. The passage of the AJCA improved firms' access to their internal funds "trapped" in foreign subsidiaries (Blouin and Krull, 2009) and led to a large increase in the amount of foreign earnings firms repatriated. For example, the pharmaceutical giant Pfizer repatriated close to $37 billion from foreign subsidiaries under the tax cut provision of the act. The AJCA induced an exogenous variation in firms' costs of financing, which subsequently reduces the firms' need to seek external financing. Hence firms repatriating under the act improve their access to finance, which indirectly improves the firms' overall financial performance. In the remainder of the paper, we use lower cost of financing, improved access to finance, or improved financial performance interchangeably.

Our sample consists of firms listed in the Standard & Poor's 1500 stock market index (S&P

1500) and the KLD social ratings database. There are 5,585 firm-year observations for the years 2001 through 2007. We use a difference-in-differences (DiD) methodology to isolate the effect of improved access to finance on firms' CSR engagement. The results indicate that reductions in firms' cost of financing lead to an increase in firms' CSR engagement. We decompose the CSR measure to its main components - CSR strengths and CSR concerns. Results indicate that the overall increase in CSR is driven by an increase in CSR strengths rather than a decrease in CSR concerns. We further test whether firms use CSR in a way predicted by the signaling theory. To do so, we add an extra dimension to the analysis to capture firms' level of financial constraints prior to the AJCA. Consistent with the prediction of the signaling theory, we find that unconstrained firms increase CSR, while constrained firms decrease their engagement.

Our study addresses one of the long-standing questions in the field of CSR — the direction of causality between firm financial performance and firms' engagement in CSR. We provide causal evidence that a lower cost of capital (improved access to financing) leads to an increase in firms' CSR engagement. Our findings contribute to several streams of literature. In particular, we add to recent empirical studies on the drivers of firms' CSR by providing causal evidence for a factor that is important to consider when studying firms' CSR engagement and which was oftentimes overlooked in empirical research (Margolis et al., 2007). Future research that explores the impact of CSR related activities on firm performance also needs to consider the reverse relationship. Our study also adds to the literature that directly addresses the impact of CSR on firms' financial constraints. Cheng et al. (2014) show that financial constraints are sensitive to firms' CSR in the respect that higher engagement correlates with relaxed financial constraints.

In contrast, we provide causal evidence for the reverse relationship [1]. Our study does not question the finding in Cheng et al. (2014). It instead builds upon and explores whether these findings are an outcome of a preceding causality.

2 BACKGROUND

2.1 Corporate social responsibility

Corporate social responsibility (CSR) has evolved from a concept perceived inconsistent with shareholder welfare maximization (Friedman, 1970; Jensen et al., 1976) to being a central element of firms' strategy (e.g., Hawn et al., 2014; Porter et al., 2011). CSR has been described as "voluntary integration of social and environmental concerns in companies' operations" (Cheng,

[1] In this respect, our paper is similar to Hong et al., 2012 who use the dot.com stock market bubble to argue for a causal relationship between firm financial constraints and firms' CSR engagement. However, their sample of firms is restricted to large firms listed on the S&P 500 index, many of which are not financially constrained. Most importantly, we show that a reduction in the cost of financing among financially unconstrained firms leads to higher engagement in CSR.

Ioannou, and Serafeim, 2014, p. 1), as well as firms' "commitments to both social and environmental practices" (Bansal, Gao, and Qureshi, 2014, p. 950). For the purpose of our study, we follow Wang et al. (2016) and define CSR as a firm's responsibility to a broader set of stakeholders beyond its shareholders.

The scholarship investigating the link between CSR and firm financial performance is broadly divided into two camps. On the one hand, studies within the neoclassical economic theory framework argue that CSR leads to misappropriation and misallocation of corporate resources. The former stems from diverting funds from the rightful owners, and the latter is a result of diverting resources from their best use towards less suited purposes (Margolis et al., 2003).

On the other hand, scholars have argued that firms' obligations extend beyond their shareholders to society at large. CSR has been shown to generate value through improved financial performance (Flammer, 2015b), better access to valuable resources (Waddock et al., 1997), and through gaining social legitimacy (Hawn et al., 2014). CSR can increase firm financial performance by improving relationships with firms' key stakeholders (Barnett, 2007). For example, through increased customer loyalty (Luo et al., 2006; Lev et al., 2010) or through improved employee retention (Bode et al., 2015). In addition, it can be used as a means to signal responsible firm behavior to stakeholders (Hawn, 2013; Cheng et al., 2014) and for its" insurance-like" properties (Godfrey, 2005).

Despite being voluminous, the literature studying CSR and firm financial performance has thus far produced equivocal results (Margolis et al., 2007). The majority of the research has focused on the effect of firms' engagement in CSR on subsequent firm profitability. Significantly less attention has been paid to the reverse but equally important relationship. In this study, we empirically test for the existence of a causal effect of improved firm financial performance, through better access to finance, on firms' CSR engagement. More formally, we argue:

Hypothesis 1 (H1): *Improved access to finance will lead to an increase in firm's engagement in CSR.*

2.2 Financial constraints and CSR

Prior research investigating the relationship between capital markets and firms' strategic investments show that financial constraints play a vital role for firms' capital investments and future profits (Hall et al., 2010; Baker et al., 2003; Stein, 2003; Campello et al., 2013). In the presence of financial frictions, firms are likely to forgo investments that may otherwise be profitable. Therefore, ease in financial constraints (e.g., through lower cost of internal financing) will allow firms to undergo projects previously deemed unattainable (Faulkender et al., 2012; Cheng et al., 2014).

Firms' level of financial constraints is directly related to their ability to undertake positive net present value (NPV) projects. Besides using internal sources of financing, firms can also turn to the capital markets. However, when investing or lending funds, in the presence of uncertainty, external parties can often require a premium. Thus firms perceived more risky investments would be subjects to higher risk premia. From a utility-based framework, where an external party (e.g., investor or creditor) is characterized by a concave utility function, the expected utility from an uncertain investment will always be lower than or equal to the utility from a certain investment with the same expected payoff. As given by Jensen's inequality: $E[U(X)] \leq U(E[X])$, where X, within our context, is the payoff of an investment. Reducing the uncertainty about the true value of a firm or its true ability to repay creditors will reduce the costs firms incur due to the higher risk premium required. However, financial frictions such as informational asymmetries can present a hindrance to doing so.

Asymmetric information, which occurs when one party has different or insufficient information than the other, has a vital role for firms on capital markets, e.g., to access financing either through equity or debt. Investors and creditors have access to less information regarding the firm's financial stability and its future projects than insiders, for example, managers (Myers et al., 1984; Akerlof, 1970). It is only natural that the terms under which they can access financing will be more unfavorable compared to firms where informational asymmetries are alleviated. Engaging in CSR presents an opportunity for firms to send a signal of strong stakeholder relations and low firms risk to investors and other capital market participants (Bénabou et al., 2010; Cheng et al., 2014). For the signal to be credible, it has to be costly (Leland et al., 1977). Otherwise, high-risk firms can imitate low-risk firms, which would translate into no effect for firms' engaging in CSR for their signaling properties. However, if CSR is a costly signal that firms use to convey information and reduce asymmetries (Spence, 2002), firms' financial performance should affect their ability to send that signal. To test whether firms use CSR in the way predicted by the signaling theory, we add the extra dimension of firms' level of financing constraints prior to the shock. We argue that within the signaling framework, unconstrained firms can afford to spend the windfall on signaling projects, whereas constrained firms would have other more urgent projects in waiting before they reach the signaling one. More formally, we test the following hypothesis:

Hypothesis 2 (H2): *Firms' prior level of financial constraints moderates the relationship between improved access to finance and firms' engagement in CSR.*

2.3 Media attention and CSR

The media plays a vital role in shaping and directing the public's attention (Petkova, 2012; Carroll, 2011). As society's dominant information provider, the media is a highly viable and effective channel for firms to communicate with their stakeholders (Grafström et al., 2011) successfully. Media attention, the awareness and focus on a particular firm by the media, can reduce information asymmetries for investors on capital markets allowing for more transparent and rational judgment of the firm's activity (Du, Bhattacharya, and Sen, 2010).

News reports and media assessment can serve as an external feedback cue for individuals (Gamache and McNamara, 2019). Although coverage often focuses on rather precise facts and figures, their evaluative tone can vary substantially (Vergne et al., 2018b) and that heterogeneity in the tone, positive or negative, has implications for decision-makers. For example, subjects of negative media coverage are shown to closely follow media assessments and be more likely to overestimate the influence of such coverage (Kepplinger, 2017). In fact, bad news is more impactful than good information and feedback. This is partly due to how negative information is processed by individuals and the public, as bad news is closely linked to survival threats in the evolutionary process (Gamache et al., 2019; Baumeister et al., 2001). Thus, negative media coverage is more impactful than positive media coverage. It is also perceived as more interesting than positive information, which is also reflected in the strong negative bias in the media (Soroka, 2006; Niven, 2001; Rozin and Royzman, 2001). Therefore, firms' misconduct and irresponsible behavior are more likely to become the subject of news coverage (Lamin and Zaheer, 2012). In the presence of strong negative bias, firms do not need to be involved in a major scandal or unlawful act to get under the media's scrutiny. For example, although the purpose of the AJCA was to increase economic activity and subsequent job creation, the repatriation of foreign funds back to the U.S. was surrounded by news coverage related to tax evasion and overall negative publicity. However, firms can use strategic tools, such as CSR, to counter the costly effects of negative media attention; as previous research has shown, firms with higher visibility in the media tend to have higher CSR than peers with lower media coverage, as such firms could encounter greater scrutiny from stakeholders (Fiss and Zajac, 2006).

It is only natural for firms to value positive media coverage, which provides reputational benefits and legitimacy, and positively affects their investment value (Gamache et al., 2019; Pollock et al., 2003). Negative media attention, however, can translate into unfavorable stakeholder perceptions of the firms that can subsequently lead to reputational fines and negatively affect the firms' stock price and its ability to access cheaper financing (Bednar, Love, and Kraatz, 2015; DeAngelo, DeAngelo, and Gilson, 1996). As such, media attention in general and negative media attention specifically can be powerful tools in shaping firms' decisions (Vergne et al., 2018a).

Within the context of a signaling theoretical framework, we argue that firms with higher media attention (negative media attention) in the years preceding the act will increase their CSR engagement compared to firms with lower media (negative media) coverage in the years after the act. Repatriating firms that are more often in the spotlight and/or with more negative coverage will, when access to finance gets cheaper, use CSR as a signal to investors and other stakeholders to mitigate the effect of negative media attention. More formally, we test the following hypotheses:

Hypothesis 3 (H3): *Firms' prior media attention level moderates this relationship between improved access to finance and firms' engagement in CSR.*

Hypothesis 4 (H4): *Firms' prior negative media attention level moderates the relationship between improved access to finance and firms' engagement in CSR.*

3 DATA AND METHODOLOGY

3.1 The American Jobs Creation Act of 2004

The American Jobs Creation Act of 2004 (AJCA, the act) was an attempt by the U.S. government to increase domestic investment. It provided a significant one-off tax reduction (the tax rate was lowered to 5.25 percent from the standard 35 percent) on dividends repatriated from foreign operations back to the U.S.- based parent. Firms could apply this tax reduction in either 2004, 2005, or 2006. American firms have significant amounts of cash accumulated in their foreign subsidiaries, mainly due to the high tax-related costs associated with repatriation (Foley et al., 2007). The AJCA led to a large increase in the amount of foreign earnings firms repatriated, which according to the Internal Revenue Services (IRS), amounted to $313 billion or over 1 percent of the U.S. GDP. To illustrate, the pharmaceutical firm Pfizer repatriated $37 billion from its foreign operations under the act. The passage of the AJCA improved firms' access to their internal funds "trapped" in foreign subsidiaries (Blouin et al., 2009). It lowered firms' cost of internal financing and subsequently reduced the need to seek external financing. The induced variation in firms' cost of financing is exogenous. The act did not alter the firm's existing investment opportunity set; the act itself did not create new projects; instead, it allowed firms to undertake projects previously considered unattainable (Faulkender et al., 2012). The AJCA has to date been used as an exogenous shock to test for the causal impact of lower costs of financing on firms' investment decisions (Dharmapala et al., 2011; Faulkender et al., 2012), the profitability of foreign acquisitions (Edwards et al., 2015), workplace safety (Cohn et al., 2015) or disclosure quality (Irani et al., 2014).

3.2 Data and variable definitions

Data sources and sample selection

Our sample consists of firms listed in the Kinder, Lyndenberg, Domini & Co. (KLD) social ratings database as of 2001. KLD is a widely used measure of CSR (Waddock et al., 1997; Cheng et al., 2013; Flammer, 2015b)[2]. Despite some criticism related to the structure of its data (Rowley and Berman, 2000), it has been labeled "the largest multidimensional CSP (corporate social performance) database available to the public" (Deckop et al., 2006, p. 334). It is considered as one of the" most influential social raters with $8 billion invested in funds based on its index" (Chatterji

[2]Elements that did not exist throughout the entire sample period were excluded (e.g., No-Layoff Policy, Political Accountability Concern).

et al., 2008, p. 55). The data set is very useful for studying changes in firms' CSR since it applies consistent rating criteria from year to year. Most importantly, KLD is the only database of CSR ratings with a broad coverage available from 2001, the start of this paper's empirical setting. Repatriation data is collected from thousands of firm filings stored on the SEC EDGAR database. Firm-level accounting data is sourced from Compustat, and information on firms' media coverage is obtained from Factiva. Our final sample is an unbalanced panel dataset with 5,585 firm-year observations for 2001 through 2007.

Repatriation under the AJCA

Although information on firms' repatriation activity was not readily available, firms were required to discuss the decision whether or not to repatriate foreign dividends in their 10-K filings. To obtain this information, we used the *SECEdgar* package in Python to access and download firms' 10-K filings from the SEC Edgar database. We further programmed a parser that identified firms discussing the act and extracted the relevant passages. Since the act had several different provisions, we read the extracted passages and manually assessed whether the foreign dividend tax provision applied to the repatriated amount. Based on this information, we constructed the dummy variable *AJCA*, which is equal to 1 if a firm repatriates under the act in either 2004, 2005 or 2006 and 0 otherwise. Previous research using the AJCA shows that the decision to repatriate is endogenous as it is a decision made by the management of the firm (Dharmapala et al., 2011). To address this issue, we follow the approach of Faulkender et al. (2012) and estimate firms' probability of repatriation. We then include the probability of repatriation in the DiD estimation alongside firms' actual decision to repatriate.

Predicted probability of repatriation

Firms' probability of repatriation, *Pr(AJCA)*, is estimated using a logistic regression based on data for the year prior to the passage of the AJCA. The dependent variable for the logistic regression is a dummy variable equal to 1 in 2003 if a firm repatriates under the AJCA in either 2004, 2005, or 2006 and 0 otherwise. We include measures which affect firms' propensity to repatriate such as firm size, market-to-book value of total assets, profitability, foreign tax rate (< 35 percent), foreign earnings, permanently reinvested earnings, and foreign pre-tax income as suggested by prior research (Dharmapala et al., 2011; Faulkender et al., 2012).

Dependent variables

To measure firms' CSR engagement, we use the sum of CSR strengths as assigned by the KLD database. KLD rates firms in the following seven areas: community, corporate governance, diversity, employee relations, environment, human rights, and product quality. For each area, strengths and concerns are assigned to reflect firms' conduct with respect to a broader set of stakeholders. The recent literature suggests an empirical and conceptual difference between strengths and concerns and advises against netting out the two (Flammer et al., 2015b; Kacperczyk, 2009; Mattingly et al., 2006). Therefore, we keep strengths and concerns as two separate measures of CSR (we include the CSR concerns as a control). In the analysis, we also consider six of the individual categories in KLD: *Corporate governance*, *Natural environment*, *Product quality*, *Employee relations*, *Diversity* and *Community*. In addition, we re-estimate our specification using KLD's composite measure - *net*CSR as a dependent variable.

Control variables

Firm size is the natural log of the market value of total assets obtained as the market value of common stock plus the book value of total liabilities. *Firm profitability* is earnings before interest depreciation and amortization scaled by the book value of total assets. The *Market-to-book ratio* is the market value of total assets to the book value of total assets. *Foreign earnings* is a measure of the profitability of the subsidiary and is the three year average of foreign pre-tax income scaled by the book value of total assets for the years prior to the act. *Foreign tax rate* is a dummy variable equal to 1 if the US marginal tax rate of 35 percent exceeds the average foreign tax rate and 0 otherwise (average foreign tax rate is the mean of foreign income taxes divided by foreign pre-tax income for years 2001, 2002 and 2003). *Foreign pre-tax income* is a dummy variable equal to 1 if the average foreign pre-tax income for a firm in the three years before the act is positive and 0 otherwise. Although *Foreign earnings* and *Foreign pre-tax income* are reliable proxies for foreign operations, a potential flaw is that they may contain earnings from years before the three-year period prior to the act or, the variable may reflect earnings already repatriated. To overcome this, we include a measure of permanently reinvested earnings abroad, which is the log of 1 plus the firms' stock of permanently reinvested foreign earnings, $ln(1 + PRE)$.

Moderating variables

Financial constraints. The precise classification of firms into constrained and unconstrained firms is challenging as financial constraints are not directly observable. The literature therefore predominantly relies on composite measures of observable firm characteristics (e.g., firm size, age and leverage) such as the WW index (Whited and Wu, 2006).

We choose the WW index as a measure of external financing constraints over other measures for multiple reasons. For example, while the KZ index is a popular measure of financial constraints, it recently received substantial criticism in the corporate finance literature (e.g. Hoberg and Maksimovic, 2015; Farre-Mensa and Ljungqvist, 2016). One source of criticism is that the parameters of the KZ index are estimated on a comparably small sample of 49 firms and therefore become unstable when applied on larger samples or for samples with greater heterogeneity between firms (Whited et al., 2006). Our sample is comparably large and includes firms that vary on a number of characteristics such as industry or size. Another criticism of the KZ index is its dependence on Tobin's Q, which is known to be estimated with a large measurement error (Erickson and Whited, 2006) and to be prone to potential stock mispricing. For example, the WW index does not include a measure of Tobin's Q and is thus robust to the adverse effects of stock mispricing. Also, it relies on industry sales growth and individual sales growth to identify constrained firms (e.g., firms in high growth industries exhibiting low individual sales). We constructed the WW index using the parameters estimated by Whited et al. (2006). Appendix B contains detailed information regarding the construction of the WW index.

As the WW index takes on both positive and negative values, we transform the variable on a 0 to 1 line, where 0 is financially unconstrained and 1 is financially constrained, to allow for ease of interpretation of the results. For the purpose, we construct an empirical cumulative density function (ECDF), as graphical and statistical examination did not yield supportive results of either normal or student-t distribution. Using the ECDF allows us to map the negative values of the WW index into a positive index without violating the true data distribution. Thus, our measure of external financial constraints is based on the ECDF and is equal to the average of the mapped WW index for the three years prior to the act (before treatment). Further, we control for changes in CSR for financially constrained relative to unconstrained firms post-treatment relative to pre-treatment. To do so, we construct a measure of financial constraints for the period after the act. The measure takes on values for the period after and is equal to zero for years prior to 2004.

To test whether firms respond differently based on the source of their financing constraints (external vs. internal), we include a measure that classifies firms into constrained and unconstrained based on their ability to finance their projects internally. We follow Faulkender et al. (2012) and calculate the percent years during which each firm's internal cash flow is not sufficient to finance their investment. To illustrate, if a firm's internal cash flow is insufficient in 2001, 2002, and 2003 the firm will have a score of 1, classifying it as fully constrained. We create a control for the level of internal financing constraints for the period after the AJCA (2004-2007 including).

Media attention. To measure firms' media attention, we obtained information on media coverage for each firm in Factiva, using the major U.S. news outlets publishing in English. The number of articles per firm per year was then used to create an overall media attention measure - *Media* as the average of the per year number of articles for the period prior to the AJCA (2001-2003 including).

To measure the tone of the articles, we analyzed the text using the negative emotions dictionary in the Linguistic Inquiry and Word Count (LIWC) program. LIWC aims at detecting emotional, social, and cognitive words as well as standard linguistic dimensions, such as usage of pronouns within a body of text (Pennebaker, Booth, and Francis, 2007a) [3]. The variable *Negative media* is the average of the per year percentage of negative emotions in the text for the period prior to the act (2001-2003 including).

Summary statistics

Table 1.1 provides summary statistics for non-repatriating and repatriating firms. Repatriating firms are on average larger and more profitable than non-repatriating firms and have higher earnings from foreign operations. In addition, their foreign tax rate is on average lower than the U.S. marginal tax rate of 35%. In terms of CSR, repatriating firms engage in both more positive CSR and more negative CSR than non-repatriating firms. Within the individual social performance areas, repatriating firms exhibit higher performance on corporate governance, community, environment, product quality, employee relations, and diversity.

3.3 Methodology

Identification

Establishing a causal relationship between improved access to finance and firm's CSR is challenging due to issues of endogeneity resulting from reverse causality and omitted variables. For example, better access to finance may be driven by superior corporate social performance (Cheng et al., 2014) or higher corporate social performance might stem from improved access to finance. To overcome concerns of endogeneity, we need an empirical context in which variation in firms' cost of financing is due to exogenous factors. We use the exogenous variation in firms' internal costs of financing induced by the AJCA.

Since the act was not passed into law to increase CSR investments and did not include a provision stating that a tax break will be applied to CSR related projects, it allows for a clear identification of the effect of improved access to finance on firms' CSR. Moreover, the passage of the AJCA did not alter firms' investment opportunity set; it simply allowed firms to pursue projects previously considered unattainable due to lowering the cost of capital as a result of repatriation.

Difference-in-differences

To test for a causal link between improved access to finance and CSR, we use a DiD estimation method, a widely used method in the economics, finance, and management literature. It is often applied to identify the effect of a policy change on firm behavior [4]. In its simplest form, the DiD estimation includes two groups, a treatment and a control group, and two time periods,

[3]Information regarding the individual steps and procedure for using LIWC2007 is provided in the Linguistic Inquiry and Word Count: LIWC2007 Operations Manual (Pennebaker et al., 2007b).

[4]For recent application in the management literature see Flammer et al., 2015a, and Flammer, 2015a.

before and after the intervention. Firms in the treatment group are affected by the policy change, whereas firms in the control group are not affected by the policy change.

We use the AJCA of 2004 as an exogenous shock to the cost of firms' internal financing. We include both the predicted probability of repatriation - *Pr(AJCA)*, which accounts for the endogenous nature of firms' decision to repatriate, and the measure of the actual decision to repatriate - AJCA. Therefore, the resulting DiD estimation is with three groups, two control groups, and one treatment group. A detailed comparison between standard DiD methodology and the augmented DiD is presented in Appendix A. Table 1.2 provides an overview of the three groups of firms.

In our empirical setup, we distinguish between firms that repatriated from firms that could repatriate but chose not to and firms that could not repatriate because, for example, they did not have any foreign earnings. To test hypothesis 1, we estimate the following equation:

$$CSR_{it} = \beta_0 Pr(AJCA_{it}) + \beta_1 [AJCA_{it} - Pr(AJCA)_{it}] + \gamma^{'} \boldsymbol{X_{it}} + \lambda_i + \mu_t + \epsilon_{it}, \tag{1.1}$$

The dependent variable CSR_{it} is a measure of firms' CSR. The coefficient β_0, captures the variation across the sample in firms' probability of repatriation. It measures the effect of the act for firms that had an incentive to repatriate as opposed to those that did not have an incentive to repatriate (groups 2 & 3 vs. group 1). The coefficient β_1 is the main coefficient of interest as it captures the effect of the act for repatriating versus non-repatriating firms, while holding probability of repatriation constant (group 3 vs group 2). $\boldsymbol{X_{it}}$ a vector of the following control variables: *Firm size*, *Firm profitability*, and *Market-to-book*. We further include firm (λ_i) and time (μ_t) fixed effects. Firm fixed effects control for unobserved heterogeneity on the level of the individual firm that is constant over time. Time dummies account for yearly changes in the general business environment that are common to all firms. Including firm and time fixed effects means that we are running a dummy variable regression equivalent to a Fixed Effects (FE) estimator. An assumption of FE estimators is the absence of serial correlation in the error terms. We, therefore, cluster standard errors by firms, a procedure that also accounts for heteroskedasticity.

Difference-in-differences with moderators

We extend the previous specification to account for the level of financing constraints firms faced prior to the act. We interact $[AJCA_{it} - Pr(AJCA)_{it}]$ with our measures of internal and external financial constraints. To test our second hypothesis, we estimate the following equation:

$$
\begin{aligned}
CSR_{it} = {} & \beta_0 Pr(AJCA_{it}) + \beta_1 [AJCA_{it} - Pr(AJCA)_{it}] \\
& + \beta_2 [AJCA_{it} - Pr(AJCA)_{it}]\ x\ Financially\ Constrained_i \\
& + \gamma' \mathbf{X_{it}} + \lambda_i + \mu_t + \epsilon_{it}.
\end{aligned} \tag{1.2}
$$

In this specification, the coefficient β_2 on the interaction term captures the effect of the act for financially constrained repatriating firms relative to financially unconstrained repatriating firms while holding the probability of repatriation constant. The effect of the act for the unconstrained repatriating firms is captured by β_1. Appendix A contains an illustrative example of the proposed identification strategy.

To test the moderating role of media attention, we follow equation 1.2 and interact $[AJCA_{it} - Pr(AJCA)_{it}]$ with the overall measure of firms media exposure - *Media* as well as the measure of negative media attention - *Negative media*. The coefficient of interest is β_2 as it captures the effect of the act for repatriating firms with higher overall media coverage and higher negative media coverage respectively.

4 RESULTS

Probability of repatriation. In Table 1.3, we report the predicted probability of repatriation under the AJCA along with the corresponding marginal effects. Columns (1) and (2) provide the result of cross-sectional Logit regressions where the dependent variable AJCA is equal to 1 if a firm repatriates under the act and 0 otherwise. The probability of repatriation is estimated for the year 2003, as this is the year immediately prior to the passage of the AJCA. Columns (3) and (4) contain the respective marginal effects.

Results in column (3) indicate that firm size, significantly and positively affects firms' probability of repatriation. More precisely, on average, a 10 percent increase in the market value of assets leads to approximately 1 percent increase in probability of repatriation under the AJCA. Firms with greater access to internal funding, as measured by *Firm profitability*, have a higher probability of repatriating under the AJCA. A 10 percentage points increase in firm profitability leads to a 3 percent increase in the probability of repatriation. In column (4), we add measures of firms' incentives to repatriate funds from foreign subsidiaries. The marginal effects in column (4) indicate that firms with foreign operations in low tax countries have approximately 12 percent higher probability of repatriation. The higher the profitability of a firm's foreign subsidiary the more likely it is that the firm repatriates under the act. Finally, firms with permanently reinvested foreign earnings have a higher probability of repatriation. A 10 percent increase in firms' permanently reinvested earnings leads to a 0.4 percent higher probability of repatriation.

Main results. We provide results from DiD estimation of the causal effect of changes in the firms' cost of financing on firms' performance on CSR in Table 1.4. The relevant equation is equation 1.1.

The coefficient β_1 on $[AJCA_{it} - Pr(AJCA)_{it}]$ is the DiD coefficient. It captures the effect of the act for repatriating firms. It is positive and significant which indicates an increase in CSR of approximately 0.425 units ($\beta_1 = 0.425$, $se = 0.13$). The positive and significant coefficient on Pr(AJCA) ($\beta_0 = 1.751$, $se = 0.28$) shows that firms with high probability of repatriation have higher levels of CSR. While firm size is positively associate with high probability of repatriation, the association with CSR is negative ($Size(log) = 0.196$, $se = 0.11$). Since large firms are more likely to repatriate, firm size and probability to repatriate will capture some of the same effects. The marginal negative effect of firm size on CSR, therefore captures the remaining effect of firms size after controlling for effect of firms also being multinational to a varying degree. The coefficients on Market-to-book and Firm profitability are statistically insignificant (*Market-to-book* $= 0.050$, $se = 0.03$ and $Firm\ profitability = 0.386$, $se = 0.41$).

To test the sensitivity of our results and for comparison with previous research, we use *net*CSR, the difference between firms' sum of scores in the strengths categories to the sum of scores in the concerns categories, as a dependent variable. We present the results of the estimation in column (2) of Table 1.4. The coefficient on the interaction term is positive and statistically significant ($\beta_1 = 0.511$; $se = 0.15$). This result confirms that repatriating firms increased their CSR relative to non-repatriating firms as a result of the exogenous shock to their costs of financing. Overall, the results in column (2) are very similar to those in column (1) suggesting that the effect of the act on firm engagement in CSR is not driven by our choice of CSR measure.

We further investigate the individual components of CSR strengths. Results are presented in Table 1.5 and indicate that repatriating firms increase CSR relative to non-repatriating firms in the areas of corporate governance ($\beta_1 = 0.078$, $se = 0.03$), environment ($\beta_1 = 0.177$, $se = 0.05$), diversity ($\beta_1 = 0.101$, $se = 0.06$) and community ($\beta_1 = 0.076$, $se = 0.04$). Results remain robust when we replace the individual category strengths with the respective net measures for each of the six KLD categories.

Financial constraints. Table 1.6 shows the results of the DiD estimation extended to include measures of financing constraints. In column (1), the negative and significant coefficient on the interaction term ($\beta_2 = -1.319$, $se = 0.40$) indicates that financially constrained repatriating firms decrease their engagement in CSR relative to financially unconstrained repatriating firms as a result of the positive shock to their cost of internal financing. The coefficient β_1 on $[AJCA_{it} - Pr(AJCA)_{it}]$ now captures the effect of the AJCA for financially unconstrained repatriating firms. The positive and significant coefficient ($\beta_1 = 0.877$, $se = 0.22$) suggest that financially unconstrained firms increase their CSR engagement in the period after the act. The coefficient on Pr(AJCA) ($\beta_0 = 1.605$, $se = 0.28$) remains positive and significant indicating that firms with high probability of repatriation have higher CSR relative to firms with low or no probability to repatriate. In column (2) of Table 1.6, the statistically insignificant coefficient on $[AJCA_{it} - Pr(AJCA)_{it}]$ x *Internal FC* indicates that we cannot statistically distinguish between internally financially constrained and unconstrained repatriating firms ($\beta_2 = 0.083$, $se = 0.30$).

Media attention. Results from the DiD estimation with measures of overall and negative media attention are presented in column (1) and column (2) of Table 1.7. The positive and statistically significant coefficients on the interaction term, $[AJCA_{it} - Pr(AJCA)_{it}]$ x *Media*, in column (1) indicates that repatriating firms with high overall media coverage in the years prior to the act increase their CSR engagement relative to firms with low coverage ($\beta_2 = 1.617$, $se = 0.66$). Interestingly, firms with lower media coverage also increase their CSR engagement as a result of the act as indicated by the positive and statistically significant coefficient on $[AJCA_{it} - Pr(AJCA)_{it}]$ ($\beta_1 = 0.333$, $se = 0.13$). The total effect for repatriating firms with high media coverage is positive.

Results are similar for the specification with negative media coverage presented in column (2) of Table 1.7. Repatriating firms with more negative coverage increase their CSR engagement relative to firms with lower negative coverage. The coefficient on $[AJCA_{it} - Pr(AJCA)_{it}]$ x *Negative media* is positive and statistically significant ($\beta_2 = 0.261$, $se = 0.11$). The total effect for repatriating firms with negative media coverage is an increase in firms' CSR engagement as a result of improved access to financing.

5 VALIDITY OF THE EMPIRICAL METHODOLOGY

We test for the validity of the underlying assumption of the DiD method by graphically verifying whether CSR strengths for repatriating and non-repatriating firms followed a parallel trend prior to the act. Figure 1.1 shows that repatriating and non-repatriating firms had very similar paths prior to the act. We observe divergence in the years after the passage of the AJCA (2004 and onward). We also formally test for differences in the pre-treatment trends between treatment and control groups and calculate the mean change in CSR separately for repatriating and non-repatriating firms. We then perform a two-sample t-test. With a t-statistic of -1.467 we fail to reject the null hypothesis. Therefore, we cannot reject that there are no differences in the pre-treatment trends between the treatment and control groups.

Further, we conduct a placebo test to ensure that our results capture the effect of the act and not the effect of other potentially unobserved factors. We re-estimated our specification with an artificial year of treatment. We moved the year of the shock to 2002. Table 1.8 shows the results of the placebo test for *CSR strengths* as well as for *net*CSR.

The probability of repatriation, $Pr(AJCA)$, is significant, however, with a much lower magnitude than the main estimation results. This means that firms that are more likely to repatriate, usually larger and more profitable firms, have higher CSR strengths. It is important to note that

$Pr(AJCA)$ solely captures firms' incentive to repatriate and not their actual decision to repatriate. Thus, the coefficient is capturing a static difference between these groups. The coefficient on $[AJCA_{it} - Pr(AJCA)_{it}]$ is insignificant for both, *CSR strengths* and *netCSR*, showing that our DiD estimation is robust and that we are not capturing the effect of anything but the act ($\beta_1 = 0.001$, $se = 0.14$; $\beta_1 = 0.073$, $se = 0.16$).

6 DISCUSSION AND CONCLUSION

This paper set out to investigate one of the long-standing questions in the field of CSR, namely the direction of causality between firm financial performance and firms' engagement in CSR. To empirically address this question, we test whether changes in firms' cost of capital induced by repatriation provision of the American Jobs Creation Act of 2004 affect firms' CSR engagement. Our empirical specification and use of the DiD methodology allowed us to overcome the issues of endogeneity (unobserved heterogeneity and reverse causality) that often plague research in CSR. Further, to account for the self-selection bias that stems from firms' endogenous decision to repatriate, we predicted a probability of repatriation for firms in our sample. Including both the predicted probability of repatriation and firms' actual decision to repatriate in our empirical model allows us to distinguish between three separate groups. Our results provide causal evidence that firms increase their CSR engagement as a result of improved access to cheaper financing. We, therefore, find support for hypothesis 1.

The relationship between CSR and access to finance was previously examined by Cheng et al. (2014). The authors argued for a direction of the relationship from CSR to better access to finance. We build upon the signaling framework used by the authors and argue that in order for CSR to be a credible signal, it has to be costly as otherwise imitation will follow, and no effect would be observed. However, if CSR is a costly signal, firms' financial performance will affect their ability to send a signal. Therefore, we do not question their findings but rather explore and confirm that the relationship found in their study is an outcome of a preceding causality.

Once we established the direction of causality, we further tested whether firms use CSR in the way predicted by the signaling theory. We add an extra dimension, firms' level of financing constraints prior to the AJCA. We argued that the effect of improved access to finance on firms' CSR engagement would differ for financially constrained and financially unconstrained firms. Within a signaling context, if CSR is costly, it is the financially unconstrained firms that can afford to spend the windfall on signaling projects. However, financially constrained firms would have other, more urgent projects to attend to before they get to the signaling one. Results from the DiD estimation with the measure of external financing constraints - the WW index, show that financially constrained repatriating firms decrease their engagement in CSR, while financially unconstrained firms increase it. We do not find statistically significant results for the internal financing constraints measure, which takes into account the firms' ability to finance projects with internal funds. Overall, the results provide support for hypothesis 2, the relationship is moderated by the level of financial constraints firms face prior to the act. The presence of an effect for external and the lack of effect when using the internal constraints measure provides further support for the use of CSR as a signaling tool.

As a credible information provider, mainstream media presents a highly viable channel for firms to communicate with stakeholders and other actors on capital markets. The media plays an important role in reducing informational asymmetries for investors through increased transparency in firms' actions (Du et al., 2010). However, previous research has shown that the media has a strong negative bias (Soroka, 2006; Niven, 2001) and preference for bad over good news. Positive media coverage provides reputational benefits (Gamache et al., 2019) and negative media coverage translates into reputational penalties (Bednar et al., 2015). Thus, media attention in general and negative media attention in particular, can affect firms' decisions. We thus argued that overall and negative media attention would moderate the relationship between improved access to finance and firms' CSR engagement. Results from a DiD estimation with moderators show evidence for the moderating role of both overall and negative media attention. Firms with higher levels of media coverage increase their CSR engagement more than firms with lower media coverage. Using negative media coverage as the moderating variable yields similar results. With this finding, we contribute to the literature on the strategic use of CSR as a signaling instrument (e.g. Cheng et al., 2014; Jones et al., 2001). Our findings further contribute to the stream of research studying the use of CSR as a signaling tool (Flammer, 2020; Cheng et al., 2014; Su et al., 2016). Results from the estimation accounting for firms' prior level of media attention (total and negative) show that CSR is indeed a costly signal. Repatriating firms with high overall and negative media attention prior to the act increased their CSR engagement due to the exogenously lowered cost of financing. If CSR were not a costly engagement, firms would use it even in the absence of the AJCA on-off tax reduction. However, we find that the CSR engagement for firms with high incentives to counteract unwanted media attention increases after improving their access to finance.

Finally, our results contribute to the vibrant literature studying the drivers of firms' CSR engagement (e.g., Rubio et al., 2016; Shen et al., 2016; Flammer, 2014; Ioannou et al., 2012). We add to this stream of literature by providing causal evidence that improved access to finance (lower internal costs of financing) affects firm-level engagement in CSR. Establishing causal evidence for the direction of the link between firm financial performance and CSR is imperative to our understanding of why firms engage in CSR. Understanding the drivers is crucial to understanding the value of CSR, especially as CSR is emerging as a new investment factor.

References

Akerlof, George A (1970). "The market for "lemons": Quality uncertainty and the market mechanism". In: *The Quarterly Journal of Economics*, pp. 488–500.

Baker, Malcolm, Jeremy C Stein, and Jeffrey Wurgler (2003). "When does the market matter? Stock prices and the investment of equity-dependent firms". In: *The Quarterly Journal of Economics* 118.3, pp. 969–1005.

Bansal, Pratima, Jijun Gao, and Israr Qureshi (2014). "The extensiveness of corporate social and environmental commitment across firms over time". In: *Organization Studies* 35.7, pp. 949–966.

Barnett, Michael L (2007). "Stakeholder influence capacity and the variability of financial returns to corporate social responsibility". In: *Academy of management review* 32.3, pp. 794–816.

Baumeister, Roy F, Ellen Bratslavsky, Catrin Finkenauer, and Kathleen D Vohs (2001). "Bad is stronger than good". In: *Review of general psychology* 5.4, pp. 323–370.

Bednar, Michael K, E Geoffrey Love, and Matthew Kraatz (2015). "Paying the price? The impact of controversial governance practices on managerial reputation". In: *Academy of Management Journal* 58.6, pp. 1740–1760.

Bénabou, Roland and Jean Tirole (2010). "Individual and corporate social responsibility". In: *Economica* 77.305, pp. 1–19.

Blouin, Jennifer and Linda Krull (2009). "Bringing it home: A study of the incentives surrounding the repatriation of foreign earnings under the American Jobs Creation Act of 2004". In: *Journal of Accounting Research* 47.4, pp. 1027–1059.

Bode, Christiane, Jasjit Singh, and Michelle Rogan (2015). "Corporate social initiatives and employee retention". In: *Organization Science*.

Campello, Murillo and John R Graham (2013). "Do stock prices influence corporate decisions? Evidence from the technology bubble". In: *Journal of Financial Economics* 107.1, pp. 89–110.

Carroll, Craig E (2011). "International perspectives on agenda-setting theory applied to business news". In: *Corporate reputation and the news media: Agenda-setting within business news coverage in developed, emerging, and frontier markets*, pp. 3–14.

Chatterji, Aaron K and David II Levine (2008). "Imitate or differentiate? Evaluating the validity of corporate social responsibility ratings". In: *Center for Responsible Business*.

Cheng, Beiting, Ioannis Ioannou, and George Serafeim (2014). "Corporate social responsibility and access to finance". In: *Strategic Management Journal* 35.1, pp. 1–23.

Cheng, Ing-Haw, Harrison Hong, and Kelly Shue (2013). *Do Managers Do Good with Other People's Money?* Working Paper. National Bureau of Economic Research.

Cohn, Jonathan B and Malcolm Wardlaw (2015). "Financing Constraints and Workplace Safety". In: *Journal of Finance, Forthcoming*.

DeAngelo, Harry, Linda DeAngelo, and Stuart C Gilson (1996). "Perceptions and the politics of finance: junk bonds and the regulatory seizure of First Capital Life". In: *Journal of Financial Economics* 41.3, pp. 475–511.

Deckop, John R, Kimberly K Merriman, and Shruti Gupta (2006). "The effects of CEO pay structure on corporate social performance". In: *Journal of Management* 32.3, pp. 329–342.

Dharmapala, Dhammika, C Fritz Foley, and Kristin J Forbes (2011). "Watch what I do, not what I say: The unintended consequences of the Homeland Investment Act". In: *The Journal of Finance* 66.3, pp. 753–787.

Du, Shuili, Chitrabhan B Bhattacharya, and Sankar Sen (2010). "Maximizing business returns to corporate social responsibility (CSR): The role of CSR communication". In: *International journal of management reviews* 12.1, pp. 8–19.

Edwards, Alexander, Todd Kravet, and Ryan Wilson (2015). "Trapped cash and the profitability of foreign acquisitions". In: *Contemporary Accounting Research*.

Erickson, Timothy and Toni M Whited (2006). "On the accuracy of different measures of q". In: *Financial Management* 35.3, pp. 5–33.

Farre-Mensa, Joan and Alexander Ljungqvist (2016). "Do measures of financial constraints measure financial constraints?" In: *Review of Financial Studies* 29.2, pp. 271–308.

Faulkender, Michael and Mitchell Petersen (2012). "Investment and capital constraints: Repatriations under the American Jobs Creation Act". In: *Review of Financial Studies* 25.11, pp. 3351–3388.

Fiss, Peer C. and Edward J. Zajac (Dec. 2006). "The symbolic management of strategic change: Sensegiving via framing and decoupling". English (US). In: *Academy of Management Journal* 49.6, pp. 1173–1193. ISSN: 0001-4273. DOI: 10.5465/AMJ.2006.23478255.

Flammer, Caroline (2014). "Does product market competition foster corporate social responsibility? Evidence from trade liberalization". In: *Strategic Management Journal*.

— (2015a). "Corporate Social Responsibility and the Allocation of Procurement Contracts: Evidence from a Natural Experiment".

— (2015b). "Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach". In: *Management Science* 61.11, pp. 2549–2568.

— (2020). "Green bonds: effectiveness and implications for public policy". In: *Environmental and Energy Policy and the Economy* 1.1, pp. 95–128.

Flammer, Caroline and Jiao Luo (2015a). "Corporate social responsibility as an employee governance tool: Evidence from a quasi-experiment". In: *Strategic Management Journal*.

Flammer, Caroline and Aleksandra Kacperczyk (2015b). “The impact of stakeholder orientation on innovation: Evidence from a natural experiment”. In: *Management Science* 62.7, pp. 1982–2001.

Foley, C Fritz, Jay C Hartzell, Sheridan Titman, and Garry Twite (2007). “Why do firms hold so much cash? A tax-based explanation”. In: *Journal of Financial Economics* 86.3, pp. 579–607.

Friedman, Milton (1970). “The Social Responsibility of Business is to Increase its Profits”. In: *New York Times Magazine*, pp. 32–33.

Gamache, Daniel L and Gerry McNamara (2019). “Responding to bad press: How CEO temporal focus influences the sensitivity to negative media coverage of acquisitions”. In: *Academy of Management Journal* 62.3, pp. 918–943.

Godfrey, Paul C (2005). “The relationship between corporate philanthropy and shareholder wealth: A risk management perspective”. In: *Academy of Management Review* 30.4, pp. 777–798.

Grafström, Maria and Karolina Windell (2011). “The role of infomediaries: CSR in the business press during 2000–2009”. In: *Journal of business ethics* 103.2, p. 221.

Hall, BH and J Lerner (2010). *The Financing of R&D and Innovation, volume 1 of Handbook of the Economics of Innovation, chapter 0*.

Hawn, Olga (2013). “How social legitimacy helps overcome low home country legitimacy: Corporate Social Responsibility and emerging market multinationals”. In: *Academy of Management Annual Meeting, Orlando, Florida*.

Hawn, Olga and Ioannis Ioannou (2014). *Mind the Gap: The Interplay Between Internal and External Actions in the Case of Corporate Social Responsibility*. Working Paper.

Hoberg, Gerard and Vojislav Maksimovic (2015). “Redefining financial constraints: a text-based analysis”. In: *Review of Financial Studies* 28.5, pp. 1312–1352.

Hong, Harrison, Jeffrey D Kubik, and Jose A Scheinkman (2012). “Financial constraints on corporate goodness”. In: *Working paper*.

Ioannou, Ioannis and George Serafeim (2012). “What drives corporate social performance? The role of nation-level institutions”. In: *Journal of International Business Studies* 43.9, pp. 834–864.

Irani, Rustom M and David Oesch (2014). *Financial Constraints and Corporate Disclosure*. Working Paper.

Jensen, Michael C and William H Meckling (1976). “Theory of the firm: Managerial behavior, agency costs and ownership structure”. In: *Journal of Financial Economics* 3.4, pp. 305–360.

Jones, Ray and Audrey J Murrell (2001). “Signaling Positive Corporate Social Performance An Event Study of Family-Friendly Firms”. In: *Business & Society* 40.1, pp. 59–78.

Kacperczyk, Aleksandra (2009). “With greater power comes greater responsibility? Takeover protection and corporate attention to stakeholders”. In: *Strategic Management Journal* 30.3, pp. 261–285.

Kepplinger, Hans Mathias (2017). "Reciprocal effects". In: *The International Encyclopedia of Media Effects*, pp. 1–9.

Lamin, Anna and Srilata Zaheer (2012). "Wall Street vs. Main Street: Firm strategies for defending legitimacy and their impact on different stakeholders". In: *Organization Science* 23.1, pp. 47–66.

Leland, Hayne E and David H Pyle (1977). "Informational Asymmetries, Financial Structure, and Financial Intermediation". In: *The Journal of Finance* 32.2.

Lev, Baruch, Christine Petrovits, and Suresh Radhakrishnan (2010). "Is doing good good for you? How corporate charitable contributions enhance revenue growth". In: *Strategic Management Journal* 31.2, pp. 182–200.

Luo, Xueming and Chitra Bhanu Bhattacharya (2006). "Corporate social responsibility, customer satisfaction, and market value". In: *Journal of Marketing* 70.4, pp. 1–18.

Margolis, Joshua D and James P Walsh (2003). "Misery loves companies: Rethinking social initiatives by business". In: *Administrative Science Quarterly* 48.2, pp. 268–305.

Margolis, Joshua D, Hillary Anger Elfenbein, and James P Walsh (2007). "Does it pay to be good? A meta-analysis and redirection of research on the relationship between corporate social and financial performance". In: *Ann Arbor* 1001, pp. 48109–1234.

Mattingly, James E and Shawn L Berman (2006). "Measurement of corporate social action discovering taxonomy in the Kinder Lydenburg Domini ratings data". In: *Business & Society* 45.1, pp. 20–46.

Myers, Stewart C and Nicholas S Majluf (1984). "Corporate financing and investment decisions when firms have information that investors do not have". In: *Journal of Financial Economics* 13.2, pp. 187–221.

Niven, David (2001). "Bias in the news: Partisanship and negativity in media coverage of presidents George Bush and Bill Clinton". In: *Harvard International Journal of Press/Politics* 6.3, pp. 31–46.

Pennebaker, James W, Roger J Booth, and Martha E Francis (2007a). "LIWC2007: Linguistic inquiry and word count". In: *Austin, Texas: liwc. net*.

— (2007b). "Operator's manual: Linguistic inquiry and word count: LIWC2007". In:

Petkova, Antoaneta (2012). "From the ground up: Building young firms' reputations". In: *The Oxford handbook of corporate reputation*, pp. 383–401.

Pollock, Timothy G and Violina P Rindova (2003). "Media legitimation effects in the market for initial public offerings". In: *Academy of Management journal* 46.5, pp. 631–642.

Porter, Michael E and Mark R Kramer (2011). "Creating shared value". In: *Harvard Business Review* 89.1/2, pp. 62–77.

Rozin, Paul and Edward B Royzman (2001). "Negativity bias, negativity dominance, and contagion". In: *Personality and social psychology review* 5.4, pp. 296–320.

Rubio, Silvina and Antonio B Vázquez (2016). “Do Institutional Investors Influence Firm Social Performance?” In: *Available at SSRN 2716056*.

Shen, Rui, Yi Tang, and Ying Zhang (2016). “Does Firm Innovation Affect Corporate Social Responsibility?” In:

Soroka, Stuart N (2006). “Good news and bad news: Asymmetric responses to economic information”. In: *The journal of Politics* 68.2, pp. 372–385.

Spence, Michael (2002). “Signaling in retrospect and the informational structure of markets”. In: *American Economic Review* 92.3, pp. 434–459.

Stein, Jeremy C (2003). “Agency, information and corporate investment”. In: *Handbook of the Economics of Finance*. Vol. 1. Elsevier, pp. 111–165.

Su, Weichieh, Mike W Peng, Weiqiang Tan, and Yan-Leung Cheung (2016). “The signaling effect of corporate social responsibility in emerging economies”. In: *Journal of business Ethics* 134.3, pp. 479–491.

Vergne, J.-P., G. Wernicke, and S. Brenner (2018a). “Signal incongruence and it’s consequences: A study of media disapproval and CEO overcompensation”. In: *Organization Science* 29.5, pp. 755–987.

Vergne, Jean-Philippe, Georg Wernicke, and Steffen Brenner (2018b). “Signal incongruence and its consequences: A study of media disapproval and CEO overcompensation”. In: *Organization Science* 29.5, pp. 796–817.

Waddock, Sandra A and Samuel B Graves (1997). “The corporate social performance–financial performance link”. In: *Strategic management journal* 18.4, pp. 303–319.

Wang, Heli, Li Tong, Riki Takeuchi, and Gerard George (2016). “Corporate Social Responsibility: An Overview and New Research Directions: Thematic Issue on Corporate Social Responsibility”. In: *Academy of Management Journal* 59.2, pp. 534–544. DOI: 10.5465/amj.2016.5001. eprint: http://amj.aom.org/content/59/2/534.full.pdf+html. URL: http://amj.aom.org/content/59/2/534.short.

Whited, Toni M and Guojun Wu (2006). “Financial constraints risk”. In: *Review of Financial Studies* 19.2, pp. 531–559.

Appendix A

Standard Difference-in-differences

An illustration of a standard DiD expression in the context of repatriation under the AJCA:

$$Y_{it} = \alpha + \gamma Repat_i + \lambda Post_t + \delta(Repat_i * Post_t) + \epsilon_{it}$$

Non-repatriating, Before: α
Non-repatriating, After: $\alpha + \lambda$
Repatriating, Before: $\alpha + \gamma$
Repatriating, After: $\alpha + \gamma + \lambda + \delta$

$$\begin{aligned}
DiD &= (Repatriating\ After - Repatriating\ Before) - \\
&\quad (Non - repatriating\ After - Non - repatriating\ Before) \\
DiD &= (\alpha + \gamma + \lambda + \delta - \alpha - \gamma) - (\alpha + \lambda - \alpha) \\
DiD &= \delta
\end{aligned}$$

Identification: An illustrative example

We have adapted an example illustrating the identification strategy we use, showing that β_1 is the correct measure. Let us take the difference between two firms, one repatriating with another non-repatriating firm:

$$\begin{aligned}
CSR(Repatriating)_{it} &= \beta_0 Pr(AJCA)_{it} + \beta_1[1 - Pr(AJCA)_{it}] + \beta_2 X_{it} \\
CSR(Non - Repatriating)_{it} &= \beta_0 Pr(AJCA)_{it} + \beta_1[0 - Pr(AJCA)_{it}] + \beta_2 X_{it} \\
\Delta CSR_{it} &= \beta_1([1 - Pr(AJCA)_{it}] - [0 - Pr(AJCA)_{it}]) \\
\Delta CSR_{it} &= \beta_1
\end{aligned}$$

Why do we need the difference between actual and predicted repatriation?

$$\begin{aligned}
Y_{it} &= \alpha + \beta_0 Pr(AJCA)_{it} + \beta_1 (AJCA_{it} - Pr(AJCA)_{it}) + \beta_2 X_{it} + \epsilon_{it} \\
Y_{it} &= \alpha + \beta_0 Pr(AJCA)_{it} + \beta_1 AJCA_{it} - \beta_1 Pr(AJCA)_{it} + \beta_2 X_{it} + \epsilon_{it}
\end{aligned}$$

We re-arrange,

$$Y_{it} = \alpha + \beta_1 AJCA_{it} + (\beta_0 - \beta_1) Pr(AJCA)_{it} + \beta_2 X_{it} + \epsilon_{it}$$

Thus, we can enter AJCA and Pr(AJCA) additively, however, we will not be able to pin down β_1.

An illustrative example of the DiD estimation with financial constraints.

$$\begin{aligned}
CSR(Repatriating)_{it} &= \beta_0 Pr(AJCA)_{it} + \beta_1 [1 - Pr(AJCA)_{it}] \\
&+ \beta_2 [1 - Pr(AJCA)_{it}] * FC + \beta_3 X_{it} + \epsilon_{it} \\
CSR(Non - Repatriating)_{it} &= \beta_0 Pr(AJCA)_{it} + \beta_1 [0 - Pr(AJCA)_{it}] \\
&+ \beta_2 [0 - Pr(AJCA)_{it}] * FC + \beta_3 X_{it} + \epsilon_{it} \\
\Delta CSR_{it} &= \beta_1 ([1 - Pr(AJCA)_{it}] - [0 - Pr(AJCA)_{it}]) \\
&+ \beta_2 ([1 - Pr(AJCA)_{it}] - [0 - Pr(AJCA)_{it}]) * FC \\
\Delta CSR_{it} &= \beta_1 + \beta_2 * FC
\end{aligned}$$

Appendix B

WW index

For the ease of interpretation of the econometric estimation and separation of the groups, we transformed the variables of the three indexes to be on a 0 to 1 line. We constructed empirical cumulative density functions (ECDF) since graphical and statistical examination did not yield supportive results for either the normal or student-t distribution as an adequate cumulative density function (CDF) to fit the values of the WW, SA, or KZ indexes. Using the ECDF allows us to transform the values on a 0 to 1 line (0 for fully unconstrained, 1 fully unconstrained) without changing the true distribution of the data. Since we are interested in measuring the level of financial constraints firms faced prior to the passage of the act, we calculated the mean for the years 2001-2003 and kept it constant for each firm. To account for the level of financial constraints post the act, we applied the same method for the years 2004 through 2007. The resulting measure of the level of financial constraints in the period post the act - *Fin Constraints Post* has the value 0 for the years prior to 2004 and the measure of financial constraints after 2003.

We constructed the WW index using the parameters estimated by Whited et al., 2006. The index is a linear combination of the following accounting variables that we winsorized at 99 percentile to avoid extreme ratios: 1) cash flow to total assets (*CF*), 2) long term debt to total assets (*TLTD*), 3) natural log of total assets (*LNTA*), 4) average industry sales growth, estimated separately for each of the 3-digit SIC industry codes in each year (*ISG*), 5) sales growth for each firm-year observation (*SG*), 6) dummy variable indicating positive dividends paid (*DIVPOS*). The specification of the WW index is as follows:

$$WW\ Index = -0.091 * CF_{it} + 0.021 * TLTD_{it} - 0.044 * LNTA_{it} +$$
$$0.102 * ISG_{it} - 0.035 * SG_{it} - 0.062 * DIVPOS_{it}$$

FIGURES

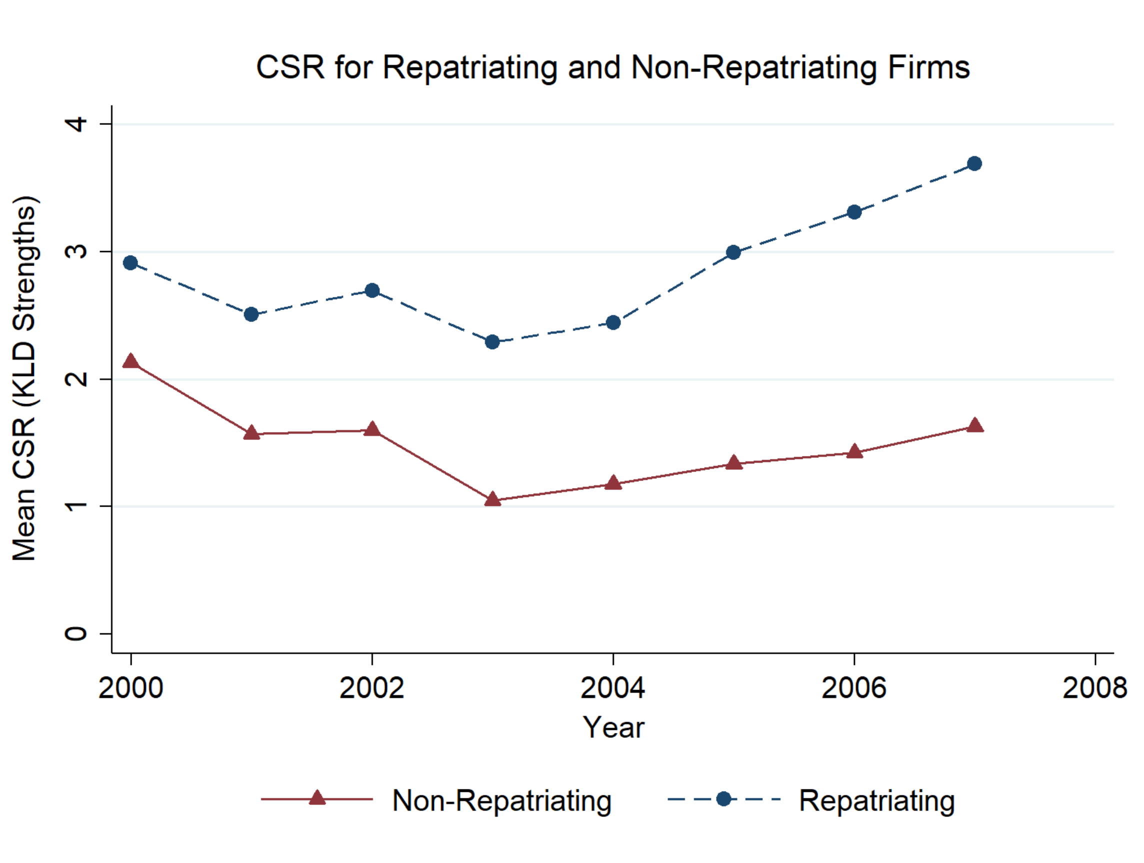

FIGURE 1.1: Parallel paths DiD assumption: Graphical test

TABLES

TABLE 1.1: Summary statistics for non-repatriating and repatriating firms

	Non-Repatriating		Repatriating	
	Mean	SD	Mean	SD
Measures of CSR				
CSR strengths	1.345	1.830	2.861	3.240
CSR concerns	1.942	1.996	2.560	2.437
*net*CSR	−0.597	2.219	0.300	2.764
Corporate governance	0.107	0.319	0.143	0.406
Community	0.125	0.418	0.336	0.728
Natural environment	0.141	0.407	0.384	0.758
Product quality	0.059	0.248	0.174	0.413
Employee relations	0.308	0.619	0.623	0.912
Diversity	0.605	1.026	1.202	1.447
Financial constraints				
Financial constraints (WW)	0.493	0.276	0.350	0.257
Financial constraints (FP)	0.405	0.415	0.264	0.364
Media attention				
Media	0.064	0.148	0.108	0.232
Negative media	0.283	0.748	0.519	1.258
Control variables				
Size (log)	8.056	1.350	9.121	1.460
Market-to-book	1.958	1.228	2.300	1.404
Firm profitability	0.133	0.114	0.160	0.083
Foreign tax rate (=1 if < U.S.marg tax)	0.107	0.309	0.252	0.434
Foreign earnings	0.003	0.014	0.013	0.030
Foreign earnings (=1 if 3 yrs avrg.>0)	0.143	0.350	0.313	0.464

TABLE 1.2: Overview of different groups of firms

Number	Treatment/Control	Group Name
1	Control	Could not and did not repatriate
2	Control	Could but did not repatriate
3	Treatment	Could and did repatriate

TABLE 1.3: Predicted probability of repatriation and marginal effects (logistic regression)

	(1) Repatriate Yes/No	(2) Repatriate Yes/No	(3) Marginal Effects	(4) Marginal Effects
Size (log)	0.507^{***}	0.349^{***}	0.093^{***}	0.059^{***}
	(0.05)	(0.07)	(0.01)	(0.01)
Market-to-book	0.074	-0.033	0.014	-0.006
	(0.06)	(0.09)	(0.01)	(0.01)
Firm profitability	1.700^{*}	2.116^{*}	0.312^{*}	0.360^{*}
	(0.91)	(1.25)	(0.17)	(0.21)
Foreign tax rate		0.681^{***}		0.116^{***}
		(0.21)		(0.04)
Foreign earnings		12.155^{***}		2.067^{***}
		(4.14)		(0.72)
Foreign earnings		0.275		0.047
(=1 if 3 yrs avrg.>0)		(0.26)		(0.04)
PRE (log)		0.207^{***}		0.035^{***}
		(0.04)		(0.01)
pseudo R^2	0.11	0.24		
Observations	933	933	933	933

Notes: Robust standard errors are reported in parentheses. Statistical significance levels: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$.

TABLE 1.4: Main results

	(1) CSR strengths	(2) *net*CSR
Pr(AJCA) (β_0)	1.751***	1.858***
	(0.28)	(0.30)
$[AJCA_{it} - PR(AJCA)_{it}]$ (β_1)	0.425***	0.511***
	(0.13)	(0.15)
Size (log)	−0.196*	−0.367***
	(0.11)	(0.14)
Market-to-book	−0.050	0.048
	(0.03)	(0.05)
Firm profitability	0.386	0.995*
	(0.41)	(0.52)
Year fixed effects	*Yes*	*Yes*
Firm fixed effects	*Yes*	*Yes*
Observations	5,585	5,585

Notes: This table contains the results from the DiD estimation with the main dependent variables - CSR *strengths* and *net* CSR. β_0 is the coefficient on the predicted probability of repatriation - $Pr(AJCA)_{it}$. β_1 is the coefficient on the difference between the actual decision to repatriate and the probability of repatriation - $AJCA_{it} - PR(AJCA)_{it}$. The variable $AJCA_{it}$, is equal to 1 from the year in which a firm repatriates. β_1 captures the effect of the act for repatriating versus non-repatriating firms, while holding probability of repatriation constant. Standard errors (clustered at the firm level) are reported in parentheses. Statistical significance levels: *p<0.1; **p<0.05; ***p<0.01.

TABLE 1.5: Effect of improved access to finance on individual CSR indicators

	(1) Governance	(2) Environment	(3) Product	(4) Employees	(5) Diversity	(6) Community
Pr(AJCA) (β_0)	0.411***	0.592***	−0.006	0.103	0.410***	0.242***
	(0.08)	(0.11)	(0.05)	(0.09)	(0.12)	(0.08)
$[AJCA_{it} - PR(AJCA)_{it}]$ (β_1)	0.078***	0.177***	0.022	−0.028	0.101*	0.076**
	(0.03)	(0.05)	(0.03)	(0.05)	(0.06)	(0.04)
Size (log)	−0.050**	−0.123***	−0.008	0.083**	−0.065	−0.033
	(0.02)	(0.04)	(0.02)	(0.04)	(0.05)	(0.03)
Market-to-book	0.007	0.013	−0.001	−0.040**	−0.015	−0.015
	(0.01)	(0.01)	(0.00)	(0.02)	(0.02)	(0.01)
Firm profitability	−0.035	0.130	−0.061	0.289	−0.060	0.124
	(0.10)	(0.10)	(0.06)	(0.21)	(0.16)	(0.11)
Year fixed effects	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Firm fixed effects	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Observations	5585	5585	5585	5585	5585	5585

Notes: This table contains the results from the DiD estimation with individual categories of CSR as dependent variables. β_0 is the coefficient on the predicted probability of repatriation - $Pr(AJCA)_{it}$. β_1 is the coefficient on the difference between the actual decision to repatriate and the probability of repatriation - $AJCA_{it} - PR(AJCA)_{it}$. The variable $AJCA_{it}$, is equal to 1 from the year in which a firm repatriates. β_1 captures the effect of the act for repatriating versus non-repatriating firms, while holding probability of repatriation constant. Standard errors (clustered at the firm level) are reported in parentheses. Statistical significance levels: *p<0.1; **p<0.05; ***p<0.01.

TABLE 1.6: Effect of improved access to finance on CSR strengths for financially constrained and unconstrained firms

	(1) CSR strengths	(2) CSR strengths
Pr(AJCA) (β_0)	1.605***	1.595***
	(0.28)	(0.27)
$[AJCA_{it} - PR(AJCA)_{it}]$ (β_1)	0.877***	0.386***
	(0.22)	(0.13)
$[AJCA_{it} - PR(AJCA)_{it}]$ x External FC (β_2)	−1.319***	
	(0.40)	
$[AJCA_{it} - PR(AJCA)_{it}]$ x Internal FC (β_2)		0.083
		(0.30)
Size (log)	−0.223**	−0.230**
	(0.11)	(0.11)
Market-to-book	−0.020	0.013
	(0.04)	(0.04)
Firm profitability	0.514	0.456
	(0.42)	(0.40)
Year fixed effects	*Yes*	*Yes*
Firm fixed effects	*Yes*	*Yes*
Observations	5,230	5,238

Notes: This table contains the results of panel DiD that extends on the baseline equation by including an interaction term with measures of financial constraints. β_0 is the coefficient on the predicted probability of repatriation - $Pr(AJCA)_{it}$. β_1 is the coefficient on the difference between the actual decision to repatriate and the probability of repatriation - $AJCA_{it} - PR(AJCA)_{it}$. The coefficient of interest is β_2 as it captures the effect of financially constrained relative to unconstrained repatriating firms (Column (1) and Column (2)). Standard errors (clustered at the firm level) are reported in parentheses. Statistical significance levels: *p<0.1; **p<0.05; ***p<0.01.

TABLE 1.7: Results from DiD with media attention

	(1) CSR strengths	(2) CSR strengths
$Pr(AJCA)$ (β_0)	1.289***	1.339***
	(0.24)	(0.25)
$[AJCA_{it} - PR(AJCA)_{it}]$ (β_1)	0.333***	0.364***
	(0.13)	(0.13)
$[AJCA_{it} - PR(AJCA)_{it}]$ x Media (β_2)	1.617**	
	(0.66)	
$[AJCA_{it} - PR(AJCA)_{it}]$ x Negative media (β_2)		0.261**
		(0.11)
Size (log)	−0.183	−0.184
	(0.11)	(0.11)
Market-to-book	−0.011	−0.010
	(0.04)	(0.04)
Firm profitability	0.563	0.569
	(0.43)	(0.43)
Year fixed effects	*Yes*	*Yes*
Firm fixed effects	*Yes*	*Yes*
Observations	4,694	4,694

Notes: This table contains the results of panel DiD that extends on the baseline equation by including an interaction term with measures of total media attention - *Media*, and negative media attention - *Negative media* . β_0 is the coefficient on the predicted probability of repatriation - $Pr(AJCA)_{it}$. β_1 is the coefficient on the difference between the actual decision to repatriate and the probability of repatriation - $AJCA_{it} - PR(AJCA)_{it}$. The coefficient of interest is β_2 as it captures the effect of firms with high level of media coverage (negative media coverage) relative to firms with lower overall media coverage (negative media coverage) amongst the repatriating firms (Column (1) and Column (2)). Standard errors (clustered at the firm level) are reported in parentheses. Statistical significance levels: *p<0.1; **p<0.05; ***p<0.01.

TABLE 1.8: Placebo Test

	(1) CSR strengths	(2) *net*CSR
Pr(AJCA) (β_0)	0.641***	0.733**
	(0.24)	(0.30)
$[AJCA_{it} - PR(AJCA)_{it}]$ (β_1)	0.001	0.073
	(0.14)	(0.16)
Size (log)	−0.058	−0.016
	(0.16)	(0.23)
Market-to-book	−0.029	0.057
	(0.05)	(0.07)
Firm profitability	−0.217	−0.373
	(0.79)	(1.25)
Yea fixed effects	*Yes*	*Yes*
Firm fixed effects	*Yes*	*Yes*
Observations	5,585	5,585

Notes: For the purpose of the placebo test, the year of the shock was artificially set to 2002. β_0 is the coefficient on the predicted probability of repatriation - $Pr(AJCA)_{it}$. β_1 is the coefficient on the difference between the actual decision to repatriate and the probability of repatriation - $AJCA_{it} - PR(AJCA)_{it}$. $AJCA_{it}$, is equal to 1 from the year in which a firm repatriates. β_1 captures the effect of the act for repatriating versus non-repatriating firms, while holding probability of repatriation constant. Standard errors (clustered at the firm level) are reported in parentheses. Statistical significance levels: *p<0.1; **p<0.05; ***p<0.01.

Chapter 2

Enemy at the Gates: The Threat of Short Selling and Firms' Engagement in Corporate Social Responsibility

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Abstract

We test for a causal relationship between an increase in the threat of short selling and firm engagement in corporate social responsibility (CSR). Taking a risk-management perspective of CSR, we argue that firms will improve their CSR when confronting an increase in the threat of short selling. We further theorize that the level of stock held by short-term oriented institutional investors and the firms' level of financing constraints moderate the relationship. To test our hypotheses, we use the exogenous variation in the cost of short selling induced by the SEC's Pilot Program under Regulation SHO of 2004, through which the SEC lifted short selling restrictions for a randomly selected subset of Russell 3000 firms. Results from difference-in-differences analyses lend support to our hypotheses.

1 INTRODUCTION

Short sellers have been shown to exert significant downward pressure on stock prices (Grullon, Michenaud, and Weston, 2015; Mitchell, Pulvino, and Stafford, 2004), sometimes by reverting to tactics such as spreading false rumors under pseudonyms (Mitts, 2018), or by publicly talking down stocks (Wong and Zhao, 2017) and portraying managers as incompetent (Christophe, Ferri, and Hsieh, 2010). Hence, short sellers are perceived as a threat (Lamont, 2012; Shi, Connelly, and Cirik, 2018). Recent research on the reaction of firms to an increase in the short selling threat shows that as a consequence, firms reduce capital expenditures, investments into R&D, and shrink the scope of their operations (Grullon et al., 2015; Wong et al., 2017). Under a higher threat of short selling, managers can shift focus towards activities at the very core of their firms' operations and with which they were successful in the recent past (Shi, Connelly, and Cirik, 2018). By showing that managers accept less risk, prefer more conservative investments, and privilege projects that increase short-term efficiency over long-term strategic commitments, this research has significantly advanced our knowledge about firms' reaction to an investment practice that is increasingly popular (Ljungqvist and Qian, 2016; Zhao, 2018). However, some of the activities that usually lie outside the firms' operational core and which do not increase firms' short-term efficiency have the potential to counteract an increase in the threat of short selling. In this paper, we argue that corporate social responsibility (CSR) is such activity, and firms will actively increase their CSR engagement to counteract the higher threat of short selling.

We base our arguments on the risk management perspective of CSR, according to which stakeholders react more leniently to a firm implicated in a harmful, adverse or undesirable activity if the firm has built strong relations with its stakeholders (Fombrun, Gardberg, and Barnett, 2000; Godfrey, 2005). In addition, firms with high CSR performance are also less likely to be implicated in adverse activities in the first place (Barnett, Hartmann, and Salomon, 2019; Koh, Qian, and Wang, 2014). Hence, when short sellers target a firm, firms strong on CSR are less affected than those with a more transactional stakeholder approach. This suggests that by increasing CSR, managers can reduce their firms' attractiveness to short sellers and thereby counteract increases in the threat of short selling. We further argue that firms' reactions can differ due to considerable heterogeneity among firms on dimensions that prior research has shown to affect firms' ability to increase CSR engagement. We focus on two factors that are especially relevant in our context, namely the investment horizon of firms' dominant institutional owners and firms' endowment with financial resources.

We test our hypotheses using a difference-in-differences (DiD) methodology in a context in which variation in the threat of short selling is induced exogenously. Short selling is a contested practice that has historically been subject to various restrictions, one of which is the uptick rule established in the U.S. in the 1930s (Beber and Pagano, 2013). The uptick rule prohibits short sales when stock prices are declining and thereby imposes significant costs for short sellers (Alexander and Peterson, 1999). In 2004, the Security and Exchange Commission (SEC) announced the Pilot Program under Regulation SHO under which the uptick rule was removed for an ex-ante randomly selected one third of the Russell 3000 firms but left intact for the remaining two thirds of firms. The uptick rule's removal presented an exogenous decrease in the cost of short selling and considerably increased the short selling threat for firms for which the uptick rule was lifted. The results from our analyses indicate that firms react to the increase in the threat of short selling by improving their CSR.

Our findings provide new insights to research on the effects of an increasingly popular type of investor on firm-level outcomes (e.g., De Angelis et al., 2017; Grullon et al., 2015; Shi et al., 2018). Contrary to what one might conclude based on the arguments of this literature, we show that managers react to an increase in the short selling threat by increasing CSR. We further contribute to this research by explaining the heterogeneity in firms' reactions to an increase in the threat of short selling. We also add to scholarship on the drivers of CSR which has not yet considered CSR being driven by risk-management considerations (e.g., Flammer, 2015; Ioannou and Serafeim, 2012). Finally, we extend the risk management perspective of CSR, which to-date has predominantly focused on the ex-post risk management effects of CSR (e.g., Barnett et al., 2019; Godfrey et al., 2009a; Shiu et al., 2017) and just begun to study its ex-ante risk management properties (Koh et al., 2014).

2 BACKGROUND AND HYPOTHESIS DEVELOPMENT

2.1 Short selling as a threat

An investor who shorts a stock, i.e., short seller, borrows the stock for a daily fee from a broker and immediately sells the stock on the market. When share prices fall, the short seller can purchase the stock from the market at the lower price and cover his or her position with the broker. Short sellers differ from other investors in that their profit is inversely related to the price of a stock. Short sellers make a profit if the price falls, and they incur a loss if the price increases. Therefore, the risk of selling a stock short is substantial. Since there is no upper bound to a share price, the losses are theoretically limitless. Short sellers can also be forced to close a profitable position early. Lenders can ask for borrowed stocks to be returned on demand, which may force short sellers to close the position prematurely ("short squeeze") if they cannot find another lender (Lamont, 2012).

The role of short sellers in financial markets is strongly debated. There are two opposing views. On the one hand, short sellers are seen as sophisticated investors who use their knowledge and skill advantages to profit from arbitrage on price differentials (Boehmer, Jones, and

Zhang, 2008). In this view, short selling improves market efficiency because short sellers incorporate negative news and opinions into stock prices (Boehmer and Wu, 2013; Cohen, Diether, and Malloy, 2007). This prevents overvaluation of stocks and overinvestment in projects by increasing an otherwise artificially low cost of capital (Edmans, Goldstein, and Jiang, 2015). Short sellers can also expose cases of corporate fraud or other forms of misconduct (Karpoff and Lou, 2010). On the other hand, the short sellers' risk-return profile results in strong incentives for short sellers to exert downward pressure on stock prices actively. Short sellers can distort share prices through multiple means. For example, they may publicly talk down a firm and portray its managers as incompetent in the popular media or at investor conferences (Zhao, 2018; Ljungqvist et al., 2016; Christophe et al., 2010).

Irrespective of the view to which one subscribes, short sellers can create significant downward price pressure on stocks (e.g., Ljungqvist et al., 2016; Appel et al., 2019; Aitken et al., 1998). Decreasing share prices can have severe consequences for firms and managers. For example, they can put a firm's survival in jeopardy by increasing the likelihood of a hostile takeover (Shleifer and Vishny, 2003; Manne, 1965). This scenario has been shown to exuberate managerial career concerns (Walsh and Ellwood, 1991) and to lead managers to avoid profitable but risky projects (Holmstroem, 1999; Amihud and Lev, 1981). Share prices also signal to managers how the market evaluates a firm's strategy and investments. Hence, when short sellers exert downward pressure on a firm's stock, the negative feedback that the falling price provides may trigger managers to mistakenly cancel profitable projects (Goldstein and Alexander, 2008). At the very least, pressure on share prices adversely affects managers' compensation, as incentive pay is usually closely tied to the firm's share price (Devers, Cannella, Reilly, and Yoder, 2007).

It is not only when actual short selling occurs that firm's can be negatively affected. The perceived risk of downward pressure on share prices of managers is already affected when shorting restrictions are removed. De Angelis et al. (2017) show that Regulation SHO increases the implied volatility of pilot firms' put options but not that of call options. The options market provides an ex-ante risk measure otherwise not reflected in the share price. The implied volatility of options on shares determines the probability distribution that the market implies for the evolvement of the share price over a given horizon. An increase in the implied volatility of put options relative to call options imply a shift towards a right-skewed probability distribution, i.e., investors consider a decrease in the share price more likely than an increase.

2.2 The risk management perspective of CSR and the short selling threat

Scholars have long sought to understand how firms could benefit from engaging in CSR. This quest has resulted in a rich body of literature that shows, for example, that CSR improves firms' image (Fombrun, 1996), consumer support (Lev, Petrovits, and Radhakrishnan, 2010), and demand (Singh et al., 2019). Research has additionally provided evidence that CSR increases firms' attractiveness to employees and strengthens employee commitment and retention (Burbano, 2016; Turban et al., 1997; Bode et al., 2015). As a whole, this body of research has shown that firms can benefit from investing in better relationships with stakeholders.

Research that builds upon the idea that CSR leads to better and more resilient relations with stakeholders proposes an additional channel—one rooted in risk mitigation—through which firms can benefit from engaging in CSR. This channel is especially relevant in the context of the short selling threat. More specifically, the risk management perspective of CSR proposes that engagement in CSR results in a better reputation among stakeholders (Fombrun et al., 2000). This idea was further refined by Godfrey (2005). He argues that CSR builds up a reservoir of moral capital among stakeholders and that a negative event "encourages stakeholders to give the firm the benefit of the doubt regarding intentionality, knowledge, negligence, or recklessness" Godfrey (2005, p. 788).

Empirical evidence lends support to the risk management perspective of CSR. For example, the evidence provided in Godfrey et al. (2009a) shows that stock prices of firms implicated in negative legal or regulatory actions decreased less if the firm had engaged in CSR beforehand. Minor and Morgan (2011) and Flammer (2013) find a similar effect respectively in the contexts of product recalls and firms' poor environmental performance. Shiu et al. (2017) demonstrate for a wide range of negative events that the risk management effect also applies to firms' bond prices. Likewise, the risk benefits of CSR can apply to consumer brand evaluations in the aftermath of a product failure (Klein and Dawar, 2004), disapproval of CEO overcompensation in the news media (Vergne, Wernicke, and Brenner, 2018), or corporate reputation after instances of organizational fraud (Williams et al., 2000).

Scholars increasingly argue that CSR also generates ex-ante risk benefits. Three mechanisms have been suggested to explain how the ex-ante benefits of CSR evolve and make a firm a less attractive target for short sellers. First, high CSR prevents a firm from engaging or being implicated in an adverse activity in the first place. Investing in CSR also strengthens a firm's relations with stakeholders and links it to a more diverse group of stakeholders, which improves a firm's ability to sense and correct maladaptive tendencies (Ortiz-de-Mandojana and Bansal, 2016). Second, stakeholders may be willing to give the firm the benefit of the doubt and thus not carefully scrutinize a negative event if the firm's CSR is high (Barnett, 2014). Third, firms with strong CSR are usually more transparent about their business conduct (Barnett et al., 2019). Indeed, research on CSR has a strong tradition of demonstrating that being more responsible also entails being more transparent (Fernandez-Feijoo et al., 2014).

Taken together, the research on the ex-post benefits of CSR and the literature on its ex-ante benefits suggest that firms with a high level of CSR are less attractive targets to short sellers. They are less likely to be involved in negative events, and their stocks will suffer less if they are implicated in a negative event. Based on these insights, we argue that when a firm experiences a rise in the threat of short selling, it will increase its engagement in CSR to counterbalance the higher short selling threat. More formally, we hypothesize:

Hypothesis 1 (H1): *Firms increase their CSR engagement as a result of the increased threat of short selling.*

2.3 Institutional investors with a short-term investment horizon and the threat of short selling

We argue that the temporal orientation of institutional owners will moderate the impact of short selling on CSR. We focus on institutional investors as they are large equity holders who are able and willing to influence firms' investment decisions and strategies actively, also in regards to CSR (Dyck, Lins, Roth, and Wagner, 2019; Neubaum and Zahra, 2006). Institutional investors are not a homogeneous group but differ in terms of their investment styles, trading frequency, and the competitive pressure they exert on firms. All of these parameters affect their sensitivity to the short-term performance of the firms in their portfolios. We expect that these differences result in heterogeneous outcomes in managerial responses to an increase in negative external pressures.

In our arguments, we concentrate on transient institutional investors – institutional investors with short time horizons. Transient institutional investors are disproportionately present in the publicly listed firm in the U.S. and are especially sensitive to the activities of short sellers (Bushee, 2001; Bushee, 1998). Transient institutional investors seek short-term returns by holding large, diversified portfolios and are known to actively trade stocks (Bushee, 1998). Given their large portfolios, transient institutional investors usually do not engage with firms' managers. Instead, they vote with their feet, e.g., by buying/selling the firm's stocks. Due to their short-term orientation, transient institutional investors are likely to unload firm shares in reaction to, for example, negative news or when stock prices are on a downward trend (Bushee, 1998). For example, Ke, Huddart, and Petroni (2003) show that transient investors off-load their shares rapidly when firms' earnings fall relative to their expected trend.

Transient institutional investors have also been blamed for fostering myopia among managers (e.g., Porter, 1992). In his analysis of investor preferences, Bushee (2001) finds that transient institutional investors exhibit strong preferences for near-term earnings over long-term firm value. He also asserts that such myopic behavior spills over to firms where these investors are dominant among the owners. This suggests that managers adapt accordingly when a firm's dominant owner favors short-term earnings over long-term firm value. Survey evidence supports this interpretation. For example, responses in Graham et al. (2005) indicate that, in order to boost short-term performance, possibly in response to short-term pressure by investors, many managers are willing to cut long-term investments despite this being potentially detrimental to long-term firm value. Conversely, Beyer, Larcker, and Tayan (2014) conclude from their survey that long-term-oriented shareholders allow managers to pursue long-term investments more effectively because they are not distracted by short-term performance pressures.

Empirical evidence lends further support to the contention that transient institutional investors can cause firms to focus on boosting short-term performance, sometimes at the expense of long-term performance. For example, compared to firms with more long-term-oriented investors, firms with a high level of transient institutional ownership are more likely to cut R&D investments to be able to report higher quarterly or annual earnings (Cremers, Pareek, and Sautner, 2019), to manage earnings upward (Matsumoto, 2002), to soften competitive behavior (Zhang and Gimeno, 2016), or to gear competitive actions toward improving short-term performance. Because investments in CSR can entail short-term earnings shortfalls, which transient investors are averse to (Bushee, 2001), managers may feel discouraged from responding to an increase in the threat of short selling by improving CSR. In addition, the combination of short holding periods and large, diversified holdings provide little incentive for transient institutional investors to appropriately assess the long-term implications of firms' investments (Schnatterly et al., 2008). Taken together, these considerations suggest that transient institutional investors are less supportive of managerial responses to an increased threat of short selling that entail increasing the firm's CSR. Thus, we propose the following:

Hypothesis 2 (H2): *Firms with more transient institutional ownership will engage less in CSR under the increased threat of short selling.*

2.4 Firm financial constraints and the threat of short selling

The second dimension that affects a firms' reactions to an increase in the threat of short selling is the degree of financial constraints a firm faces. Financially constrained firms may not be able to fund all desired investments, which may "...be due to credit constraints or inability to borrow, inability to issue equity, dependence on bank loans, or illiquidity of assets" (Lamont, Polk, and Saa-Requejo, 2001, p. 529). Prior research has argued and shown that a firms' level of CSR is inversely related to the degree to which the firm is financially constrained: the more constrained the firm, the lower its engagement in CSR (Hong, Kubik, and Scheinkman, 2012). Compared to financially unconstrained firms, financially constrained firms may be less likely to respond to the threat of short selling with an increase in CSR.

First, firms that are unable to generate or borrow enough funds to meet interim financial needs have less latitude when it comes to waiting for deferred returns from investments in projects with long-term payoff horizons (Souder and Shaver, 2010). CSR is such an investment. This suggests that financially constrained firms may have to forgo uncertain investment projects whose payoffs extend beyond the quarterly or annual earnings measurements. Second, financially constrained firms have difficulty generating a reservoir of goodwill with stakeholders (Koh et al., 2014). Stakeholders expect firms to contribute to society, and they reward them accordingly. However, in circumstances where a firm struggles to finance its core business activities, diverting funds toward CSR instead of toward ensuring the firm's economic viability and solvency will not build up goodwill with stakeholders and might even attract punishment instead of rewards (Vergne et al., 2018; Wang et al., 2011).

Taken together, financially constrained firms might not have the necessary funds to increase investments into CSR, nor might such investments generate insurance like properties acting as a safety net when short sellers exert pressure on the firm's stock. More formally, we argue that:

Hypothesis 3 (H3): *Financially constrained firms will engage in less CSR under an increased threat of short selling.*

3 DATA AND METHODOLOGY

3.1 Data and variable definitions

The Pilot Program under Regulation SHO

Empirically, it is difficult to estimate how the threat of short selling can influence firms' engagement in CSR. To rule out issues of endogeneity, we carefully selected an empirical context in which the cost of short selling varied due to exogenous factors (i.e., factors not affected by firms or short sellers): the variation in the cost of short selling induced by the Pilot Program under Regulation SHO. The program, introduced by the SEC, removed the uptick rule for a randomly selected one third of the firms on the Russell 3000 index while keeping the rule intact for the other two thirds of firms [1].

The uptick-rule is a trading restriction put in place in the 1930s to restrict short selling activity when stock prices are declining, in an effort to prevent a downward spiral in the stock market. Research shows that the uptick-rule significantly increased the cost of short selling and thereby severely impeded this activity (Alexander and Peterson, 1999) and that the removal of the rule led to an increase in short selling (Diether et al., 2009; Grullon et al., 2015). Effectively, during the Pilot Program, the costs of shorting a stock decreased for firms for which the restriction was removed, making those firms more vulnerable to speculative behavior and downward pressure on their stock prices. As the assignment of firms into treatment - firms for which the uptick-rule

[1] (Rule 202T – Pilot Program), Securities and Exchange Commission Act Release No.50104 (July 28, 2004

was removed–and control (firms for which the uptick-rule was left intact) was randomized, the empirical context provides a "true" experimental setting ideal for testing our hypotheses [2].

Data sources and sample selection

Our dataset consists of the firms in the Russell 3000 index as of 2004 that are also covered by the MSCI Kinder Lydenberg Domini (KLD) dataset on CSR. KLD is an independent rating firm that provides information on CSR of public firms. Although some researchers have discussed the limitations of KLD ratings (Entine, 2003) several others have regarded KLD as the most comprehensive dataset for gauging CSR (Choi and Wang, 2009) with greater objectivity and generalizability relative to alternative data sources (Hull et al., 2008). It is also the most widely used dataset for CSR research (Mattingly, 2017; Perrault et al., 2018). Information on ownership by institutional investors is from the Thompson Reuters Institutional Managers (13f) Holdings database. The data necessary to construct measures of financial constraints and accounting control variables are from COMPUSTAT. Our sample ends in 2006, as in 2007, the SEC lifted the uptick rule for all firms in the Russell 3000 index. Our final sample consists of 6,241 firm-year observations, 545 treated firms, and 1,087 control firms, and it includes the pre-treatment period (2002 to 2003) and the post-treatment period (2004 to 2006) [3].

Dependent variables

Our main dependent variable is *net*CSR, which is the difference between the aggregated annual strengths scores and the aggregated annual concern scores for the following six categories provided in KLD: community, diversity, human rights, employee relations, product, and environment The use of a net score is a common approach in recent research on CSR (e.g., Gupta, Briscoe, and Hambrick, 2017; Petrenko, Aime, Ridge, and Hill, 2016; Chin, Hambrick, and Treviño, 2013), and it is consistent with the idea that firms' social performance is achieved through doing societal good and minimizing negative externalities. A detailed description of the individual CSR elements is provided in Table A.1 in the appendix.

To address concerns in the literature that composite indexes mask important nuances between socially responsible activities and socially irresponsible ones (e.g., Mattingly et al., 2006), we also assessed the effect of an increase in the threat of short selling on the sum of the aggregate annual CSR strengths and aggregate annual CSR concerns separately. We jointly discuss the results for all three dependent variables in the Results section.

[2] We are not the first to use the removal of the uptick-rule to study how the threat of short selling influences firm-level outcomes. The context has been used, for example, to study the effect on earnings management (FANG, HUANG, and KARPOFF, 2016), executive pay (De Angelis et al., 2017), capital expenditures (Grullon et al., 2015) and growth modes (Shi et al., 2018).

[3] Several prior studies using the Pilot Program exclude the year 2004 (e.g., Shi et al., 2018, Fang et al., 2016). Therefore, we re-estimated our analysis without the year 2004 and found that our results are robust.

Moderating variables

Transient institutional investors. We measure *Transient investors* as the average percentage of a firm's stock owned by transient institutional investors in 2002 and 2003. The use of pre-treatment values mitigates potential concerns that the moderating variable is affected by the treatment itself. We use the classification by Bushee (2001) to categorize institutional investors into transient, dedicated, and quasi-indexers. We focus on transient institutional investors as they are the most likely group to unload stocks with disappointing performance and pressure managers to invest in projects with short-term returns over long-term returns (Bushee, 1998).

Financial constraints. We use the Whited Wu (WW) index to measure financial constraints, which we calculate based on the years 2002 and 2003 using the parameters provided in Whited and Wu (2006). For ease of interpretation of the results of the econometric estimation, we add a constant to the WW index calculation [4]. The WW index is widely used in the finance and management literature to reflect firms financial constraints (e.g., Farre-Mensa et al., 2016; Cheng et al., 2014; Hennessy et al., 2007). The index is calculated as the linear combination of the following accounting variables: cash flow to total assets, long-term debt to total assets, natural log of total assets, firm's three-digit industry sales growth (estimated separately for each of the three-digit SIC industry codes in each year), firm sales growth, and a dummy variable indicating if the firm paid positive dividends.

Control variables

As controls, we include *Firm size*, measured as the market value of total assets, as larger firms possess more resources to engage in CSR. We further control for the return on assets, *ROA*, calculated as net income divided by total assets, *Tobin's q* (market value of equity plus total assets less the book value of common equity to total assets), *Leverage* (long-term debt plus short-term debt to stock holders' equity), and *Capital intensity* (capital expenditures scaled by the book value of total assets). More mature, more profitable, and lower-risk firms are more likely to have higher CSR performance (Orlitzky and Benjamin, 2001).

Summary statistics

We provide summary statistics and pairwise correlations for the full sample in Table 2.1, Panel A. In Panel B, we report summary statistics with a breakdown between treated firms and firms in the control group for the year 2003. The reported mean values show that firms in the treatment and control groups were similar in the year prior to treatment. Moreover, none of the differences

[4] Adding a constant does not change the variability in the sample, but it does allow for a WW index ranging from 0 to 1, where higher values indicate that it is more difficult for a firm to obtain external financing.

in the variables is statistically significant. The results show that the treatment and control firms were similar in the year before the removal of the uptick rule.

3.2 Methodology

Difference-in-differences

We apply a DiD methodology to capture the effect of an increase in the short selling threat on firms' CSR. More specifically, we compare the difference in CSR performance before and after the removal of the uptick-rule for firms for which the uptick-rule has been removed (treatment group) with the corresponding difference for firms for which the uptick-rule was left intact (control group). As Table 2.1 Panel B shows, both groups are otherwise similar. We identify firms in the treatment and control groups based on information provided by the SEC. The pre-treatment period is 2002 to 2003, the post-treatment (after) period is the years 2004 to 2006. Our baseline specification is the following:

$$CSR_{it} = \alpha_1 Treatment_i + \alpha_2 Treatment_i * After_t + \gamma' \boldsymbol{X_{it}} + \lambda_t + \epsilon_{it}, \tag{2.1}$$

where i indexes firms, t indexes years, and λ_t are time dummies. *Treatment* is a dummy variable that equals one if the uptick rule was removed for the firm and otherwise zero. *After* is equal to one for the years 2004 to 2006 and equal to zero for the two years before (2002 and 2003). X_{it} is a vector of the following control variables: firm size, return on assets, leverage, Tobin's q, cash ratio, and capital intensity. The regression is estimated by ordinary least squares (OLS). The coefficient of interest is α_2. It measures the difference in the reaction to the increase in the short-selling threat between firms in the treatment group and those in the control group. The coefficient α_1 measures the mean difference in CSR performance between treated firms and firms in the control group prior to the removal of the uptick rule.

To ensure the validity of the DiD method, we tested whether CSR in the treatment and control groups followed a parallel trend in the period before the removal of the uptick rule. To do so, we compared pre-treatment CSR trends for treated and control firms using a two-sample t-test. We failed to reject the null hypothesis that CSR did not differ between the firms in the treatment and control group in the period before the removal of the uptick rule ($t = 1.21$). Figure 2.1 provides graphical evidence for the existence of a parallel path prior to the treatment. Furthermore, in all regressions, *treatment* is not significant, which further suggests that there is no pre-treatment effect for pilot firms and that treatment and control firms had similar CSR performances before the removal of the uptick rule.

Difference-in-differences with moderators

To test Hypotheses 2 and 3, we include measures for the percentage stocks held by transient institutional investors and for the level of firms' financing constraints. We interact these measures with the treatment dummy and the dummy for time period after the removal of the uptick rule. This allows us to capture the sensitivity of firms to the treatment based on the level of stock held by transient institutional investors and financing constraints. Equation 2.2 shows the DiD estimation equation for transient institutional investors (the equations for financial constraints is similar).

$$\begin{aligned} CSR_{it} &= \beta_1 Treatment_i + \beta_2 Treatment_i * After_t \\ &\quad + \beta_3 Treatment_i * After_t * Transient\ investors_i \\ &+ \beta_4 Treatment_i * Transient\ investors_i + \beta_5 Transient\ investors_i * After_t \\ &\quad + \beta_6 Transient\ investors_i + \gamma' \boldsymbol{X_{it}} + \lambda_t + \epsilon_{it}, \end{aligned} \tag{2.2}$$

The coefficient of main interest is β_3. It captures the effect of an increase in the short selling threat for treated firms dependent on the percentage of stocks held by transient institutional investors (level of financial constraints). Finally, in all specifications, we cluster standard errors by firms and years to account for serial correlation in the error term

4 RESULTS

Main results. In Hypothesis 1 we predicted that firms react to the increase in the threat of short selling by improving their CSR. Model 1 in Table 2.2 presents the results (estimates are based on equation (2.1)). The positive and statistically significant coefficient on the interaction term Treatment*After indicates that firms for which the uptick-rule was removed indeed reacted to the increase in the threat of short selling by increasing their CSR by approximately 0.12 units (coefficient of 0.119, $se = 0.023$).

In Model 2 in Table 2.2, we additionally include the measure of transient institutional ownership (estimates are based on equation (2.2)). In line with Hypothesis 2, the negative and statistically significant coefficient on the interaction of Treatment * After * Transient investors suggests that within the group of treated firms, those with higher ownership by transient institutional investors decrease CSR relative to firms with lower ownership levels by transient investors (coefficient of -0.419, $se = 0.211$).

Model 3 of Table 2.2 shows results for financially constrained firms (Hypothesis 3). The negative and statistically significant coefficient on the interaction of Treatment * After * Financial constraints indicates that that within the group of treated firms, financially constrained firms decrease their CSR relative to financially unconstrained firms (coefficient of -1.397, $se = 0.411$).

CSR strength and CSR concerns. In tables 2.3 and 2.4, we present results using the aggregate annual CSR strengths and aggregate annual CSR concerns as dependent variables. In Model 1 in Table 2.3, the positive and statistically significant coefficient on Treatment*After suggests that treated firms increased their CSR strengths by 0.078 relative to control firms (coefficient of 0.078, $se = 0.020$).

The negative and statistically significant coefficient on the effect for transient institutional ownership in Model 2 in Table 2.3 indicates that among treated firms, those with higher ownership by transient institutional investors decrease their CSR strengths relative to firms with fewer stocks held by transient investors (coefficient of -0.537, $se = 0.144$). Similarly, in Model 3 of Table 2.3, we find a statistically significant negative effect on CSR strengths for financially constrained firms (coefficient of -0.601, $se = 0.344$).

Results for firms' CSR concerns are displayed in Table 2.4. In Model 1 in Table 2.4 the negative and statistically significant coefficient on the interaction of Treatment*After indicates that treated firms decrease their CSR concerns (coefficient of -0.061, $se = 0.016$). In Model 2 in Table 2.4, we find no statistically significant difference between firms with different levels of transient institutional ownership (coefficient of -0.126, $se = 0.287$). Thus, there is no evidence that suggests ownership by transient institutional investors moderates the response of firms to the increased threat posed by short sellers when considering CSR concerns only. Results in Model 3 in Table 2.4 suggest that among treated firms, firms which are more financially constrained increase their CSR concerns relative to financially unconstrained firms (coefficient of 1.058, $se = 0.273$).

5 DISCUSSION AND CONCLUSION

In this paper, we build on the risk management perspective of CSR to theorize about how firms react to an increase in the threat of short selling. We argue that firms react to the short selling threat by increasing their engagement in CSR. Firms do so because CSR generates insurance-like effects that result in stronger and more lenient stakeholder reactions. We test our prediction in a context in which a regulatory change exogenously decreased the cost of short selling for a random subset of the firms on the Russel 3000 list. This context allows us to make causal claims.

Our research provides new insights concerning the effects of an increasingly popular type of investor on firm-level outcomes (e.g., Shi et al., 2018; De Angelis et al., 2017; Grullon et al., 2015). We show that managers react to an increase in the short selling threat by increasing CSR. With our paper, we also add to scholarship on the drivers of CSR (Flammer, 2015; Ioannou et al., 2012) which has not yet considered whether CSR may be driven by risk management needs. Finally, we extend the risk management perspective of CSR, which until now has predominantly focused on the ex-post risk management effects of CSR (e.g., Barnett et al., 2019; Shiu et al., 2017; Godfrey et al., 2009b) and has only recently begun to study its ex-ante risk management properties (Barnett et al., 2019; Koh et al., 2014).

References

Aitken, Michael J, Alex Frino, Michael S McCorry, and Peter L Swan (1998). "Short sales are almost instantaneously bad news: Evidence from the Australian Stock Exchange". In: *The Journal of Finance* 53.6, pp. 2205–2223.

Alexander, G. J. and M. A. Peterson (1999). "Short Selling on the New York Stock Exchange and the Effects of the Uptick Rule". In: *Journal of Financial Intermediation* 8.1, pp. 90–116.

Amihud, Y. and B. Lev (1981). "Risk Reduction as a Managerial Motive for Conglomerate Mergers". In: *The Bell Journal of Economics* 12.2, pp. 605–617.

Appel, Ian, Jordan Bulka, and Vyacheslav Fos (2019). "Active Short Selling by Hedge Funds". In: *European Corporate Governance Institute-Finance Working Paper* 609.

Barnett, M. L. (2014). "Why Stakeholders Ignore Firm Misconduct: A Cognitive View". In: *Journal of Management* 40.3, pp. 676–702.

Barnett, M. L., J. Hartmann, and R. M. Salomon (2019). "Have You Been Served? Extending the Relationship between Corporate Social Responsibility and Lawsuits". In: *Academy of Management Discoveries* 4.2, pp. 109–126.

Beber, A. and M. Pagano (2013). "Short-Selling Bans Around the World: Evidence from the 2007–09 Crisis". In: *The Journal of Finance* 68.1, pp. 343–381.

Beyer, A., D. F. Larcker, and B. Tayan (2014). *2014 Study on How Investment Horizon and Expectations of Shareholder Base Impact Corporate Decision-Making*. National Investor Relations Institute and Stanford University: Stanford University.

Bode, C., J. Singh, and M. Rogan (2015). "Corporate Social Initiatives and Employee Retention". In: *Organization Science* 26.6, pp. 1702–1720.

Boehmer, E., C. M. Jones, and X. Zhang (2008). "Which Shorts Are Informed?" In: *The Journal of Finance* 63.2, pp. 491–527.

Boehmer, Ekkehart and Juan Wu (2013). "Short selling and the price discovery process". In: *The Review of Financial Studies* 26.2, pp. 287–322.

Burbano, V. C. (2016). "Social Responsibility Messages and Worker Wage Requirements: Field Experimental Evidence from Online Labor Marketplaces". In: *Organization Science* 27.4, pp. 1010–1028.

Bushee, B. J. (1998). "The Influence of Institutional Investors on Myopic RD Investment Behavior". In: *The Accounting Review* 73.3, pp. 305–333.

— (2001). "Do Institutional Investors Prefer Near-Term Earnings over Long-Run Value?" In: *Contemporary Accounting Research* 18.2, pp. 207–246.

Cheng, I.-H., H. G. Hong, and K. Shue (2014). *Do Managers Do Good with Other Peoples' Money?, Chicago Booth*. Research Paper. No. 12–47.

Chin, MK, Donald C Hambrick, and Linda K Treviño (2013). "Political ideologies of CEOs: The influence of executives' values on corporate social responsibility". In: *Administrative Science Quarterly* 58.2, pp. 197–232.

Choi, J. and H. Wang (2009). "Stakeholder relations and the persistence of corporate financial performance". In: *Strategic Management Journal* 30.8, pp. 895–907.

Christophe, S. E., M. G. Ferri, and J. Hsieh (2010). "Informed trading before analyst downgrades: Evidence from short sellers". In: *Journal of Financial Economics* 95.1, pp. 85–106.

Cohen, Lauren, Karl B Diether, and Christopher J Malloy (2007). "Supply and demand shifts in the shorting market". In: *The Journal of Finance* 62.5, pp. 2061–2096.

Cremers, M., A. Pareek, and Z. Sautner (2019). "Short-Term Investors, Long-Term Investments, and Firm Value: Evidence from Index Inclusions". In: *Management Science*. forthcoming.

De Angelis, D., G. Grullon, and S. Michenaud (2017). "The Effect of Short-Selling Threats on Incentive Contracts: Evidence from an Experiment". In: *Review of Financial Studies* 30.5, pp. 1627–1659.

Devers, C. E., A. A. Cannella, G. P. Reilly, and M. E. Yoder (2007). "Executive Compensation: A Multidisciplinary Review of Recent Developments". In: *Journal of Management* 33.6, pp. 1016–1072.

Diether, K. B., K.-H. Lee, and I. M. Werner (2009). "Short-Sale Strategies and Return Predictability". In: *The Review of Financial Studies* 22.2, pp. 575–607.

Dyck, Alexander, Karl V Lins, Lukas Roth, and Hannes F Wagner (2019). "Do institutional investors drive corporate social responsibility? International evidence". In: *Journal of Financial Economics* 131.3, pp. 693–714.

Edmans, Alex, Itay Goldstein, and Wei Jiang (2015). "Feedback effects, asymmetric trading, and the limits to arbitrage". In: *American Economic Review* 105.12, pp. 3766–97.

Entine, Jon (2003). "The myth of social investing". In: *Organization & Environment* 16.3, pp. 352–368.

FANG, VIVIAN W., ALLEN H. HUANG, and JONATHAN M. KARPOFF (2016). "Short Selling and Earnings Management: A Controlled Experiment". In: *The Journal of Finance* 71.3, pp. 1251–1294. DOI: `10.1111/jofi.12369`. eprint: `https://onlinelibrary.wiley.com/doi/pdf/10.1111/jofi.12369`. URL: `https://onlinelibrary.wiley.com/doi/abs/10.1111/jofi.12369`.

Farre-Mensa, Joan and Alexander Ljungqvist (2016). "Do measures of financial constraints measure financial constraints?" In: *Review of Financial Studies* 29.2, pp. 271–308.

Fernandez-Feijoo, Belen, Silvia Romero, and Silvia Ruiz (2014). "Effect of Stakeholders'Pressure on Transparency of Sustainability Reports Within the GRI Framework". In: *Journal of Business Ethics* 122.1, pp. 53–63. DOI: 10.1007/s10551-013-1748-5.

Flammer, C. (2015). "Does Corporate Social Responsibility Lead to Superior Financial Performance? A Regression Discontinuity Approach". In: *Management Science* 61.11, pp. 2549–2568.

Flammer, Caroline (2013). "Does Product Market Competition Foster Corporate Social Responsibility?" In: *Academy of Management Proceedings*. Vol. 2013. 1. Academy of Management, p. 10714.

Fombrun, C. (1996). *Reputation*. Boston, MA: Harvard Business School Press.

Fombrun, C. J., N. A. Gardberg, and M. L. Barnett (2000). "Opportunity Platforms and Safety Nets: Corporate Citizenship and Reputational Risk". In: *Business and Society Review* 105.1, pp. 85–106.

Godfrey, P. C. (2005). "The relationship between corporate philanthropy and shareholder wealth: A risk management perspective". In: *Academy of Management Review* 30.4, pp. 777–798.

Godfrey, P. C., C. B. Merrill, and J. M. Hansen (2009a). "The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis". In: *Strategic Management Journal* 30.4, pp. 425–445.

Godfrey, Paul C, Craig B Merrill, and Jared M Hansen (2009b). "The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis". In: *Strategic Management Journal* 30.4, pp. 425–445.

Goldstein, I. and G. Alexander (2008). "Manipulation and the Allocational Role of Prices". In: *The Review of Economic Studies* 75.1, pp. 133–164.

Graham, J. R., C. R. Harvey, and S. Rajgopal (2005). "The economic implications of corporate financial reporting". In: *Journal of Accounting and Economics* 40.1, pp. 3–73.

Grullon, G., S. Michenaud, and J. P. Weston (2015). "The Real Effects of Short-Selling Constraints". In: *The Review of Financial Studies* 28.6, pp. 1737–1767.

Gupta, A., F. Briscoe, and D. C. Hambrick (2017). "Red, blue, and purple firms: Organizational political ideology and corporate social responsibility". In: *Strategic Management Journal* 38.5, pp. 1018–1040.

Hennessy, C. A. and T. M. Whited (2007). "How Costly Is External Financing? Evidence from a Structural Estimation". In: *The Journal of Finance* 62.4, pp. 1705–1745.

Holmstroem, B. (1999). "Managerial Incentive Problems: A Dynamic Perspective". In: *The Review of Economic Studies* 66.1, pp. 169–182.

Hong, Harrison, Jeffrey D Kubik, and Jose A Scheinkman (2012). *Financial Constraints on Corporate Goodness*. Working Paper 18476. National Bureau of Economic Research. DOI: 10.3386/w18476. URL: http://www.nber.org/papers/w18476.

Hull, C. E. and S. Rothenberg (2008). “Firm performance: The interactions of corporate social performance with innovation and industry differentiation”. In: *Strategic Management Journal* 29.7, pp. 781–789.

Ioannou, Ioannis and George Serafeim (2012). “What drives corporate social performance? The role of nation-level institutions”. In: *Journal of International Business Studies* 43.9, pp. 834–864.

Karpoff, Jonathan M and Xiaoxia Lou (2010). “Short sellers and financial misconduct”. In: *The Journal of Finance* 65.5, pp. 1879–1913.

Ke, B., S. Huddart, and K. Petroni (2003). “What insiders know about future earnings and how they use it: Evidence from insider trades”. In: *Journal of Accounting and Economics* 35.3, pp. 315–346.

Klein, J. and N. Dawar (2004). “Corporate social responsibility and consumers’ attributions and brand evaluations in a product–harm crisis”. In: *International Journal of Research in Marketing* 21.3, pp. 203–217.

Koh, P.-S., C. Qian, and H. Wang (2014). “Firm litigation risk and the insurance value of corporate social performance”. In: *Strategic Management Journal* 35.10, pp. 1464–1482.

Lamont, O. A. (2012). “Go Down Fighting: Short Sellers vs”. In: *Firms. The Review of Asset Pricing Studies* 2.1, pp. 1–30.

Lamont, Owen, Christopher Polk, and Jesus Saa-Requejo (2001). “Financial constraints and stock returns”. In: *Review of Financial Studies* 14.2, pp. 529–554.

Lev, B., C. Petrovits, and S. Radhakrishnan (2010). “Is doing good good for you? How corporate charitable contributions enhance revenue growth”. In: *Strategic Management Journal* 31.2, pp. 182–200.

Ljungqvist, A. and W. Qian (2016). “How Constraining Are Limits to Arbitrage?” In: *Review of Financial Studies* 29.8, pp. 1975–2028.

Manne, H. G. (1965). “Mergers and the Market for Corporate Control”. In: *Journal of Political Economy* 73.2, pp. 110–120.

Matsumoto, D. A. (2002). “Management’s Incentives to Avoid Negative Earnings Surprises”. In: *The Accounting Review* 77.3, pp. 483–514.

Mattingly, J. E. (2017). “Corporate social performance: A review of empirical research examining the corporation–society relationship using Kinder, Lydenberg, Domini social ratings data”. In: *Business Society* 56.6, pp. 796–839.

Mattingly, James E and Shawn L Berman (2006). “Measurement of corporate social action discovering taxonomy in the Kinder Lydenburg Domini ratings data”. In: *Business & Society* 45.1, pp. 20–46.

Minor, D. and J. Morgan (2011). “CSR as Reputation Insurance: Primum Non Nocere”. In: *California Management Review* 53.3, pp. 40–59.

Mitchell, M., T. Pulvino, and E. Stafford (2004). “Price Pressure around Mergers”. In: *The Journal of Finance* 59.1, pp. 31–63.

Mitts, J. (2018). Short and Distort: Columbia Law School; Columbia University - Columbia Business School.

Neubaum, D. O. and S. A. Zahra (2006). “Institutional Ownership and Corporate Social Performance: The Moderating Effects of Investment Horizon, Activism, and Coordination”. In: *Journal of Management* 32.1, pp. 108–131.

Orlitzky, M. and J. D. Benjamin (2001). “Corporate Social Performance and Firm Risk: A Meta-Analytic Review”. In: *Business Society* 40.4, pp. 369–396.

Ortiz-de-Mandojana, N. and P. Bansal (2016). “The long-term benefits of organizational resilience through sustainable business practices”. In: *Strategic Management Journal* 37.8, pp. 1615–1631.

Perrault, Elise and Michael A Quinn (2018). “What have firms been doing? Exploring what KLD data report about firms' corporate social performance in the period 2000-2010”. In: *Business & Society* 57.5, pp. 890–928.

Petrenko, O. V., F. Aime, J. Ridge, and A. Hill (2016). “Corporate social responsibility or CEO narcissism? CSR motivations and organizational performance”. In: *Strategic Management Journal* 37.2, pp. 262–279.

Porter, M. E. (1992). “Capital choices: changing the way America invest in industry”. In: *Journal of Applied Corporate Finance* 5.2, pp. 4–16.

Schnatterly, K., K. W. Shaw, and W. W. Jennings (2008). “Information advantages of large institutional owners”. In: *Strategic Management Journal* 29.2, pp. 219–227.

Shi, Wei, Brian L Connelly, and Kubilay Cirik (2018). “Short seller influence on firm growth: A threat rigidity perspective”. In: *Academy of Management Journal* 61.5, pp. 1892–1919.

Shiu, Y.-M. and S.-L. Yang (2017). “Does engagement in corporate social responsibility provide strategic insurance-like effects?” In: *Strategic Management Journal* 38.2, pp. 455–470.

Shleifer, A. and R. W. Vishny (2003). “Stock market driven acquisitions”. In: *Journal of Financial Economics* 70.3, pp. 295–311.

Singh, J., N. Teng, and S. Netessine (2019). “Philanthropic Campaigns and Customer Behavior: Field Experiments on an Online Taxi Booking Platform”. In: *Management Science* 65.2, pp. 913–932.

Souder, D. and J. M. Shaver (2010). “Constraints and incentives for making long horizon corporate investments”. In: *Strategic Management Journal* 31.12, pp. 1316–1336.

Turban, D. B. and D. W. Greening (1997). “Corporate Social Performance and Organizational Attractiveness to Prospective Employees”. In: *The Academy of Management Journal* 40.3, pp. 658–672.

Vergne, J.-P., G. Wernicke, and S. Brenner (2018). "Signal incongruence and it's consequences: A study of media disapproval and CEO overcompensation". In: *Organization Science* 29.5, pp. 755–987.

Walsh, J. P. and J. W. Ellwood (1991). "Mergers, acquisitions, and the pruning of managerial deadwood". In: *Strategic Management Journal* 12.3, pp. 201–217.

Wang, H. and C. Qian (2011). "Corporate philanthropy and corporate financial performance: The roles of stakeholder response and political access". In: *Academy of Management Journal* 54.6, pp. 1159–1181.

Whited, T. M. and G. Wu (2006). "Financial constraints risk". In: *Review of Financial Studies* 19.2, pp. 531–559.

Williams, R. J. and J. D. Barrett (2000). "Corporate philanthropy, criminal activity, and firm reputation: Is there a link?" In: *Journal of Business Ethics* 26.4, pp. 341–350.

Wong, Y. T. F. and W. Zhao (2017). *Post-Apocalyptic: The Real Consequences of Activist Short-Selling, Marshall School of Business*. Working Paper. No. 17-25.

Zhang, Y. and J. Gimeno (2016). "Earnings Pressure and Long-Term Corporate Governance: Can Long-Term-Oriented Investors and Managers Reduce the Quarterly Earnings Obsession?" In: *Organization Science* 27.2, pp. 354–372.

Zhao, W. (2018). *Activist Short-Selling, University of Texas at Austin*. Working Paper. Series.

Appendix

TABLE A.1: KLD individual categories: Description

Positive indicator	Negative indicator
Community	
Charitable giving, Innovative giving, Non-US charitable giving, Support for housing, Support for education, Volunteer programs, Others	Investment controversies, Negative economic impact, Tax disputes, Others
Diversity	
CEO, Promotion, Board of directors, Work/life balance, Women & minority contracting, Employment of disabled, LGBTQ policies, Others	Controversies, Non-representation, Others
Human rights	
Indigenous peoples relation, Labor rights, Others	Indigenous people controversies, Burma concern, Labor rights, Others
Employee relations	
Union relations, Cash profit sharing, Employee involvement, Retirement benefits, Health and safety, Others.	Poor union relations, Health and safety fines, Workforce reduction, Underfunded retirement benefits, Others
Product	
Quality, R&D, Benefits to economically disadvantaged, Others	Product safety, Marketing/contracting concerns, Antitrust, Others
Environment	
Beneficial products and services, Pollution prevention, Recycling, Clean energy, Others	Hazardous waste, Regulation problems, Ozone depleting chemicals, Substantial emissions, Agricultural chemicals, Climate change, Others

FIGURES

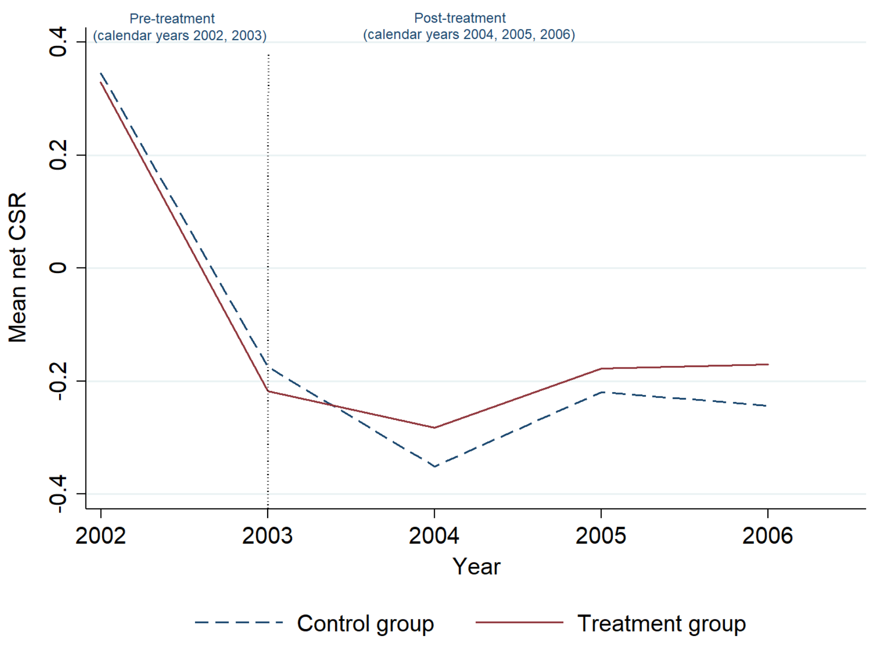

FIGURE 2.1: Parallel paths DiD assumption: Graphical test

TABLES

TABLE 2.1: Descriptive statistics

Panel A: All observations

	Mean	St. Dev.	1	2	3	4	5	6
Net CSR	−0.187	2.012						
Firm size	7.027	1.442	0.112					
ROA	0.122	0.133	0.063	0.207				
Leverage	0.204	0.204	−0.08	0.257	−0.175			
Tobin's q	2.223	1.472	0.132	−0.276	−0.026	−0.118		
Cash ratio	0.198	0.207	0.079	−0.412	−0.363	−0.269	0.39	
Capital intensity	0.05	0.051	−0.035	0.026	0.256	0.031	0.03	−0.213

Panel B: Pre-treatment comparison

	Control			Treatment			Comparison	
	N	Mean	St. Dev.	N	Mean	St. Dev.	Diff.	T-stat.
Dependent								
Net CSR	1,087	−0.175	1.773	545	−0.218	1.545	0.044	(−0.49)
CSR strengths	1,087	0.903	1.727	545	0.859	1.491	0.045	(−0.52)
CSR concerns	1,087	1.078	1.537	545	1.077	1.488	0.001	(−0.01)
Control								
Firm size	1,087	6.703	1.475	545	6.761	1.435	−0.058	(−0.76)
ROA	1,087	0.105	0.136	545	0.115	0.118	−0.01	(−1.48)
Leverage	1,087	0.201	0.200	545	0.205	0.200	−0.004	(−0.39)
Tobin's q	1,087	2.248	1.502	545	2.317	1.621	−0.069	(−0.85)
Cash ratio	1,087	0.215	0.221	545	0.210	0.223	0.005	−0.41
Capital intensity	1,087	0.046	0.048	545	0.048	0.048	−0.002	(−0.88)
Moderating								
WW index	1,087	0.343	0.086	545	0.341	0.086	0.002	(−0.5)
Transient investors	1,087	0.224	0.169	545	0.215	0.156	0.01	(−1.1)

Notes: In Panel A, the sample includes 6,241 firm-year observations from 2002 to 2006. In Panel B, the sample includes all observations in the year prior to treatment (2003) and is split into treatment and control groups. The t-statistics are from two-sample t-tests.

TABLE 2.2: Effect of threat of short selling on *net*CSR (composite measure)

	Model 1	Model 2	Model 3
	Baseline	Transient investors	Financial constraints
Treatment*After	0.119	0.217	0.577
	(0.023)	(0.064)	(0.159)
Treatment*After*Transient investors		−0.419	
		(0.211)	
Treatment*After*Financial constraints			−1.397
			(0.411)
Treatment	−0.073	0.015	−0.297
	(0.073)	(0.113)	(0.432)
Firm size	0.266	0.266	0.258
	(0.067)	(0.067)	(0.085)
Return on Assets	0.875	0.863	0.861
	(0.330)	(0.333)	(0.318)
Leverage	−0.765	−0.769	−0.750
	(0.203)	(0.206)	(0.207)
Tobin's q	0.194	0.194	0.193
	(0.033)	(0.033)	(0.037)
Cash ratio	0.979	0.979	0.993
	(0.213)	(0.213)	(0.037)
Capital intensity	−1.350	−1.301	−1.346
	(0.668)	(0.661)	(0.675)
Treatment*Transient investors		−0.247	
		(0.346)	
After*Transient investors		0.500	
		(0.229)	
Transient investors (period before)		−0.227	
		(0.304)	
Treatment*Financial constraints			0.702
			(1.151)
After*Financial constraints			−0.669
			(0.261)
Financial constraints (period before)			0.342
			(1.204)
Year fixed effects	*Yes*	*Yes*	*Yes*
Adjusted R^2	0.508	0.510	0.510
Observations	6,241	6,241	6,241

Notes: SEs (clustered at the firm and year level) are reported in parentheses.

TABLE 2.3: Effect of a higher threat of short selling on CSR strengths

	Model 1	Model 2	Model 3
	Baseline	Transient investors	Financial constraints
Treatment*After	0.078	0.220	0.270
	(0.020)	(0.039)	(0.141)
Treatment*After*Transient investors		−0.537	
		(0.144)	
Treatment*After*Financial constraints			−0.601
			(0.344)
Treatment	−0.085	−0.142	−0.206
	(0.060)	(0.094)	(0.347)
Firm size	0.694	0.706	0.502
	(0.081)	(0.081)	(0.071)
Return on assets	0.123	0.143	−0.185
	(0.228)	(0.231)	(0.220)
Leverage	−0.931	−0.959	−0.816
	(0.182)	(0.181)	(0.282)
Tobin's q	0.198	0.202	0.200
	(0.024)	(0.025)	(0.025)
Cash ratio	0.991	1.036	1.262
	(0.209)	(0.212)	(0.257)
Capital intensity	−0.875	−0.812	−0.674
	(0.489)	(0.490)	(0.470)
CSR concerns	0.202	0.198	0.195
	(0.043)	(0.043)	(0.043)
Treatment*Transient investors		0.185	
		(0.278)	
After*Transient investors		0.577	
		(0.335)	
Transient investors (period before)		−0.890	
		(0.439)	
Treatment*Financial constraints			0.382
			(0.931)
After*Financial constraints			−0.903
			(1.091)
Financial constraints (period before)			−3.534
			(1.344)
Year fixed effects	*Yes*	*Yes*	*Yes*
Adjusted R^2	0.344	0.347	0.351
Observations	6,241	6,241	6,241

Notes: SEs (clustered at the firm and year level) are reported in parentheses.

TABLE 2.4: Effect of a higher threat of short selling on CSR concerns

	Model 1	Model 2	Model 3
	Baseline	Transient investors	Financial constraints
Treatment*After	−0.061	−0.023	−0.412
	(0.016)	(0.074)	(0.102)
Treatment*After*Transient investors		−0.126	
		(0.287)	
Treatment*After*Financial constraints			1.058
			(0.273)
Treatment	−0.009	−0.141	0.117
	(0.052)	(0.112)	(0.365)
Firm size	0.440	0.452	0.275
	(0.046)	(0.047)	(0.049)
Return on assets	−0.952	−0.915	−1.213
	(0.224)	(0.225)	(0.212)
Leverage	−0.033	−0.058	0.047
	(0.149)	(0.150)	(0.151)
Tobin's q	−0.019	−0.16	−0.015
	(0.021)	(0.021)	(0.021)
Cash ratio	−0.079	−0.033	0.159
	(0.123)	(0.124)	(0.132)
Capital intensity	0.648	0.649	0.822
	(0.537)	(0.539)	(0.540)
CSR strengths	0.171	0.167	0.162
	(0.033)	(0.033)	(0.034)
Treatment*Transient investors		0.507	
		(0.377)	
After*Transient investors		−0.028	
		(0.179)	
Transient investors (period before)		−0.639	
		(0.225)	
Treatment*Financial constraints			−0.390
			(0.993)
After*Financial constraints			−0.123
			(0.173)
Financial constraints (period before)			−3.165
			(1.212)
Year fixed effects	*Yes*	*Yes*	*Yes*
Adjusted R^2	0.270	0.273	0.277
Observations	6,241	6,241	6,241

Notes: SEs (clustered at the firm and year level) are reported in parentheses.

Chapter 3

The Inconvenient Mind: Extreme Weather Events and Firms' Engagement in Corporate Social Responsibility

"To embrace the possibilities of tomorrow, we must reject the perennial prophets of doom and their predictions of the apocalypse"

Donald J. Trump

"Scientific evidence for warming of the climate system is unequivocal"

Intergovernmental Panel on Climate Change (IPCC)

Abstract

I test whether the shortening of managers' temporal and spatial distance to climate change, induced by the occurrence of extreme weather events, causes changes in their firms' engagement in corporate social responsibility (CSR). I further examine the moderating effect of managers' political beliefs and whether they express more concerns about climate change after experiencing an extreme weather event. Results from a difference-in-differences analysis show that firms increase their engagement in CSR. However, the increase is driven by the social rather than the environmental component of CSR. I find no evidence for the moderating effect of CEOs' political affiliation. Interestingly, while extreme weather events are salient enough for managers to discuss them in the firms' 10-K filings, the focus is on the event's specific occurrence and not on the long-term threat of climate change and the risks associated with it.

1 INTRODUCTION

Climate change is one of the most pressing issues of our time. It challenges firms, industries, and civil society to turn towards sustainable practices to mitigate the risks posed by the global temperature rise. The "Special Report: Global Warming of 1.5 °C by the Intergovernmental Panel on Climate Change (IPCC 2019) highlights the climate urgency with projections for significant increases in the number and the intensity of heatwaves, heavy rainfall, extensive droughts, and rising sea levels. These pose a direct threat to firms by disrupting their business operations (e.g., higher costs of raw materials, decreased access to fresh water) and threatening their long-term existence.

Historically, firms have been a significant contributor to the underlying causes of climate change. For example, although Exxon was aware of the link between fossil fuel use and increased levels of CO_2 along with the subsequent changes in earth's climate in the early 1980s[1], it continued to fund climate-denying research for more than 20 years (Goldenberg, 2015; Allen and Craig, 2016). Today, an increasing number of organizations acknowledge the risks of inaction, and their engagement in socially and environmentally responsible activities can play a key role in addressing the challenge ahead.

Despite widespread agreement among climate scientists that the current warming trend results from human activity, the public debate on the magnitude and cause of climate change does not seem to converge to a common opinion. Only 48% of surveyed Americans believe that climate change is due to human activity, while 51% believe Earth's warming is due to natural causes or there is no warming occurring at all, and only a third believes that they or their families will be harmed (Kennedy and Hefferon, 2019). Such low levels of belief certainty and perceived risk from climate change often translate into low levels of engagement with the issue (Myers, Maibach, Roser-Renouf, Akerlof, and Leiserowitz, 2013).

A possible explanation for the low levels of belief certainty, perceived risk, and subsequent engagement is the presence of deeply rooted cognitive biases that prevent individuals from acting rationally in the face of complex threats with dispersed impacts, inherent complexity, and long time frames. In this paper, I draw upon the concepts of time discounting, events occurring in the distant future carry less weight today, and space discounting, events occurring away from home carry less weight in decision making at home, to study firms' engagement in CSR. To do so, I use the exogenous variation in managers' temporal and spatial discounting induced by the experience of extreme weather events. In this study, extreme weather events are defined as weather and climate events that generate a significant negative impact on humans, the infrastructure, and the environment. The negative impact is captured by the extent of the inflicted damages and the associated with them costs. As political ideology is shown to have a strong association with climate

[1] Scientists at ExxonMobile (Humble Oil at the time) raised the issue already in 1957 (Brannon, Daughtry, Perry, Simons, Whitaker, and Williams, 1957).

change skepticism (Myers et al., 2013), I further explore the moderating role of such prior beliefs on the effect of extreme weather events on firms' engagement in CSR. To gain further insights into the interpretation of extreme weather events by managers, I investigate whether a link is created between extreme weather events and climate change risk.

To address potential issues of endogeneity, I use a dynamic staggered difference-in-differences (DiD) methodology on a set of firms listed in the Russell 3000 for a period of 10 years, from the year 2003 to 2012. This allows me to capture the dynamic effect of firms' behavior over the years following the exogenous shock induced by the occurrence of an extreme weather event. To test whether managers express more concerns about climate change after experiencing an extreme weather event, I conduct a textual analysis of the Management Discussion & Analysis (MD&A) section of firms' 10-K filings with the Securities and Exchange Commission (SEC).

2 EXTREME WEATHER AND CLIMATE CHANGE

2.1 Definition of extreme weather events

The scientific interest in extreme weather and climate events has increased significantly over the past years (Tippett, 2018). This comes with a growing understanding of the link between weather and climate extremes and anthropogenic warming. Although it is difficult to attribute any single weather event to climate change, as hurricanes, heat, and cold waves occur naturally, recent studies show hard scientific evidence for human causes of climate change and extreme weather. For example, unusually heavy rainfalls and subsequent flooding can occur in the absence of climate change as natural weather variations. However, it is the human factor that makes such events more frequent and more severe. Schaller, Kay, Lamb, Massey, Van Oldenborgh, Otto, Sparrow, Vautard, Yiou, and Ashpole (2016a) show that climate change has increased the probability of experiencing heavy rainfalls, such as those causing the devastating floods in 2014 in the U.K., by 43%. As warmer weather holds more moisture, the likelihood of heavier rainfall increases (Schaller et al., 2016a), which also increases the potential for damages as more properties become at risk of flooding. The UK floods of 2014 costed £451 million in insurance losses (Hassol, Torok, Lewis, and Luganda, 2017). Severe storms with unprecedented rainfalls (e.g., Katrina in 2005, U.K. floodings in 2014) and heat waves (e.g., the Australian "angry summer" of 2013) are among the classes of extreme events that will become more frequent and more severe under a continuously warming climate (Kossin, 2018; Haigh, Morton, Lemos, Knutson, Prokopy, Lo, and Angel, 2015).

Different disciplines, such as social and earth sciences, engineering, climatology, and hydrology, engage in research and management of such events. Thus, different definitions and thresholds are often used in order to determine the extremity of an event. For example, extreme events can be characterized through their intensity, frequency, duration, magnitude, and impact or outcome, with the latter prevailing in social science research (McPhillips, Chang, Chester, Depietri, Friedman, Grimm, Kominoski, McPhearson, Méndez-Lázaro, Rosi, and Shafiei Shiva, 2018).

In this study, I follow a risk-based approach to defining extreme weather events (Sarewitz, Pielke, and Keykhah, 2003), where the risk of a particular outcome (e.g., $250 million in losses per county) describes the severity of the event. Using a dollar amount of the inflicted damages yields a direct measure of the impact on the local economy and community. A meteorological measure may be more precise in describing what happened; however, a damage measure will capture the effect of it. As climatic changes happen over very long horizons, amplitudes in precipitation or temperature may not be salient enough for individuals, while immediate and costly losses are more likely to induce changes in behavior.

3 THE PSYCHOLOGICAL MECHANISM

Despite the emerging scientific findings attributing extreme weather and climate events to human-driven climate change (Schaller, Kay, Lamb, Massey, Van Oldenborgh, Otto, Sparrow, Vautard, Yiou, Ashpole, Bowery, Crooks, Haustein, Huntingford, Ingram, Jones, Legg, Miller, Skeggs, Wallom, Weisheimer, Wilson, Stott, and Allen, 2016b; Lewis and Karoly, 2013), this view has not been widely reflected in the public opinion (Hassol et al., 2017). According to Gallup's annual environmental survey in 2003, only 63% of Americans stated that global warming is happening and it is caused by human activity (Newport, 2010). The number has fluctuated over the years, falling to 50% in 2010 and further down to 41% in 2013 (Marlon, Leiserowitz, and Feinberg, 2013). Interestingly, the way environmental problems are ranked has virtually remained the same since 1989. Individuals in the U.S. express greater concerns over threats with closer proximity such as air and water pollution rather than long-term threats such as global warming.

The complexity of the threat climate change poses, along with the dispersion of its effects over time and geographical space, make the use of psychological mechanisms key to understanding the drivers of individual and organizational engagement, or the lack thereof, with activities related to climate change risks. Such systematic patterns of deviation from the norm and rationality in individuals' decision making are described under the umbrella of cognitive biases and heuristics. The concept was first introduced by Kahneman and Tversky (1996), and its implications have been subject to numerous studies in the areas of finance, economics, and management (Gino, Moore, and Bazerman, 2009; Bazerman and Chugh, 2006; Pahl, Sheppard, Boomsma, and Groves, 2014).

Recent studies on climate change have examined the link between individuals' personal experiences and their beliefs. For example, findings from U.S.-based surveys show that personal experiences with climate change lead to increased concerns associated with it (Konisky, Hughes, and Kaylor, 2016). Further, such experiences can even trump individuals' prior beliefs (Myers et al., 2013). These findings are further confirmed in international surveys (Broomell, Budescu, and Por, 2015). Li, Johnson, and Zaval (2011) show that changes in personal beliefs from perceived deviation in daily temperature among U.S. and Australian participants are followed by greater concern about global warming and increased donations to global warming charities. Evidence from direct experience of the series of severe storms in the U.K. in 2013/2014 suggests that changes in perception translate into a higher likelihood to take personal action and an increase in support for climate change mitigation policies (Demski, Capstick, Pidgeon, Sposato, and Spence, 2017).

Although there has been an increasing focus on establishing empirical evidence of the effect of extreme weather events and climate change perception and engagement (Demski et al., 2017; Weber, 2016; Weber, 2010), the role it has in organizational engagement and the precise mechanisms through which it occurs remain relatively untested. In this paper, I examine the role of the discounting bias on firms' engagement with climate change issues. More precisely, I study how induced changes in temporal and spatial distances to climate change affect firms' engagement with the social and environmental aspects of CSR. I argue that costly weather events can serve as wake-up calls that change the distant nature of climate change risks into the present alerting managers of firms in affected areas to climate change risks.

3.1 Temporal and spatial discounting and firms' engagement in CSR

The perception of distances across time and space is embedded in the concept of discounting. Discounting has been of interest for researchers across various fields, such as economics, management, psychology, and cognate sciences. It is often described as the way individuals value resources. As hyperbolic discounters, individuals put higher preference (value) on near-term realizations than on those to be obtained in the distant future. The effect of hyperbolic discounting on firms' engagement in CSR has been investigated mainly through its influence on organizational time horizons (Flammer and Bansal, 2017; Mandojana and Bansal, 2016; Bansal and DesJardine, 2014). Without a doubt, time preference has an important role in the context of climate change as climate change risks emerge gradually and over time. This can have implications for managerial decisions pertaining to CSR. For example, if managers believe that environmental consequences are far into the future, they may choose not to engage in costly CSR strategies that can hurt the firms' profitability in the short-run.

When interpreted as inter-temporal trade-offs, discounting does not take into account the importance of spatial influences on organizational engagement with climate change. Spatial discounting is characterized by failure to assess potential threats and risks from an event occurring in a distant geographical location. This is of particular importance in the context of climate change, as the consequences of human activity are first becoming evident in areas geographically away from where the majority of large multinational firms are located. For example, managers may be aware of climate change but not be concerned about it because it does not affect them personally. Thus, spatial discounting can translate into delayed, or no response, to climate change risks which can pose a direct threat to firms' costs of operation and subsequent long-term performance.

CEOs personal experiences, perception of climate change risk and CSR engagement

Individuals seek and process information in a manner aligned with their preferred conclusion (Kunda, 1990). Thus, information consistent with an individual's beliefs is accepted, whereas conflicting information is rejected or becomes subject to criticism (Dawson, Gilovich, and Regan, 2002). This is especially relevant in situations where an individual deems herself powerless in affecting the outcome or reducing the possible threat (Dawson et al., 2002). The abstract nature of the science behind climate change and the distance to the risks, in both time and space, present ideal conditions for climate-change skepticism and speculations (Myers et al., 2013).

To better understand the role of spatial and temporal discounting in managerial decision making, it is necessary to observe a link between experiences and future actions. Previous studies show evidence that CEOs' prior experiences, such as being exposed to economic, personal, and career-specific events, affect their risk-taking behavior, which subsequently influences corporate policies (Dessaint and Matray, 2017; Dittmar and Duchin, 2016) and investment decisions (Guiso, Sapienza, and Zingales, 2018). Experiencing a natural disaster causes changes in risk-taking behavior as the risk of future similar events is perceived to be greater (Cameron and Shah, 2015). The severity of the natural disaster has also been shown to affect managerial behavior. CEOs who experience natural disasters with significant negative outcomes behave more conservatively as opposed to CEOs who experience disasters without significant negative outcomes (Bernile, Bhagwat, and Rau, 2017). Extreme weather events have been shown to affect risk-taking behavior even among fund managers —professionals who deal with risk for a living (Bernile, Bhagwat, Kecskés, and Nguyen, 2016). Thus, the first-hand experience of an extreme weather event is likely to make the risks of climate change more salient and cognitively available for CEOs, which can subsequently affect their firms' engagement in CSR. More formally, I hypothesize the following:

Hypothesis 1 (H1): *Firms headquartered in counties severely affected by an extreme weather event will increase their engagement in CSR after the event.*

3.2 The moderating role of political preferences of CEOs on firms' engagement in CSR

Managers' personal values and experiences have been shown to drive their decisions and to significantly impact organizational outcomes (Hambrick and Mason, 1984). Prior beliefs of top executives, such as their political ideology—defined as a set of values and attitudes towards societal goals and the ways to achieve them (Tedin, 1987) —affect decisions about corporate and risk management strategies, social activism (Briscoe, Chin, and Hambrick, 2014) and firms' CSR practices (Chin, Hambrick, and Treviño, 2013). As a person's political ideology is a reflection of their personality (Adorno, Frenkel-Brunswik, Levinson, and Sanford, 1950), it can provide insight into their perceptions and can explain individuals' actions (Bermiss and McDonald, 2018; Tedin, 1987). Political ideology has been shown to "exhibit exceptional stability" (Bermiss et al., 2018, p. 2183) in shaping personal values and motivating one's behavior (Jost, 2006; Evans, Heath, and Lalljee, 1996). Such ideological values can be represented as points along a liberalism-conservatism continuum where views on issues related to social change and equality determine whether an individual belongs to or leans towards one or the other (Bermiss et al., 2018; Jost, Glaser, Kruglanski, and Sulloway, 2003). In the United States, these views are reflected in individuals' support for one of the two political parties —the Democratic or the Republican political parties.

Political party affiliation in the U.S. has a long history with climate change skepticism. Recent polls on attitudes towards climate change in the U.S. show that although there is a significant increase in the percentage of Americans who believe climate change is a major threat to the country's well being, that increase is driven by Democrats (84% in 2019 from 58% in 2013), whereas views among Republicans have stayed virtually the same over the years (27% in 2019 from 22% in 2013) (Kennedy et al., 2019). Democrats and Democratic leaners are also more likely to report at least some effect of climate change on their local community compared to Republicans and Republican leaners (82% vs. 38%) (Jones, 2015).

The Democratic Party platform emphasizes issues related to the environment and, specifically, climate change. Further, Democratic-leaning firms, measured through political donations of the CEO, are shown to have more socially responsible policies (Di Giuli and Kostovetsky, 2014) and to initiate more corporate diversity programs (Carnahan and Greenwood, 2018) than Republican-leaning firms. Compared to their liberal counterparts, conservative CEOs have been shown to engage in less CSR, be more sensitive to the firms' past performance (Chin et al., 2013), and be more risk-averse in their tax strategies (Christensen, Dhaliwal, Boivie, and Graffin, 2015). As a result, conservative CEOs are more likely to perceive CSR initiatives as optional rather than core firm activities.

The existing heterogeneity among CEOs with respect to their political beliefs is likely to affect CEOs cognitive distance to climate change. A priory, the cognitive distance for Democrat CEOs is likely to be shorter compared to that of Republican CEOs. More formally, I test the following hypothesis:

Hypothesis 2 (H2): *Firms with Republican CEOs, headquartered in counties severely affected by an extreme weather event, will increase their engagement in CSR after the event relative to firms with non-Republican CEOs.*

4 DATA AND METHODOLOGY

4.1 Data and variable definitions

Data sources and sample selection

To construct the sample, I merge the Spatial Hazard and Loss Database for the United States (SHELDUS) with MSCI KLD STATS (KLD) and Standard & Poor's Compustat. SHELDUS is a county-level hazard dataset, which covers natural disasters and perils such as hurricanes, floods, wildfires, tornadoes, thunderstorms, floods, and heavy rainfall. It contains information on the severity of the event (e.g., property and crop damage, fatalities, and duration). KLD contains annual measures for firms' environmental, social, and governance performance; Compustat contains firm-level accounting data. Information on the exact location of firms' headquarters (e.g., address, zipcode, state and county name) is collected from firms' 10-K filings with the SEC using the *edgar* package in R (Lonare and Patil, 2019). To obtain county FIPS, unique identifiers of geographical locations, I use the *OpenCage* package in R (Salmon, 2018) which performs a fuzzy match on the provided addresses and returns the three best matches. I then select the county FIPS with the highest frequency of hits for each firm-year observation. To examine the moderating effect of CEOs' political preferences, I merge the data sets above with CEO level information from Execucomp and political donations data from the Federal Election Commission (FEC).

The final sample is an unbalanced panel and consists of 21,527 firm-year observations for firms part of the Russell 3000 index from 2003 to 2012. Figure 3.1 shows graphical representation of the geographical location of Russell 3000 firms. The map in Panel A shows the highest concentration of firm headquarters is in the coastal areas and parts of the Midwest, which also coincides with major urban clusters. Firms in the sample are spread over 529 different counties. The specific counties affected by extreme weather events with total damages per county exceeding $250 million are presented in Figure 3.2.

Dependent variable

Data on CSR is obtained from MSCI KLD STATS (KLD), an annual data set of positive and negative environmental, social, and governance (ESG) performance indicators. Initiated in 1991, it is the longest continuous ESG data time series available. To assess firms' exposure to and management of ESG risks, KLD collects data from various sources, such as company disclosures and government and NGO databases. ESG performance indicators are divided into positive and negative indicators. Positive indicators capture management best practices, and negative indicators capture controversies related to the firms' operations, their products and services, and violations of international laws, regulations, and common global norms. The CSR measure is calculated as the net score of positive and negative indicators in the respective environmental, social, and governance domains. Table A.1 in the appendix contains a detailed description of the ESG performance indicators used in the study.

Control variables

In this analysis, I use the standard for the literature accounting measures of firm size, profitability, and leverage, which I obtain from Compustat. *Size* is relevant as larger firms may exhibit more socially responsible behavior as opposed to small size firms (Waddock and Graves, 1997). It is measured as the natural log of the book value of a firm's total assets. As a measure of profitability, I use return on assets (*ROA*), calculated as operating income before depreciation scaled by the book value of total assets. *Leverage* is the ratio of the sum of long-term and short-term debt to shareholders' equity.

Moderating variable: Political preferences

To measure the political preferences of a firm's CEO, I calculated the CEOs' active contributions to either the Republican or Democratic parties (or both on few occasions) from 1992 to 2018[2]. *Republican* is a dummy variable equal to 1 if a CEO has predominantly donated to the Republican party over the twenty six year period, and 0 otherwise.

I collected data on individual contributions to federal committees from the FEC. The yearly files contain information on the name of the individual contributor, their geographical location, the date, the amount of the contribution, and which committee they contributed to. I then matched this data to committee party affiliation information obtained from the FEC's committee master files.

Due to the misspelling of names of both individuals and firms in the FEC data, I employ cosine similarity, a Natural Language Processing (NLP) method, to ensure consistent matching of names between the FEC files and the Execucomp data. Cosine similarity calculates the similarity of two text strings, in this context, names of individuals and firms, by tokenizing the names and calculating the frequency of letters and words. Each text string is then represented as a vector of numbers, indicating the frequency of a specific word with respect to a common dictionary. The similarity between two text-strings is then calculated using the cosine function, which yields 1 in the case of two identical vectors and 0 in the case of no common words or letters. More specifically, the vectors are created using the Tf-idf method, which provides the frequency of words/letters and scales the words according to how unique they are compared to the entire dataset. For example, if a name contains a unique combination of letters, the likelihood of the individual/firm being identical to another with the same letter combination should be high. To match FEC and Execucomp, I used information on CEO and company names from Execucomp

[2] To ensure precision in the classification of CEOs political affiliation, I use data past the end of the estimation period.

as the basis for the vocabulary used for tokenization (creation of Tf-idf vectors). A conservative threshold of similarity (0.995) was applied to replace names in FEC with names from Execucomp, followed by a merge of the two data sets.

Summary statistics

Descriptive statistics for the variables used in the analysis are presented in Table 3.1. Panel A contains descriptive statistics for all firms in the sample, while Panel B and Panel C contain descriptive statistics for firms with a CEO who have actively contributed to the Republican and Democratic parties, respectively. Overall, firms with Republican CEOs tend to have lower ESG, environmental and social scores than their Democratic counterparts.

4.2 Methodology

Identification

To rule out potential issues of endogeneity, a research design that provides exogenous shifts in the spatial and temporal distance to climate change-induced risks is necessary. For this purpose, I use the occurrence of extreme weather events. The use of weather measures in statistical analysis is not new. In his seminal work, Wright (1928) used weather variables as an instrument to estimate the elasticity of supply and demand for flaxseed. Since weather is exogenous, it serves as a natural experiment and allows for clear identification of the statistical effect (Angrist and Krueger, 2001). Data on weather events have become central to a growing body of literature where it is used to quantify the economic effects and possible risks of climate change. The occurrence of extreme weather events provides an ideal setting for testing the effect of exogenous shocks on managers' temporal and spatial distance to climate change on firms' CSR engagement. To capture more rare and extreme events by construct, I focus on weather events with damages over $250 million (adjusted for inflation) per county in a given year. Firms located in a county hit by an extreme weather event with damages above $250 million will be assigned to treatment, while firms in unaffected counties will serve as a control.

To examine whether firms increase their CSR engagement following the occurrence of an extreme weather event in the county where a firm is headquartered, I employ a dynamic staggered difference-in-differences following Bertrand and Mullainathan (2003), Gibson and Krueger (2018) and Flammer and Kacperczyk (2019).

Difference-in-differences

The firm-level regression for testing Hypothesis 1 is estimated as follows:

$$CSR_{it} = \sum_{n \in \Omega} \beta_n Extreme\ Weather\ Event_{it+n} + \gamma' \boldsymbol{X_{it}} + \mu_i + \lambda_{st} + \epsilon_{it}, \tag{3.1}$$

where i indexes firms; t indexes years; s indexes states; n indexes number of years from the occurrence of the event and $\Omega = \{-1, 1, 2, 3\}$, μ_i are firm fixed effects; λ_{st} are state by year fixed effects. $Extreme\ Weather\ Event_{it+n}$ are treatment dummies equal to 1 if a firm is located in a county where an extreme weather event has occurred. For example, $Extreme\ Weather\ Event_{it+1}$ indicates that firm i has been subject to an extreme weather event one year ago. $\boldsymbol{X_{it}}$ is a vector of control variables, which include ROA, size, leverage. Standard errors are clustered at the county level as this is the level at which the "treatment" occurs. The coefficients of interest are β_n for $n \in \{1, 2, 3\}$, which measure the dynamics of the effect of extreme weather events on firms' CSR. For example, Qualcomm in San Diego, California, is assigned to treatment in the year 2003 due to damages from wildfires exceeding \$250 million (total damages exceeded \$1 billion). In the following years, 2004 through 2006, Qualcomm appears in the group of treated firms where the dynamic effect is captured by β_n for $n \in \{1, 2, 3\}$. From Hypothesis 1, I expect β_n to be positive. The inclusion of firm fixed effects accounts for unobserved heterogeneity at the firm level, while the inclusion of state by year fixed effects accounts for time-varying unobserved heterogeneity at the state level.

Difference-in-differences with political preferences

The firm-level regression for testing Hypothesis 2 is estimated as follows:

$$\begin{aligned} CSR_{it} = & \sum_{n \in \Omega} \alpha_n Extreme\ Weather\ Event_{it+n} \times Republican_{it} \\ & + \sum_{n \in \Omega} \beta_n Extreme\ Weather\ Event_{it+n} + \gamma' \boldsymbol{X_{it}} + \mu_i + \lambda_{st} + \epsilon_{it}, \end{aligned} \tag{3.2}$$

where the regression is similar to equation 3.1, however, with additional four interaction terms between *Extreme Weather Event* dummies and the moderating variable *Republican*. The coefficients of interest are α_n for $n \in \{1, 2, 3\}$, measuring the effect of the shock for firms with Republican CEOs relative to firms with non-Republican CEOs. From Hypothesis 2, I expect α_n to be positive.

4.3 Validity of extreme weather events as an exogenous shock

In this section, I examine whether the occurrence of extreme weather events, defined as weather events with costs exceeding \$250 million per county, are a suitable exogenous shock. Naturally, such an empirical set up differs from a set up where variation is induced by a legislative change or carefully designed pilot study. As firms' locations are, to a large extent, fixed and weather does not vary randomly across counties, it is important to address potential issues arising from that.

Some counties in the southern regions will naturally experience warmer weather than those towards the north. As such, certain regions may be prone to experiencing a certain type of weather and weather extremes. For example, coastal areas may be more likely to be on the path of hurricanes. Furthermore, such regions may have different industry composition, which can then affect the results we see (e.g., energy industries being hit significantly more than any other industry).

For extreme weather events to be exogenous, the following conditions must be fulfilled: 1) The event should not be anticipated or 2) correlated with unobserved factors affecting firms' CSR. To fulfill the first condition, firms should not be able to predict the occurrence of extreme weather events systematically; otherwise, the event is anticipated and thus not a surprise. I investigate this by estimating the predictability of extreme weather events based on past occurrences and by examining the distribution of weather events. Figure 3.3 shows the empirical density function for weather events in the SHELDUS database for the years 1960 to 2018. The orange line indicates the best fit of a log normal distribution. The majority of weather events on county-level appear below the $25 million mark, while events with costs exceeding $50 million are rare but happen more frequently than the log normal distribution implies (grey bar over the orange line). Thus, a fat-tailed distribution is likely to fit the weather data better than a normal distribution. This means that events at the extremes have costs from damages multiples bigger than the mean, therefore making the mean a poor measure to describe the impact of weather events. Even events with several standard deviations bigger than the mean, will only be marginally as impactful as those drawn from the tail of the distribution. This is confirmed in Figure 3.4, which shows the log-log plot of weather events from SHELDUS for the same time period. A distribution without fat-tails is described as a quickly decaying downward sloping line indicating that both magnitude and probability decrease at an increasing pace - indicated by the green and blue log-normal lines on the plot. The full data set is plotted using the dark red line, which decays linearly, clearly indicating a fat-tailed distribution. The extremity of the weather events I study means they are not predictable, fulfilling the first requirement. Firms operate in an environment that is somewhat predictable and can be understood and planned for. Extreme weather events are, therefore, truly unpredictable shocks to the environment in which firms operate.

I further test whether the occurrence of extreme weather in the past five years within a given county helps predict the likelihood of an extreme weather event occurring over the next year. Results from a logistic regression indicate a likelihood of -0.1%. Similar results were obtained from a probit regression. The coefficient is close to zero and statistically insignificant. This lands further support that weather events with damages at the selected threshold of $250 million are not predictable based on past occurrences, fulfilling the first exogeneity condition.

The second conditions require that we control for systematic differences in the ways firms are affected by extreme weather events. For example, some industries may systematically be hit more than others if they tend to be located in high-risk areas for extreme weather events, and they may also differ in terms of their CSR engagement. Controlling for location or fixed effects on firm-level is thus of importance. I include both firm fixed effects and state by year fixed effects. To further account for the concern that extreme weather events may occur in particular areas where a certain type of firm (e.g., oil firms) is prevalent, I investigate the distribution of events across industries. Figure 3.5 shows that the frequency of events across industries is very similar and rather close to the mean. For example, energy industries that tend to be placed in the south are hit no more than utilities. Capital goods are hit the least; however, the difference in frequency compared to the mean is not large enough to be a concern. No industry appears to deviate from the mean, which further alleviates any endogeneity concerns.

Overall, weather events with costs above $250 million are indeed extreme as they deviate significantly from the mean (realizations from fat-tailed distributions), they are not predictable from an economic standpoint (the likelihood of a second extreme strike given extreme weather events in the past five years is low) and certain industries are not hit more often than others.

5 DO FIRMS INCREASE THEIR ENGAGEMENT IN CSR AFTER AN EXTREME WEATHER EVENT?

5.1 Main results

Results from the DiD estimation of equation 3.1, presented in Table 3.2, show evidence for an increase in firms' CSR engagement following the occurrence of an extreme weather event in the county where firms are headquartered. The positive and statistically significant coefficients on $Dummy_{t+1}$ and $Dummy_{t+2}$ ($\beta_1 = 0.133$, $se = 0.077$; $\beta_2 = 0.177$, $se = 0.089$) in the model specification without controls in column (1) of Table 3.2, suggest that the increase in CSR engagement peaks in the year after the shock and persists in the second year after.

Results from the model specification with a full set of controls are presented in column (2) of Table 3.2. The positive and significant coefficients on $Dummy_{t+1}$ and $Dummy_{t+2}$ ($\beta_1 = 0.141$, $se = 0.082$; $\beta_2 = 0.168$, $se = 0.083$) suggest that the results hold when we control for firm characteristics such as size, profitability and leverage. In both specifications, the coefficient on $Dummy_{t-1}$ is small and statistically insignificant ($\beta_{-1} = 0.022$, $se = 0.073$; $\beta_{-1} = 0.030$, $se = 0.072$), which indicates that there is no pre-existing trend in the data. Hypothesis 1 predicted that firms would increase their CSR engagement as a result of an extreme weather event shock. The results from the main estimation provide evidence for the existence of such causal relationship.

I further investigate the effect of extreme weather events on firms' CSR by decomposing the CSR measure into its main components: environmental, social and governance performance indicators. Results are presented in Table 3.3. I find strong effect of extreme weather events on firms' social performance indicator, as suggested by the positive and statistically significant coefficients on $Dummy_{t+1}$ and $Dummy_{t+2}$ ($\beta_1 = 0.124$, $se = 0.059$ and $\beta_2 = 0.166$, $se = 0.066$ respectively).

The coefficient on $Dummy_{t-1}$ is small and statistically insignificant, which further confirms that there is no pre-existing trend in the data. The results in columns (1) and (2) of Table 3.3 show no effect on the environmental and governance components of CSR. The coefficients on $Dummy_{t+1}$, $Dummy_{t+2}$ and $Dummy_{t+3}$ in both specifications are statistically insignificant.

5.2 Political preferences

Results from the DiD analysis with political preferences are presented in Table 3.4. The estimation follows equation 3.2, where the treatment dummies are interacted with a measure of political preferences equal to 1 for firms' whose CEOs have, over the years, actively donated to the Republican party and 0 otherwise. The statistically insignificant coefficients on the interaction terms in columns (1) and (2) of Table 3.4 suggest that firms with Republican CEOs, neither increase nor decrease CSR engagement post-treatment relative to firms with non-Republican CEOs (the coefficients α_{t+1}, α_{t+2}, α_{t+3} from equation 3.2 are all statistically insignificant).

Hypothesis 2 predicted that firms with Republican CEOs would increase their CSR engagement more so than firms with non-Republican CEOs as a result of an extreme weather event shock. I, therefore, do not find support for Hypothesis 2. As the statistically significant coefficients on $Dummy_{t+1}$ and $Dummy_{t+2}$ indicate, the total effect is still present and positive; however, the effect is not moderated by the political preferences of the CEO.

The results persist when I re-estimate equation 3.2 substituting the main measure of CSR with its individual components (environmental, social, and governance indicators). Results presented in Table 3.5 show statistical significance on $Dummy_{t+1}$ and $Dummy_{t+2}$ in column (2) where the dependent variable is the social component of CSR. There is no evidence for the moderating role of Republican political preferences on firms' CSR engagement for firms affected by an extreme weather event.

5.3 Managers' concern with extreme weather and climate change

Do managers express more concerns about climate change after experiencing an extreme weather event? To investigate this, I perform textual analysis on firms' 10-K filings with the SEC. I specifically focus on the Management's Discussion and Analysis (MD&A) section of the 10-K files[3] as it provides an overview of the firm's past and current financial performance and management's future projections. The purpose of the MD&A section is to offer a "discussion and analysis of a company's business as seen through the eyes of those who manage the business" (Securities

[3] This section is labeled "Item 7. Management's Discussion and Analysis of Financial Conditions and Results of Operations."

and Commission, 2003). It is the section where managers identify and disclose trends, demands, and uncertainties that could have a potential material effect on their firms' financial stability and future performance.

To create measures of attention to climate change issues and extreme weather events, I decompose the MD&A section of the firm filings into single, double, and triple word combinations[4] using the *N-gram* method from the natural language processing field. The method provides a quick and efficient way of analyzing the text. To measure the extent to which climate change and extreme weather have been discussed, I count the number of occurrences of single, double, and triple word combinations (e.g., *climate change*, *climate change risk*) based on two different dictionaries of relevant expressions and individual words. The dictionaries are presented in Table A.2 in the appendix.

To test whether managers mention extreme weather events or the risk associated with them after the occurrence of a costly weather event, I use a dynamic staggered DiD methodology, similar to equation 3.1, however only including dummies one year previous to an event, the year of an event and one year after. As the MD&A discussion covers a single year, contrary to CSR initiatives that develop over time, we should expect to only find an effect in the year of the shock. I therefore include $Dummy_t$, where $t = 0$, in the estimation.

The dependent variable, *Extreme weather* is a count variable equal to the sum of occurrences of all expressions included in the dictionary (see Panel A of Table A.2). The regression is estimated using a poisson model with state by year fixed effects. I include *ROA*, *Log(Total Assets)* and *Leverage* as firm-level controls. Standard errors are clustered at the county level. Results from the regression are presented in Table 3.6. The coefficient on $Dummy_t$ in column 2 is positive and statistically significant ($\beta_0 = 0.587$, $se = 0.281$). Therefore, being exposed to extreme weather events leads to an increase in mentions of extreme weather and associated risks of 80 percent.

I follow the same approach to then test whether managers express more concerns about climate change after a costly weather event. The dependent variable is *Climate change*. It is measured as the sum of occurrences of all expressions from the climate change risk dictionary presented in Panel B of Table A.2. The statistically insignificant coefficient on $Dummy_t$ in both column (1) and column (2) of Table 3.7 suggest that managers do not express more concerns about climate change after an extreme weather event ($\beta_0 = 0.221$, $se = 0.341$; $\beta_0 = 0.269$, $se = 0.354$).

The results suggest that extreme weather events are salient enough for managers to report them in the MD&A section of their firm's 10-K filings. However, the reporting is focused on the immediate and specific occurrence of extreme weather and not on the longer-term challenge of climate change. From the theory, I argued that the experience of an extreme weather event would shrink the distance both in time and space to climate change. The results suggest that such events

[4]The following are examples of such decomposition: *susceptible* (unigram), *susceptible to* (bigram), *susceptible to hurricanes* (trigram). As we move to the trigram, the algorithm includes additional combination such as *to susceptible*, *to hurricanes*, *hurricanes to*, *hurricanes to susceptible*.

are significant enough to be identified as important matters; however, for the average firm the link to climate change seems to not be established and subsequently mentioned.

6 DISCUSSION

Scientists agree that our climate is changing, global warming is "unequivocal" (Qin, Plattner, Tignor, Allen, Boschung, Nauels, Xia, Bex, and Midgley, 2014) and human activity is contributing to it (Trenberth, 2012). Despite these scientific findings, for some, climate change continues to be a distant phenomenon, temporally and spatially removed from everyday experiences. Recently, more attention has been focused on examining the link between personal experiences of weather and climate change-related events and concern and willingness to act on the issue. I followed this stream of literature and argued that a direct experience of an extreme weather event could positively impact firms' social and environmental engagement. The mechanism at play is the shortened distance in both time and geographical space to climate change risks induced by the occurrence of extreme weather events. Extreme weather events were defined as extremely damaging events with costs exceeding $250 million measured at the county level.

Results from a dynamic staggered DiD estimation show that firms increase their overall engagement in CSR; however, the increase is only in the social component of CSR, which firms may implement quickly and which has an immediate and local instead of long-term and global focus. The empirical method employed allows me to trace the effect over several years. I find no evidence that firms become more environmentally focused over time as a result of experiencing an extreme weather event.

A possible explanation for the lack of improvement in firms' environmental engagement could be that a connection between extreme weather events and climate change is not formed. Thus, the effect of experiences on climate change perception, concerns, and actions may not be as strong as previous research has suggested. I conduct a simple analysis to test whether managers link climate change to the occurrence of an extreme weather event. Results from the analysis of the MD&A section in firms' 10K filings do suggest that extreme weather events are severe enough to be mentioned when reporting to investors. However, it does not appear that a link between extreme weather and climate change is created.

As the influence of personal experiences has been shown to vary across the political spectrum, I further tested whether managers' political preferences moderate the relationship. Following previous studies, I argued that managers with ideological opposition to climate change, measured through their monetary contributions to the Republican party, will be affected more by a salient and costly event than their non-republican counterparts (Dunlap, 2013; Myers et al., 2013). Results from dynamic staggered DiD with political preference as a moderator show no difference between Republicans and non-Republicans. The results do not change or modify the conclusion of Hypothesis 1, as we see the same effect of an increase in overall CSR driven by the social component on an aggregate level. The empirical textual analysis may point to the underlying reason; extreme weather events may not be directly interpreted as a result of climate change. Thus, managers' personal experience with extreme weather does not trump their prior beliefs - being a Republican with conservative beliefs regarding climate change and its anthropogenic causes.

The lack of action in terms of environmental CSR, can partly be explained by the results of the MD&A analysis and the way existing research linking experiences to perception has been conducted. Most of the research underlying the theory is based on surveys that capture perception; however, in this paper, I use a measure of actual outcomes and actions. Even if managers create a link between extreme weather and climate change, they will be unlikely to report on it to investors or conduct new environmental CSR strategies if the challenge is too big and abstract for a single firm to act on. An analogy can be drawn to "Tragedy of the Commons," where despite a common interest, each member of society keeps acting in the way that best benefit them individually (Garrett, 1968).

7 CONCLUSION

This paper set out to investigate whether experiences of extreme weather events shorten managers' cognitive distance in both time and space to climate change and the associated with it risks. It provides empirical evidence that costly weather events trigger firms' overall engagement in CSR. However, changes are driven solely by the social component of CSR rather than the environmental one. As extreme weather events inflict severe damages to the local community and infrastructure, it is expected that firms would extend support to their affected community. This is supported by the findings, as firms increase engagement in the year after the shock, and this engagement persists in the second year after the event. Surprisingly, firms do not increase engagements in the environmental component of CSR. The lack of effect in the year after the extreme weather event could be explained by the firm's focus being on recovering from the disaster. However, the lack of effect in the environmental domain persists in the second and third years after the shock.

Since political ideology is strongly related to individuals' belief certainty and perceived risks from climate change, I examine the moderating effect of CEOs' political preference on their CSR response to damages inflicted from the occurrence of an extreme weather event. With this, I also address concerns from previous research calling for the inclusion of prior beliefs and ideology when studying cognitive distance to climate change (McDonald, Chai, and Newell, 2015). However, I find no evidence for the moderating effect of CEOs' political preferences on firms' engagement in CSR.

I further investigate whether managers discuss extreme weather events and climate change in their reports to investors after experiencing a costly and damaging weather event. My findings show that such events are salient enough for managers to include them in the MD&A section, where challenges, risks, and opportunities ahead of the firm are discussed. However, it does not appear that a link is created between the risks of extreme weather events and the challenges stemming from climate change.

Overall, the paper provides empirical evidence that managers exhibit biases with regards to the abstract nature and the long-time frame of climate change. These findings contribute to the growing streams of literature studying the effects of individuals' personal experiences and prior beliefs on the perception of and engagement with climate change and climate change risk (Demski et al., 2017; Weber, 2016; Broomell et al., 2015; Myers et al., 2013). While previous studies have predominantly relied on survey methods, this study uses an empirical context and causal inference methodology to study managers' behavior and subsequent firm-level CSR engagement. Further, the results add to the vibrant stream of strategic management literature interested in the effects of time on managerial decision making, particularly focusing on organizational time horizons (Flammer et al., 2017; Ortiz-de-Mandojana and Bansal, 2016; Bansal et al., 2014). I extend this stream of literature by considering another cognitive bias, spatial discounting, and examining its role in organizational engagement in CSR practices. Moreover, I contribute with causal evidence by conducting an empirical analysis linking firms' CSR engagement to their managers' cognitive distance to climate change.

These findings have important implications for policymakers within climate change and the transformation towards a more sustainable global economy. Although extreme weather events are becoming more prominent, the results suggest that a drastic organizational change of behavior related to investments in CSR and specifically the natural environment may not occur. Firms respond to the immediate threat posed by an extreme weather event when it materializes; however, they do not respond to the more distant threat of climate change. If self-regulation of firms is not to be expected, there is a need for national and international regulation of business conduct in order to reach the targets set by the Paris Agreement.

References

Adorno, Theodor, Else Frenkel-Brunswik, Daniel J. Levinson, and R. Nevitt Sanford (1950). *The authoritarian personality, studies in prejudice series*.

Allen, Myria W and Christopher A Craig (2016). "Rethinking corporate social responsibility in the age of climate change: a communication perspective". In: *International Journal of Corporate Social Responsibility* 1.1, p. 1.

Angrist, Joshua D and Alan B Krueger (2001). "Instrumental variables and the search for identification: From supply and demand to natural experiments". In: *Journal of Economic perspectives* 15.4, pp. 69–85.

Bansal, Pratima and Mark R DesJardine (2014). "Business sustainability: It is about time". In: *Strategic Organization* 12.1, pp. 70–78.

Bazerman, Max H and Dolly Chugh (2006). "Bounded awareness: Focusing failures in negotiation". In: *Negotiation theory and research* 7, pp. 9–10.

Bermiss, Y Sekou and Rory McDonald (2018). "Ideological misfit? Political affiliation and employee departure in the private-equity industry". In: *Academy of Management Journal* 61.6, pp. 2182–2209.

Bernile, Gennaro, Vineet Bhagwat, Ambrus Kecskés, and Phuong-Anh Nguyen (2016). "Do Catastrophic Experiences Affect Risk Attitudes? Evidence from US-Based Managers of Non-US Mutual Funds". In:

Bernile, Gennaro, Vineet Bhagwat, and P Raghavendra Rau (2017). "What doesn't kill you will only make you more risk-loving: Early-life disasters and CEO behavior". In: *The Journal of Finance* 72.1, pp. 167–206.

Bertrand, Marianne and Sendhil Mullainathan (2003). "Enjoying the quiet life? Corporate governance and managerial preferences". In: *Journal of political Economy* 111.5, pp. 1043–1075.

Brannon, HR, AC Daughtry, D Perry, LH Simons, WW Whitaker, and Milton Williams (1957). "Humble oil company radiocarbon dates I". In: *Science* 125.3239, pp. 147–150.

Briscoe, Forrest, MK Chin, and Donald C Hambrick (2014). "CEO ideology as an element of the corporate opportunity structure for social activists". In: *Academy of Management Journal* 57.6, pp. 1786–1809.

Broomell, Stephen B., David V. Budescu, and Han-Hui Por (2015). "Personal experience with climate change predicts intentions to act". In: *Global Environmental Change* 32, pp. 67–73. ISSN:

09593780. DOI: 10.1016/j.gloenvcha.2015.03.001. URL: https://linkinghub.elsevier.com/retrieve/pii/S095937801500031X.

Cameron, Lisa and Manisha Shah (2015). "Risk-taking behavior in the wake of natural disasters". In: *Journal of Human Resources* 50.2, pp. 484–515.

Carnahan, Seth and Brad N Greenwood (2018). "Managers' political beliefs and gender inequality among subordinates: Does his ideology matter more than hers?" In: *Administrative Science Quarterly* 63.2, pp. 287–322.

Chin, MK, Donald C Hambrick, and Linda K Treviño (2013). "Political ideologies of CEOs: The influence of executives' values on corporate social responsibility". In: *Administrative Science Quarterly* 58.2, pp. 197–232.

Christensen, Dane M, Dan S Dhaliwal, Steven Boivie, and Scott D Graffin (2015). "Top management conservatism and corporate risk strategies: Evidence from managers' personal political orientation and corporate tax avoidance". In: *Strategic Management Journal* 36.12, pp. 1918–1938.

Dawson, Erica, Thomas Gilovich, and Dennis T Regan (2002). "Motivated Reasoning and Performance on the was on Selection Task". In: *Personality and Social Psychology Bulletin* 28.10, pp. 1379–1387.

Demski, Christina, Stuart Capstick, Nick Pidgeon, Robert Gennaro Sposato, and Alexa Spence (2017). "Experience of extreme weather affects climate change mitigation and adaptation responses". In: *Climatic Change* 140.2, pp. 149–164. ISSN: 0165-0009. DOI: 10.1007/s10584-016-1837-4. URL: http://link.springer.com/10.1007/s10584-016-1837-4.

Dessaint, Olivier and Adrien Matray (2017). "Do managers overreact to salient risks? Evidence from hurricane strikes". In: *Journal of Financial Economics* 126.1, pp. 97–121.

Di Giuli, Alberta and Leonard Kostovetsky (2014). "Are red or blue companies more likely to go green? Politics and corporate social responsibility". In: *Journal of Financial Economics* 111.1, pp. 158–180.

Dittmar, Amy and Ran Duchin (2016). "Looking in the rearview mirror: The effect of managers' professional experience on corporate financial policy". In: *The Review of Financial Studies* 29.3, pp. 565–602.

Dunlap, Riley E (2013). "Climate change skepticism and denial: An introduction". In: *American behavioral scientist* 57.6, pp. 691–698.

Evans, Geoffrey, Anthony Heath, and Mansur Lalljee (1996). "Measuring left-right and libertarian-authoritarian values in the British electorate". In: *British Journal of Sociology*, pp. 93–112.

Flammer, Caroline and Pratima Bansal (2017). "Does a long-term orientation create value? Evidence from a regression discontinuity". In: *Strategic Management Journal* 38.9, pp. 1827–1847.

Flammer, Caroline and Aleksandra Kacperczyk (2019). "Corporate social responsibility as a defense against knowledge spillovers: Evidence from the inevitable disclosure doctrine". In: *Strategic Management Journal* 40.8, pp. 1243–1267.

Garrett, Hardin (1968). "The tragedy of the commons". In: *Science* 162.3859, pp. 1243–1248.

Gibson, Rajna and Philipp Krueger (2018). "The sustainability footprint of institutional investors". In: *Swiss Finance Institute Research Paper* 17-05.

Gino, Francesca, Don A Moore, and Max H Bazerman (2009). "No harm, no foul: The outcome bias in ethical judgments". In: *Harvard Business School NOM Working Paper* 08-080.

Goldenberg, Suzanne (2015). "Exxon knew of climate change in 1981, email says—but it funded deniers for 27 more years". In: *The Guardian* 8.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales (2018). "Time varying risk aversion". In: *Journal of Financial Economics* 128.3, pp. 403–421.

Haigh, T, LW Morton, MC Lemos, C Knutson, LS Prokopy, YJ Lo, and J Angel (2015). *Agricultural advisors as climate information intermediaries: exploring differences in capacity to communicate climate. Weat. Clim. Soc. 7, 83–93. doi: 10.1175*. Tech. rep. WCAS-D-14-00015.1.

Hambrick, Donald C and Phyllis A Mason (1984). "Upper echelons: The organization as a reflection of its top managers". In: *Academy of management review* 9.2, pp. 193–206.

Hassol, Susan Joy, Simon Torok, Sophie Lewis, and Patrick Luganda (2017). *(Un)Natural Disasters: Communicating Linkages Between Extreme Events and Climate Change*. URL: `https://public.wmo.int/en/resources/bulletin/unnatural-disasters-communicating-linkages-between-extreme-events-and-climate`.

Jones, Jeffrey M (2015). "In US, concern about environmental threats eases". In: *Gallup, March* 25.

Jost, John T (2006). "The end of the end of ideology." In: *American psychologist* 61.7, p. 651.

Jost, John T, Jack Glaser, Arie W Kruglanski, and Frank J Sulloway (2003). "Political conservatism as motivated social cognition." In: *Psychological bulletin* 129.3, p. 339.

Kahneman, Daniel and Amos Tversky (1996). "On the reality of cognitive illusions." In:

Kennedy, Brian and Meg Hefferon (Aug. 28, 2019). "U.S. concern about climate change is rising, but mainly among Democrats". In: *Pew Research Center*.

Konisky, David M., Llewelyn Hughes, and Charles H. Kaylor (2016). "Extreme weather events and climate change concern". In: *Climatic Change*. ISSN: 15731480. DOI: `10.1007/s10584-015-1555-3`.

Kossin, James P (2018). "A global slowdown of tropical-cyclone translation speed". In: *Nature* 558.7708, pp. 104–107.

Kunda, Ziva (1990). "The case for motivated reasoning." In: *Psychological bulletin* 108.3, p. 480.

Lewis, Sophie C. and David J. Karoly (2013). "Anthropogenic contributions to Australia's record summer temperatures of 2013". In: *Geophysical Research Letters*. ISSN: 00948276. DOI: `10.1002/grl.50673`.

Li, Ye, Eric J. Johnson, and Lisa Zaval (2011). "Local warming: Daily temperature change influences belief in global warming". In: *Psychological Science*. ISSN: 09567976. DOI: `10.1177/0956797611400913`.

Lonare, Gunratan and Bharat Patil (2019). *edgar: Platform for EDGAR Filing Management and Textual Analysis*. R package version 2.0.2. URL: `https://CRAN.R-project.org/package=edgar`.

Mandojana, Natalia Ortiz-de and Pratima Bansal (2016). "The long-term benefits of organizational resilience through sustainable business practices". In: *Strategic Management Journal* 37.8, pp. 1615–1631.

Marlon, JR, A Leiserowitz, and G Feinberg (2013). "Scientific and public perspectives on climate change". In: *Yale University. New Haven, CT: Yale Project on Climate Change Communication*.

McDonald, Rachel I, Hui Yi Chai, and Ben R Newell (2015). "Personal experience and the 'psychological distance'of climate change: An integrative review". In: *Journal of Environmental Psychology* 44, pp. 109–118.

McPhillips, Lauren E., Heejun Chang, Mikhail V. Chester, Yaella Depietri, Erin Friedman, Nancy B. Grimm, John S. Kominoski, Timon McPhearson, Pablo Méndez-Lázaro, Emma J. Rosi, and Javad Shafiei Shiva (2018). "Defining Extreme Events: A Cross-Disciplinary Review". In: *Earth's Future* 6.3, pp. 441–455. ISSN: 23284277. DOI: `10.1002/2017EF000686`.

Myers, Teresa A, Edward W Maibach, Connie Roser-Renouf, Karen Akerlof, and Anthony A Leiserowitz (2013). "The relationship between personal experience and belief in the reality of global warming". In: *Nature climate change* 3.4, pp. 343–347.

Newport, Frank (2010). "Americans' global warming concerns continue to drop". In: *Gallup Polling* 11.

Ortiz-de-Mandojana, N. and P. Bansal (2016). "The long-term benefits of organizational resilience through sustainable business practices". In: *Strategic Management Journal* 37.8, pp. 1615–1631.

Pahl, Sabine, Stephen Sheppard, Christine Boomsma, and Christopher Groves (2014). "Perceptions of time in relation to climate change". In: *Wiley Interdisciplinary Reviews: Climate Change* 5.3, pp. 375–388.

Qin, Dahe, GK Plattner, M Tignor, SK Allen, J Boschung, A Nauels, Y Xia, V Bex, PM Midgley, et al. (2014). "Climate change 2013: the physical science basis". In: *Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (eds TF Stocker et al.)* Pp. 5–14.

Salmon, Maëlle (2018). *opencage: Interface to the OpenCage API*. R package version 0.1.4. URL: `https://CRAN.R-project.org/package=opencage`.

Sarewitz, Daniel, Roger Pielke, and Mojdeh Keykhah (2003). "Vulnerability and risk: Some thoughts from a political and policy perspective". In: *Risk Analysis* 23.4, pp. 805–810. ISSN: 02724332. DOI: `10.1111/1539-6924.00357`.

Schaller, Nathalie, Alison L. Kay, Rob Lamb, Neil R. Massey, Geert Jan Van Oldenborgh, Friederike E.L. Otto, Sarah N. Sparrow, Robert Vautard, Pascal Yiou, Ian Ashpole, Andy Bowery, Susan M. Crooks, Karsten Haustein, Chris Huntingford, William J. Ingram, Richard G. Jones, Tim Legg, Jonathan Miller, Jessica Skeggs, David Wallom, Antje Weisheimer, Simon Wilson, Peter A. Stott, and Myles R. Allen (2016b). "Human influence on climate in the 2014 southern England winter floods and their impacts". In: *Nature Climate Change*. ISSN: 17586798. DOI: 10.1038/nclimate2927.

Schaller, Nathalie, Alison L Kay, Rob Lamb, Neil R Massey, Geert Jan Van Oldenborgh, Friederike EL Otto, Sarah N Sparrow, Robert Vautard, Pascal Yiou, Ian Ashpole, et al. (2016a). "Human influence on climate in the 2014 southern England winter floods and their impacts". In: *Nature Climate Change* 6.6, p. 627.

Securities, Exchange Commission, et al. (2003). "Interpretation: Commission guidance regarding management's discussion and analysis of financial condition and results of operations". In: *Prieiga per< http://www. sec. gov/rules/interp/33-8350. htm*.

Tedin, Kent L (1987). "Political ideology and the vote". In: *Research in micropolitics* 2.1, pp. 63–94.

Tippett, Michael K (2018). *Extreme weather and climate*.

Trenberth, Kevin E (2012). "Framing the way to relate climate extremes to climate change". In: *Climatic change* 115.2, pp. 283–290.

Waddock, Sandra A and Samuel B Graves (1997). "The corporate social performance–financial performance link". In: *Strategic management journal* 18.4, pp. 303–319.

Weber, Elke U. (2010). *What shapes perceptions of climate change?* DOI: 10.1002/wcc.41.

— (2016). "What shapes perceptions of climate change? New research since 2010". In: *Wiley Interdisciplinary Reviews: Climate Change*. ISSN: 17577799. DOI: 10.1002/wcc.377.

Wright, Philip G (1928). *Tariff on animal and vegetable oils*. Macmillan Company, New York.

Appendix

TABLE A.1: ESG Performance Indicators: Description

Positive Performance Indicator	Negative Performance Indicator
Environment	
Environmental Opportunities (Clean Tech)	Regulatory Compliance
Toxic Emissions and Waste	Toxic Emissions and Waste
Packaging Materials & Waste	Energy & Climate Change
Carbon Emissions	Impact of Products & Services
EMS & Biodiversity & Land Use	
Water Stress	Operational Waste
Biodiversity & Land Use	Supply Chain Management
Raw Material Sourcing	Water Stress
Social	
Community Engagement	Community Impact
Indigenous Peoples Relations	Support for Controversial Regimes
Human Rights Policies & Initiatives	Freedom of Expression and Censorship
Union Relations	Union Relations Concern
Cash Profit Sharing	Health and Safety Concern
Involvement	Supply Chain
Health & Safety Policies & Initiatives	Child Labor
Human Capital Development	
	Labor Rights & Supply Chain (Other)
Board of Directors (Gender)	Workforce Diversity
	Board Diversity (Gender)
Product Safety & Quality	Product Quality & Safety
Social Opportunities	Marketing & Advertising
Access to Finance	Anti-competitive Practices
Governance	
Corruption & Instability	Governance Structures Controversies
Financial System Risk	Controversial Investments
	Bribery & Fraud
	Governance (Other)

TABLE A.2: List of expressions used in *N-gram* models

Panel A: Extreme weather events	
Unigrams	"blizzard", "drought", "wildfire"
Bigrams	"hurricane risk", "hurricane threat", "flooding risk", "natural disaster", "warming risk", "heat wave", "temperature rise", "air pollution"
Trigrams	"susceptible to hurricanes", "such as hurricanes"
Panel B: Climate change issues	
Unigrams	"donation(s)", "pollution", "epidemic"
Bigrams	"climate change", "climate risk", "global warming", "environmental risk", "environmental disaster", "sea level", "tropical storm", "flooding threat", "extreme temperature"
Trigrams	"climate change risk", "global warming risk"

FIGURES

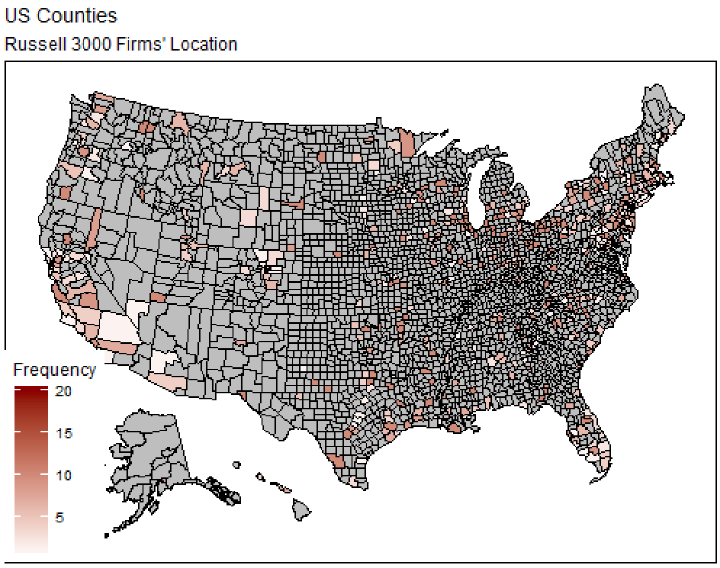

FIGURE 3.1: Location of Russell 3000 firms at county level

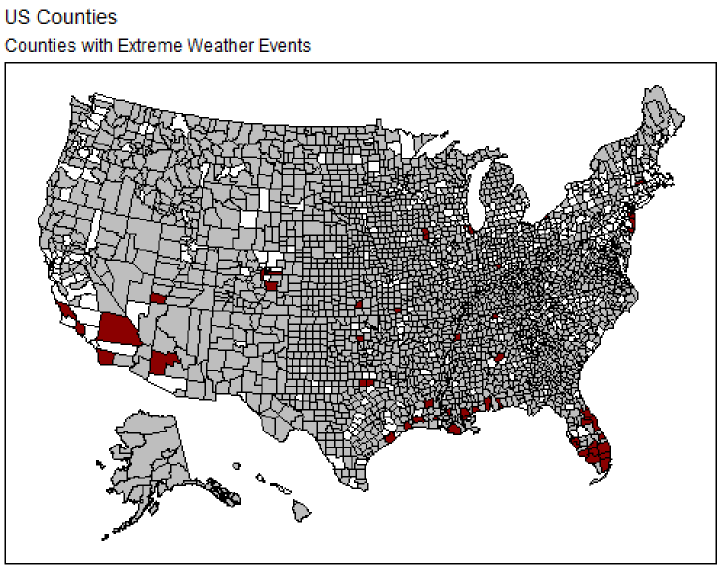

FIGURE 3.2: Counties hit by extreme weather events ($250 million)

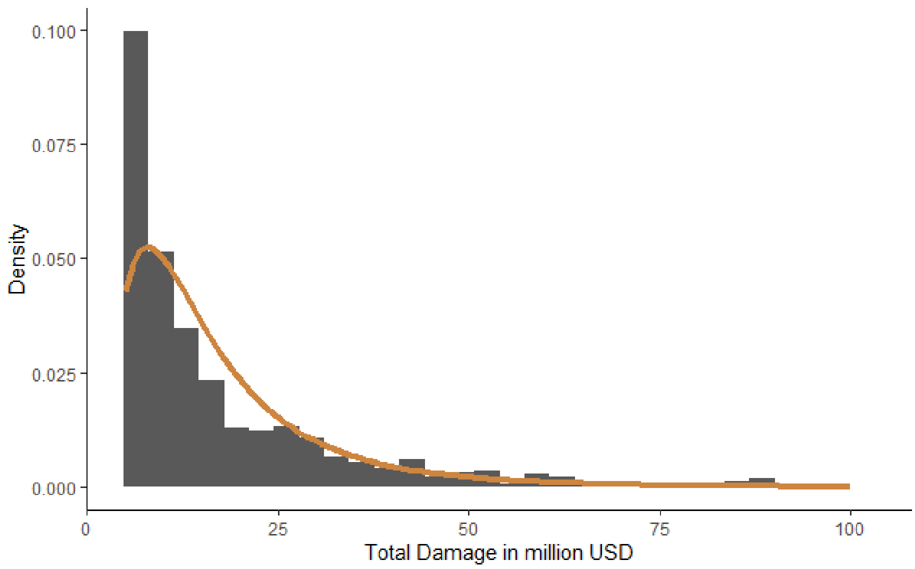

FIGURE 3.3: Distribution of weather events in SHELDUS 1960 - 2018

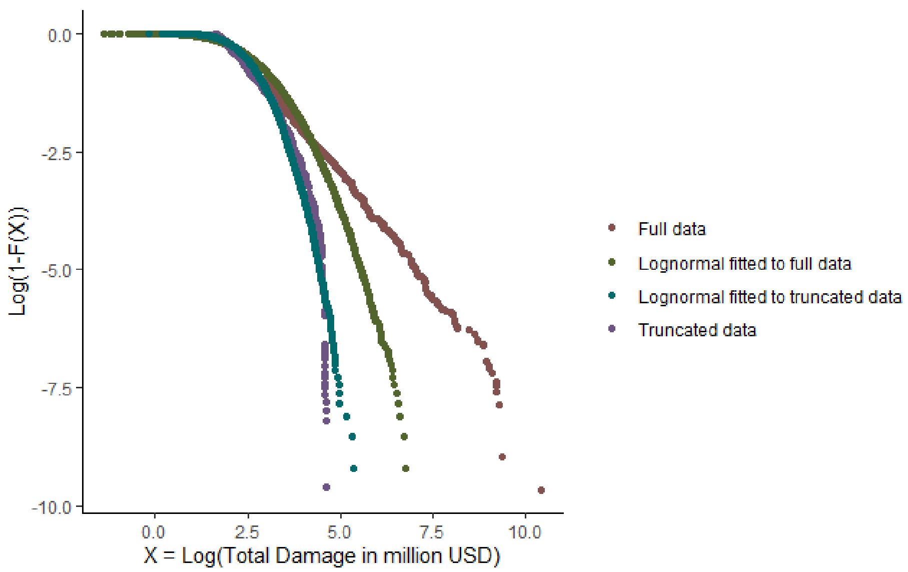

FIGURE 3.4: Tail behavior

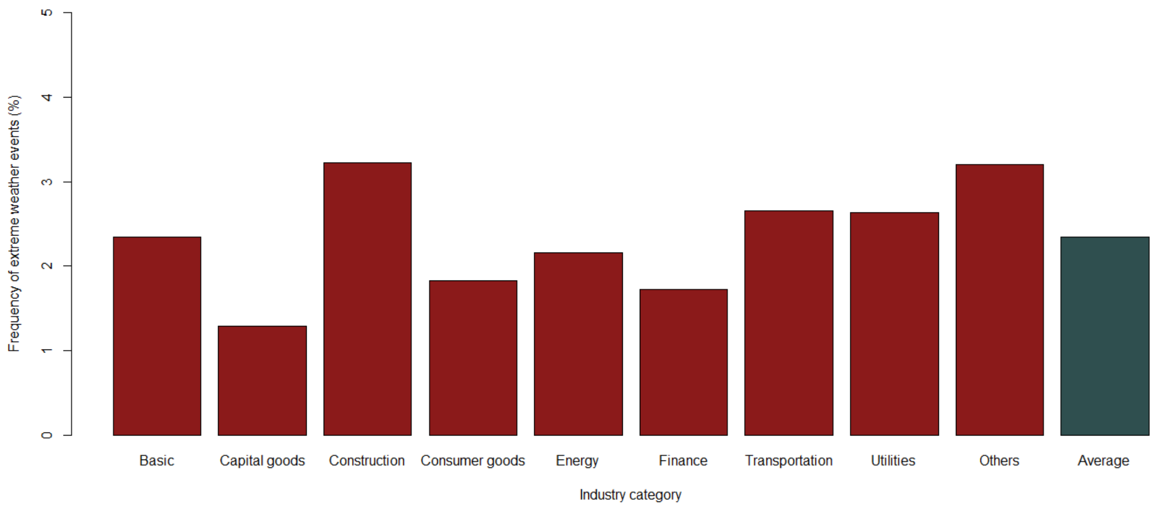

FIGURE 3.5: Distribution of extreme weather events across industries

TABLES

TABLE 3.1: Descriptive statistics

Panel A: All observations

	N	Mean	St. Dev.	Min	Max
ESG	21,527	−0.254	1.292	−9	9
Environmental	21,527	0.042	0.706	−4	5
Social	21,527	−0.259	0.965	−8	6
Governance	21,527	−0.037	0.247	−3	1
EWE (shock)	21,527	0.018	0.133	0	1
ROA	20,628	0.101	0.176	−12.413	1.954
Log(Total Assets)	21,521	7.285	1.716	−0.021	14.674
Leverage	21,447	0.220	0.228	0.000	3.676

Panel B: Republican CEOs

	N	Mean	St. Dev.	Min	Max
ESG	3,834	−0.457	1.599	−8	9
Environmental	3,834	0.011	0.903	−3	4
Social	3,834	−0.401	1.170	−6	6
Governance	3,834	−0.068	0.298	−2	1
EWE (shock)	3,834	0.021	0.145	0	1
ROA	3,694	0.142	0.098	−0.796	1.183
Log(Total Assets)	3,833	8.074	1.735	3.752	14.615
Leverage	3,814	0.233	0.182	0.000	1.511

Panel C: Democratic CEOs

	N	Mean	St. Dev.	Min	Max
ESG	2,066	−0.123	1.470	−7	6
Environmental	2,066	0.161	0.814	−4	4
Social	2,066	−0.231	1.122	−5	4
Governance	2,066	−0.053	0.280	−3	1
EWE (shock)	2,066	0.012	0.109	0	1
ROA	1,951	0.122	0.107	−0.785	1.389
Log(Total Assets)	2,065	7.968	1.764	3.746	14.674
Leverage	2,058	0.224	0.207	0.000	2.616

TABLE 3.2: Dynamic DiD: Main regression results

	Dependent variable:	
	ESG	
	(1)	(2)
$Dummy_{t-1}$	0.022	0.030
	(0.073)	(0.072)
$Dummy_{t+1}$	0.133*	0.141*
	(0.077)	(0.082)
$Dummy_{t+2}$	0.177**	0.168**
	(0.089)	(0.083)
$Dummy_{t+3}$	−0.049	−0.040
	(0.077)	(0.080)
ROA		−0.006
		(0.048)
Log(Total Assets)		−0.065
		(0.041)
Leverage		−0.061
		(0.109)
Firm fixed effects	*Yes*	*Yes*
State x year fixed effects	*Yes*	*Yes*
R^2	0.603	0.606
Observations	21,279	20,316

Notes: SEs (clustered at the county level) are reported in parentheses. Statistical significance levels: *p<0.1; **p<0.05; ***p<0.01

TABLE 3.3: Dynamic DiD: Environmental, social and governance indicators

	Dependent variable:		
	Environmental	Social	Governance
	(1)	(2)	(3)
$Dummy_{t-1}$	0.017	0.002	0.011
	(0.047)	(0.043)	(0.014)
$Dummy_{t+1}$	−0.003	0.124**	0.019
	(0.046)	(0.059)	(0.018)
$Dummy_{t+2}$	−0.004	0.166**	0.006
	(0.051)	(0.066)	(0.020)
$Dummy_{t+3}$	−0.052	0.026	−0.013
	(0.059)	(0.052)	(0.024)
ROA	0.025	−0.049	0.018
	(0.028)	(0.039)	(0.015)
Log(Total Assets)	−0.048**	−0.023	0.005
	(0.020)	(0.031)	(0.008)
Leverage	0.041	−0.078	−0.023
	(0.064)	(0.065)	(0.023)
Firm fixed effects	*Yes*	*Yes*	*Yes*
State x year fixed effects	*Yes*	*Yes*	*Yes*
R^2	0.622	0.617	0.454
Observations	20,316	20,316	20,316

Notes: SEs (clustered at the county level) are reported in parentheses. Statistical significance levels: *p<0.1; **p<0.05; ***p<0.01

TABLE 3.4: Dynamic DiD with political preferences

	Dependent variable:	
	ESG	
	(1)	(2)
$Dummy_{t-1}$ x Rep_{t-1}	0.193	0.212
	(0.153)	(0.173)
$Dummy_{t+1}$ x Rep_{t+1}	−0.185	−0.159
	(0.204)	(0.202)
$Dummy_{t+2}$ x Rep_{t+2}	−0.194	−0.205
	(0.238)	(0.255)
$Dummy_{t+3}$ x Rep_{t+3}	0.035	0.036
	(0.275)	(0.278)
$Dummy_{t-1}$	−0.020	−0.016
	(0.077)	(0.076)
$Dummy_{t+1}$	0.174**	0.173*
	(0.088)	(0.092)
$Dummy_{t+2}$	0.222*	0.215*
	(0.117)	(0.114)
$Dummy_{t+3}$	−0.067	−0.061
	(0.098)	(0.099)
ROA		−0.008
		(0.048)
Log(Total Assets)		−0.063
		(0.040)
Leverage		−0.060
		(0.107)
Republican	−0.123**	−0.120**
	(0.050)	(0.053)
Firm fixed effects	*Yes*	*Yes*
State x year fixed effects	*Yes*	*Yes*
R^2	0.603	0.607
Observations	21,279	20,316

Notes: SEs (clustered at the county level) are reported in parentheses. Statistical significance levels: *p<0.1; **p<0.05; ***p<0.01

TABLE 3.5: Dynamic DiD with political preferences

	Dependent variable:		
	Environmental	Social	Governance
	(1)	(2)	(3)
$Dummy_{t-1}$ x Rep_{t-1}	0.158	0.062	−0.007
	(0.109)	(0.134)	(0.027)
$Dummy_{t+1}$ x Rep_{t+1}	0.030	−0.134	−0.054
	(0.074)	(0.158)	(0.046)
$Dummy_{t+2}$ x Rep_{t+2}	−0.111	−0.081	−0.013
	(0.132)	(0.152)	(0.042)
$Dummy_{t+3}$ x Rep_{t+3}	−0.026	0.104	−0.041
	(0.141)	(0.183)	(0.039)
$Dummy_{t-1}$	−0.017	−0.013	0.014
	(0.049)	(0.053)	(0.012)
$Dummy_{t+1}$	−0.014	0.154**	0.033
	(0.047)	(0.076)	(0.021)
$Dummy_{t+2}$	0.024	0.183**	0.008
	(0.055)	(0.090)	(0.016)
$Dummy_{t+3}$	−0.054	−0.004	−0.003
	(0.069)	(0.070)	(0.028)
ROA	0.024	−0.050	0.018
	(0.028)	(0.038)	(0.015)
Log(Total Assets)	−0.046**	−0.022	0.005
	(0.020)	(0.031)	(0.008)
Leverage	0.041	−0.078	−0.023
	(0.062)	(0.064)	(0.023)
Republican	−0.085**	−0.043	0.008
	(0.038)	(0.041)	(0.017)
Firm fixed effects	*Yes*	*Yes*	*Yes*
State x year fixed effects	*Yes*	*Yes*	*Yes*
R^2	0.623	0.617	0.454
Observations	20,316	20,316	20,316

Notes: SEs (clustered at the county level) are reported in parentheses. Statistical significance levels: *p<0.1; **p<0.05; ***p<0.01

TABLE 3.6: Extreme weather mentions 10K (poisson)

	Dependent variable:	
	Extreme weather	
	(1)	(2)
$Dummy_{t-1}$	0.366	0.385
	(0.335)	(0.339)
$Dummy_{t}$	0.551*	0.587**
	(0.290)	(0.281)
$Dummy_{t+1}$	−0.003	0.019
	(0.208)	(0.202)
ROA		0.207
		(0.247)
Log(Total Assets)		0.200***
		(0.068)
Leverage		−0.036
		(0.220)
State × year fixed effects	*Yes*	*Yes*
Pseudo R^2	0.092	0.112
Observations	28,821	27,275

Notes: Standard-errors (clustered at the county level) are reported in parentheses. Statistical significance levels: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

TABLE 3.7: Climate change mentions 10K (poisson)

	Dependent variable: Climate change (1)	(2)
$Dummy_{t-1}$	0.145	0.162
	(0.274)	(0.280)
$Dummy_{t}$	0.221	0.269
	(0.341)	(0.354)
$Dummy_{t+1}$	0.011	−0.024
	(0.344)	(0.362)
ROA		0.008
		(0.013)
Log(Total Assets)		0.368***
		(0.053)
Leverage		0.365***
		(0.112)
State × year fixed effects	*Yes*	*Yes*
Pseudo R^2	0.128	0.20
Observations	31,234	29,732

Notes: Standard-errors (clustered at the county level) are reported in parentheses. Statistical significance levels: *p<0.1; **p<0.05; ***p<0.01

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