

Sharing the Pain between Workers and Management: Evidence from the COVID-19 Pandemic and 9/11 Attacks

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Abstract

We examine the rhetoric in ESG literature that managers “share the pain” of employees who are laid off or whose benefits are cut by committing to reduce CEO pay or by enacting other positive worker friendly actions during the Covid crisis. Using the exogenous shock of the COVID pandemic and a unique database, we examine more than 4,062 positive and negative actions targeted at workers taken by the S&P 1500 firms in 2020 in response to the pandemic. Our findings indicate that economic considerations such as exposure to the pandemic and poor stock performance prior to the pandemic are the primary determinants of management’s decision to share the pain of employees. Stakeholder concerns, proxied by higher employee-related corporate social responsibility scores, lower pay disparity between the CEO and the median employee, or a signatory to the Business Roundtable Statement, are not associated with managers’ sharing of the pain. Evidence of such pain sharing from another unexpected crisis from the past –the September 11, 2001, terrorist attacks – is remarkably similar. Sharing the pain is not associated with future stock returns performance. Finally, we show that the median CEO’s wealth increased nearly 18-fold relative to the CEO pay cut for firms that enforced CEO pay cuts and laid off employees during the Covid crisis. The paper adds to growing evidence that U.S. firms do not appear to “walk the talk” of concerns for stakeholders.

JEL Classification: J33, J63, M14

Keywords: ESG, sharing the pain, pay cuts, layoffs, CEO wealth, corporate social responsibility, stakeholder capitalism, BRT signatories, COVID, 9/11

“As it became clear that the pandemic was going to devastate the economy and their businesses, many boards and chief executives appeared to sense a need to tell workers and investors that they were sharing in the pain.”

The New York Times

“We are all in this together, corporate bosses told us last year as they promised to forgo parts of their salaries or bonuses in recognition of the havoc wreaked by Covid-19.”

The Financial Times

1. Introduction

We empirically examine management’s claims of “sharing the pain” of employees during the recent COVID-19 economic crisis. Since the beginning of the pandemic, companies across the U.S. enacted actions that adversely impacted employees. In an effort to create a feeling of solidarity with the employees, some companies also enacted management pay cuts and other positive actions. This “sharing of pain” has received considerable attention in the media.¹ While some experts called these actions “symbolic” (Duffy, 2020), others deemed them as “an attempt to create a feeling of unity” (Hinchliffe, 2020).² Company executives were particularly more inclined to characterize management salary and benefit cuts as signs of sharing the pain than portraying them as cost-cutting measures.³

Much of this discussion boils down to three key aspects of organizational change – building corporate culture and two pro-social objectives related to addressing income inequality and advocating for greater stakeholder capitalism. Sharing the financial pain imposed by the pandemic between management and workers is potentially one way of building

¹ We provide several accounts of news media articles explicitly discussing the concept of “sharing the pain” in Table A1 of the online appendix.

² A related study on “sharing the pain” argues that managers enacted pay cut decisions to mitigate negative shareholder reaction to other corporate decisions, such as dividend cuts (Alves et al., 2021).

³ For example, when General Electric Company announced plans to furlough approximately half of its U.S. maintenance, repair and overhaul employees, Chairman and CEO H. Lawrence Culp, Jr. stated in a press release, “As David Joyce wrote in his note to GE Aviation employees earlier, ‘Our hardworking, determined employees are the heart of our business, and it is difficult to have to take these steps due to external factors like this. But we must respond immediately with every action within our control to protect our ability to serve our customers now and as the industry eventually recovers.’ I feel the same way. That is why I will forgo my full salary for the remainder of 2020.” (GE News, 2020).

a more effective corporate culture, especially if management is seen as taking actions consistent with their stated values of fairness and equity for workers (see, Graham et al., 2021). Calls for addressing organizational income inequality have resurfaced during the pandemic (see, e.g., Eccles, 2022a). Empirical evidence suggests that pay disparity within an organization can be detrimental to firm value as it discourages employees and leads to a feeling of resentment among the rank and file employees (Bebchuk et al., 2011; Rouen, 2020). The COVID-19 pandemic reinforced this debate as millions of workers either temporarily or permanently lost their jobs. Management was thereby forced to take actions to address this asymmetric imposition of hardship on workers relative to senior executives. Survey evidence suggests that large institutional investors and other governance bodies considered income inequality an important antecedent to sharing the pain (Konigsburg and Finzi, 2020).

The third aspect of this discussion relates to stakeholder capitalism – the concept that managers and board of directors should not only serve the interests of the shareholders but also other key stakeholders (see, e.g., Alexander, 2020).⁴ Corporate claims about purpose and stakeholder capitalism have become louder and more frequent of late. Most notably, in August 2019, 181 CEOs of the Business Roundtable (BRT) released a new “Statement on the Purpose of a Corporation” seeking to “move away from shareholder primacy,” to “include commitment to all stakeholders: customers, employees, suppliers, communities and shareholders.” The BRT statement was opposed by the Council of Institutional Investors (CII) and has generated considerable debate about the purpose of the corporation in the media and academic circles (Henderson and Temple-West, 2019; Bebchuk and Tallarita, 2020; Colvin, 2020; Raghunandan and Rajgopal, 2021a).

⁴ At the heart of this debate is whether stakeholder-oriented businesses create value for shareholders (Edmans, 2011, 2012; Borghesi et al., 2014; Eccles et al., 2014; Flammer, 2015; Ferrell et al., 2016), particularly during economic downturns (Lins et al., 2017; Bae et al., 2021).

In the middle of the stakeholder capitalism debate, COVID-19 struck the world. The discussion morphed into how the COVID-19 crisis has created an opportunity for CEOs and board members to implement their claims about corporate purpose and stakeholder capitalism into practice, especially concerning sharing the pain imposed by COVID-19 between workers and management.⁵ We provide empirical evidence of the sharing of pain between management and workers during the COVID-19 crisis. As a benchmark, we go back in time and examine how management shared the economic pain imposed by the 9/11 terror attacks with workers. The 9/11 sample serves as a helpful reference to a time when concerns about stakeholder capitalism and income inequality were not stated as vigorously as they are today. More specifically, we ask which firms share the economic pain of employees by enacting a positive action (e.g., CEO salary reduction) when also enacting a negative action (e.g., furloughing or laying off employees)?

From a research design standpoint, the COVID-19 crisis is an appropriate setting as the pandemic was imposed on firms in an exogenous manner. Proponents of stakeholder capitalism also believe that the recent pandemic provides a good setting to test corporate claims of stakeholder governance (Eccles, 2022b; see, e.g., Gadinis and Miazad, 2022). Management per se is not responsible for the difficulties imposed on their firms by the economic crisis. However, management was responsible for the financial state of the firm before the crisis hit. A natural question to ask is whether the management deserves a pay cut during the crisis.

On the one hand, CEOs are known to be compensated for windfalls or favorable luck but not penalized for negative luck (Bertrand and Mullainathan, 2001). Others have documented that such asymmetry can be justified as a compensation committee's response to index the CEO wage to outside employment opportunities (Himmelberg and Hubbard, 2000; Rajgopal et al.,

⁵ See, for instance, Goodman (2020), Elsesser (2020), Loree (2021), and Wartzman (2021).

2006). On the other hand, the heightened focus on corporate purpose and the attendant social pressure can encourage boards to share the pain between CEOs and workers. Westphal and Zajac (1998) find that companies make symbolic changes to CEO pay to gain shareholder approval, even if these changes have no long-term impact on governance quality. Whether and how boards impose compensation cuts during a crisis is ultimately an empirical question.

To assess this empirical question, we obtain a unique data set of company actions tracked by Compensation Advisory Partners (CAP). More specifically, CAP tracks positive and negative compensation and human capital decisions enacted by the Standard and Poor's (S&P) 1500 companies for the calendar year 2020 and January 2021. We use this information to study what determines a company's human capital-related responses to the pandemic. In particular, we consider pain borne by management if the firm enacts at least one positive compensation or human capital action. Positive compensation actions include reducing the salaries of the CEO, executive chairman, other executives, and/or board of directors. Positive human capital actions include expanding benefits programs for employees or hiring more employees during the pandemic. We consider pain to be borne by workers if a firm enacts at least one negative human capital action. Examples of negative human capital actions include furloughing or laying off employees and suspending 501(k) matches. In our sample, 26.9 (24.1) percent of the firms reduced the salary of the CEO (of other executives). Fewer than 10 percent of the firms expanded employee benefit programs. Furthermore, firms furloughed employees (21.2 percent) rather than lay them off (10.5 percent). Using firms' actions in response to the pandemic, we classify firms into four categories: (i) *Positive action* if companies enact one or more positive actions; (ii) *Negative action* if companies enact one or more negative actions; (iii) *Pain sharing* if companies that enact at least one positive action and one or more negative actions; and (iv) *No action* if companies do not enact any actions in response to the pandemic.

We begin by investigating who enacts positive and negative actions. We find that firms financially hurt by the COVID-19 crisis are more likely to enact actions, both positive and negative.⁶ Moreover, large firms and firms with smaller cash balances, and those that experienced poor stock price performance leading up to the pandemic are more likely to enact positive and negative actions. Similarly, firms are more likely to be classified as *Pain sharing* if they have suffered larger negative stock returns during the pandemic and in the 24 months preceding the pandemic. Stakeholder concerns, proxied by (i) higher ESG score for employee concerns as per the KLD database; (ii) whether the firm is a BRT signatory or not; and (iii) firms with smaller pay disparity between the CEO and the median employee, are not associated with whether the firm is classified as *Pain sharing*. This finding lines up with prior research that BRT signatories who espoused concerns for all stakeholders did not necessarily follow through on their proclamations with concrete action (e.g., Bebchuk and Tallarita, 2020; Raghunandan and Rajgopal, 2021a). The non-result related to KLD scores is consistent with prior work that that ESG ratings are noisy (Yang, 2020; Raghunandan and Rajgopal, 2021a).

Would these insights generalize to a different crisis at a time when stakeholder concerns are not as salient as they are today? We evaluate this question by analyzing the sharing of economic pain imposed by the 9/11 terror attacks. The results are remarkably similar to the COVID-19 shock. Again, economic considerations appear to explain both positive and negative company actions subsequent to the 9/11 attacks. In particular, past return performance and the firms' stock returns in a narrow window around the 9/11 attacks explain employee layoffs. Due to limited data availability during this time period, we measure stakeholder orientation based on whether a firm is included as one of the best places to work in the Fortune Magazine's *Best Company List* between 1998-2000. Interestingly, we find that stakeholder-

⁶ Consistent with Dechow et al. (2021), we measure the economic impact of the Covid-19 crisis on firms as the cumulative abnormal return from January 1, 2020 to March 31, 2020.

oriented firms were more likely layoffs employees in the aftermath of the 9/11 attacks. We also find some evidence that stakeholder concerns are associated with firms' decisions to share the economic pain of their employees. While firms listed as one of the best places to work in the Fortune Magazine between 1998-2000 are more likely to lay off employees, they were also more likely to cut CEO salary to share the pain of the employees. However, the coefficient on the variable is statistically significant only at the 10 percent level.

A combined assessment of the evidence suggests that economic considerations, such as poor stock return performance, rather than stakeholder considerations are more likely to be associated with pain sharing decisions between workers and management. In a follow-up analysis, we find that post-March 2020, the pay cut taken by CEOs is more than made up by increases in CEO wealth. For instance, we find that CEOs of *Positive action* and *Pain sharing* firms experience a 26.9- and 18.3-fold increase in stock-related wealth from December 31, 2019 to March 31, 2021 relative to the salary and bonus cuts they enact during the pandemic. We also find no association between pain sharing and future stock return performance. Hence, the rhetoric related to stakeholder capitalism and shared sacrifice between CEOs and workers is not borne out by the evidence.

Our findings closely relate to the debate on stakeholder capitalism. Recent evidence suggests that U.S. firms do not appear to "walk the talk" or follow through on proclamations of concerns for stakeholders. For instance, recent evidence suggests that U.S. firms that signed the BRT statement are more likely to commit environmental and labor-related compliance violations compared to within-industry peers (Raghunandan and Rajgopal, 2021a). Similarly, banks with superior environmental, social, and governance (ESG) ratings are more likely to reject loan applications in poor neighborhoods despite having similar mortgage default rates as low-ESG banks (Basu et al., 2021). Such lack of commitment to stakeholder values is not limited to individual firms. For instance, self-labeled ESG mutual funds in the U.S. are more

likely to hold stocks of polluting firms compared to other funds offered by the same asset managers in the same years (Raghunandan and Rajgopal, 2021b). More recently, Bebchuk et al. (2022) study corporate acquisitions during the COVID-19 pandemic and show that corporate leaders fail to negotiate for stakeholders' interests when making acquisitions. Our paper adds one more data point to the now increasing accumulation of studies in this line of research.

Our paper is also related to the emerging debate on understanding the performance implications of corporate culture (e.g., Guiso et al., 2015; Graham et al., 2021). Consistent with these cited papers, the absence of a correlation between pain sharing and future performance suggests that symbolic rhetoric about managerial sacrifice in a crisis to build corporate culture without substantive actions are unlikely to be productive.

2. Institutional background

2.1. COVID-19 crisis

The COVID-19 crisis, which hit around February and March 2020 in the United States, has changed how we live. As of March 1, 2022, the Johns Hopkins Coronavirus center reported that 437 million patients have been infected worldwide and more than 5.9 million of them had succumbed.⁷ The United States, with barely 4 percent of the world's population has suffered a disproportionately large burden with 79 million cases and a million deaths. During the pandemic, the need for social distancing to stop the spread of COVID-19 adversely affected consumer demand in industries that rely on dining, tourist traffic, hotels, cruises, cinemas, spectator sports, airlines, cruise lines, and hospitality sectors. However, not every industry has suffered as COVID-19 is potentially a boon for firms that provide work-at-home technology (e.g., Slack or Zoom), online retail as going into stores is potentially hazardous (Amazon.com), or streaming entertainment at home (Netflix, Disney +). Bloom et al. (2021) survey U.S. small

⁷ John Hopkins Coronavirus Resource Center, Accessed: March 1, 2022, <https://coronavirus.jhu.edu/>.

businesses and find significant variation in the impact of COVID-19 on firm operations. For example, they find that while the average drop in sales during the second quarter of 2020 was 29 percent, more than 40 percent of the firms reported zero or positive impact of the pandemic on their revenue numbers.

2.2. COVID-19 foreshadowed by debate on social responsibility of business

Six months before COVID-19 hit, the debate about the social responsibility of business arguably crested when 181 CEOs signed the Business Roundtable Statement (BRT) in August 2019. The statement declared that “while each of our individual companies serves its own corporate purpose, we share a fundamental commitment to all of our stakeholders.” Concern for stakeholders was broadly defined as delivering value to customers, investing in employees, dealing fairly and ethically with suppliers, supporting the communities in which these businesses work, and generating long-term value for shareholders. In particular, the BRT promised to “compensate employees fairly, including through training and education, while fostering diversity and inclusion.” The August 2019 statement was seen as a landmark event because the BRT had declared in a September 1997 white paper titled “Statement on Corporate Governance” that “The Business Roundtable wishes to emphasize that the principal objective of a business enterprise is to generate economic returns to its owners.”

Questions have inevitably arisen on whether the BRT followed up on its statements expressing concern for stakeholders. Raghunandan and Rajgopal (2021a) find that past violation records across hundreds of federal and state agencies of BRT signatories are worse than that of a comparable sample matched on size and industry. BRT signatory firms performed worse with environmental agencies such as the EPA (Environmental Protection Agency) and labor agencies such as the OSHA (Occupational Safety and Health Administration), MSHA (Mine Safety and Health Administration), and DOL (Department of Labor). Bebhuk and Tallarita (2020) view the BRT statement to be largely a public relations move rather than a

signal of a significant shift in how corporations treat stakeholders. Bebchuk et al. (2022) examine acquisitions of public companies announced during the COVID-19 pandemic. They report that while the deal terms provide large gains for the shareholders of the target companies and private benefits for executives, there is little evidence of corporate leaders negotiating protections for employees, customers, suppliers, or other stakeholders.

One significant test of whether BRT signatories, in particular, and businesses, in general, are serious about stakeholder capitalism is for CEOs to sacrifice a portion of their compensation during the COVID-19 crisis to share in the economic pain imposed on their employees. CEOs of several prominent firms such as McDonald's, Disney, Harley-Davidson, Ford Motor Co, General Electric, and Lyft have voluntarily taken temporary pay cuts.

2.3. Relevant literature

Whether boards should cut CEO compensation in response to an exogenous crisis such as COVID-19 or 9/11 is not apparent. For instance, Bertrand and Mullainathan (2001) document that CEOs are compensated for lucky breaks such as oil price increases boosting the share prices of oil firms or foreign currency induced increases in earnings or stock prices of multinationals. Himmelberg and Hubbard (2000) and Rajgopal et al. (2006) find that CEOs are rewarded for relatively exogenous lucky breaks but are minimally penalized for bad luck. They argue that such asymmetry can be justified as a compensation committee's response to index the CEO wage to outside employment opportunities. Garvey and Milbourn (2006) suggest that the pay-for-luck relationship is attributable to powerful CEOs influencing the pay-setting process. Pay-asymmetry is justified in the literature in several ways: (i) it aids executive retention (Bizjak et al., 2008); (ii) it encourages CEOs to invest in costly information about potential industry shocks (Gopalan et al., 2010); (iii) it helps balance explicit and implicit incentives (Feriozzi, 2011); (iv) it is spurious and is a result of model misspecification (Daniel et al., 2020). Drawing from this literature and assuming that CEO pay is inherently risky and

sensitive to performance, one can argue that the compensation committee ought to leave the compensation of CEOs unchanged even if CEOs have to lay off workers in response to the COVID-19 crisis.

The counter-argument is that the heightened focus in 2019 on corporate purpose after the BRT statement and the attendant social pressure might have encouraged boards to share the pain between CEOs and workers even if such CEO pay cut actions are merely symbolic. Westphal and Zajac (1998) find that symbolic actions related to CEO compensation, such as setting up a long-term incentive plan without actually implementing such a plan, are associated with positive stock price reactions. Hamm et al. (2015) find that firms whose CEOs take symbolic one-dollar salaries are associated with better future performance suggesting greater CEO wealth in the long run. Moreover, CEO tenure for firms that take a one-dollar salary is possibly extended by one year.

Another line of inquiry is that management's attempts to share the pain with workers would create greater social capital or an effective corporate culture at the firm. For example, Lins et al. (2017) show that firms with greater social capital, measured as higher CSR scores, are associated with higher stock returns during the 2008 financial crisis. They document that such firms benefit through higher profitability, margins, sales growth, and employee productivity relative to low-CSR firms. Shan and Tang (2020) find that Chinese firms with greater employee satisfaction appear to endure the COVID-19 stock market downturn better than other firms. In contrast, Bae et al. (2021) find no evidence that CSR affected stock returns during the pandemic. Turning to the corporate culture literature, Guiso et al. (2015) document that when employees perceive top managers as trustworthy, the firm's performance is stronger. Graham et al. (2021) find that firms that espouse aspirational values but do not live out their values in the workplace are associated with ineffective cultures and lower valuations. Ultimately, whether specific firms choose to inflict pain on the rank-and-file workers via

layoffs and pay cuts and whether such pain was shared with the firm's CEO, either symbolically or substantively, is an empirical question.

3. Pain Sharing during the COVID-19 Pandemic

3.1. Data and variable definitions – COVID-19 sample

To study the determinants of firms' positive, negative, and pain sharing compensation and human capital actions, we use data compiled by Compensation Advisory Partners (CAP), an independent executive compensation private company that consults with boards and management teams on executive compensation.⁸ Since the start of the pandemic, CAP has monitored firms' actions in response to changing economic conditions caused by COVID-19. By February 28, 2021, CAP had compiled a list of more than 4,062 positive and negative actions taken by the S&P 1500 firms in response to the pandemic. CAP collects this data from company disclosures (e.g., Form 8-K) and a thorough search of media outlets reporting such information (e.g., The Wall Street Journal). We first obtained this data set from CAP in September 2020. Subsequent updates were incorporated using CAP's webpage on COVID-19 Resource Center.⁹ We match the companies in CAP's database with Compustat using the ticker symbol. When the ticker symbol is not available in Compustat, we manually match the two data sets using company names. This matching process leads to an initial sample of 1,504 companies.¹⁰

We expect both greater exposure to the pandemic and firm performance before the pandemic to affect a firm's actions in response to COVID-19. To capture the economic impact of the COVID-19 pandemic on firms, we follow Dechow et al. (2021) and estimate cumulative abnormal returns using daily returns data from Center for Research in Security Prices (CRSP)

⁸ CAP website, *About CAP*, <https://www.capartners.com/about-us/>, last accessed: February 24, 2022.

⁹ CAP website, *COVID-19 Resource Center*, <https://www.capartners.com/covid-19-compensation-trends/>, last accessed: February 24, 2022.

¹⁰ Our sample contains all S&P 1500 companies covering more than 90 percent of the U.S. stock market equity.

for the pandemic period (i.e., between January 1, 2020 and March 31, 2020).¹¹ We also measure stock returns before the pandemic to account for economic performance leading into the pandemic. To do this, we calculate cumulative abnormal returns for the past 24 months ending in December 2019 using monthly CRSP data.

To capture a firm's tendency towards stakeholder capitalism, we use three distinct proxies. First, using a similar procedure as Lins et al. (2017), we focus on the employee-related component of CSR using employee-related strengths and weaknesses in MSCI ESG KLD STATS database. The employee-related score, which ranges between -1 and 1 indicates a firm's willingness (unwillingness) to support their employees in the form of union relations, labor management, and supply chain labor standards among other issues. For our second proxy, we hand collect information on whether a firm is a signatory of the August 2019 Statement on the Purpose of a Corporation by the Business Roundtable to capture a firm's commitment toward stakeholder-centric behavior. Finally, we use the ratio of CEO pay to median employee pay as our third metric for firms oriented towards stakeholder capitalism. Consistent with equity theory (see, Akerlof and Yellen, 1990), firms with greater pay disparity can leave a feeling of unfairness towards employees. We therefore expect firms with greater pay disparity to be associated with less senior management sacrifice in favor of employees.

Table 1, Panel A lists the sample construction steps. We begin with the initial sample of 1,504 firms with available data from CAP. Next, we delete observations for the following reasons – (1) missing equity price information in CRSP to calculate returns during the pandemic (35 observations); (2) missing information to calculate control variables (17 observations); (3) missing employee-related CSR score from the KLD database used to capture stakeholder orientation (8 observations); and (4) missing data on CEO pay ratio to median

¹¹Abnormal returns are calculated by subtracting the value-weighted CRSP returns from a firm's stock returns.

employee pay. Our final sample for the COVID-19 analyses comprises 1,416 firm observations.

[Table 1 around here]

Based on their compensation and human capital actions in response to the COVID-19 pandemic, we broadly classify firms into four main categories: *Positive action*, *Negative action*, *Pain sharing*, and *No action*. Firms that take one or more positive compensation or human capital actions in response to the pandemic are coded as companies that initiated a *Positive action*. Positive compensation actions include reduction of the CEO's base salary, executive chairman's pay, or board of directors' pay, among other decisions. Similarly, expanding benefits program or hiring more employees during the pandemic are coded as positive human capital decisions. Firms that take one or more negative compensation or human capital actions in response to the pandemic are coded as companies that initiated a *Negative action*. Examples of negative human capital actions include laying off or furloughing employees and suspending 401(k) matching. Table 1, Panel B provides the full list of positive and negative actions taken by firms during the pandemic.¹² Firms that take at least one positive action and one or more negative actions are coded as *Pain sharing*. Finally, firms that take neither positive nor negative actions are classified as *No action* firms.

Table 1, Panel B reports the frequency of firms enacting positive, negative, pain sharing, and inaction responses to COVID-19. It turns out that 605 firms enacted at least one positive action, 409 firms took at least one negative action, and 354 firms initiated both at least one positive and negative action.¹³ More than half of our sample firms (756 firms) took neither a positive nor a negative action in response to the pandemic. Hence, there is reasonable variation

¹² Table A2 in the online appendix provides more detailed examples for some of these actions with excerpts from company disclosures and news articles.

¹³ *Positive action* and *Negative action* are not mutually exclusive. For instance, a firm reducing the base salary of the CEO may also be engaging in reducing their workforce. We find that 251 firms take only positive action(s) and 55 firms take only negative action(s). Therefore, defining our variables in a mutually exclusive way would reduce the power of our regression models.

in terms of the dyad of decisions (positive and negative) that firms take in response to the Covid crisis. The paper assesses whether such variation is best explained in terms of economic considerations such as poor performance or concerns for the stakeholder, in this case, workers.

Figure 1 reports the granularity of CAP data by showing the percentage of sample firms enacting positive compensation actions (Figure 1A), positive human capital decisions (Figure 1B), and negative human capital decisions (Figure 1C). In Figure 1A, we report that 26.9 percent of our sample firms reduced the base salary of the CEO. Similarly, 24.1 percent reduced the base salary of other executives. Less than 10 percent of firms expanded benefit programs such as paid leaves due to COVID-19 while only a handful of firms (1.6 percent) expanded their workforce (see Figure 1B). Figure 1C shows that furloughs (21.2 percent) were more common than layoffs (10.5 percent).

Figure 2 shows the frequency of positive and negative actions enacted by firms in response to COVID-19. Majority of the sample firms (811 and 1,007) do not take any actions. The number of firms that initiated one, two, and three positive actions was 146, 115, and 208, respectively.¹⁴ In contrast, 165, 142, and 78 firms initiated one, two, and three negative actions.

Figure 3 presents the industry distribution of firms enacting positive, negative, and pain sharing actions compared to them taking no action.¹⁵ Figure 3A shows that positive actions were more common within the Wholesale and Retail industry (101 firms compared to 142 without an action). Similarly, 29 firms in the Consumer Durables industry initiated a positive action compared to 37 firms that did not take any action in the CAP dataset. Figure 3B shows that out of 213 firms in the Wholesale and Retail industry, 71 initiated a negative action and 142 took neither positive nor negative actions. Finally, Figure 3C shows that pain sharing was more common in Wholesale and Retail, Consumer Durable, and Manufacturing industries.

¹⁴ Most firms took compensation-related actions across the board for top executives and the board of directors, which is why the frequency of firms with three positive actions is the highest.

¹⁵ In Figure 3, industries are defined based on the Fama and French (1997) 12-industry groupings classified using the four-digit standard industry classification (SIC) codes.

Overall, there is significant variation within and across industries in firm behavior in response to the COVID-19 pandemic.

3.2. Descriptive Statistics

Table 2 provides the descriptive statistics of the primary variables for the COVID-19 sample firms classified by actions enacted in response to the pandemic. The COVID-19 pandemic impacted *Pain sharing* firms most severely. *Pain sharing* firms experienced a mean (median) *Pandemic return* of -28.9 (-26.2) percent. In comparison, the mean (median) of *Pandemic return* for *No action* firms is significantly less severe at -5.4 (-2.3) percent. *Pain sharing* firms also experience the most negative returns over two years before the COVID-19 pandemic. The mean (median) of *Past return* for *Pain sharing* firms is -7.5 (-6.4) percent compared to 2.3 (0.9) percent for *No action* firms.

[Table 2 around here]

Surprisingly, *Pain sharing* firms have a lower *Employee score* than *No action* firms and more pay disparity, as measured by the *CEO pay ratio*. The mean *Employee score* for *Pain sharing* firms is 0.152 compared to 0.190 of *No action* firms. The mean (median) *CEO pay ratio* is 5.133 (5.084) for *Pain sharing* firms compared to 4.398 (4.394) for the *No action* firms. Furthermore, *Pain sharing* firms were less likely to be signatories of the new BRT statement. Firms enacting a positive action are more likely to be part of the new BRT statement. *Pain sharing* firms also seem to have less cash, lower employee productivity, and a greater need for financing before the pandemic compared to *No action* firms.

Table 3 reports statistical tests of univariate difference between the means of key variables for (1) firms enacting a positive action (2) firms enacting a negative action, and (3) pain sharing firms. For each of these sets of firms, we compare them to firms that take no action (*No action*). In Panel A and B, we find that firms that took positive and negative actions are more exposed to the pandemic, have poor performance leading into the pandemic, greater pay

disparity, more long-term debt, less cash, and lower employee productivity compared to firms that take no actions. The *t*-statistic for the difference in *Pandemic return*, *Past return*, *CEO pay ratio*, *Long debt*, *Cash ratio*, and *Sales per employee* are statistically significant at the one percent level. Panel A also reveals that *Positive action* firms are more likely to have signed the new BRT statement compared to *No action* firms. Similarly, *Negative action* firms have lower *Employee score* compared to *No action* firms, with the difference being statistically significant.

[Table 3 around here]

Panel C presents the differences for all variables between *Pain sharing* and *No action* firms. Relative to the *No action* firms, *Pain sharing* firms are more exposed to the pandemic, have lower returns leading up to the pandemic, lower employee-related CSR score, greater pay disparity, more short- and long-term debt, and lower profitability, liquidity, and employee productivity. Also, *Pain sharing* firms are more likely to have signed the new BRT statement, although the difference is significant only at the 10 percent level. Overall, these differences indicate that firms' tendency to share the pain of their employees increases with greater economic exposure to the pandemic. We find mixed evidence that stakeholder orientation increases the probability of pain sharing. While *Pain sharing* firms are more likely to have signed the new BRT statement, they also have greater pay disparity and lower employee-related CSR scores.

3.3. *Multivariate Analysis*

3.3.1. *Determinants of positive, negative, and pain sharing actions*

We begin our multivariate analysis by investigating the determinants of firms' decisions to undertake positive, negative, and pain sharing actions in response to the COVID-19 pandemic. We estimate logit regressions of models nested in the following specification:

$$\begin{aligned}
Pr(DV=1) = & \beta_0 + \beta_1 Pandemic\ return_i + \beta_2 Past\ return_i + \beta_3 Employee\ Score_i \\
& + \beta_4 BRT\ Signatory_i + \beta_5 CEO\ pay\ ratio_i + \beta_6 \ln(Firm\ size)_i \\
& + \beta_7 Book-to-market_i + \beta_8 Short\ debt_i + \beta_9 Long\ debt_i \\
& + \beta_{10} Profitability_i + \beta_{11} Cash\ ratio_i + \beta_{12} Sales\ per\ employee_i \\
& + \beta_{13} Financing\ needs_i + Industry\ fixed\ effects_i + \varepsilon_i
\end{aligned} \tag{1}$$

where *DV* equals *Positive action*, *Negative action*, or *Pain sharing*. For all specifications estimated using Equation (1), we use *No action* firms as the control group. *Positive action* (*Negative action*) equals 1 for firms taking one or more positive (negative) actions, and 0 for firms taking neither positive nor negative actions in response to COVID-19. *Pain sharing* equals 1 for firms taking one or more negative actions and at least one positive action, and 0 for firms taking neither positive nor negative actions in response to COVID-19. We include industry-fixed effects based on Fama and French (1997) 48-industry classifications.¹⁶ These fixed effects restrict our analysis to within-industry variation and control for the overall impact of the COVID-19 pandemic on a particular industry. All other variables are as defined before and also described in Appendix A.

Table 4 reports the results of estimating various models nested in Equation (1). In Columns (1) and (2), the dependent variable is *Positive action*. In both the columns, the coefficients for *Pandemic return* and *Past return* are negative and statistically significant, suggesting firms that are more severely impacted by the COVID-19 pandemic and those that experienced poor performance in the past two years prior to the pandemic were more likely to enact positive compensation- and human capital-related actions. We also find some evidence that *Positive action* firms are more likely to be BRT signatories but are associated with greater CEO and median employee pay disparity. The coefficients for *BRT Signatory* and *CEO pay*

¹⁶ To address the potential incidental parameters problem related to the use of fixed effects in nonlinear models, we confirm in un-tabulated analyses that our results are robust using linear probability models.

ratio are positive and significant in Column (1). However, in Column (2), the coefficient for *CEO pay ratio* becomes statistically insignificant and the significance of the coefficient for *BRT signatory* is reduced to the 10 percent level once we control for other firm characteristics. The coefficient for *Employee score* is negative but statistically insignificant in both Columns (1) and (2). Furthermore, in Column (2), the coefficient on $\ln(\text{Firm size})$ is positive and statistically significant at the 1 percent level, suggesting that larger firms are more likely to enact positive actions. The coefficients on *Cash ratio* and *Sales per employee* are negative and significant. These results suggest that firms with lower liquidity and employee productivity are less likely to enact positive actions.

[Table 4 around here]

Columns (3) and (4) of Table 4 report the results of estimating various models nested in Equation (1) with *Negative action* as the dependent variable. In Column (3), the coefficient on *Pandemic return* is negative and significant, suggesting firms more severely impacted by the COVID-19 pandemic were more likely to enact negative actions. We also find evidence that BRT signatories and firms with higher pay disparity were more likely to initiate negative actions. The coefficients for *BRT signatory* and *CEO pay ratio* are positive and statistically significant. Column (4) reports the results of estimating Equation (1) with *Negative action* as the dependent variable and other firm characteristics as control variables. In Column (4), the coefficient on *Pandemic return* remains negative and significant while that on *Past return* becomes negative and statistically significant, suggesting that firms more severely impacted by the COVID-19 pandemic as well as firms performing poorly leading up to the pandemic were more likely to enact negative actions. In contrast, none of the coefficients for our proxies related to stakeholder capitalism is statistically significant. The coefficients on *BRT signatory* and *CEO pay ratio* become statistically insignificant when we control for other firm characteristics. Furthermore, in Column (4), the coefficients on *Cash ratio* and *Sales per employee* are negative

and significant and the coefficients on $\ln(\text{Firm size})$ and *Short debt* are positive and statistically significant. This shows that larger firms and firms with greater short-term debt and lower liquidity and employee productivity were more likely to enact negative actions.

Table 4, Columns (5) and (6) report the determinants of *Pain sharing*. The coefficients for *Pandemic return* and *Past return* are negative and statistically significant in Columns (5) and (6), suggesting that firms that performed worse during and before the pandemic are more likely to share the pain of the employees. Furthermore, in Column (5), the coefficient on *BRT signatory* and *CEO pay ratio* are positive and statistically significant. However, in Column (6), these coefficients become statistically insignificant once other firm characteristics are added as control variables. The coefficient on *Employee score* is statistically insignificant in both columns. Finally, the coefficient on $\ln(\text{Firm size})$ is positive and significant while those for *Cash ratio* and *Sales per employee* are negative and significant, suggesting that larger firms and firms with lower liquidity and employee productivity are more likely to share in the economic pain of the employees.

Overall, our analysis of economic pain sharing following COVID-19 suggests that economic factors such as past performance and the economic impact of the pandemic dictated management's actions to be a *Pain sharing* firm. After controlling for firm size and other firm characteristics, BRT signatories are no more likely to be a *Pain sharing* firm compared to firms that did not sign the BRT. These findings add to the growing evidence suggesting BRT signatories do not “walk the talk” (Bebchuk and Tallarita, 2020; Raghunandan and Rajgopal, 2021a). Similarly, higher employee-related CSR score or lower pay disparity do not correspond to more pain sharing. A firm's stakeholder orientation does not appear to be a significant factor in the management's decision to share the economic pain imposed on employees due to COVID-19.

3.3.2. Multivariate analysis using entropy balancing

To study the determinants of positive, negative, and pain sharing actions, we compare these firms to firms that do not enact any actions. One potential problem with this comparison is that underlying and observable differences in firm characteristics between the two groups can impact our results. To control for these effects, we match firms using entropy balancing (see, Hainmueller, 2012). Entropy balancing assigns a weight to each observation in the control group in such a way that the resulting mean and variance of the treatment and control group are virtually identical. We repeat this process three times to create unique weights for the control group (*No action* firms) for comparison with *Positive action*, *Negative action*, and *Pain sharing* firms.¹⁷ Using these weights, we re-estimate our binary logistic models nested in Equation (1).

Table 5 presents the results for the entropy-balanced samples. The coefficient on *Pandemic return* remains negative and statistically significant across all three columns. This indicates that even after controlling for observable differences in firm characteristics between *No action* firms and firms enacting positive, negative, and pain sharing actions, the economic impact of the pandemic explains firms' actions in response to COVID-19. The coefficient on *Past return* is negative but statistically insignificant. Consistent with our results in Table 4, all three of our proxies for stakeholder orientation are statistically insignificant across all three columns. This evidence reinforces the idea that once we control for underlying differences in firm characteristics between the control and treatment groups, stakeholder orientation does not explain management's actions in response to the pandemic including the decision to share the pain of employees. Among other variables, the coefficients on *ln(Firm size)* and *Sales per employee* are positive and significant while that on *Book-to-market* is negative and significant

¹⁷ Table A3 in the online appendix provides the summary statistics before and after matching between the control and three treatment groups. The mean and variance between the two groups are virtually identical after implementing entropy balancing.

across all three columns. This suggests that larger firms and firms with fewer growth opportunities and higher employee productivity prior to the pandemic were more likely to take positive, negative, and pain sharing actions. Overall, these results reinforce the notion that greater economic exposure to the pandemic was a stronger determinant of pain sharing than stakeholder considerations.

[Table 5 around here]

3.3.3. *Alternative analysis using Compustat and Execucomp data*

To further test the robustness of our results in Table 4, we use alternative data sources to identify firms' actions to the COVID-19 pandemic and re-estimate Equation (1). We rely on Execucomp and Compustat to observe firms' compensation and human capital actions. In particular, we obtain data on CEO compensation from Execucomp and data on the number of employees from Compustat. Table 6, Panel A lists the steps involved in sample construction. We begin by identifying 9,101 observations with fiscal year endings before January 2021 from Compustat. Next, we delete observations for the following reasons – (1) lack of a GVKEY-PERMNO match (3,886 observations); (2) firms not covered by Execucomp, that is, not part of the S&P 1500 (3,619 observations); (3) missing equity price information in CRSP (six observations); and (4) missing information to calculate control variables (51 observations), the employee-related CSR score from the KLD database (22 observations), and pay disparity (95 observations). Our final sample for the COVID-19 analyses using data from Compustat and Execucomp comprises 1,422 firm observations.

[Table 6 around here]

Because Execucomp and Compustat do not contain granular data to detect positive and negative actions, we modify our definitions for categorizing firms based on coarsely measured actions of firms in response to the COVID-19 pandemic. We categorize firms that reduce the base salary of the CEO in response to the pandemic as *Positive action* firms. Firms that lay off

employees (i.e., reduce their workforce by at least two percent) in response to the pandemic are classified as *Negative action* firms. Firms that lay off employees and reduce the base salary of their CEO are considered *Pain sharing* firms.¹⁸ Finally, firms that take neither positive nor negative actions are classified as *No action*. Table 6, Panel B reports the frequency of firms enacting positive, negative, pain sharing, and inaction in response to COVID-19.¹⁹

Using this alternative sample, we re-estimate our models reported in Table 4. The results provided in Table 7 are largely consistent with those presented in Table 4. The coefficients on *Pandemic return* and *Past return* are negative and statistically significant in all six columns. In contrast, with the exception of pay disparity in columns (2) and (4) (whose coefficient is only marginally significant at the 10 percent level in these columns), none of the three stakeholder orientation variables is statistically significant. Thus, economic considerations such as exposure to the pandemic and poor performance prior to the pandemic appear more important in explaining firms' actions in response to COVID-19 than stakeholder considerations, which is consistent with our evidence using data from CAP.

[Table 7 around here]

3.3.4. *How big is the managerial sacrifice, if any?*

One of the important measurement issues related to CEO pay cut relates to the definition of CEO pay. In section 3.3.3, we limit our analyses to pay cuts related to base salary, however, it is useful to understand the gains/losses recorded by CEOs in terms of their equity portfolio during and after the pandemic. To shed some light on this issue, we calculate CEO wealth using the stock holdings and exercisable options of CEOs as reported in Execucomp prior to January 2020. To estimate the value of stock options during and after the pandemic, we closely follow

¹⁸ In untabulated analyses, we find that our inferences are unchanged if we (i) take into consideration bonus along with base salary to assess whether CEOs received a pay cut, and (ii) remove the two percent workforce reduction requirement and consider any reduction in the number of employees evidence of layoffs.

¹⁹ We provide detailed descriptive statistics and univariate analysis for this sample in Tables A4 and A5 of the online appendix.

the procedure in Coles et al. (2013) and revalue the options using stock prices from CRSP at the end of the relevant month. We multiply the stock price at the end of the relevant month with the total stock holdings of the CEO excluding options to calculate the change in stock holdings. The advantage of estimating CEO wealth this way instead of using option values from Execucomp is that it accounts for any potential sales of stock or options by CEOs during the pandemic. Our measure of CEO wealth therefore captures any organic increase in the value of stock holdings and options, and makes interpretations relatively easier.

We calculate CEO wealth on three specific dates (i) before the pandemic started (i.e., December 31, 2019), (ii) during the pandemic when the stock market plummeted (i.e., March 31, 2020), and (iii) after the pandemic (i.e., March 31, 2021). Table 8 reports descriptive statistics for CEO wealth change based on our classification of firms into four categories. Panel A presents results for CEO wealth change from December 31, 2019 to March 31, 2020 and December 31, 2019 to March 31, 2021. We find that pain sharing firms had a larger decrease in CEO wealth during the pandemic period (i.e., from December 2019 to March 2020) relative to firms taking no actions. On average, the wealth change was about -53.6 percent and -30.0 percent for CEOs of firms that shared the pain relative to firms that did not take any actions, respectively. This is consistent with our previous result that firms affected more severely by the COVID-19 pandemic are more likely to share the pain. The percentage wealth change from December 31, 2019 to March 31, 2021 indicates that, on average, CEOs of all firms experienced a sharp increase in wealth after the pandemic compared to pre-pandemic levels. This is consistent with the unprecedented appreciation in the stock market after March 2020. The results show that not only were the CEOs able to make up for the losses during the pandemic period, but their wealth increased beyond the pre-pandemic period. In fact, *Pain sharing* firms were closely lagging behind *No action* firms with mean (median) percentage wealth change of 42.2 (24.1) and 49.3 (30.4) percent, respectively.

[Table 8 around here]

In panel B of Table 8, we report the dollar values of pay cuts enacted and the corresponding changes in CEO wealth. We find that, among firms that enacted a CEO pay cut in the form of a salary, the median CEO experienced a decline of approximately \$118 thousand. The corresponding value for *Pain sharing* firms is approximately \$130 thousand. In contrast, the median increase in CEO wealth for the two types of firms was approximately, \$3,600 thousand, \$2,642 thousand, respectively. To put this in relative terms, we measure the ratio of change in wealth to the absolute value of decrease in salaries. We find that among the *Positive action* and *Pain sharing* firms, the median CEO wealth increased nearly 27- and 18-fold, respectively, relative to the salary cut enacted. Furthermore, we find that 272 out of 393 CEOs whose salary was cut, for whom we can calculate the change in wealth, experienced an increase in wealth greater in dollar value than the salary cut they enacted. These findings imply that while CEOs enacted symbolic pay cuts in their salaries to share the pain of their employees, they experienced significant wealth increases through their equity and option portfolios.

3.3.5. *Future consequences of firm decisions*

Next, we assess the relationship between firms' responses to the COVID-19 pandemic and future firm performance to investigate whether sharing the pain with workers creates social capital which results in better future firm performance. Following Lins et al. (2017), we assess whether the decision to enact positive, negative, and pain sharing actions are associated with better or worse future performance. We restrict this analysis to 15 months following March 2020 for which data are available in a machine-readable format and measure future performance using post-COVID 19 pandemic stock returns. We report the results in Table 9. Using cumulative monthly abnormal returns over 15 months after March 2020 to measure post-pandemic performance, we find no evidence of better or worse future performance for firms enacting positive, negative, or pain sharing actions. However, firms that were more severely

impacted by the pandemic experience relatively higher stock returns after March 2020. This evidence suggests that sharing the pain of the employees during the COVID-19 pandemic did not necessarily translate to better future firm performance.

[Table 9 around here]

4. Pain Sharing following the September 11 Terrorist Attacks

As mentioned before, the COVID-19 crisis constitutes an experiment that arguably occurred when concerns about stakeholder capitalism were widespread. The crisis also prompted central banks to engage in unprecedented increases in money supply, which, in turn, boosted stock markets. Subsequent increases in the value of managerial equity all but dwarfed the nominal pay cuts in terms of bonus and salary. On account of these peculiar circumstances, we investigate another shock in history, the 9/11/2001 terrorist attacks. Those attacks came unannounced, unlike the gradual build up to another crisis, the 2008 Global Financial Crisis shock induced by mortgage lending.

4.1. Data and variable definitions – September 11 sample

To analyze management's sharing of pain with workers following the September 11, 2001 terrorist attacks, we obtain executive compensation data from Execucomp, firm-specific financial data from Compustat, and equity prices from the Center for Research in Security Prices (CRSP). Table 10, Panel A lists the sample selection procedure. We begin by identifying 10,778 observations with fiscal year-ends before September 2001. Next, we delete observations for the following reasons – (1) lack of a GVKEY-PERMNO match (3,149 observations); (2) firms with missing compensation data on Execucomp (5,992 observations); (3) firms with missing equity prices as of September 17, 2001 (8 observations); and (4) companies with missing information to calculate control variables (58 observations). Our final sample for the September 11 attacks analyses comprises of 1,571 observations.

[Table 10 around here]

To capture a firm's economic exposure to the September 11 attack, we calculate the cumulative returns immediately following the September 11, 2001 attacks (*CAR 0,2*) and denote it as *Sep-11 return*. Because trading was halted and the equity markets were closed for one week following the attacks, we obtain daily stock returns after equity markets opened on Monday, September 17, 2001. We calculate the three-day cumulative abnormal returns beginning on September 17, 2001 and use that return measure as our proxy for a firm's economic exposure to the September 11 attacks. We calculate abnormal returns by subtracting the value-weighted CRSP returns from a firm's stock returns.

We use a firm's stock returns over the previous 24 months *Past return*, ending in August 2001, to proxy for its past performance. Since granular data about stakeholder orientation is not available during this time period, we capture firms' corporate social responsibility towards employees by manually collecting data about Fortune Magazine's Best Company List and creating an indicator variable (*Best company list*) reflecting whether a company was listed by the Fortune Magazine as one of the best employers. To avoid forward-looking bias, we create this indicator variable based on data in 1998, 1999, and 2000. Finally, we compare the most recent fiscal year ending before September 11, 2001 to the most recent fiscal year ending after September 11, 2001 to calculate the change in the number of employees and CEO's salary.

As before, to assess firms' response towards employees' economic pain following the September 11 attacks, we classify firms into four groups based on changes in CEO compensation and employee count – *Positive action*, *Negative action*, *Pain sharing*, and *No action*. We categorize firms as *Positive action* if the change in salary of CEO compensation is negative and categorize firms as *Negative action* if the company lays off at least 2 percent of its workforce in the fiscal year ending immediately after September 2001. We classify firms as *Pain sharing* if the change in total CEO compensation is negative and the firm lays off

employees. Finally, firms taking neither actions are classified as *No action*. Similar to our analysis using the COVID-19 sample, we use *No action* firms as our control group.

Table 10, Panel B provides summary statistics of our classification of firms into these categories. A significant majority of the firms (764) enacted no actions in response to the attacks. On the other hand, 164 firms reduce CEO's total compensation and lay off employees (i.e., *Pain sharing* firms). Similarly, 299 and 672 firms are classified as *Positive action* and *Negative action*, respectively.²⁰

Using this sample, we begin our multivariate analysis by investigating the determinants of firms' decisions to enact positive, negative, and pain sharing actions in response to the September 11 attacks. To do so, we estimate logit regressions of models nested in the following specification:

$$\begin{aligned}
 Pr(DV=1) = & \beta_0 + \beta_1 Sep-11\ return_i + \beta_2 Past\ return_i + \beta_3 Best\ company\ list_i & (2) \\
 & + \beta_4 \ln(Firm\ size)_i + \beta_5 Book-to-market_i + \beta_6 Short\ debt_i \\
 & + \beta_7 Long\ debt_i + \beta_8 Profitability_i + \beta_9 Cash\ ratio_i \\
 & + \beta_{10} Sales\ per\ employee_i + \beta_{11} Financing\ needs_i \\
 & + Industry\ fixed\ effects_i + \varepsilon_i
 \end{aligned}$$

where *DV* equals *Positive action*, *Negative action*, or *Pain sharing*. We include industry-fixed effects based on Fama and French's (1997) 48-industry classifications.²¹ The fixed effects structure restricts our analysis to within-industry variation and controls for the overall impact of the September 11 terrorist attacks on a particular industry. All other variables are as defined before and are also described in Appendix A.

²⁰ We provide detailed descriptive statistics and univariate analysis for this sample in Tables A6 and A7 in the online appendix.

²¹ To address the potential incidental parameters problem related to the use of fixed effects in nonlinear models, in untabulated analyses we confirm that our results are robust using linear probability models.

Table 11 reports the results of estimating various models nested in Equation (2). In Columns (1) and (2), the dependent variable is *Positive action*. We find that firms that experienced more negative short-window equity returns around the September 11 attacks and poorer equity returns leading up to the attacks were more likely to enact positive actions. The coefficients on *Sep-11 return* and *Past return* are negative and significant in both Columns (1) and (2). Furthermore, in column (2), the coefficients on *Profitability* and *Financing needs* are negative and significant. At the same time, the coefficient on *Best company list* is positive but statistically insignificant. This suggests that firms on Fortune magazine’s Best Company List were no more likely to enact positive actions compared to other firms. While acknowledging that 9/11 and COVID-19 shocks are arguably different, the parallels between these results and the ones tabulated in Table 4 for COVID-19 are striking. Firms most exposed to the shock (measured as the short window return to the crisis studied), those that suffer poorer performance leading into the crises are more likely to enact positive actions in both the crises.

[Table 11 around here]

We report the results of estimating models nested in Equation (2) with *Negative action* as the dependent variable in Columns (3) and (4). In both columns, the coefficients on *Sep-11 return* are negative and statistically significant, suggesting that firms with greater exposure to the 9/11 shock were more likely to lay off employees. Furthermore, in Column 4, the coefficients on *ln(Firm size)*, *Profitability*, *Sales per employee*, and *Financing needs* are negative and statistically significant whereas the coefficient on *Book-to-market* is positive and significant, implying that that smaller firms, firms with fewer growth opportunities, less financing needs, and lower employee productivity, and less profitable firms were more likely to enact negative actions in the form of employee layoffs. Interestingly, the coefficient on the stakeholder concerns variable capturing firm’s commitment to social responsibility, *Best company list* is positive and statistically significant, which suggests that firms included on

Fortune magazine's Best Company List were more likely to lay off employees following the September 11 attacks.

Next, we investigate the determinants of firms' decisions to be pain-sharing in response to the September 11 terrorist attacks. Columns (5) and (6) of Table 11 report the results of estimating Equation (2) using *Pain sharing* as the dependent variable. The negative and significant coefficients for *Sep-11 return* and *Past return* in columns (5) and (6) again suggest that managers of firms experiencing poorer performance immediately after the September 11 terrorist attacks and underperforming firms prior to the attacks were more likely to share economic pain with their workers. Furthermore, in Column (6), the coefficients on *Profitability*, *Sales per employee*, and *Financing needs* are negative and significant. This suggests that firms which (i) were less profitable, (ii) had lower employee productivity, and (iii) had fewer financing needs were more likely to share in the economic pain imposed by the September 11 attacks with employees. We find some evidence of an association between inclusion in Fortune magazine's Best Companies to Work for List and the firm's management sharing the pain with employees. The coefficient on *Best company list* is positive and statistically significant at the 10 percent level in Column (6). Overall, our analysis of economic pain sharing following the September 11, 2001 terrorist attacks suggests that economic factors such as past performance as well as the economic impact of the attacks dictated management's actions to share the pain with employees. Controlling for other factors, managers of firms lauded for their treatment of employees are slightly more likely to share the economic pain imposed by the terrorist attacks with their employees.

5. Conclusions

In this paper, we empirically investigate whether firms shared the economic pain of employees during the COVID-19 pandemic. In 2019, the Business Roundtable (BRT), a group of CEOs of America's most prominent firms, pledged to do more for workers and not just

company shareholders by redefining the purpose of a corporation to include “investing in our employees.” The BRT goes on, “this starts with compensating them fairly and providing important benefits.” When Covid struck, ESG groups have suggested that CEOs thus committed to stakeholder capitalism should lead by example and consider “adjusting salaries and forgoing bonuses for the year, redirecting those funds to retain and support their workers, especially those who are most vulnerable.” (JUST Capital, 2020).

We find that economic factors such as past performance and the economic impact of the pandemic dictated management’s decisions to enact positive, negative, and pain sharing actions. We do not find support for the stakeholder hypothesis. Stakeholder concerns, proxied by higher ESG score for employee concerns, being a BRT signatory, and pay disparity between the CEO and the median employee, are not associated with firms’ decision to share the economic pain of employees resulting from the COVID-19 pandemic. Remarkably, increases in CEO wealth post-COVID appear to have more than made up for the cut in CEO salaries and bonuses even if firms shared the pain. These fact patterns repeat when pain sharing was considered during another crisis in history (9/11 attacks), a period when concerns and rhetoric surrounding stakeholder capitalism were less prominent. In sum, our paper adds to the evidence that U.S. firms that profess concerns for all stakeholders do not appear to “walk the talk” when specific corporate actions such as CEO pay cuts and employee layoffs are considered. Symbolic actions, not backed by substantive financial commitments, are not associated with building social capital, consistent with the emerging literature on corporate culture.

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Figure 1: Positive and Negative Company Actions

Figure 1A - Positive Company Actions in Relation to Compensation

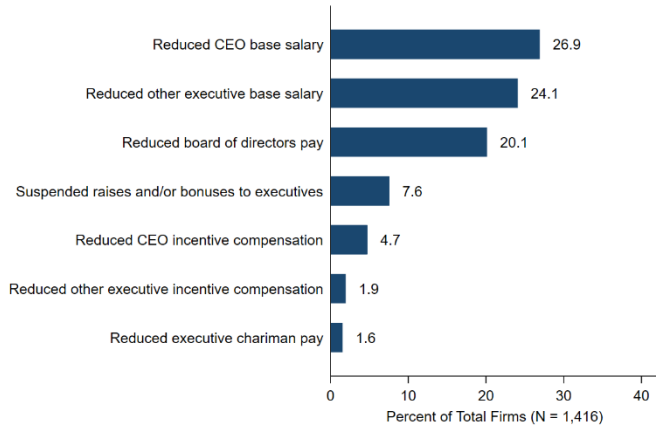


Figure 1B - Positive Company Actions in Relation to Employees

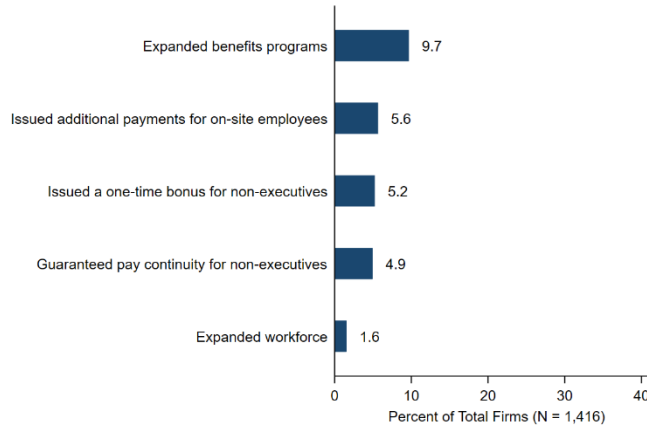


Figure 1C - Negative Company Actions in Relation to Employees

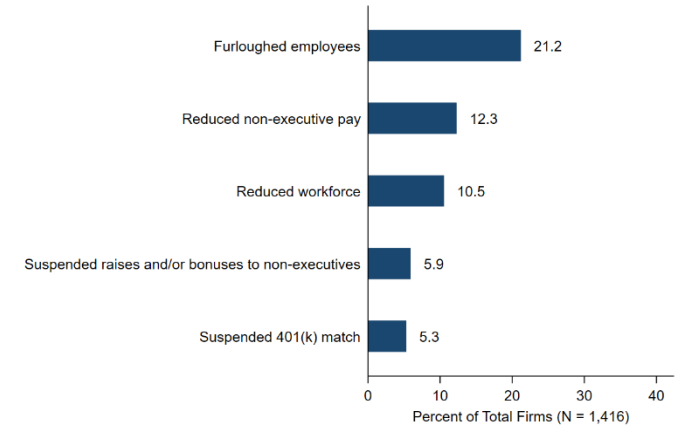


Figure 2: Frequency of Positive and Negative Actions

Figure 2A - Frequency of Positive Actions

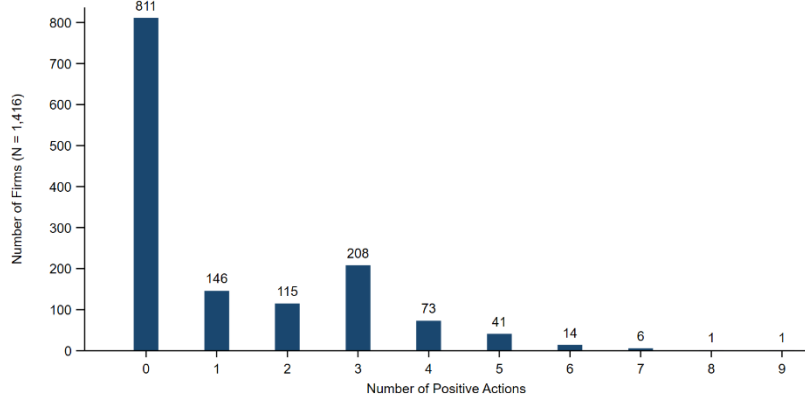


Figure 2B - Frequency of Negative Actions

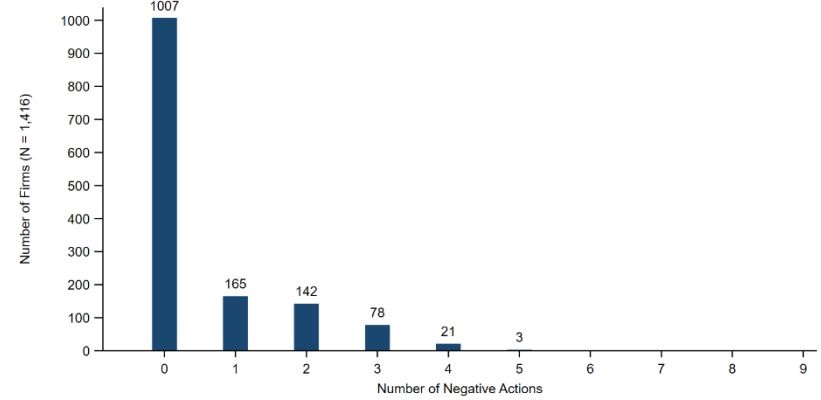


Figure 3: Industry Composition of Firms Taking Actions

Figure 3A - Number of Companies Taking Positive Actions by Industry

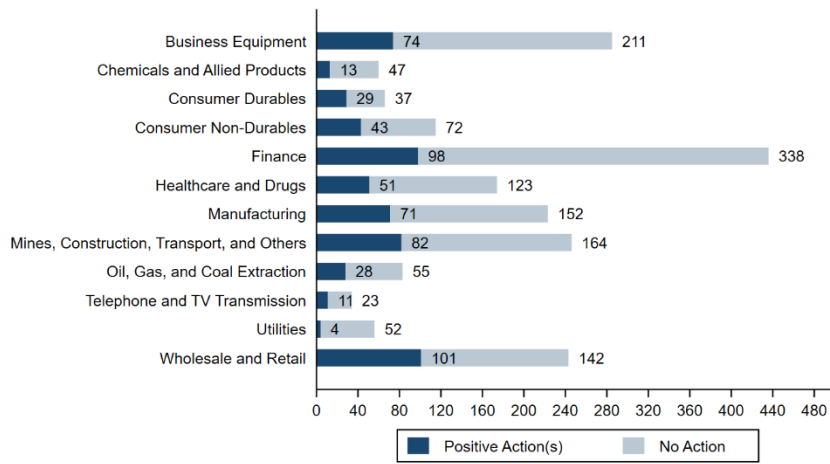


Figure 3B - Number of Companies Taking Negative Actions by Industry

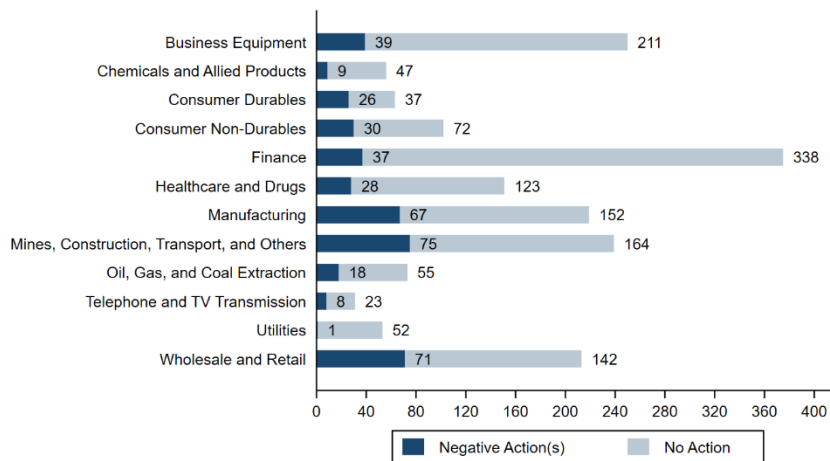


Figure 3C - Number of Companies Taking Both Negative & Positive Actions by Industry

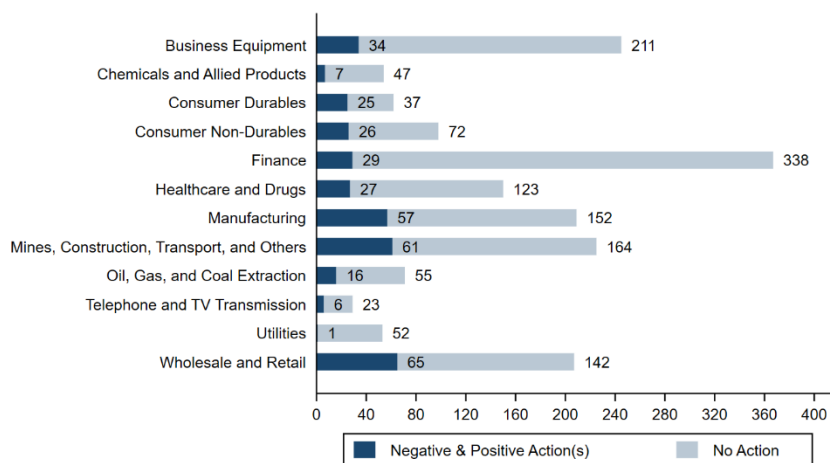


Table 1

Sample selection procedure and classification summary – COVID-19 sample using CAP data.

This table provides sample selection procedure and summary statistics on sample composition for the COVID-19 test sample using CAP data.

Panel A: Sample selection procedure		
1.	S&P 1500 firms covered by Compensation Advisory Partners (CAP)	1,504
2.	Firms with no return data for the pandemic period	(35)
3.	Firms with deficient data to compute the necessary control variables	(17)
4.	Firms with missing data on employee-related CSR score from KLD	(8)
5.	Firms with missing data on CEO pay ratio to median employee pay	(28)
	Final sample	1,416
Panel B: Definitions and sample composition		
Variable	Definition	Number of firms
<i>Positive action</i>	Companies taking one or more positive compensation or human capital actions in response to COVID-19. Positive compensation actions include: <ol style="list-style-type: none"> 1. Reduced CEO base salary 2. Reduced other executive base salary 3. Reduced board of directors pay 4. Suspended executive raises and/or bonuses 5. Reduced CEO incentive compensation 6. Reduced other executive incentive compensation 7. Reduced executive chairman pay 8. Expanded benefits programs Positive human capital actions include: <ol style="list-style-type: none"> 1. Expanded workforce 2. Issued additional payments for on-site employees 3. Issued a one-time bonus for non-executives 4. Guaranteed pay continuity for non-executives 5. Expanded workforce 	605
<i>Negative action</i>	Companies taking one or more negative human capital actions in response to COVID-19. Negative human capital actions include: <ol style="list-style-type: none"> 1. Furloughed employees 2. Reduced non-executive pay 3. Reduced workforce 4. Suspended raises and/or bonuses to non-executives 5. Suspended 401(k) match 	409
<i>Pain sharing</i>	Companies taking one or more negative actions and at least one positive action in response to COVID-19.	354
<i>No action</i>	Companies that do not take any positive or negative actions in response to COVID-19.	756

Table 2

Summary statistics: COVID-19 sample using CAP data.

This table reports the summary statistics for key variables. *Positive action* (*Negative action*) denotes firms taking one or more positive (negative) actions in response to COVID-19 based on CAP data. *Pain sharing* denotes one or more negative actions and at least one positive action in response to COVID-19. *No action* denotes inaction in response to COVID-19. For more detailed definitions of positive and negative actions, see panel B of Table 1. *Pandemic return* is the cumulative abnormal return during the pandemic from January 1, 2020, to March 31, 2020. *Past return* is the cumulative abnormal return over the past 24 months ending in December 2019. *Employee score* is the employee-related component score of CSR based on data in MSCI KLD database. *BRT signatory* equals 1 if the firm is a signatory of the new [Statement on the Purpose of a Corporation](#), and 0 otherwise. *CEO pay ratio* is the natural logarithm of the ratio of CEO total compensation to median employee compensation. $\ln(\text{Firm size})$ is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets.

	<i>Positive action</i>		<i>Negative action</i>		<i>Pain sharing</i>		<i>No action</i>	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<i>Pandemic return</i>	-0.201	-0.171	-0.276	-0.240	-0.289	-0.262	-0.054	-0.023
<i>Past return</i>	-0.043	-0.040	-0.065	-0.052	-0.075	-0.064	0.023	0.009
<i>Employee score</i>	0.176	0.000	0.153	0.000	0.152	0.000	0.190	0.000
<i>BRT signatory</i>	0.147	0.000	0.110	0.000	0.116	0.000	0.083	0.000
<i>CEO pay ratio</i>	5.056	5.037	5.078	5.050	5.133	5.084	4.398	4.394
$\ln(\text{Firm size})$	8.673	8.438	8.414	8.200	8.367	8.128	8.397	8.182
<i>Book-to-market</i>	0.439	0.373	0.458	0.398	0.453	0.391	0.493	0.419
<i>Short debt</i>	0.034	0.020	0.038	0.018	0.036	0.018	0.029	0.013
<i>Long debt</i>	0.298	0.276	0.301	0.287	0.305	0.291	0.250	0.231
<i>Profitability</i>	0.085	0.073	0.087	0.077	0.087	0.077	0.070	0.057
<i>Cash ratio</i>	0.096	0.058	0.092	0.060	0.093	0.060	0.135	0.064
<i>Sales per employee</i>	5.857	5.772	5.792	5.682	5.748	5.657	6.411	6.258
<i>Financing needs</i>	0.051	0.020	0.055	0.023	0.055	0.022	0.045	0.022

Table 3

Univariate differences: COVID-19 sample using CAP data.

This table reports the univariate differences for key variables between *Positive action*, *Negative action*, and *Pain sharing* and the control sample of *No Action*. *Positive action* (*Negative action*) denotes one or more positive (negative) actions in response to COVID-19 based on CAP data. *Pain sharing* denotes one or more negative actions and at least one positive action in response to COVID-19. *No action* denotes inaction in response to COVID-19. For more detailed definitions of positive and negative actions, see panel B of Table 1. *Pandemic return* is the cumulative abnormal return during the pandemic from January 1, 2020, to March 31, 2020. *Past return* is the cumulative abnormal return over the past 24 months ending in December 2019. *Employee score* is the employee-related component score of CSR based on data in MSCI KLD database. *BRT signatory* equals 1 if the firm is a signatory of the new [Statement on the Purpose of a Corporation](#), and 0 otherwise. *CEO pay ratio* is the natural logarithm of the ratio of CEO total compensation to median employee compensation. *ln(Firm size)* is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: *Positive action* versus *No action*

	<i>No action</i>	<i>Positive action</i>	Difference	<i>t</i> -statistics
<i>Pandemic return</i>	-0.054	-0.201	0.147***	8.74
<i>Past return</i>	0.023	-0.043	0.065***	3.02
<i>Employee score</i>	0.190	0.176	0.015	1.07
<i>BRT signatory</i>	0.083	0.147	-0.064***	-3.73
<i>CEO pay ratio</i>	4.398	5.056	-0.659***	-10.70
<i>ln(Firm size)</i>	8.397	8.673	-0.277***	-3.28
<i>Book-to-market</i>	0.493	0.439	0.054**	2.01
<i>Short debt</i>	0.029	0.034	-0.005	-1.54
<i>Long debt</i>	0.250	0.298	-0.048***	-3.86
<i>Profitability</i>	0.070	0.085	-0.015***	-3.74
<i>Cash ratio</i>	0.135	0.096	0.039***	5.00
<i>Sales per employee</i>	6.411	5.857	0.554***	9.76
<i>Financing needs</i>	0.045	0.051	-0.006	-1.25

Panel B: *Negative action firms* versus *No action firms*

	<i>No action</i>	<i>Negative action</i>	Difference	<i>t</i> -statistics
<i>Pandemic return</i>	-0.054	-0.276	0.223***	12.11
<i>Past return</i>	0.023	-0.065	0.087***	3.53
<i>Employee score</i>	0.190	0.153	0.038**	2.54
<i>BRT signatory</i>	0.083	0.110	-0.027	-1.50
<i>CEO pay ratio</i>	4.398	5.078	-0.681***	-9.73
<i>ln(Firm size)</i>	8.397	8.414	-0.017	-0.19
<i>Book-to-market</i>	0.493	0.458	0.036	1.29
<i>Short debt</i>	0.029	0.038	-0.009**	-2.41
<i>Long debt</i>	0.250	0.301	-0.052***	-4.14
<i>Profitability</i>	0.070	0.087	-0.017***	-3.71
<i>Cash ratio</i>	0.135	0.092	0.042***	4.71
<i>Sales per employee</i>	6.411	5.792	0.620***	9.40
<i>Financing needs</i>	0.045	0.055	-0.010*	-1.73

Panel C: *Pain sharing firms* versus *No action firms*

	<i>No action</i>	<i>Pain sharing</i>	Difference	<i>t</i> -statistics
<i>Pandemic return</i>	-0.054	-0.289	0.235***	12.07
<i>Past return</i>	0.023	-0.075	0.097***	3.73
<i>Employee score</i>	0.190	0.152	0.039**	2.47
<i>BRT signatory</i>	0.083	0.116	-0.032*	-1.73
<i>CEO pay ratio</i>	4.398	5.133	-0.736***	-9.95
<i>ln(Firm size)</i>	8.397	8.367	0.029	0.31
<i>Book-to-market</i>	0.493	0.453	0.040	1.36
<i>Short debt</i>	0.029	0.036	-0.007*	-1.72
<i>Long debt</i>	0.250	0.305	-0.055***	-4.15
<i>Profitability</i>	0.070	0.087	-0.017***	-3.49

<i>Cash ratio</i>	0.135	0.093	0.041***	4.36
<i>Sales per employee</i>	6.411	5.748	0.663***	9.59
<i>Financing needs</i>	0.045	0.055	-0.010*	-1.68

Table 4

Determinants of positive and negative actions: COVID-19 sample using CAP data.

This table reports the determinants of positive and negative actions in response to the COVID-19 pandemic. In particular, we estimate Equation (1) using logistic regressions with *Positive action*, *Negative action*, and *Pain sharing* as dependent variables. *Positive action* (*Negative action*) equals 1 for firms taking one or more positive (negative) actions, and 0 for firms taking neither positive nor negative actions in response to COVID-19. *Pain sharing* equals 1 for firms taking one or more negative actions and at least one positive action, and 0 for firms taking neither positive nor negative actions in response to COVID-19. *Pandemic return* is the cumulative abnormal return during the pandemic from January 1, 2020, to March 31, 2020. *Past return* is the cumulative abnormal return over the past 24 months ending in December 2019. *Employee score* is the employee-related component score of CSR based on data in MSCI KLD database. *BRT signatory* equals 1 if the firm is a signatory of the new [Statement on the Purpose of a Corporation](#), and 0 otherwise. *CEO pay ratio* is the natural logarithm of the ratio of CEO total compensation to median employee compensation. *ln(Firm size)* is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets. Industry fixed effects based on Fama and French (1997) 48-industry classifications are included but their coefficients are not reported for brevity. The *t*-statistics based on heteroscedasticity-robust standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Dependent variable	<i>Positive action</i>		<i>Negative action</i>		<i>Pain sharing</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
Economic exposure variables						
<i>Pandemic return</i>	-1.603*** (-5.31)	-1.735*** (-5.21)	-2.720*** (-6.48)	-2.965*** (-6.08)	-2.766*** (-6.28)	-2.962*** (-5.75)
<i>Past return</i>	-0.413** (-2.28)	-0.558*** (-2.70)	-0.334 (-1.57)	-0.514** (-2.03)	-0.426* (-1.91)	-0.561** (-2.09)
Stakeholder orientation variables						
<i>Employee score</i>	-0.164 (-0.59)	-0.374 (-1.23)	-0.141 (-0.39)	-0.443 (-1.14)	-0.165 (-0.42)	-0.379 (-0.89)
<i>BRT signatory</i>	0.675*** (3.10)	0.417* (1.71)	0.438* (1.65)	0.154 (0.52)	0.536* (1.94)	0.339 (1.09)
<i>CEO pay ratio</i>	0.332*** (4.64)	0.074 (0.97)	0.309*** (3.77)	0.064 (0.67)	0.329*** (3.82)	0.121 (1.16)
Other firm characteristics						
<i>ln(Firm size)</i>		0.229*** (3.44)		0.239*** (2.68)		0.162* (1.69)
<i>Book-to-market</i>		-0.160 (-0.91)		-0.160 (-0.51)		-0.265 (-0.78)
<i>Short debt</i>		0.751 (0.66)		2.132* (1.75)		1.637 (1.27)
<i>Long debt</i>		0.251 (0.70)		-0.346 (-0.63)		-0.514 (-0.89)
<i>Profitability</i>		0.762 (0.73)		1.563 (1.08)		1.355 (0.88)
<i>Cash ratio</i>		-2.121*** (-3.61)		-2.165*** (-3.04)		-2.394*** (-3.19)
<i>Sales per employee</i>		-0.388*** (-3.74)		-0.392*** (-2.85)		-0.388*** (-2.70)
<i>Financing needs</i>		0.858 (1.01)		1.239 (1.27)		0.989 (0.96)
Intercept	0.008 (0.01)	1.924 (1.31)	0.719 (0.61)	2.397 (1.59)	0.066 (0.05)	2.507 (1.53)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R ²	0.199	0.224	0.297	0.321	0.318	0.338
Observations	1,334	1,334	1,134	1,134	1,079	1,079

Table 5

Determinants of positive actions, negative actions, and pain sharing using entropy balancing: COVID-19 sample using CAP data.

This table reports the determinants of pain sharing in response to the COVID-19 pandemic. In particular, we estimate Equation (1) using logistic regressions with *Positive action*, *Negative action*, and *Pain sharing* as dependent variables and entropy-balanced samples. *Positive action* (*Negative action*) equals 1 for firms taking one or more positive (negative) actions, and 0 for firms taking neither positive nor negative actions in response to COVID-19. *Pain sharing* equals 1 for firms taking one or more negative actions and at least one positive action, and 0 for firms taking neither positive nor negative actions in response to COVID-19. *Pandemic return* is the cumulative abnormal return during the pandemic from January 1, 2020, to March 31, 2020. *Past return* is the cumulative abnormal return over the past 24 months ending in December 2019. *Employee score* is the employee-related component score of CSR based on data in MSCI KLD database. *BRT signatory* equals 1 if the firm is a signatory of the new [Statement on the Purpose of a Corporation](#), and 0 otherwise. *CEO pay ratio* is the natural logarithm of the ratio of CEO total compensation to median employee compensation. *ln(Firm size)* is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets. Industry fixed effects based on Fama and French (1997) 48-industry classifications are included but their coefficients are not reported for brevity. The *t*-statistics based on heteroscedasticity-robust standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Dependent variable	<i>Positive action</i>	<i>Negative action</i>	<i>Pain sharing</i>
	(1)	(2)	(3)
Economic exposure variables			
<i>Pandemic return</i>	-1.798*** (-4.93)	-3.534*** (-6.63)	-3.508*** (-6.42)
<i>Past return</i>	-0.349 (-1.48)	-0.407 (-1.46)	-0.452 (-1.55)
Stakeholder orientation variables			
<i>Employee score</i>	-0.467 (-1.43)	-0.429 (-1.02)	-0.318 (-0.72)
<i>BRT signatory</i>	0.015 (0.06)	-0.087 (-0.27)	0.049 (0.15)
<i>CEO pay ratio</i>	0.030 (0.34)	-0.007 (-0.06)	0.066 (0.56)
Other firm characteristics			
<i>ln(Firm size)</i>	0.150** (2.02)	0.252** (2.53)	0.219** (2.12)
<i>Book-to-market</i>	-0.432** (-2.22)	-0.870** (-2.52)	-0.913** (-2.51)
<i>Short debt</i>	-0.721 (-0.54)	-0.697 (-0.54)	-0.994 (-0.67)
<i>Long debt</i>	-0.661 (-1.30)	-1.720*** (-2.84)	-2.022*** (-3.20)
<i>Profitability</i>	-2.028 (-1.49)	-2.842 (-1.54)	-3.120 (-1.59)
<i>Cash ratio</i>	0.025 (0.03)	-0.234 (-0.26)	-0.525 (-0.52)
<i>Sales per employee</i>	0.248** (2.22)	0.278** (2.05)	0.328** (2.23)
<i>Financing needs</i>	0.317 (0.36)	0.055 (0.05)	0.018 (0.02)
Intercept	-0.150 (-0.11)	0.360 (0.24)	-0.268 (-0.17)
Industry FE	Yes	Yes	Yes
Pseudo R ²	0.134	0.244	0.257
Observations	1,334	1,134	1,079

Table 6

Sample selection procedure and classification summary – COVID-19 sample using Execucomp and Compustat data.

This table provides sample selection procedure and summary statistics on sample composition for the COVID-19 test sample using Execucomp and Compustat as the data source.

Panel A: Sample selection procedure

1. Firms with fiscal year ending before January 2021	9,101
2. Firms with no GVKEY-PERMNO match	(3,886)
3. Firms not covered in Execucomp	(3,619)
4. Firms with no return data for the pandemic period	(6)
5. Firms with deficient data to compute the necessary control variables	(51)
6. Firms with missing data on employee-related CSR score from KLD	(22)
7. Firms with missing data on CEO pay ratio to median employee pay	(95)
Final sample	1,422

Panel B: Definitions and sample composition

Variable	Definition	Number of firms
<i>Positive action</i>	Companies reducing the base salary of the CEO in response to COVID-19.	428
<i>Negative action</i>	Companies reducing their workforce by at least 2% in response to COVID-19.	592
<i>Pain sharing</i>	Companies reducing their workforce by at least 2% and reducing the base salary of the CEO in response to COVID-19.	247
<i>No action</i>	Companies that do not take any positive or negative actions in response to COVID-19.	649

Table 7

Determinants of positive and negative actions: COVID-19 sample using Execucomp and Compustat data.

This table reports the determinants of positive and negative actions in response to the COVID-19 pandemic. In particular, we estimate Equation (1) using logistic regressions with *Positive action*, *Negative action*, and *Pain sharing* as dependent variables. *Positive action* equals 1 for firms reducing the base salary of the CEO, and 0 for firms taking neither positive nor negative actions in response to COVID-19. *Negative action* equals 1 for firms reducing their workforce by at least 2%, and 0 for firms taking neither positive nor negative actions in response to COVID-19. *Pain sharing* equals 1 for firms reducing their workforce by at least 2% and reducing the base salary of the CEO, and 0 for firms taking neither positive nor negative actions in response to COVID-19. *Pandemic return* is the cumulative abnormal return during the pandemic from January 1, 2020, to March 31, 2020. *Past return* is the cumulative abnormal return over the past 24 months ending in December 2019. *Employee score* is the employee-related component score of CSR based on data in MSCI KLD database. *BRT signatory* equals 1 if the firm is a signatory of the new [Statement on the Purpose of a Corporation](#), and 0 otherwise. *CEO pay ratio* is the natural logarithm of the ratio of CEO total compensation to median employee compensation. $\ln(\text{Firm size})$ is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets. Industry fixed effects based on Fama and French (1997) 48-industry classifications are included but their coefficients are not reported for brevity. The *t*-statistics based on heteroscedasticity-robust standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Dependent variable	<i>Positive action</i>		<i>Negative action</i>		<i>Pain sharing</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
Economic exposure variables						
<i>Pandemic return</i>	-1.950*** (-4.42)	-1.913*** (-3.93)	-2.127*** (-5.37)	-1.975*** (-4.85)	-2.639*** (-4.03)	-2.584*** (-3.51)
<i>Past return</i>	-0.964*** (-4.09)	-1.013*** (-4.08)	-1.167*** (-5.34)	-0.987*** (-4.34)	-1.632*** (-4.75)	-1.683*** (-5.07)
Stakeholder orientation variables						
<i>Employee score</i>	-0.105 (-0.33)	-0.113 (-0.32)	-0.308 (-1.10)	-0.074 (-0.25)	-0.165 (-0.38)	-0.137 (-0.29)
<i>BRT signatory</i>	0.377 (1.59)	0.280 (1.06)	0.119 (0.55)	0.321 (1.31)	0.284 (0.93)	0.186 (0.53)
<i>CEO pay ratio</i>	-0.038 (-0.53)	-0.141* (-1.76)	-0.053 (-0.73)	-0.157* (-1.67)	-0.038 (-0.36)	-0.126 (-0.99)
Other firm characteristics						
$\ln(\text{Firm size})$		0.084 (1.19)		-0.031 (-0.47)		0.077 (0.79)
<i>Book-to-market</i>		-0.177 (-0.68)		0.068 (0.30)		-0.295 (-0.87)
<i>Short debt</i>		-0.966 (-0.96)		-0.253 (-0.25)		0.766 (0.63)
<i>Long debt</i>		0.217 (0.55)		0.358 (0.97)		0.544 (1.05)
<i>Profitability</i>		-1.619 (-1.10)		-1.749 (-1.25)		-2.836 (-1.08)
<i>Cash ratio</i>		-1.762*** (-2.76)		-2.641*** (-4.05)		-1.336* (-1.70)
<i>Sales per employee</i>		-0.145 (-1.34)		-0.291*** (-2.92)		-0.130 (-0.84)
<i>Financing needs</i>		1.120 (1.17)		0.415 (0.46)		0.667 (0.51)
Intercept	-1.019 (-1.21)	0.006 (0.00)	-0.411 (-0.72)	2.357** (2.49)	-2.036** (-2.19)	-1.173 (-0.75)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.184	0.197	0.159	0.181	0.303	0.312
Observations	1,066	1,066	1,231	1,231	883	883

Table 8

Descriptive statistics for CEO wealth change during COVID-19.

This table contains descriptive statistics for CEO wealth change for the four categories of firms. *Positive action* are firms reducing the base salary of the CEO in response to COVID-19. *Negative action* are firms reducing their workforce by at least 2% in response to COVID-19. *Pain sharing* are firms reducing their workforce by at least 2% and reducing the base salary of the CEO in response to COVID-19. *No action* firms do not take any positive or negative actions in response to COVID-19. CEO wealth has two components, stock holdings and options. Value of stock holdings is calculated using the share price at the end of the relevant month, as provided in CRSP. Stock options are valued using the methodology in Coles et al. (2013). *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Descriptive statistics for CEO wealth change between December 31, 2019 and March 31, 2021.

	<i>Positive action</i>		<i>Negative action</i>		<i>Pain sharing</i>		<i>No action</i>	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
% Δ Wealth Dec. 2019 to Mar. 2020	-0.462	-0.465	-0.465	-0.462	-0.536	-0.550	-0.300	-0.301
% Δ Wealth Dec. 2019 to Mar. 2021	0.461	0.291	0.359	0.210	0.422	0.241	0.493	0.304

Panel B: Change in wealth compared to CEO base salary reductions

	<i>Positive action</i>	<i>Pain sharing</i>
Median base salary reduction (in '000 \$)	118.084	129.592
Median change in wealth (in '000 \$)	3599.992	2642.688
Median ratio of change in wealth to salary reduction	26.897	18.274
<i>N</i> where change in wealth is greater	272	150
Total firms with available data	393	227
% where change in wealth is greater	69.2%	66.1%

Table 9

Future performance based on company actions: Covid-19 sample using CAP data.

Post-pandemic return is the cumulative monthly abnormal return over the 15 months after March 2020. *Positive action* (*Negative action*) equals 1 for firms taking one or more positive (negative) actions, and 0 for firms taking neither positive nor negative actions in response to COVID-19. *Pain sharing* equals 1 for firms taking one or more negative actions and at least one positive action, and 0 for firms taking neither positive nor negative actions in response to COVID-19. *Pandemic return* is the cumulative abnormal return during the pandemic from January 1, 2020, to March 31, 2020. *Past return* is the cumulative abnormal return over the past 24 months ending in December 2019. *Employee score* is the employee-related component score of CSR based on data in MSCI KLD database. *BRT signatory* equals 1 if the firm is a signatory of the new [Statement on the Purpose of a Corporation](#), and 0 otherwise. *CEO pay ratio* is the natural logarithm of the ratio of CEO total compensation to median employee compensation. $\ln(\text{Firm size})$ is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets. Industry fixed effects based on Fama and French (1997) 48-industry classifications are included but their coefficients are not reported for brevity. The *t*-statistics based on heteroscedasticity-robust standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Dependent variable	<i>Post-pandemic Return</i>	<i>Post-pandemic Return</i>	<i>Post-pandemic Return</i>
	(1)	(2)	(3)
<i>Positive action</i>	0.027 (0.75)		
<i>Negative action</i>		0.036 (0.72)	
<i>Pain sharing</i>			0.049 (0.86)
<i>Pandemic return</i>	-0.873*** (-9.75)	-0.808*** (-7.30)	-0.807*** (-6.93)
<i>Past return</i>	-0.153 (-1.47)	-0.139 (-1.21)	-0.133 (-1.14)
<i>Employee score</i>	-0.018 (-0.31)	-0.034 (-0.50)	-0.033 (-0.46)
<i>BRT signatory</i>	0.014 (0.37)	0.016 (0.36)	0.015 (0.31)
<i>CEO pay ratio</i>	0.051* (1.93)	0.044 (1.61)	0.044 (1.61)
$\ln(\text{Firm size})$	-0.064*** (-4.31)	-0.055*** (-3.57)	-0.053*** (-3.33)
<i>Book-to-market</i>	0.083 (0.91)	0.205** (2.16)	0.210** (2.16)
<i>Short debt</i>	0.360 (1.04)	0.406 (1.35)	0.427 (1.14)
<i>Long debt</i>	0.277*** (3.27)	0.515*** (4.67)	0.508*** (4.50)
<i>Profitability</i>	-0.427 (-1.46)	-0.186 (-0.59)	-0.223 (-0.69)
<i>Cash ratio</i>	0.770** (2.23)	0.867** (2.28)	0.897** (2.30)
<i>Sales per employee</i>	0.030 (1.44)	0.007 (0.29)	0.009 (0.39)
<i>Financing needs</i>	0.106 (0.66)	0.069 (0.40)	0.101 (0.57)
Intercept	-0.598*** (-2.73)	-0.650** (-2.51)	-0.680** (-2.54)
Industry FE	Yes	Yes	Yes
Adjusted R^2	0.310	0.306	0.305
Observations	1,328	1,132	1,078

Table 10

Sample selection procedure and classification summary – September 11 sample using Execucomp and Compustat data.

This table provides sample selection procedure and summary statistics on sample composition for the September 11 test sample using Execucomp and Compustat as the data source.

Panel A: Sample selection procedure

1. Firms with fiscal year ending before September 2001	10,778
2. Firms with no GVKEY-PERMNO match	(3,149)
3. Firms not covered in Execucomp	(5,992)
4. Firms with no return data on September 17, 2001	(8)
5. Firms with deficient data to compute the necessary control variables	(58)
Final sample	1,571

Panel B: Definitions and sample composition

Variable	Definition	Number of firms
<i>Positive action</i>	Companies reducing the base salary of the CEO in response to September 11 terrorist attacks.	299
<i>Negative action</i>	Companies reducing their workforce by at least 2% in response to September 11 terrorist attacks.	672
<i>Pain sharing</i>	Companies reducing their workforce by at least 2% and reducing the base salary of the CEO in response to September 11 terrorist attacks.	164
<i>No action</i>	Companies that do not take any positive or negative actions in response to September 11 terrorist attacks.	764

Table 11

Determinants of positive and negative actions: September 11 sample using Execucomp and Compustat data.

This table reports the determinants of positive and negative actions in response to the September 11 terrorist attacks. In particular, we estimate Equation (2) using logistic regressions with *Positive action*, *Negative action*, and *Pain sharing* as dependent variables. *Positive action* equals 1 for firms reducing the base salary of the CEO, and 0 for firms taking neither positive nor negative actions after September 11 attacks. *Negative action* equals 1 for firms reducing their workforce by at least 2%, and 0 for firms taking neither positive nor negative actions after September 11 attacks. *Pain sharing* equals 1 for firms reducing their workforce by at least 2% and reducing the base salary of the CEO, and 0 for firms taking neither positive nor negative actions after September 11 attacks. *Sep-11 return* is the cumulative abnormal return for three days post 9/11. *Past return* is the cumulative return over the past 24 months. *Best company list* equals 1 if the firm was listed as one of the best places to work in the Fortune Magazine in the year 1998, 1999, or 2000, and zero otherwise. *ln(Firm size)* is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets. Industry fixed effects based on Fama and French (1997) 48-industry classifications are included but their coefficients are not reported for brevity. The *t*-statistics based on heteroscedasticity-robust standard errors are shown in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Dependent variable	<i>Positive action</i>		<i>Negative action</i>		<i>Pain sharing</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
Economic exposure variables						
<i>Sep-11 return</i>	-2.755*** (-3.36)	-1.809** (-2.12)	-2.877*** (-4.47)	-2.655*** (-3.78)	-4.259*** (-4.06)	-3.381*** (-3.18)
<i>Past return</i>	-0.863*** (-6.18)	-0.848*** (-5.52)	-0.993*** (-7.80)	-0.884*** (-6.41)	-1.398*** (-7.16)	-1.292*** (-5.89)
Stakeholder orientation variables						
<i>Best company list</i>	0.471 (0.80)	0.851 (1.39)	1.354*** (2.82)	1.739*** (3.54)	0.725 (1.06)	1.284* (1.81)
Other firm characteristics						
<i>ln(Firm size)</i>		-0.092 (-1.61)		-0.135*** (-3.07)		-0.073 (-0.93)
<i>Book-to-market</i>		0.139 (1.33)		0.355** (2.01)		0.234 (1.58)
<i>Short debt</i>		-0.610 (-0.59)		1.483 (1.51)		0.469 (0.31)
<i>Long debt</i>		-0.402 (-0.77)		0.412 (0.96)		-0.149 (-0.21)
<i>Profitability</i>		-2.580*** (-3.19)		-1.726*** (-2.84)		-3.447*** (-3.33)
<i>Cash ratio</i>		1.944*** (3.44)		0.461 (0.95)		2.229*** (2.88)
<i>Sales per employee</i>		-0.077 (-0.61)		-0.388*** (-3.73)		-0.546** (-2.50)
<i>Financing needs</i>		-1.521** (-2.11)		-1.007* (-1.81)		-1.987** (-2.09)
Intercept	-0.898* (-1.82)	0.574 (0.62)	0.462 (0.38)	2.979** (2.41)	-1.613*** (-3.06)	2.170* (1.70)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo <i>R</i> ²	0.119	0.157	0.154	0.198	0.227	0.287
Observations	1,036	1,036	1,400	1,400	871	871

Appendix A

Variable Definitions

Variable	Definition	Source
Company Actions		
<i>Positive action</i>	Companies taking one or more positive compensation or human capital actions in response to the economic shock.	Compensation Advisory Partners
<i>Negative action</i>	Companies taking one or more negative human capital actions in response to the economic shock	Compensation Advisory Partners
<i>Pain sharing</i>	Companies taking one or more negative actions and at least one positive action in response to the economic shock.	Compensation Advisory Partners
<i>No action</i>	Companies that do not take any positive or negative actions in response to the economic shock.	Compensation Advisory Partners
Economic exposure variables		
<i>Pandemic return</i>	Cumulative abnormal return during the pandemic from January 1, 2020 to March 31, 2020.	CRSP
<i>Sep-11 return</i>	Cumulative abnormal return for three days post 9/11.	CRSP
<i>Past return</i>	Cumulative abnormal return over the past 24 months.	CRSP
Stakeholder orientation variables		
<i>Employee score</i>	Employee-related component score of CSR based on data in MSCI KLD database. We calculate the net employee score by subtracting the weaknesses from the strengths for the most recent year ending prior to the pandemic.	MSCI KLD
<i>BRT signatory</i>	Equals 1 if the firm is a signatory of the new Statement on the Purpose of a Corporation, and 0 otherwise.	Hand collected from Business Roundtable's website
<i>Best company list</i>	Equals one if the firm was listed as one of the best places to work in the Fortune Magazine in the year 1998, 1999, or 2000, and zero otherwise.	Hand collected from Fortune Magazine's website
<i>CEO pay ratio</i>	The natural logarithm of the ratio of CEO total compensation to median employee compensation.	Hand collected from proxy statements
Other firm characteristics		
<i>ln(Firm size)</i>	Natural logarithm of market value of equity in millions of dollars.	Compustat
<i>Book-to-market</i>	Book-to-market ratio, calculated as the book value of equity divided by the market value of equity.	Compustat
<i>Short debt</i>	Short-term debt divided by total assets.	Compustat
<i>Long debt</i>	Long-term debt divided by total assets.	Compustat
<i>Profitability</i>	Operating income divided by total assets.	Compustat
<i>Cash ratio</i>	Cash and cash equivalents divided by total assets.	Compustat
<i>Sales per employee</i>	Natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands	Compustat
<i>Financing needs</i>	Sum of change in long-term debt and sale of common equity divided by total assets.	Compustat

Notes: For the COVID-19 sample, we calculate all variables as of the most recent fiscal year ending before January 2020. For instance, *LONGDEBT* is calculated using long-term debt as of the most recent fiscal year ending before January 2020 and divided by the total assets as of that fiscal year. For the 9-11 sample, we calculate all variables as of the most recent fiscal year ending before September 2001. For instance, *SHORTDEBT* is calculated using short-term debt as of the most recent fiscal year ending before September 2001 and divided by the total assets as of that fiscal year.

Online Appendix

To:

Sharing the Pain between Workers and Management: Evidence

from COVID-19 and 9/11 Attacks

Afzali, M., Khan, U., Rajgopal, S.

Table A1: ‘Sharing the Pain’ in the News

Source	Title	Date	Excerpt	Link
CNN Business	Why CEOs are giving up their salaries during the coronavirus crisis	March 26, 2020	“‘A lot of it is symbolic,’ Itay Goldstein, professor of finance University of Pennsylvania's Wharton School, said. ‘When we come into a crisis like the one we have right now — where it’s a difficult time for the economy, for workers, people are losing their jobs, people don’t know what to expect — I think for CEOs to come out and say, ‘We are going to give up our pay,’ it’s a signal that they are sharing the pain.’”	Link
Fortune	CEOs are taking pay cuts as furloughs and layoffs mount. Is it actually helping?	April 02, 2020	“According to Charles O’Reilly, a professor of organizational behavior at the Stanford Graduate School of Business, one reason top executives are giving up their pay is to attempt to create a feeling of unity. ‘It sends a signal [to employees]: We care about you, we’re in this together, and we’re going to share the burden,’ he says.”	Link
Financial Times	The CEO’s coronavirus conundrum: how much pay to sacrifice?	April 07, 2020	“As companies suspend operations, scrap dividends and send employees home, their top executives are facing demands to make sacrifices of their own.”	Link
Los Angeles Times	CEOs cut millions of jobs amid coronavirus yet keep their lofty bonuses	May 15, 2020	“In some instances, hefty stock awards have arguably made sharing the pain an exercise in virtue signaling.”	Link
New York Times	As the Pandemic Forced Layoffs, C.E.O.s Gave Up Little	July 29, 2020	“As it became clear that the pandemic was going to devastate the economy and their businesses, many boards and chief executives appeared to sense a need to tell workers and investors that they were sharing in the pain.”	Link
Deloitte Insights	CEO compensation in a COVID-19 world	November 03, 2020	“For their part, CEOs generally recognized that their compensation would likely be adjusted to be more aligned with the sacrifices made by employees and shareholders, and as a way to ‘share the pain’ and ‘lead by example.’”	Link
Financial Times	For all their fine words, CEOs aren’t sharing the pain	April 21, 2021	“Taking personal salary cuts during the pandemic last year allowed corporate leaders to literally put their money where their mouths were. But, executives being executives, the bottom line on CEO pay turns out to be rather different than the early headlines suggested.”	Link

Table A2: Examples of Company Actions in Response to COVID-19

Company	Action	Date	Source	Excerpt
Uber Technologies, Inc.	Reduced CEO base salary	May 6, 2020	Form 8-K	“In connection with the foregoing, Dara Khosrowshahi, the Company’s Chief Executive Officer, after consultation with the Board of Directors, agreed to waive his base salary for the remainder of the year ending December 31, 2020.”
Ralph Lauren Corporation	Reduced CEO base salary	April 4, 2020	Form 8-K	“In addition, the Company’s President and Chief Executive Officer, Patrice Louvet, has agreed to a temporary reduction of 50% in his base salary otherwise payable under his employment agreement through the duration of the crisis.”
WESCO International, Inc.	Reduced CEO base salary	April 27, 2020	Form 8-K	“On April 27, 2020, and in support of Company’s efforts to reduce costs during the current period of uncertainty resulting from the economic downturn in connection with the COVID-19 pandemic, senior management recommended and the Compensation Committee of the Board of Directors of the Company (“Board”) approved a 25% temporary reduction in the base salaries of John J. Engel, Chairman, President and Chief Executive Officer.”
Rockwell Automation, Inc.	Reduced CEO base salary	April 27, 2020	Schedule 14A	“In response to the macroeconomic environment caused by the COVID-19 pandemic, we instituted temporary cost reductions during fiscal 2020, including reduction in executive compensation as follows: Base salary reduction of 25% for our CEO and 15% for our other NEOs for the period April 27, 2020 to December 6, 2020.”
A. O. Smith Corporation	Reduced CEO base salary	May 5, 2020	Company press release	“Board members and the chief executive officer of the Company have voluntarily reduced their cash component of board compensation and his base salary, respectively, by 25 percent.”
Cummins Inc.	Reduced CEO base salary	Apr 03, 2020	Company website	“In response to lower demand and customer shutdowns in several countries, the company is taking the following temporary actions to lower costs: A reduction of 50 percent in the salary of the CEO.”
Eaton Corporation plc	Reduced other executives’ base salary	April 21, 2020	Form 8-K	“On April 21, 2020, the Compensation and Organization Committee of the Board of Directors took action to reduce the second quarter base salary of all officers, including each of the Named Executive Officers.”
General Electric Company	Reduced other executives’ base salary	April 16, 2020	The Wall Street Journal	“General Electric Co. said senior managers reporting to Chief Executive Larry Culp are giving up portions of their salaries for the rest of the year to help GE employees affected by the coronavirus pandemic.”
HCA Healthcare, Inc.	Reduced other executives’ base salary	April 2, 2020	Form 8-K	“On March 31, 2020, the Compensation Committee (the “Committee”) of the Board of Directors of HCA Healthcare, Inc. (the “Company”) approved a 30 percent reduction in base salary for the Company’s named executive officers and other executive officers for the period from April 1, 2020 through May 31, 2020.”
Hewlett Packard Enterprise Company	Reduced board of directors pay	May 19, 2020	Form 8-K	“The Board also agreed to reduce by 25% the portion of the annual \$100,000 cash retainer to which each director is entitled for the period beginning on July 1, 2020 through the remainder of fiscal 2020.”
Flex Ltd.	Reduced board of directors pay	March 29, 2020	Form 8-K	“In support of the Company’s initiatives in response to COVID-19, the Board has determined that it will decrease all non-employee director cash compensation payments (annual cash retainer, Board committee chair and member cash

				compensation, Chairman of the Board cash compensation) by 30% during the first two quarters of fiscal year 2021.”
Walmart Inc.	Expanded benefits program	March 10, 2020	Company website	“If your store, club, office or distribution center is part of a mandated quarantine or if you’re required to quarantine by a government agency or by Walmart, you will receive up to two weeks of pay, and absences during the time you are out will not count against attendance.”
Apple Inc.	Expanded benefits program	March 13, 2020	Company website	“We’re also announcing that we are matching our employee donations two-to-one to support COVID-19 response efforts locally, nationally and internationally.”
CVS Health Corporation	Expanded benefits program	March 23, 2020	Company website	“Effective March 22, CVS Health has made 24 hours of paid sick leave available to part-time employees for the duration of the COVID-19 pandemic. This paid sick leave is in addition to the 14-day paid leave the company is providing for any employee who tests positive for COVID-19 or needs to be quarantined as a result of potential exposure.”
Walmart Inc.	Issued a one-time bonus for non-executives	May 12, 2020	Company website	“Walmart announced plans to provide another special cash bonus for all U.S. hourly associates to recognize them for their many contributions to communities across the country during this unprecedented time. This includes hourly associates in stores, clubs, supply chain and offices, drivers, and assistant managers in stores and clubs. The bonus will be \$300 for full-time hourly associates and \$150 for part-time hourly and temporary associates, and will add up to more than \$390 million.”
Amazon.com, Inc.	Issued a one-time bonus for non-executives	June 29, 2020	The Wall Street Journal	“Amazon.com Inc. said it would spend more than \$500 million on bonuses for employees and some contractors, following months of strong demand from consumers stuck at home during coronavirus lockdowns and pressure on workers handling the jump in orders.”
AT&T Inc.	Issued a one-time bonus for non-executives	March 26, 2020	Company website	“We are recognizing first-level managers who supervise our nonmanagement employees and first-level managers who are required to leave their homes to complete their work with a monthly appreciation bonus of up to \$1,000 for time worked, effective March 25 and until further notice. We will share more details on eligibility and the payout date soon.”
Berkshire Hathaway Inc.	Furloughed employees	March 31, 2020	Form 10-Q	“We have also taken actions in response to the economic losses from reductions in consumer demand for products and services we offer and our inability to produce goods and provide services at certain of our businesses. These actions have included employee furloughs, wage and salary reductions, capital spending reductions and other actions intended to help mitigate the economic losses and preserve capital and liquidity.”
General Electric Company	Furloughed employees	March 23, 2020	Company website	<p>“GE Aviation is announcing plans that impact its U.S. population, while the business works with the appropriate parties to properly address its global workforce:</p> <ul style="list-style-type: none"> • There will be a temporary lack of work impacting approximately 50% of its U.S. maintenance, repair and overhaul employees for 90 days.”
FedEx Corporation	Furloughed employees	April 13, 2020	Daily Memphian	“FedEx Freight is temporarily furloughing ‘a small number’ of employees because of a decline in volume during the COVID-19 pandemic.”
CarMax, Inc.	Furloughed employees	April 08, 2020	Company website	“Effective April 18, approximately 15,500 CarMax associates will be placed on furlough. The majority of furloughed

				associates are employed at CarMax stores that are currently closed due to government mandates.”
Ford Motor Company	Reduced workforce	September 2, 2020	The Wall Street Journal	“Ford Looks to Trim 1,400 Salaried Employees in U.S. Through Buyouts. Auto maker cut about 7,000 salaried workers globally last year, mostly in Europe.”
American Airlines Group Inc.	Reduced workforce	August 25, 2020	Form 8-K	“In short, American’s team will have at least 40,000 fewer people working Oct. 1 than we had when we entered this pandemic. We have worked to mitigate as many involuntary reductions as possible through voluntary programs. Across the mainline and regional carriers, more than 12,500 of our colleagues have made the difficult decision to leave the company permanently through early out programs or retirement. Another 11,000 team members have offered to be on a leave of absence in October.”
United Airlines Holdings, Inc.	Reduced workforce	July 8, 2020	USA Today	“In a memo to employees, the Chicago-based airline said 36,000 employees, or 45% of its front-line workers in the USA and more than a third of its overall workforce of 95,000, face layoffs on or around Oct. 1. The most affected groups: flight attendants and airport customer service and gate agents, which account for 26,000 of the 36,000.”
L Brands, Inc.	Reduced workforce	July 28, 2020	The Wall Street Journal	“L Brands Inc. said it plans to lay off about 850 corporate employees, or about 15% of the jobs at its home office, the latest restructuring at the embattled retail company.”
Booking Holdings Inc.	Reduced workforce	August 4 2020	CNBC	“Booking.com’s parent company plans to lay off up to 25% of its global workforce as the Covid-19 pandemic continues to take a heavy toll on travel, the company reported in a filing Tuesday. Booking.com has more than 17,000 employees, a company spokeswoman told CNBC.”

Table A3

Univariate differences before and after entropy balancing: COVID-19 sample using CAP data.

This table reports the univariate differences for key variables between *Positive action*, *Negative action*, and *Pain sharing* and the control sample of *No Action*. *Positive action* (*Negative action*) denotes one or more positive (negative) actions in response to COVID-19 based on CAP data. *Pain sharing* denotes one or more negative actions and at least one positive action in response to COVID-19. *No action* denotes inaction in response to COVID-19. For more detailed definitions of positive and negative actions, see panel B of Table 1. *ln(Firm size)* is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: *Positive action* versus *No action*

	<i>Positive action</i>	<i>No action</i>	<i>No action</i>	<i>Positive action</i>	<i>No action</i>	<i>No action</i>
	(Mean)	(Mean)	(Mean)	(Variance)	(Variance)	(Variance)
		Pre-balancing	Post-balancing		Pre-balancing	Post-balancing
<i>ln(Firm size)</i>	8.673	8.397***	8.673	2.747	2.119***	2.747
<i>Book-to-market</i>	0.439	0.493**	0.439	0.253	0.231	0.253
<i>Short debt</i>	0.034	0.029	0.034	0.002	0.004***	0.002
<i>Long debt</i>	0.298	0.250***	0.298	0.065	0.042***	0.065
<i>Profitability</i>	0.085	0.070***	0.085	0.005	0.006***	0.005
<i>Cash ratio</i>	0.096	0.135***	0.096	0.011	0.028***	0.011
<i>Sales per employee</i>	5.857	6.411***	5.858	0.927	1.211***	0.934
<i>Financing needs</i>	0.051	0.045	0.051	0.010	0.007***	0.010

Panel B: *Negative action* firms versus *No action* firms

	<i>Negative action</i>	<i>No action</i>	<i>No action</i>	<i>Negative action</i>	<i>No action</i>	<i>No action</i>
	(Mean)	(Mean)	(Mean)	(Variance)	(Variance)	(Variance)
		Pre-balancing	Post-balancing		Pre-balancing	Post-balancing
<i>ln(Firm size)</i>	8.414	8.397	8.414	2.219	2.119	2.219
<i>Book-to-market</i>	0.458	0.493	0.458	0.152	0.231***	0.152
<i>Short debt</i>	0.038	0.029**	0.038	0.004	0.004	0.004
<i>Long debt</i>	0.301	0.250***	0.301	0.041	0.042	0.041
<i>Profitability</i>	0.087	0.070***	0.087	0.004	0.006***	0.004
<i>Cash ratio</i>	0.092	0.135***	0.092	0.009	0.028***	0.009
<i>Sales per employee</i>	5.792	6.411***	5.792	1.043	1.211*	1.044
<i>Financing needs</i>	0.055	0.045*	0.055	0.011	0.007***	0.011

Panel C: *Pain sharing* firms versus *No action* firms

	<i>Pain sharing</i>	<i>No action</i>	<i>No action</i>	<i>Pain sharing</i>	<i>No action</i>	<i>No action</i>
	(Mean)	(Mean)	(Mean)	(Variance)	(Variance)	(Variance)
		Pre-balancing	Post-balancing		Pre-balancing	Post-balancing
<i>ln(Firm size)</i>	8.367	8.397	8.367	2.271	2.119	2.271
<i>Book-to-market</i>	0.453	0.493	0.453	0.159	0.231***	0.159
<i>Short debt</i>	0.036	0.029*	0.036	0.003	0.004***	0.003
<i>Long debt</i>	0.305	0.250***	0.305	0.044	0.042	0.044
<i>Profitability</i>	0.087	0.070***	0.087	0.004	0.006***	0.004
<i>Cash ratio</i>	0.093	0.135***	0.093	0.009	0.028***	0.009
<i>Sales per employee</i>	5.748	6.411***	5.748	1.032	1.211*	1.033
<i>Financing needs</i>	0.055	0.045*	0.055	0.012	0.007***	0.012

Table A4

Summary statistics: COVID-19 sample using Execucomp and Compustat data.

This table reports the summary statistics for key variables. *Positive action* denotes firms reducing the base salary of CEOs in response to COVID-19 based on Execucomp data. *Negative action* denotes firms reducing their workforce by at least 2% in response to COVID-19 based on Compustat data. *Pain sharing* denotes firms reducing both the base salary of the CEO and their workforce in response to COVID-19. *No action* denotes inaction in response to COVID-19. For more detailed definitions of positive and negative actions, see panel B of Table 6. *Pandemic return* is the cumulative abnormal return during the pandemic from January 1, 2020, to March 31, 2020. *Past return* is the cumulative abnormal return over the past 24 months ending in December 2019. *Employee score* is the employee-related component score of CSR based on data in MSCI KLD database. *BRT signatory* equals 1 if the firm is a signatory of the new [Statement on the Purpose of a Corporation](#), and 0 otherwise. *CEO pay ratio* is the natural logarithm of the ratio of CEO total compensation to median employee compensation. *ln(Firm size)* is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets.

	<i>Positive action</i>		<i>Negative action</i>		<i>Pain sharing</i>		<i>No action</i>	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<i>Pandemic return</i>	-0.224	-0.192	-0.245	-0.202	-0.335	-0.288	-0.035	-0.015
<i>Past return</i>	-0.082	-0.056	-0.118	-0.083	-0.185	-0.113	0.081	0.060
<i>Employee score</i>	0.166	0.000	0.154	0.000	0.146	0.000	0.204	0.000
<i>BRT signatory</i>	0.114	0.000	0.093	0.000	0.097	0.000	0.106	0.000
<i>CEO pay ratio</i>	4.789	4.820	4.682	4.610	4.818	4.804	4.648	4.605
<i>ln(Firm size)</i>	8.453	8.302	8.257	8.022	8.240	8.049	8.644	8.380
<i>Book-to-market</i>	0.475	0.386	0.566	0.468	0.547	0.427	0.431	0.368
<i>Short debt</i>	0.030	0.017	0.033	0.018	0.033	0.018	0.033	0.013
<i>Long debt</i>	0.314	0.297	0.294	0.282	0.337	0.321	0.247	0.222
<i>Profitability</i>	0.077	0.068	0.066	0.061	0.071	0.066	0.083	0.069
<i>Cash ratio</i>	0.099	0.057	0.084	0.048	0.086	0.053	0.146	0.076
<i>Sales per employee</i>	5.991	5.817	6.100	5.922	6.007	5.812	6.269	6.121
<i>Financing needs</i>	0.057	0.031	0.047	0.023	0.055	0.031	0.046	0.017

Table A5

Univariate differences: COVID-19 sample using Execucomp and Compustat data.

This table reports the univariate differences for key variables between *Positive action*, *Negative action*, and *Pain sharing* and the control sample of *No Action*. *Positive action* denotes firms reducing the base salary of CEOs in response to COVID-19 based on Execucomp data. *Negative action* denotes firms reducing their workforce by at least 2% in response to COVID-19 based on Compustat data. *Pain sharing* denotes firms reducing both the base salary of the CEO and their workforce in response to COVID-19. *No action* denotes inaction in response to COVID-19. For more detailed definitions of positive and negative actions, see panel B of Table 6. *Pandemic return* is the cumulative abnormal return during the pandemic from January 1, 2020, to March 31, 2020. *Past return* is the cumulative abnormal return over the past 24 months ending in December 2019. *Employee score* is the employee-related component score of CSR based on data in MSCI KLD database. *BRT signatory* equals 1 if the firm is a signatory of the new [Statement on the Purpose of a Corporation](#), and 0 otherwise. *CEO pay ratio* is the natural logarithm of the ratio of CEO total compensation to median employee compensation. *ln(Firm size)* is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: *Positive action* versus *No action*

	<i>No action</i>	<i>Positive action</i>	Difference	<i>t</i> -statistics
<i>Pandemic return</i>	-0.035	-0.224	0.189***	9.80
<i>Past return</i>	0.081	-0.082	0.164***	6.55
<i>Employee score</i>	0.204	0.166	0.038**	2.41
<i>BRT signatory</i>	0.106	0.114	-0.008	-0.42
<i>CEO pay ratio</i>	4.648	4.789	-0.141*	-1.91
<i>ln(Firm size)</i>	8.644	8.453	0.191*	1.94
<i>Book-to-market</i>	0.431	0.475	-0.044	-1.62
<i>Short debt</i>	0.033	0.030	0.003	0.92
<i>Long debt</i>	0.247	0.314	-0.067***	-4.61
<i>Profitability</i>	0.083	0.077	0.006	1.31
<i>Cash ratio</i>	0.146	0.099	0.047***	5.05
<i>Sales per employee</i>	6.269	5.991	0.278***	4.07
<i>Financing needs</i>	0.046	0.057	-0.011*	-1.80

Panel B: *Negative action firms* versus *No action firms*

	<i>No action</i>	<i>Negative action</i>	Difference	<i>t</i> -statistics
<i>Pandemic return</i>	-0.035	-0.245	0.210***	12.10
<i>Past return</i>	0.081	-0.118	0.199***	8.90
<i>Employee score</i>	0.204	0.154	0.050***	3.54
<i>BRT signatory</i>	0.106	0.093	0.013	0.79
<i>CEO pay ratio</i>	4.648	4.682	-0.034	-0.57
<i>ln(Firm size)</i>	8.644	8.257	0.387***	4.38
<i>Book-to-market</i>	0.431	0.566	-0.134***	-4.93
<i>Short debt</i>	0.033	0.033	0.000	0.07
<i>Long debt</i>	0.247	0.294	-0.046***	-3.62
<i>Profitability</i>	0.083	0.066	0.017***	3.96
<i>Cash ratio</i>	0.146	0.084	0.062***	7.86
<i>Sales per employee</i>	6.269	6.100	0.169***	2.72
<i>Financing needs</i>	0.046	0.047	-0.000	-0.08

Panel C: *Pain sharing firms* versus *No action firms*

	<i>No action</i>	<i>Pain sharing</i>	Difference	<i>t</i> -statistics
<i>Pandemic return</i>	-0.035	-0.335	0.300***	13.03
<i>Past return</i>	0.081	-0.185	0.267***	8.78
<i>Employee score</i>	0.204	0.146	0.058***	3.05
<i>BRT signatory</i>	0.106	0.097	0.009	0.40
<i>CEO pay ratio</i>	4.648	4.818	-0.170**	-2.08
<i>ln(Firm size)</i>	8.644	8.240	0.404***	3.40
<i>Book-to-market</i>	0.431	0.547	-0.116***	-3.45
<i>Short debt</i>	0.033	0.033	0.000	0.02
<i>Long debt</i>	0.247	0.337	-0.090***	-5.21
<i>Profitability</i>	0.083	0.071	0.012**	2.11

<i>Cash ratio</i>	0.146	0.086	0.060***	5.32
<i>Sales per employee</i>	6.269	6.007	0.262***	3.12
<i>Financing needs</i>	0.046	0.055	-0.009	-1.21

Table A6

Summary statistics: September 11 sample using Execucomp and Compustat data.

This table reports the summary statistics for key variables. *Positive action* denotes firms reducing the base salary of CEOs in response to 9/11 attacks based on Execucomp data. *Negative action* denotes firms reducing their workforce by at least 2% in response to 9/11 attacks based on Compustat data. *Pain sharing* denotes firms reducing both the base salary of the CEO and their workforce in response to 9/11 attacks. *No action* denotes inaction in response to 9/11 attacks. For more detailed definitions of positive and negative actions, see panel B of Table 10. *Sep-11 return* is the cumulative abnormal return for three days post 9/11. *Past return* is the cumulative return over the past 24 months. *Best company list* equals 1 if the firm was listed as one of the best places to work in the Fortune Magazine in the year 1998, 1999, or 2000, and zero otherwise. $\ln(\text{Firm size})$ is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets.

	<i>Positive action</i>		<i>Negative action</i>		<i>Pain sharing</i>		<i>No action</i>	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<i>Sep-11 return</i>	-0.037	-0.028	-0.036	-0.022	-0.055	-0.046	-0.007	-0.001
<i>Past return</i>	0.340	0.354	0.294	0.274	0.157	0.187	0.662	0.570
<i>Best company list</i>	0.030	0.000	0.052	0.000	0.049	0.000	0.008	0.000
$\ln(\text{Firm size})$	7.112	6.942	6.981	6.828	6.917	6.878	7.592	7.474
<i>Book-to-market</i>	0.653	0.448	0.771	0.524	0.790	0.497	0.429	0.368
<i>Short debt</i>	0.042	0.013	0.047	0.016	0.042	0.014	0.046	0.012
<i>Long debt</i>	0.165	0.114	0.200	0.175	0.170	0.111	0.191	0.167
<i>Profitability</i>	0.067	0.084	0.066	0.080	0.043	0.080	0.107	0.101
<i>Cash ratio</i>	0.182	0.081	0.129	0.044	0.189	0.091	0.130	0.049
<i>Sales per employee</i>	5.472	5.442	5.343	5.336	5.324	5.309	5.571	5.483
<i>Financing needs</i>	0.039	0.016	0.041	0.012	0.039	0.017	0.055	0.013

Table A7

Univariate differences: September 11 sample using Execucomp and Compustat data.

This table reports the univariate differences for key variables between *Positive action* denotes firms reducing the base salary of CEOs in response to 9/11 attacks based on Execucomp data. *Negative action* denotes firms reducing their workforce by at least 2% in response to 9/11 attacks based on Compustat data. *Pain sharing* denotes firms reducing both the base salary of the CEO and their workforce in response to 9/11 attacks. *No action* denotes inaction in response to 9/11 attacks. For more detailed definitions of positive and negative actions, see panel B of Table 10. *Sep-11 return* is the cumulative abnormal return for three days post 9/11. *Past return* is the cumulative return over the past 24 months. *Best company list* equals 1 if the firm was listed as one of the best places to work in the Fortune Magazine in the year 1998, 1999, or 2000, and zero otherwise. *ln(Firm size)* is the natural logarithm of market value of equity in millions of dollars. *Book-to-market* is the book-to-market ratio. *Short debt* is the short-term debt divided by total assets. *Long debt* is the long-term debt divided by total assets. *Profitability* is operating income divided by total assets. *Cash ratio* is cash and cash equivalents divided by total assets. *Sales per employee* is the natural logarithm of one plus the ratio of sales in millions of dollars to number of employees in thousands. *Financing needs* is the sum of change in long-term debt and sale of common equity divided by total assets. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: *Positive action* versus *No action*

	<i>No action</i>	<i>Positive action</i>	Difference	<i>t</i> -statistics
<i>Sep-11 return</i>	-0.007	-0.037	0.030***	4.51
<i>Past return</i>	0.662	0.340	0.322***	7.12
<i>Best company list</i>	0.008	0.030	-0.022***	-2.77
<i>ln(Firm size)</i>	7.592	7.112	0.479***	4.28
<i>Book-to-market</i>	0.429	0.653	-0.224***	-3.46
<i>Short debt</i>	0.046	0.042	0.004	0.71
<i>Long debt</i>	0.191	0.165	0.026**	2.17
<i>Profitability</i>	0.107	0.067	0.040***	4.61
<i>Cash ratio</i>	0.130	0.182	-0.052***	-4.03
<i>Sales per employee</i>	5.571	5.472	0.099	1.61
<i>Financing needs</i>	0.055	0.039	0.015*	1.66

Panel B: *Negative action firms* versus *No action firms*

	<i>No action</i>	<i>Negative action</i>	Difference	<i>t</i> -statistics
<i>Sep-11 return</i>	-0.007	-0.036	0.029***	5.34
<i>Past return</i>	0.662	0.294	0.369***	10.77
<i>Best company list</i>	0.008	0.052	-0.044***	-5.06
<i>ln(Firm size)</i>	7.592	6.981	0.610***	6.84
<i>Book-to-market</i>	0.429	0.771	-0.341***	-6.40
<i>Short debt</i>	0.046	0.047	-0.001	-0.29
<i>Long debt</i>	0.191	0.200	-0.009	-0.91
<i>Profitability</i>	0.107	0.066	0.040***	5.77
<i>Cash ratio</i>	0.130	0.129	0.002	0.16
<i>Sales per employee</i>	5.571	5.343	0.228***	4.94
<i>Financing needs</i>	0.055	0.041	0.014*	1.85

Panel C: *Pain sharing firms* versus *No action firms*

	<i>No action</i>	<i>Pain sharing</i>	Difference	<i>t</i> -statistics
<i>Sep-11 return</i>	-0.007	-0.055	0.048***	5.61
<i>Past return</i>	0.662	0.157	0.505***	8.93
<i>Best company list</i>	0.008	0.049	-0.041***	-3.93
<i>ln(Firm size)</i>	7.592	6.917	0.674***	4.84
<i>Book-to-market</i>	0.429	0.790	-0.361***	-4.20
<i>Short debt</i>	0.046	0.042	0.004	0.51
<i>Long debt</i>	0.191	0.170	0.021	1.40
<i>Profitability</i>	0.107	0.043	0.063***	5.80
<i>Cash ratio</i>	0.130	0.189	-0.059***	-3.65
<i>Sales per employee</i>	5.571	5.324	0.247***	3.16
<i>Financing needs</i>	0.055	0.039	0.016	1.37