Preliminary

Financial Flexibility and Corporate Employment

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Financial flexibility enables firms to mitigate the impacts of negative shocks and fund necessary investment in times of distress. We study the role of financial flexibility, measured as a company's cash net of short-term obligations, on firms' human capital investments during the COVID-19 pandemic. Using a daily dataset containing firms' employment decisions from March 1 through May 31, 2020, we find economically and statistically different actions among companies with otherwise similar levels of pre-pandemic financial flexibility. These differential effects are attributable to a company's historical treatment of and attitude toward its workers. Financially flexible firms with relatively stronger pre-pandemic commitments to their workers are 29.1 percentage points less likely to furlough or lay off workers, relative to firms with similarly high levels of pre-pandemic flexibility but weaker employee commitments. We also observe differing effects when studying the propensity of firms to provide pay increases to frontline employees. We demonstrate the critical role of an important non-financial characteristic in these workforce decisions, thereby adding to the corporate investment and employment literature as well as to recent work on the determinants and consequences of stakeholder capitalism.

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1. Introduction

The economic shock caused by the COVID-19 pandemic created significant financial and operating uncertainty for firms.[1] In response, companies took an unprecedented number of employment actions, ranging from increasing the pay of front-line workers for firms facing increased demand to furloughing or laying off employees due to prolonged workplace closures. In this paper, we study the role of firm financial characteristics in determining how firms respond to the pandemic-induced economic shock. Specifically, we test whether greater financial flexibility, measured as the pre-pandemic level of cash holdings net of short-term obligations, is associated with changes in labor practices at 350 of the nation's largest employers.

Financial flexibility means that a firm "can avoid financial distress in times of negative shocks and readily fund investment when profitable opportunities arise" (Gamba and Triantis, 2008). Financially flexible firms are often characterized as having greater cash holdings and easier or less costly access to external debt financing. Duchin, Ozbas, and Sensoy (2010) shows that firms with greater financial flexibility, measured as those with greater cash reserves or those that can more easily borrow, had smaller cuts in corporate fixed asset investment following the 2008 financial crisis. Caggese, Cunat, and Metzer (2019) connects financial flexibility to labor practices during non-crisis periods, finding that less financially flexible Swedish firms have distorted lay-off practices over long horizons. We extend this literature to examine how financial flexibility impacts U.S. firms' labor practices in times of economic distress. In particular, we focus on five common types of labor practices implemented during the first three months of the pandemic: (i) continued pay despite facility closures, (ii) increased pay and/or hiring, (iii) expanded worker

[1] We use the term "pandemic" when referring to the global spread and consequences of the virus SARS-CoV-2 and the related COVID-19 illness induced by the virus
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accommodations such as back-up dependent care and paid sick leave, (iv) reduced employee compensation, and (v) reduced workforce via furloughs and layoffs.

Prior literature and corporate disclosures suggest that financial flexibility is positively related to firm investment (e.g., Gamba and Triantis, 2008; Duchin et al. 2010). By extension, we predict that the likelihood a firm maintains or increases employment compensation, benefits, or status (i.e., continues to pay its workers, expands worker accommodations, and/or increases human capital investment by providing raises or hiring workers) is increasing in financial flexibility. Conversely, we expect that financial flexibility will be negatively associated with the likelihood of decreased employee compensation (i.e., employee pay cuts and workforce reductions). Indeed, several corporate disclosures from March and April of 2020 cite financial flexibility as a key determinant of corporate labor practices in the early days of the pandemic.[2]

However, *ex ante* it is unclear whether financial flexibility will influence the likelihood of these labor policy changes. First, prior literature shows that labor and capital do not necessarily move commensurately (Leon-Ledesma, McAdam, and William 2010; Chirinko and Mallick 2016; Lester 2019), implying that we could observe different effects than those in Duchin et al. (2010) when studying employment decisions. Second, given the uncertain nature of the pandemic, firms may have other pressing operational needs, investment commitments, or shareholder payout obligations that they prioritize over workforce decisions, particularly during the early months of the pandemic (e.g., Flitter and Eavis, 2020; Fung, 2020; Long, 2020). Foregoing the implementation of certain workforce practices such as continued pay, and/or reducing workforce via furloughs and layoffs,

[2] For example, Discover's CEO Roger Hochschild stated on March 12 that the company "has the financial resources to not only make it through this challenge but to continue providing a brighter future…My commitment to you is to put the people of Discover first" (Discover, 2020). Newmont states in a March 23rd announcement that "as of December 31, 2019, the Company had $2.2 billion in consolidated cash and more than $5 billion dollars of liquidity, providing significant resources to manage through this global pandemic," and in an April 23, 2020 blog post that its "financial strength provides us with the flexibility to continue supporting our more than 15,000 employees in this way through the end of June" (Newmont, 2020).

would increase firms' financial flexibility to fund these other capital demands.[3] Third, regulatory interventions in March 2020 specifically designated to aid employees may have provided an alternative source of liquidity, thereby distorting the role of a firm's pre-pandemic financial flexibility in its response to the pandemic.

To examine the empirical relation between financial flexibility and firms' labor actions, we use detailed daily employment announcement data from March through May 2020. These data were primarily compiled by JUST Capital, a not-for-profit organization whose mission is to measure firms' policies toward and treatment of both shareholders and other stakeholder groups, including employees, customers, suppliers, and the community.

In early March 2020, JUST Capital ("JUST") began collecting data on corporate responses to the pandemic by the nation's 100 largest domestic employers. The information was collected from company disclosures and a thorough search of prominent media outlets. JUST launched the first "Covid-19 Corporate Response Tracker" on its website on March 23, seven days after the first shelter-in-place order was announced (in northern California) and the U.S. federal government issued its first coronavirus guidelines. The organization continued to augment and update the Tracker, which grew to cover 300 companies as of June 1, 2020. We first spoke with JUST on April 7, 2020, after which we collaborated on a data collection process to augment the information publicly available on the JUST website. Specifically, we used the Internet Archive to capture historical snapshots and identify policies from early March to ensure consistent data coverage for all companies throughout the sample period. We also supplemented the sample by collecting data

[3] For example, Aon's CEO stated on April 27, "As we assess the economic risks on the horizon, we do not believe that these actions [suspending stock repurchases and discretionary spending] alone are enough to provide the operational flexibility we may require. That's why we are also asking colleagues across the firm to support us during this time with temporary compensation reductions" (Aon, 2020). When announcing furloughs on April 20, Coca-Cola stated that it chose "to implement certain cost-saving measures in the interest of our stockholders and to help support our financial position during this time of uncertainty" (Coca-cola, 2020).

on additional firms. The daily data permit tests of both the likelihood and timing of particular labor announcements during the early months of the pandemic by 350 of the largest publicly traded firms in the United States.

The companies in our sample on average employ approximately 27 million workers worldwide, accounting for approximately 40% of the total worldwide employment reported by U.S. public firms as of the end of 2019. The sample includes companies across a range of industries, including technology, manufacturing, retail, pharmaceutical, and financial services. All firms report assets in excess of $1 billion as of the end of 2019. Online Appendix Table 1 provides a list of the companies in the sample.

We find significant variation in the types of labor practices that firms announced. More than 45% of firms introduced accommodations such as back-up dependent care and paid sick leave (*ACCOMMODATIONS*), and 25% of firms announced hourly pay increases, bonuses, or hiring (*PAY INCREASE*). Approximately 17% of the sample announced that it would continue to pay workers at pre-pandemic levels despite facility closures (*CONTINUED PAY*). One-fifth of the sample announced employee pay cuts (*CUT PAY*), and 28% of the sample announced furloughs or layoffs (*WORKFORCE REDUCTION*).

To test our prediction that financial flexibility is positively (negatively) related to policies that maintained or increased (decreased) employee compensation or employment status, we first sort the sample based on levels of financial flexibility as of the firm's most recent preceding year-end. We find that those 175 firms with above-median levels of net cash (greater than or equal to approximately 2.7% of total assets for the average firm in the sample) are 13.3 percentage points more likely to continue to pay their workers at pre-pandemic levels, despite facility closures, relative to those firms with less financial flexibility. Given that the average incidence of continued

pay is 17.1%, this is equivalent to a 77.8% increase. However, we find little direct evidence that flexibility on average influences firms' decisions for the other four policy categories (increasing pay, offering accommodations, reducing compensation to non-executive workers, and reducing the workforce).

We then demonstrate that another factor — how favorable a firm's pre-pandemic policies are toward its workers (i.e., "worker friendliness" of the firm) — is a key determinant of the increased pay and workforce reduction policies.[4] Specifically, we find that the 87 firms with high (i.e., above median) financial flexibility but relatively low (i.e., below median) scores on a pre-pandemic worker friendliness index (*EMPLOYMENT SCORE*) are 29.1 percentage points more likely to engage in workforce reduction and 10.9 percentage points less likely to provide pay increases as compared to those 88 firms with both high financial flexibility and a high *EMPLOYMENT SCORE*. Collectively, these results demonstrate that the relations between these two actions and financial flexibility hinge, critically, on a firm's historical treatment of its workers.

We next examine how financial flexibility and pre-pandemic workforce policies impact the speed with which firms announce changes to their labor policies during the pandemic. Using a hazard model and daily firm data, we find that those firms with relatively higher financial flexibility but lower *EMPLOYMENT SCORES* not only have the greatest workforce reductions, but also appear to be the first firms to announce such reductions. These results further demonstrate the importance of pre-pandemic workforce treatment in distinguishing among financially flexible firms.

Using these daily data, we also study whether the role of financial flexibility in labor policy decisions was altered by regulatory intervention that provided an alternative source of liquidity.

[4] We measure worker friendliness using two different indices that capture firms' policies related to wages, benefits, training opportunities, and safety measures offered to employees. See more discussion in Section 2.

Specifically, we test whether firms' likelihood of announcing specific labor policies changed immediately after the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) was passed in late March 2020. *Ex ante*, it is unclear whether CARES would affect these firms, as the largest components of the law in dollar terms focused on individuals and small businesses. However, press coverage suggests that the larger firms were likely to benefit, both directly through other provisions of CARES (such as the ability to use tax losses; see Rubin and Francis 2020a and 2020b), and indirectly through sustained operations in supply chain partners and customers (Whoriskey, MacMillan, and O'Connell, 2020). We caution that, while we use short-window tests to identify the effects of CARES, the pandemic was rapidly spreading at the end of March and thus companies were quickly altering their workforce policies in response to many events at the same time. Consequently, we cannot make causal conclusions about CARES.

We find that, prior to the CARES Act, financially flexible, worker-friendly firms were more likely to continue to pay workers and less likely to engage in workforce reductions, absent any federal relief package. In the seven days following passage of CARES, these firms become more likely to make announcements of other favorable policies, such as expanded worker accommodations. The regulatory intervention is thus associated with the expansion of worker-friendly benefits within this subsample of firms. For the other sample firms, we find that CARES is associated with an increased likelihood of all types of actions, including the reduction of pay and workforce.

The results are robust to using alternative measures of financial flexibility and to controlling for other variables possibly correlated with workforce practices, such as the capital intensity of a firm and a company's ability to access external financing. Across differing specifications and measures, the principal finding is that firms' attitudes toward and treatment of

workers are distinguishing factors when examining financially flexible firms' labor responses to the pandemic. We observe economically and statistically different actions related to both pay increases and workforce reductions among a sample of similarly-sized firms with otherwise similar levels of pre-pandemic liquidity.

The results are subject to two important caveats. First, the policies we measure are a function of those that are observed via corporate disclosures and media coverage, and thus we may not capture all labor-related decisions that occurred in our sample firms during this time period. While the primary source for these announcements are corporate disclosures, we note that many furloughs and layoffs are identified from national or local press articles, or from industry news coverage, mitigating concerns that the data suffer from significant bias or underreporting. Second, we focus on labor announcements in the first 90 days of the pandemic. We select this timeframe primarily because it captures immediate responses to the exogenous shock and thus can be more cleanly attributed to the pandemic. However, we acknowledge that many companies announced additional or updated policies after June 2020, and thus our results do not speak to the prolonged effects of the pandemic on workforce practices.

A new and substantial literature has emerged documenting the effects of the pandemic on corporate America. Much of this literature focuses on aggregate macroeconomic effects or examines capital market responses to national events due to the salience of such events and readily available market data (Acharya and Steffen, 2020; Albuquerque, Koskinen, Yang, and Zhang, 2020; Alfaro, Chari, Greenland, and Schott, 2020; Cheema-Fox, LaPerla, Serafeim, and Wang, 2020; Fahlenbrach, Rageth, and Stulz, 2020; Landier and Thesmar, 2020). In contrast, we offer a test of a prominent financial theory using firm-specific announcements about corporate employment changes. The empirical results are consistent with a causal effect of a demand shock

affecting the relation between the firm and its employees. Not only do we demonstrate an economically significant and substantial role of financial flexibility in labor policies, thereby adding to the recent literature studying these effects (Caggese et al., 2019), but we show that non-financial firm characteristics such as workforce policies play a critical role in worker compensation and layoff decisions.

In addition, we bridge this literature on financial flexibility with prior work that focuses on firms' behavior toward stakeholders generally, and employees specifically. Cheng, Ioannou, and Serafeim (2014) finds that more socially responsible firms have better access to financing. In addition, prior and current research has shown that employees' views of their employers impact firm performance, and that firm-level employee policies are associated with productivity and firm performance (Edmans 2011; Konings and Vanormelingen 2015; Gubler, Larkin, and Pierce 2018; Green, Huang, Wen, and Zhou 2019; Welch and Yoon 2020). Our results connect the literature on employee welfare to the corporate finance literature by demonstrating how employee treatment interacts with financial characteristics when managers make workforce decisions. This paper also adds to the literature examining the relation between employment and financial decisions (Agrawal and Matsa 2013; Kim 2020), and further demonstrates that firm-specific stakeholder policies influence decision-making by financially flexible firms during times of uncertainty.

Lastly, the evidence in this paper is informative for corporate managers evaluating and considering additional changes to their corporate labor practices, especially as both the public health and economic uncertainty of the pandemic continue late into 2020. We provide detailed data and empirical evidence that permit managers to compare their selected pandemic labor policies to those of other large firms. Furthermore, we provide early evidence about responses to government regulatory interventions by studying the types of policies announced in the days

following the CARES Act, thereby informing regulators and policy makers as to whether firms responded as intended and the types of responses that may be observed following future relief packages (Bartik, Cullen, Glaeser, Luca, Stanton, and Sunderam 2020). We look forward to future research that incorporates additional data about corporate responses to the pandemic and further examines how such actions affected both employee and shareholder welfare.

2. Research Design, Sample Construction, and Descriptive Statistics

2.1 Research design

We study the relation between a firm's financial flexibility and the likelihood of a specific labor announcement by estimating the following linear probability model:

$$POLICY_{ip} = \beta_0 + \beta_1 HIGH\ NET\ CASH_i + \beta_2 EMPLOYMENT_i + \beta_3 PROFITABILITY_i + \beta_4 TANGIBILITY_i + \beta_5 INVENTORY_i + \beta_6 SALES\ GROWTH_i + \beta_7 DEBT\ RATING\ IND_i + \varepsilon_{ip} \quad (1)$$

The dependent variable is an indicator variable equal to 1 if firm *i* adopted policy *p* at any point during the period from March 1 through May 31, 2020, and zero otherwise. *HIGH NET CASH$_i$* is an indicator variable equal to 1 if the firm's cash and short term investments (Compustat CHE), net of short-term debt obligations (DLC), scaled by total assets, is above the median value within the sample. As with all independent and control variables, *HIGH NET CASH* is calculated using data from COMPUSTAT and measured at the end of 2019 to avoid the influence of the pandemic on a firm's pre-pandemic characteristics.[5]

We control for firm characteristics related to firm labor decisions following prior literature (Bae, Kang, and Wang 2011; Agrawal and Matsa 2013; Williams 2018; Lester 2019; Rouen 2020). *EMPLOYMENT$_i$* is equal to the natural logarithm of the firms' total worldwide employment (EMP)

[5] Results remain qualitatively unchanged when using indicator based on total cash; Online Appendix Table 2 presents these results as well as those using continuous measures of cash and net cash.

and controls for both a firm's size, as well as differing demands for employment policies. $PROFITABILITY_i$ controls for the pre-pandemic performance of the firm, which may influence the firm's ability to use corporate liquidity for pandemic labor policies and is measured as net income scaled by total assets. We also control for $TANGIBILITY_i$ and $INVENTORY_i$, as businesses with greater fixed assets or goods for sale may be more labor intensive. These variables are measured as the proportion of total assets that are fixed assets (PPENT) or inventory (INVT), respectively. We control for a firm's growth and growth opportunities with $SALES\ GROWTH_i$, which is equal to the percent change in total sales from 2018 to 2019.[6] Finally, we control for a firm's credit rating to isolate the role of internal capital in firms' employment decisions; *INVESTMENT GRADE IND* is an indicator equal to one if a firm has an investment grade rating of BBB+ (using S&P ratings obtained from Capital IQ), or zero otherwise. Appendix A defines all variables.

Prior literature supports the prediction that firms with greater financial flexibility will be able to sustain their human capital investments, particularly in times of financial distress (Duchin et al. 2010; Caggese et al. 2019). Consequently, we expect a positive β_1 coefficient when examining the likelihood of implementing policies that provide continued or increased compensation and support for employees. Conversely, we expect a negative β_1 coefficient when examining policies related to reducing pay via salary cuts and workforce reduction. We estimate Eq. (1) at the firm level (n=350).

We also use daily company policy announcements to formally test the timing of policy implementation. We expect that financially flexible firms will not only be more likely to sustain workers and their corresponding pre-pandemic levels of compensation, but also that these firms will announce that they do so more quickly. Thus, we estimate hazard models for each policy,

[6] We control for $SALES\ GROWTH_i$ in lieu of the ratio of the market value of equity to the book value of equity (MTB_i), as several firms in the sample have negative book value of equity due to historical financial statement losses.

where the dependent variable is defined as the "time to event" and measures the number of days since March 1st (the start of our sample period) that policy *p* was announced by firm *i*.

2.2 Sample construction

We obtain data about firms' pandemic responses from JUST Capital, a not-for-profit organization that "measures and ranks companies on the issues Americans care about" (JUST Capital, 2020). JUST's flagship pre-pandemic program is an annual ranking of firms in the Russell 1,000. Using hundreds of data points from firm disclosures, data providers, local and national governments, and its own data collection processes, JUST ranks firms on their treatment of employees, the environment, the local community, and their shareholders (Rouen and Wang, 2019). The ranking of "The Most Just Companies in America" is featured each year in *Forbes*, and many companies prominently display their high ranking on their corporate website and in marketing materials (Rouen and Wang 2020). In response to demand for Environment, Social, and Governance (ESG) investment vehicles, Goldman Sachs Asset Management in 2018 launched an exchange traded fund (ETF) composed of the top-ranked JUST firms. On its first day of trading, the fund attracted more than $250 million in assets, making it the most successful ESG ETF launch to date. We use a subset of these rankings in later analysis (see Section 3.2).

In March 2020, the organization began to collect data about pandemic responses by the country's largest domestic employers, with the goal of providing real-time information to corporate managers, employees, and the public. The original JUST Capital COVID-19 Corporate Response Tracker reported the pandemic-related policies of the 100 largest U.S. employers on March 23rd, where these 100 firms were identified based on estimated domestic employment and membership in the Russell 1,000. Policies included in the Tracker were obtained by searching

company filings and major news sources.[7] After the initial release, the Tracker was updated for these same 100 firms on March 31, April 19, April 29, and May 7, replacing original policies on the JUST Capital website to reflect updates or new firm announcements. During May, JUST expanded the Tracker to include an additional 200 companies and posted policies for all 300 firms on June 1.

Our initial conversation with JUST occurred on April 7. Subsequently, researchers at JUST trained the authors and a team of research assistants on the data collection methodology. Applying this methodology, we augmented the data collection in three ways. First, to ensure that our data reflected a precise history of events for those companies added to the Tracker in May, we used JUST's historical snapshots and the Internet Archive to identify policies announced in early March that had since been removed from corporate websites and/or superseded on the JUST Covid Tracker.[8] Second, we expanded the sample, adding an additional 65 large publicly-traded domestic companies identified using similar criteria. Third, we conducted additional searches to verify and augment the data provided by JUST. These steps yielded our final sample of 350 firms with requisite data for the empirical tests.[9]

[7] JUST Capital's Corporate Response Tracker collects data on a number of policies in addition to the employee-related ones that we examine here. For example, they also collect data on customer policies (adjusted hours of operation), community relief efforts (funds, services, and corporate product/distribution/logistical support), and supply chain impacts. Additionally, the Tracker covers three worker categories not studied here, including work-from-home policies, health and safety of workers, and executive pay cuts. Because almost all firms report a work-from-home policy and disclose health and safety precautions for workers, and because these policies were often required under local city, county, and state restrictions, we do not study these in the empirical analysis. We also exclude executive pay cuts given that executive pay structure is vastly different than the pay structure for most employees who are the focus of this paper. See the online tracker posted on JUST's website for more discussion of these practices.

[8] We assign a date based on the day of the disclosure or press article. To the extent that a date is not listed, we assign either the earliest date that the webpage appears on the Internet Archive around March 23rd and March 31st (the dates that correspond with the first two Covid-19 tracker releases), or if otherwise unavailable, the date when the article was found by the research team.

[9] In total, data were collected on 365 firms. We drop 8 firms due to merger and acquisitions that occurred immediately preceding or during the sample period (Allergan, United Technologies Corp, Arconic, Carrier Global, FOX, Howmet Aerospace, Otis Worldwide, and Raytheon), 1 firm due to a non-corporate entity type (Icahn Enterprises), and 6 firms due to lack of coverage in the worker indices used in subsequent analysis (Amedysis, LHC Group, Science Applications, Tenet Healthcare, Tetra Tech, and Truist Financial).

Table 1 and Figure 1 present descriptive statistics about the companies included in the sample. 33.1% of firms in the sample are in the Manufacturing industry, with relatively equal distribution of companies in Wholesale and retail trade (16.3%), Finance and insurance (16.3%), Transportation/Communication (15.7%), and Services (14.9%). Over half of the sample report between 10,000 and 50,000 total worldwide employees. 47.2% (16.5%) of the firms have between $10-$50B of assets ($100B-$500B of assets), and Table 1 shows that financial firms account for approximately 60% of the sample firms' total assets. Table 1 also shows that, while manufacturing firms account for approximately 33.1% of the sample, they only compose 17.4% of the sample firms' total assets. Online Appendix Table A1 lists the 350 firms, and Online Appendix Figure A1, Panel A, shows that the sample firms' headquarters are spread across the United States. While the descriptive statistics further demonstrate the extent to which the sample is comprised of large firms, measured with both total assets and workforce size, they also reveal important operating and geographic heterogeneity. These statistics mitigate concerns that the results are driven by disproportionate representation of a particular industry or geographic region with either a lax or stringent government response to the pandemic.

2.3 Descriptive Statistics

Table 2 reports descriptive statistics for the sample. The average firm has *NET CASH*$_i$ equal to 5.3% of total assets. More than a quarter of the sample has negative net cash as of the fiscal year-end preceding the pandemic, meaning that these firms' short-term obligations (debt obligations due within one year) exceeded their total cash balances. The main analysis uses an indicator, *HIGH NET CASH*$_i$, which is equal to one for firms with *NET CASH*$_i$ greater than 0.027 of total assets (the median value), and zero otherwise. Without considering short-term obligations, firms' gross *CASH* is equal to 9.4% of total assets.

Table 2 also displays the proportion of the sample taking each of the five categories of employment actions studied. Figure 2, Panel A depicts these statistics by graphing the number of first-time actions by the sample firms on a bi-weekly basis, where the lighter (darker) colors correspond to a relatively lower (higher) proportion of actions within that two-week period. 46.3% of firms implemented *ACCOMMODATIONS*, which includes back-up child care, paid sick leave if a worker becomes ill, monetary grants for employees disproportionately affected by the pandemic, and split shift arrangements to ensure worker safety. Approximately 17% of firms continue to pay employees even if stores or offices are closed. One quarter of the sample provides pay increases to workers, where these increases range from hourly short-term raises and hazard pay to one-time bonuses. Approximately 20% of firms report cutting pay of workers, and 28.0% of firms have *WORKFORCE REDUCTION*, either through furloughs or layoffs. Figure 2, Panel B presents a similar bi-weekly analysis but uses the total number of actions by sample firms. The shading demonstrates that these actions are clustered predominantly in the last two weeks of March and first two weeks of April. Online Appendix Figure A1, Panels B through D, map the number of policies by firm-month, where the size of each dot captures the number of policies announced at a particular firm headquarters location. This "policy intensity" is mapped against the number of reported Covid-19 cases at the county-level, with lighter colors (darker colors) reflecting fewer (more) cases.

Table 2 also provides descriptive information for the control variables included in Eq. (1). The firms are profitable, reporting an average 5.3% return on assets. Approximately 28.0% (7.2%) of firms' assets are in tangible fixed assets (inventory), and firms on average report sales growth of 5.8% in the year preceding the pandemic. Over 62% of firms in the sample have investment grade rated debt.

3. Results

3.1 Financial flexibility and employment policies

Table 3 reports results from estimating Eq. (1) to examine the relation between financial flexibility and the likelihood of a firm changing its labor practices during the early months of the pandemic. The first three columns include policies related to maintaining employment status and compensation, including *CONTINUED PAY*$_i$, *ACCOMMODATIONS*$_i$, and *PAY INCREASE*$_i$. Columns (4) and (5) test the likelihood of *WORKFORCE REDUCTION*$_i$ and *CUT PAY*$_i$. Column (1) shows that financially flexible firms are more likely to continue to pay workers. The statistically significant coefficient of 0.133 on *HIGH NET CASH* means that those 175 firms with above-median levels of net cash are 13.3 percentage points more likely to continue paying workers, despite facility or office closures, relative to the 175 firms with below-median financial flexibility. Given that on average 17.1% of the sample announces *CONTINUED PAY* (Table 2), this means that firms with an above-median level of financial flexibility have a 77.8% increase in the likelihood of continuing to pay workers. Alternatively, when testing these effects with a continuous measure of *NET CASH* or measures based on *CASH*, we find similar positive effects. For example, we find a 15.4 percentage point increase (a 90.0% change) in the likelihood of continuing to pay when using an indicator based on above-median cash (*HIGH CASH*). See Online Appendix Table 2.

Column (1) also shows that the likelihood of *CONTINUED PAY* is positively associated with both the logged number of employees (*EMPLOYMENT*) as well as a firm's return on assets (*PROFITABILITY*). A one unit increase in logged employment is associated with a 6.2 percentage point increase in the likelihood of a firm continuing to pay its workers. Similarly, a one percent increase in a firm's return on assets is associated with a 49.2 percentage point increase in the

likelihood of this action. The other control variables do not demonstrate a statistically significant effect. Thus, financial flexibility has the second largest effect relative to a firm's employment size and profitability.

Interestingly, in Columns (2) and (3), we find little evidence that financial flexibility influences *ACCOMMODATIONS* or *PAY INCREASE*. For these policies, only *EMPLOYMENT* demonstrates a statistically significant effect. We study the factors that influence these policies in Section 3.2.

In Column (4), we observe a positive but statistically insignificant coefficient for the relation between financial flexibility and the likelihood of a workforce reduction. We also observe a statistically insignificant effect for *CUT PAY* in Column (5). We instead find that *EMPLOYMENT* continues to be an important determinant of these decisions. We also observe that both *TANGIBILITY* and *INVENTORY* are positively associated with both of these actions. Collectively, these results imply that the likelihood of employment actions that reduce compensation and the number of employees is increasing in how capital intensive a firm is, measured both in terms of working capital (inventory) and fixed capital (tangible assets). Firms with an investment grade rating are 11.5 percentage points less likely to engage in workforce reductions.

In summary, contrary to a large body of prior work studying the role of cash for precautionary reasons and financial flexibility, we observe little on average effect of financial flexibility in firms' employment decisions during a time of distress. We further examine heterogeneity in this relation in Section 3.2 below.

We next test the role of financial flexibility in how quickly firms took certain actions or made certain labor-related announcements. We estimate a hazard model for each type of

employment action and plot the results in Figure 3. The lines plot, on a daily basis, the proportion of firms with a specific workforce action. Consistent with the regression results, we see that the likelihood of high net cash firms implementing continued pay practices is much higher than that of low net cash firms, with a divergence occurring within days of March 14th. A log-rank test for equality of the survivor functions confirms that firms with relatively high net cash have a significantly different survivor function for *CONTINUED PAY* than do firms with low levels of net cash: Table 3, Panel B shows a chi-square value of 11.61 (p-value = 0.0007) that rejects the null of a similar response by these groups. For *ACCOMMODATIONS* and *PAY INCREASE*, we observe similar and steady increases in the proportion of firms reporting the policies. While the *LOW NET CASH* firms appear to have a higher incidence of both types of policies, the lines are not statistically different, with p-values of 0.2072 and 0.2971 for *ACCOMMODATIONS* and *PAY INCREASE*, respectively. We similarly confirm that the patterns for *WORKFORCE REDUCTION* and *CUT PAY* are similar, with statistical tests that also fail to reject the null (p-values of 0.3984 and 0.5690, respectively). These results graphically reinforce the lack of observed effect in Table 3, Panel A.

In summary, we find that financial flexibility is positively associated with the likelihood that a firm continues to pay its workers, despite facility closures. This result is consistent with the prediction that financially flexible firms are more likely to sustain their workforce and retain compensation at pre-pandemic levels. However, we find little evidence that financial flexibility is associated with the four other policies, despite a significant literature suggesting that financial flexibility and precautionary savings are important in times of distress. We further examine whether other firm characteristics within the subsample of high financially flexible firms help explain a firm's propensity to take these employment actions.

3.2 Pre-pandemic workforce policies and the role of financial flexibility in pandemic policies

When faced with high uncertainty, some financially flexible firms choose to reduce their labor bill to further increase their savings, or to provide funds for alternative capital demands such as firm operations, investment commitments, or shareholder payouts (Flitter and Eavis, 2020; Fung, 2020; Long, 2020). A firm's decisions on what to fund or cut when under distress will reflect business demands, as well as the firm's prioritization of shareholders relative to other stakeholders. We next empirically test whether we observe variation in the likelihood of policy implementation based on a firm's historical attitude toward and treatment of workers as the prominent stakeholder group examined in this study.

To do so, we augment Eq. (1) to include a measure of pre-pandemic workforce friendliness. Specifically, we include an indicator, *HIGH EMP SCORE*, which measures whether a firm has an above median score on a workforce index (*EMPLOYMENT SCORE*) and interact this with *HIGH NET CASH* to test whether the likelihood of policy implementation differs for those firms that have both above-median levels of financial flexibility and workforce practices. We measure how beneficial a firm's policies are to workers in two ways. First, we use JUST Capital's annual firm-specific (pre-pandemic) ranking based on wages, benefits, training opportunities, and safety measures offered to employees.[10] Second, we use an index developed by the Drucker Institute, which scores a smaller sample of publicly traded firms on "Employee Engagement and

[10] This is the annual employee score described in Section 2.2, which is used as an input into JUST's annual overall corporate rankings. Some version of this score has been calculated since 2016 as part of the JUST ranking project, which is distinct from the COVID Tracker project. Conversations with an ESG-focused investor and an ESG-focused think tank further confirmed the appropriateness of JUST's measures for this analysis.

Development" using seven data indicators.[11] A higher score on both indices means that the firm's policies are generally more favorable to workers.

By partitioning the sample based on the median value of *HIGH EMP SCORE* and including the interaction with *HIGH NET CASH* (also defined based on the median value), the tests effectively examine the likelihood of labor announcements within four subsamples of firms: i) those with both below-median levels of net cash and worker scores; (ii) those with above-median levels of net cash but below-median levels of worker scores; iii) those with below-median levels of net cash but above-median levels of worker scores; and (iv) those with above-median levels of both net cash and worker scores. Partitioning the sample along these dimensions results in similarly sized subsets of 88, 88, 87, and 87 firms, respectively, mitigating concerns that any one group is disproportionately large and potentially over-weighted in the regression specification.

Firms that have an *ex ante* commitments to providing their workers with superior wages, benefits, training, and safety protocols may be more (less) likely to implement policies that retain workers and increase compensation (decrease compensation or reduce workforce). Therefore, we expect a positive (negative) coefficient on *HIGH EMP SCORE* when testing *CONTINUED PAY*, *ACCOMMODATIONS*, and *PAY INCREASE* (*WORKFORCE REDUCTION* and *CUT PAY*). However, because the main effect examines those firms with relatively low financial flexibility, it is unclear whether these firms would have sufficient liquidity to fund these actions.

[11] The Drucker score is based on three measures from Glassdoor, two from PayScale, and one each from CSRHub and kununu. These measures focus on employee engagement, corporate culture, and compensation. We considered other alternative rankings (such as MSCI) but determined that these scores are less applicable in this setting because they are based on a subset of voluntary firm disclosures, cover fewer firms in the sample, employ coarser measures, and provide less detail as to how the scores are calculated.

Table 2 includes descriptive statistics for *EMPLOYMENT SCORE* measured using both the score from JUST Capital and the Drucker Institute.[12] That both the mean and median of *EMPLOYMENT SCORE* based on both indices are close to 50 provides confidence that our sample's workforce policies are similar to those of the full sample of firms covered by the two organizations. The indicator *HIGH EMP SCORE* is equal to one for firms with values equal to or above 51.897 when using the JUST Capital score (52.200 using the Drucker Institute score), which is the median value in the sample.

Table 4 reports the results of examining the role of pre-pandemic worker policies in the relation between *HIGH NET CASH* and the likelihood of announcing each of the five labor policies. In odd (even) columns, the JUST (Drucker) worker score is used to calculate *HIGH EMP SCORE*. Across Columns (1) and (2), we observe positive coefficients on both the main effect of *HIGH NET CASH*, as well as the interaction term, but the statistical significance varies based on the index used. The coefficient on the interaction term in Column (1) of 0.104 is not statistically different from zero (t=1.33), implying that pre-pandemic workforce policies do not alter a firm's likelihood of continuing to pay employees. However, in Column (2), when using the Drucker score, we observe that the main effect is insignificant and instead that only those firms with above-median worker scores are more likely to continuing paying workers. Thus, the results appear sensitive to the measurement of pre-pandemic workforce policies, and we are precluded from determining that the role of financial flexibility varies based on *EMPLOYMENT SCORE*. The coefficient on *EMPLOYMENT* continues to remain positive and statistically significant, implying

[12] The two measures have a significant, positive correlation equal to 0.688. The Drucker score is only available for 308 of the firms in our sample. Untabulated analyses confirm that the results presented in Table 3 are robust to estimation on this smaller sample.

that primary factors associated with a firm's decision to continue to pay its employees are the level of pre-pandemic financial flexibility and the size of the firm's workforce.

We continue to observe no role for financial flexibility in the likelihood of implementing *ACCOMMODATIONS* in Columns (3) and (4). However, we now observe differential effects for *PAY INCREASE* in Columns (5) and (6) after the inclusion of *HIGH EMP SCORE*. The statistically significant coefficients of -0.140 and -0.128 for the main effect of *HIGH NET CASH* in Columns (5) and (6), respectively, and the statistically significant coefficients of 0.177 and 0.178 on the interaction of *HIGH NET CASH*HIGH EMP SCORE* mean that firms with relatively high levels of financial flexibility but below-median scores on the worker indices are less likely to increase pay than are those with high financial flexibility and high *EMPLOYMENT SCORES.* These results are economically meaningful: The results in Colum (5) (Column (6)) suggest that for the subset of firms with relatively high levels of financial flexibility, those with higher *ex ante EMPLOYMENT SCORES* are 10.9 percentage points (4.3 percentage points) more likely to increase worker pay during the pandemic.[13]

In Panel B, Column (1) (i.e., when *HIGH EMP SCORE* is measured with the JUST index), we find that pre-pandemic labor policies have a mitigating effect on the relation between *HIGH NET CASH* and *WORKFORCE REDUCTION*. The main effect on *HIGH NET CASH*, 0.184, is positive and statistically significant, implying that relative to those firms with low levels of cash and low worker scores, these firms are 18.4 percentage points more likely to lay off or furlough workers.

[13] We calculate these differences using the coefficients on *HIGH EMP SCORE* and *HIGH NET CASH*HIGH EMP SCORE* (-0.077 + 0.177 = 0.100). We observe similar but weaker coefficients with alternative measures of financial flexibility; see Online Appendix Table 2.

We then compare within the *HIGH NET CASH* firms by assessing how the propensity for these firms to lay off workers varies. We observe that firms with high financial flexibility and high worker scores are 29.1 (-0.010 + -0.281) percentage points less likely to lay off workers relative to those firms with high flexibility but low worker scores. This result implies that the decision of whether to reduce a firm's workforce via layoffs or furloughs during the pandemic is heavily influenced by both a firm's financial characteristics (levels of net cash), as well as non-financial characteristics (pre-pandemic workforce policies). When using the Drucker Institute score in Column (2), we find effects of similar size and significance. In Columns (3) and (4), we continue to observe that only the size of the firm's workforce (*EMPLOYMENT*) and the tangible nature of the firm's assets (*TANGIBILITY* and *INVENTORY*) are statistically significant when examining the likelihood of announcing employee pay cuts. Results are generally consistent when using an indicator *HIGH CASH*, which is equal to one for those firms with above-median levels of total cash holdings divided by total assets (see Online Appendix Table 2).

We next re-estimate the hazard model to study how the timing of policy implementation varies across the four groups of firms formed based on above-median sorts of both *NET CASH* and *EMPLOYMENT SCORE*. Figure 3 presents the five graphs that correspond to the estimation of the hazard model for each of the actions studied using the JUST *HIGH EMP SCORE*, which is available for all firms in the sample. The first graph for *CONTINUED PAY* shows that those financially flexible firms with relatively lower worker scores exhibited a similar number and frequency of announcements until approximately March 27. However, after that date, there is a higher proportion of firms with above median levels of *NET CASH* and above median *EMPLOYMENT SCORE* announcing this policy. Equality of survivor tests tabulated in Table 4, Panel C confirm that indeed these four lines are statistically different (p=0.0002), and additional

tests in Table 4, Panel D confirm that the subset of firms with high net cash and high employment scores is statistically different from the other groups (p=0.000).

Figure 3 also shows that a similar proportion of firms report *ACCOMMODATIONS* in the first few weeks of March. After those initial weeks, the greatest proportion of firms reporting these policies are those with low worker scores and relatively low financial flexibility. When testing whether the financially flexible firms differed in Table 4, Panel A on the basis of pre-pandemic worker policies, we observe no statistically significant differences, but statistical tests of the hazard tests in Table 4, Panel C reject the null that this time-series effect is similar (p=0.0799). The tests in Panel D show that this difference is due to the lower proportion of firms with *HIGH NET CASH* and *HIGH EMP SCORE* announcing this action. Comparison across these first two figures suggests that firms view *CONTINUED PAY* and *ACCOMMODATIONS* as substitutes.

The third figure for *INCREASE PAY* also provides further context for the results presented in Table 4, Panel A. We observe that the group that corresponds to the main effect on *HIGH NET CASH* from Panel A — those with high net cash and low employment scores — reports the lowest proportion of firms with *INCREASE PAY*, providing visual evidence consistent with the regression results. The group with the greatest proportion of *INCREASE PAY* are those firms with relatively low levels of financial flexibility and employment scores. Statistical tests in Panel C also reject the null that these groups demonstrate the same or equal effects (p=0.0976), and the tests in Panel D confirm that the differences are attributable to the two subsamples with relatively low *EMPLOYMENT SCORE*.

The role of pre-pandemic worker treatment is the most pronounced in the graph depicting *WORKFORCE REDUCTION* in Figure 3. The firms with the highest proportion of workforce

reductions are, interestingly, those firms with relatively high financial flexibility but below-median employment scores. In stark contrast, we observe firms with similarly high financial flexibility but above-median employment scores have the *lowest* proportion of workforce reductions. These lines are statistically different based on tests in Table 4, Panel C (p=0.0000), and additional tests in Panel D confirm that the differences are driven by the two groups with high financial flexibility but differing *EMPLOYMENT SCORES*. The final graph for *CUT PAY* continues to show no statistical difference across the four groups.

In summary, both the regression and hazard analysis presented in Table 4 and Figure 4 demonstrate different effects for firms with similar levels of financial flexibility. Specifically, we observe that those firms with the greatest financial flexibility and the highest (lowest) pre-pandemic worker scores report the second highest (lowest) proportion of *INCREASED PAY*, and the lowest (highest) proportion of *WORKFORCE REDUCTION*. From this analysis, we conclude that the role of financial flexibility on these two employment practices hinges on this important non-financial characteristic. While prior literature has indirectly speculated on this relation, academic work traditionally focuses on firm financial characteristics, such as cash holdings in firm investment and employment decisions (Stein 2003; Faulkender and Wang 2006; Gamba and Triantis 2008; Duchin et al. 2010; Cheng et al. 2014; Caggese et al. 2019). This finding adds to this literature by demonstrating and quantifying the critical role of an important non-financial characteristic in the relation between financial flexibility and real firm outcomes.

3.3 Government intervention and workforce policy adoption: Evidence from CARES

In March 2020, the U.S. Congress passed the CARES Act, with a primary purpose of motivating firms to retain and pay existing employees (Bartik et al. 2020). The Act effectively provided fiscal relief in the form of forgivable business loans and business tax policy changes.

Because the act was intended to provide firms with liquidity to be used specifically for employment purposes, we examine whether the likelihood that firms in our sample implemented specific labor policies changed around the passage of the CARES Act. To the extent that the government provided relief through the injection of capital, it could increase (decrease) the likelihood of implementing policies that sustain or increase compensation, benefits, or employment status (decrease compensation or employment status). However, financially flexible firms' propensity to implement or announce certain labor policy changes may be unaffected given that these firms had sufficient resources absent any governmental intervention. Furthermore, because of the nature of CARES, firms with relatively higher financial flexibility may only be affected indirectly through relief effects at customers and suppliers, or with a delay via changes to corporate tax policies. Thus, whether the role of financial flexibility in the likelihood of policy implementation changed around CARES is unclear *ex ante*.

Section 3.2 demonstrated that those firms with above median financial flexibility and employment scores responded most favorably by foregoing workforce reductions, increasing the pay of workers, and, in some cases, continuing to pay workers. Thus, we refine the indicator *HIGH NET CASH* in Eq. (1) to be equal to one for those 88 firms reporting both above median levels of financial flexibility and above median scores on the worker index and rename this indicator *HIGH NET CASH & HIGH EMP SCORE*. We insert an indicator variable *CARES WINDOW*, which is equal to one for the one-week period immediately following the CARES Act, and interact this variable with the refined *HIGH NET CASH & HIGH EMP SCORE* indicator.

We find a positive (negative) coefficient on *HIGH NET CASH & HIGH EMP SCORE* for *CONTINUED PAY* (*ACCOMMODATIONS*), meaning that those firms with above-median financial flexibility and employment scores were more likely to continue to pay workers and less

likely to provide worker accommodations in the weeks preceding CARES, relative to the rest of the sample. We interpret this result as evidence that these firms had sufficient liquidity to continue to pay workers, absent any government regulation. Furthermore, the results suggest that these firms viewed *ACCOMMODATIONS* as substitutes, choosing to offer continued pay when facilities were closed in lieu of providing other worker relief (paid sick leave, for example). We also find a negative coefficient on *HIGH NET CASH & HIGH EMP SCORE* for *WORKFORCE REDUCTION*, implying that these financially flexible firms were less likely to announce furloughs or layoffs relative to the other sample firms. Collectively, the results mean that these firms had sufficient financial flexibility at the beginning of the pandemic to retain employees on the payroll.

Across all policies, we find a positive coefficient on *CARES WINDOW*, consistent with an increase in labor-related announcements in the one week period between March 27 and April 3by the other 262 firms in the sample. We then examine how the likelihood of policy implementation changed immediately following CARES for those firms with high financial flexibility and employment scores. We find a negative coefficient on the interaction term for *CONTINUED PAY* in Column (1). When considered with the other relevant coefficients, we find that these firms still reported an overall greater likelihood of implementing the policy. However, the negative coefficient on the interaction terms suggests a lower likelihood in the short window around CARES, which we attribute to the increased number of other firms beginning to announce their own continued pay practices. Indeed, Figure 3 shows that the firms in the group reporting both high financial flexibility and high employment scores have the highest proportion of *CONTINUED PAY* throughout the sample period, with the other firms reporting a marked increase in the dates immediately following CARES. From a regulatory perspective, this implies that the CARES Act

successfully motivated those firms with low financially flexibility to continue to employ and compensate workers.

After CARES, we observe the subset of high-financially flexible, high worker firms have an increased likelihood of announcing *ACCOMMODATIONS*. This result implies that the regulatory intervention motivated the financially flexible firms to augment their labor practices and implement even more favorable workforce accommodations to complement the existing continued pay practice. Tests of *INCREASED PAY* show no coefficient on the interaction term, due to no announcements by the high net cash firms during the CARES window.

Following CARES, we find that the firms with high financial flexibility and employment scores are slightly more likely to announce workforce reductions, although the overall effect is still a lower likelihood relative to the other sample firms. In Column (5), we continue to observe little role of financial flexibility in *CUT PAY*, in both the pre- and post-CARES period.

In additional analysis, we study how a firm's ability to access the external lending market affects the results. Duchin et al. (2010) suggests that financially flexible firms may be better able to access the external capital markets. Given the broad and rapid economic shock represented by the pandemic, it is likely that firms would first rely on this internal financing to sustain operations. To isolate this effect, we include *INVESTMENT GRADE IND* as a control variable to isolate the relation between firm's *NET CASH* on hand in the pre-pandemic period (absent any additional borrowing) and subsequent employment actions. To further explore the relation between financial flexibility and pandemic labor practices, in untabulated analyses, we separately test whether the relation between financial flexibility and pandemic labor practices varies with a firm's ability to access the debt market by interacting *HIGH NET CASH* with *INVESTMENT GRADE IND.* We observe no variation based on this specification, suggesting that this potential alternative source of

capital does not alter managerial decisions about a firm's workforce. This result is arguably unsurprising, given the short window of observation and the amount of operating uncertainty that managers faced during that window.

4. Conclusion

We study how financial flexibility affects the labor decisions of 350 of the largest U.S. employers during the initial months of the pandemic. Prior literature documents an important role for financial flexibility during times of economic hardship, and we also find that these financial characteristics play a significant role in shaping firms' responses (e.g., Duchin et al. 2010). However, unlike prior literature, we provide important evidence and quantify the role of non-financial characteristics in labor decisions during periods of uncertainty. Specifically, we find that a financially flexible firm's commitment to workers prior to the pandemic impacts the firm's human capital investment decision during the pandemic.

This paper also provides an assessment of the CARES Act. We show that, for those firms with high levels of financial flexibility and relatively high pre-pandemic commitments to workers, the CARES Act is associated with an expansion of firm policies, most notably increasing workforce accommodations to complement pre-CARES commitments to continue paying employees. For those firms with relatively lower levels of financial flexibility or lower worker index scores, we find that CARES is associated with increases in more favorable policies (continuing to pay workers and offering accommodations), consistent with the policy's intent. However, we also observe increased workforce reductions for all firms.

The paper builds on the literature on financial flexibility and economic uncertainty by testing a prominent financial theory following the recent exogenous shock of the pandemic. While

the evidence is consistent with firms responding to the pandemic by using their financial flexibility to announce certain workplace practices, we also find that firms' policies related to stakeholders (i.e., employees) impacts this relation. This moderating factor of stakeholder obligation suggests that financial flexibility alone is insufficient in understanding firms' responses to negative economic shocks, and suggests that non-financial policies can help predict how firms react to uncertainty.

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Appendix A
Variable Definitions

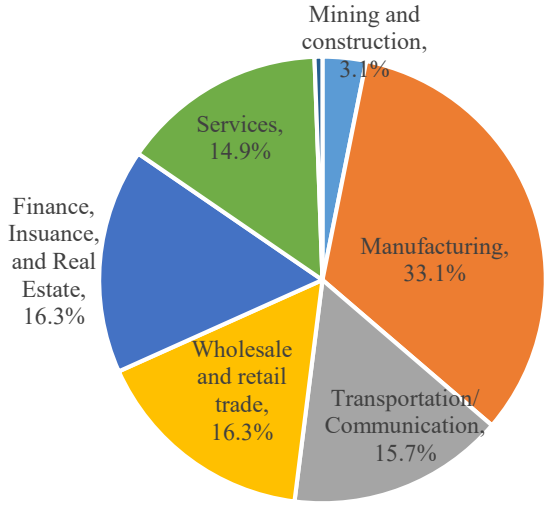
Variable	Definition and Source
ACCOMMODATIONS	An indicator equal to one if a firm implemented or expanded paid sick leave, provided back-up dependent care, provided grants for employees most affected by the pandemic, and/or implemented split shift arrangements to ensure worker health, and zero otherwise. Data obtained from JUST Capital's COVID-19 Corporate Response Tracker and augmented by authors' hand-collection.
CARES WINDOW	An indicator equal to one for the one week window from March 27 through April 3, which begins with the passage of the CARES Act, and zero otherwise.
CASH	Cash and short-term investments divided by total assets, measured as of the firm's preceding year-end. (Compustat variables: CHE, AT)
CONTINUED PAY	An indicator equal to one for firms continuing to pay workers at 100% of pre-pandemic levels, or for firms announcing no layoffs, and zero otherwise. Data obtained from JUST Capital's COVID-19 Corporate Response Tracker and augmented by authors' hand-collection.
CUT PAY	An indicator equal to one for firms that reduced employee compensation, either through announcements of continued pay at less than 100% of pre-pandemic levels, the requirement of employees to take unpaid sick leave, or other non-executive pay cuts, and zero otherwise. Data obtained from JUST Capital's COVID-19 Corporate Response Tracker and augmented by authors' hand-collection.

EMPLOYMENT	The natural logarithm of worldwide employment measured as of the firm's preceding year end (Compustat variables: EMP).
EMPLOYMENT SCORE – DRUCKER INSTITUTE	The 2019 index of "Employee Engagement and Development" from the Drucker Institute, which is based on seven data indicators from Glassdoor, Payscale, CSRHub, and kununu.
EMPLOYMENT SCORE – JUST CAPITAL	The 2019 employee component of JUST Capital's annual rankings of firms, which scores companies based on employee wages, benefits, training opportunities, and safety measures.
HIGH NET CASH	An indicator equal to one if firms have above-median levels of *NET CASH*, and zero otherwise.
HIGH EMP SCORE	An indicator equal to one for firms with above median *EMPLOYMENT SCORE* based on the JUST Capital index, and zero otherwise.
INVENTORY	Inventory divided by total assets measured as of the preceding year-end (2019). Missing values of inventory are set equal to zero. (Compustat variables: INVT, AT)
INVESTMENT GRADE IND	An indicator equal to one if a firm has an investment grade rating, and zero otherwise. Ratings are obtained from Capital IQ as of March 30, 2020 and are identified as investment grade if scored at BBB- or better.
NET CASH	Cash and short-term investments minus short-term debt obligations, divided by total assets, measured as of the preceding year-end (2019) (Compustat variables: CHE, DLC, AT)
PAY INCREASE	An indicator equal to one for firms with wage increases, bonuses, expanded overtime pay, or hiring, and zero otherwise. Data obtained from JUST Capital's COVID-19 Corporate

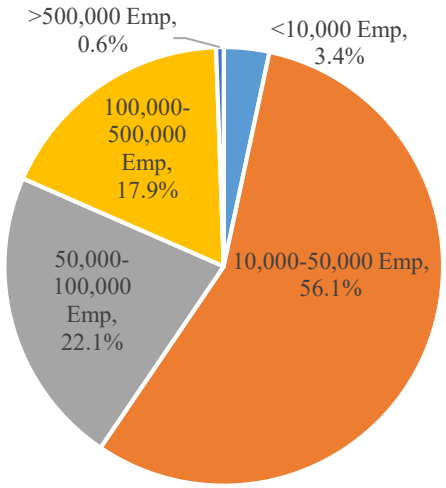
	Response Tracker and augmented by authors' hand-collection.
PROFITABILITY	Income before extraordinary items divided by total assets measured as of the preceding year-end (2019) (Compustat variables: IB, AT)
SALES GROWTH	Revenue minus lagged revenue, divided by lagged revenue measured as of the preceding year-end (2019) (Compustat variable: REVT)
TANGIBILITY	Net property, plant, and equipment divided by total assets measured as of the preceding year-end (2019) (Compustat variables: PPENT, AT)
WORLDWIDE EMPLOYMENT	Raw worldwide employment (Compustat variables: EMP)
WORKFORCE REDUCTION	An indicator equal to one for firms that furloughed or fired employees, and zero otherwise. Data obtained from JUST Capital's COVID-19 Corporate Response Tracker and augmented by authors' hand-collection.

Figure 1
Sample Descriptive Statistics

Panel A: Industry Affiliation



Panel B: Worldwide Employment



Panel C: Total Assets

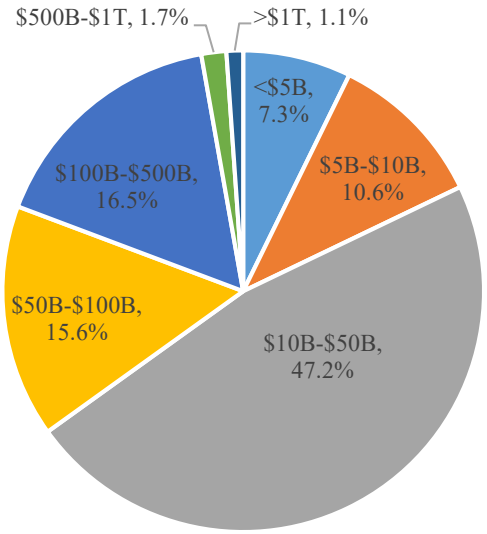


Figure 1 presents graphs of descriptive statistics about the 350 sample firms. Panel A shows the proportion of firms in each two-digit SIC industry code; Panel B shows the proportion of firms based on worldwide employment data as disclosed in firms' financial statements; and Panel C shows the proportion of firms based on total firm assets measured as of the end of 2019 (prior to the pandemic). Online Appendix Table 1 lists the sample companies; Table 1 presents additional descriptive information about the sample.

Figure 2
Frequency of Employment Actions from March 1 to May 31, 2020

Panel A: Incidence of actions per bi-weekly period

Employment Action	Total # Firms	% of Sample	Month Action Taken: March		April		May	
ACCOMMODATIONS	162	46.3%	13	65	34	22	26	2
CONTINUED PAY	60	17.1%	6	32	14	5	2	1
INCREASE PAY	87	24.9%	3	33	16	19	16	0
CUT PAY	69	19.7%	4	27	15	15	8	0
WORKFORCE REDUCTION	98	28.0%	5	22	32	18	12	2

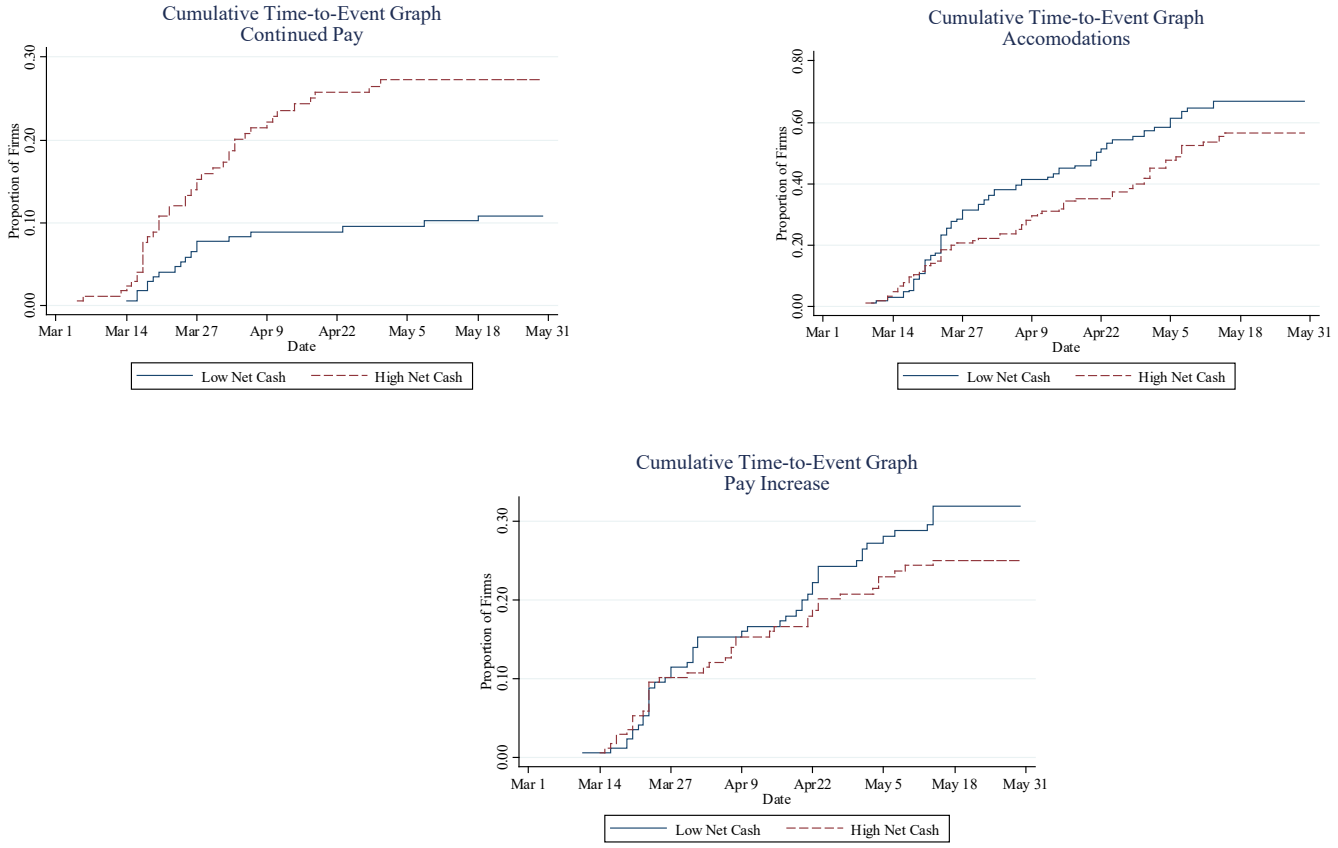
Panel B: Number of actions per bi-weekly period

Employment Action	Total # Actions	% of Actions	Month Action Taken: March		April		May	
ACCOMMODATIONS	241	38.7%	22	97	49	31	38	4
CONTINUED PAY	68	10.9%	6	35	17	7	2	1
INCREASE PAY	122	19.6%	3	56	23	21	18	1
CUT PAY	79	12.7%	5	30	18	17	9	0
WORKFORCE REDUCTION	113	18.1%	7	28	39	21	16	2

Figure 2 shows the incidence and number of actions taken over time. Panel A reports the frequency of first actions taken by each firm within each of the five categories over time, where the light (darker) colors correspond to a relatively lower (higher) proportion of the actions within a given bi-weekly period. Panel B plots the total number actions taken by each firm within each of the five categories over time, where the light (darker) colors correspond to a relatively lower (higher) proportion of the actions within a given bi-weekly period. The actions are identified from either corporate disclosures or media coverage; data are based on information reported in the JUST Capital COVID-19 Corporate Response Tracker and augmented by the authors. *ACCOMMODATIONS* includes employee benefits, such as back-up dependent care and paid sick leave. *CONTINUED PAY* reflects those firms that announced continued payment of workers' full wages, even if facilities or offices are closed. *CUT PAY* reflects those firms that announced reductions in non-executive employee wages. *PAY INCREASE* reflects those firms announcing hiring of new employees or increased wages, such as through changes in hourly wages or bonuses. *WORKFORCE REDUCTION* includes firms that announced layoffs or furloughs. Because almost all firms announced work-from-home and health/safety policies, at times in response to state and local requirements, we exclude these from the categories above; we also exclude executive pay cuts from this study. See discussion in Section 2 of the manuscript. Policies are further defined in Appendix A.

Figure 3
Timing of Employment Action by Financial Flexibility

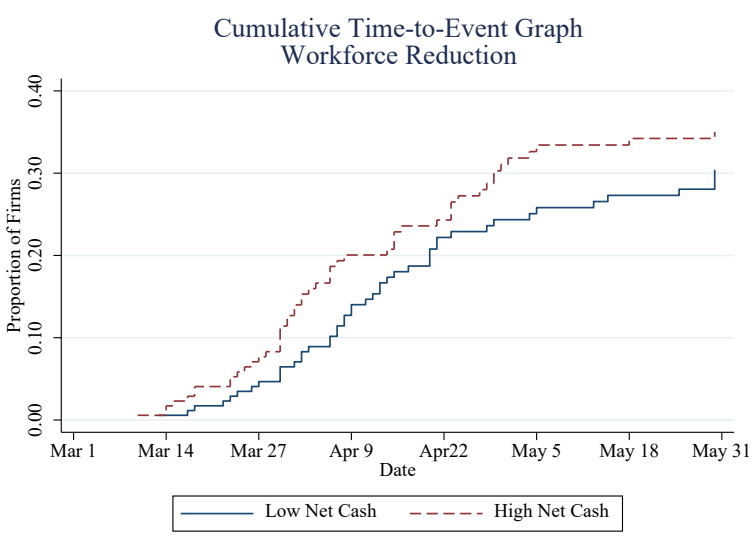
Panel A: Actions to maintain or increase employee compensation/status

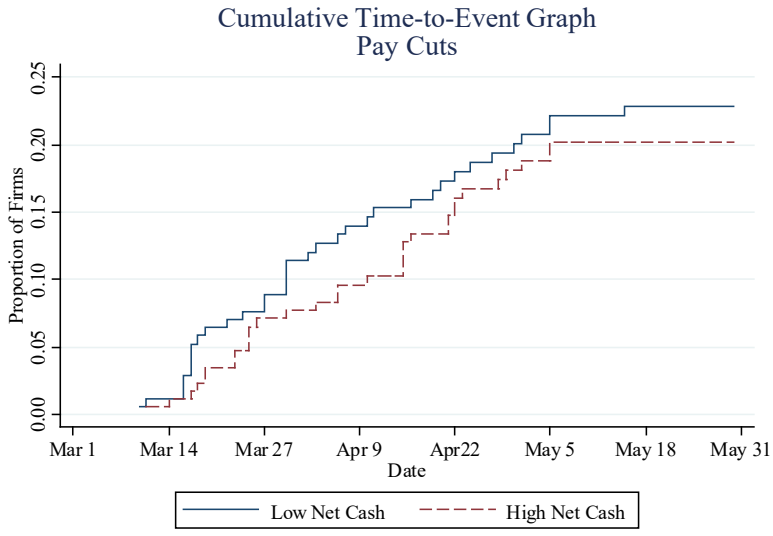


This figure plots the timing of firm actions by day during the period March 1 through May 31, 2020. The graphs on this page correspond to actions that maintain or increase employee compensation and status. *ACCOMMODATIONS* includes employee benefits, such as back-up dependent care and paid sick leave. *CONTINUED PAY* reflects those firms that announced continued payment of workers' full wages, even if facilities or offices are closed. *PAY INCREASE* reflects those firms announcing hiring of new employees or increased wages, such as through changes in hourly wages or bonuses. Table 3, Panel B presents statistical tests of the differences between *HIGH NET CASH* and *LOW NET CASH* firms, identified based on having above- or below-median values for the proportion of cash (net of short-term obligations) to total assets as of the firm's 2019 year-end.

Figure 3 (cont'd.)
Timing of Employment Action by Financial Flexibility

Panel B: Actions that decrease employee compensation/status

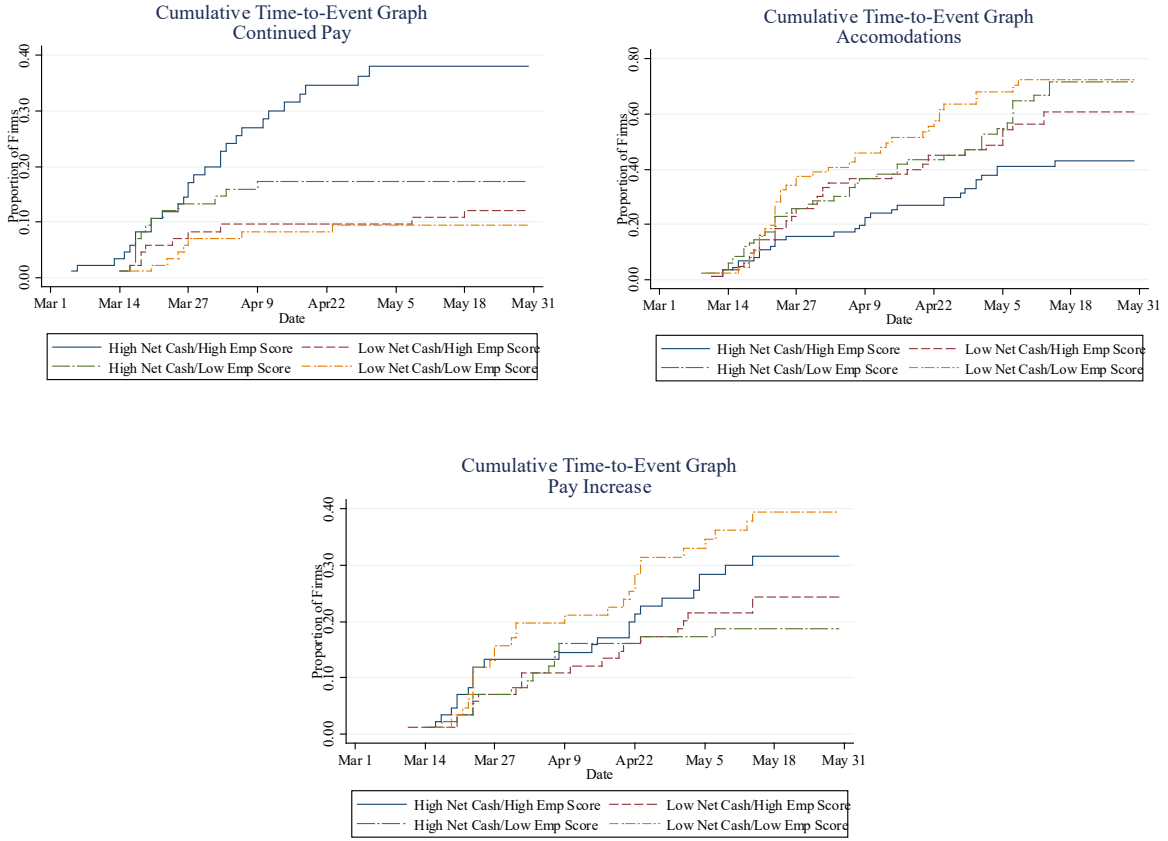




This figure plots the timing of firm actions by day during the period March 1 through May 31, 2020. The graphs on this page correspond to actions that decrease employee compensation or status. *WORKFORCE REDUCTION* includes firms that announced layoffs or furloughs. *CUT PAY* reflects those firms that announced reductions in non-executive employee wages. Table 3, Panel B presents statistical tests of the differences between *HIGH NET CASH* and *LOW NET CASH* firms, identified based on having above- or below-median values for the proportion of cash (net of short-term obligations) to total assets as of the firm's 2019 year-end.

Figure 4
Timing of Employment Action by Financial Flexibility and Historical Employment Scores

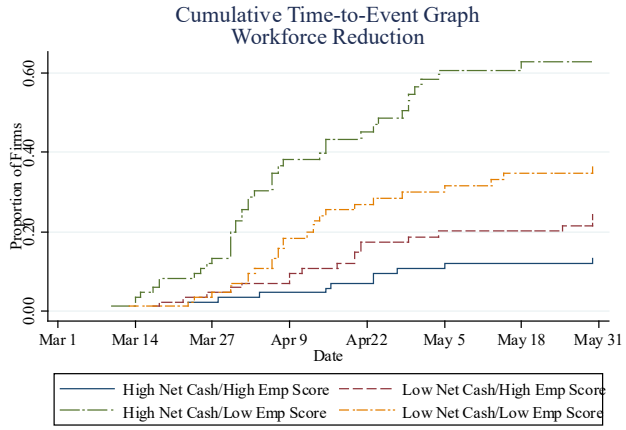
Panel A: Actions to maintain or increase employee compensation/status

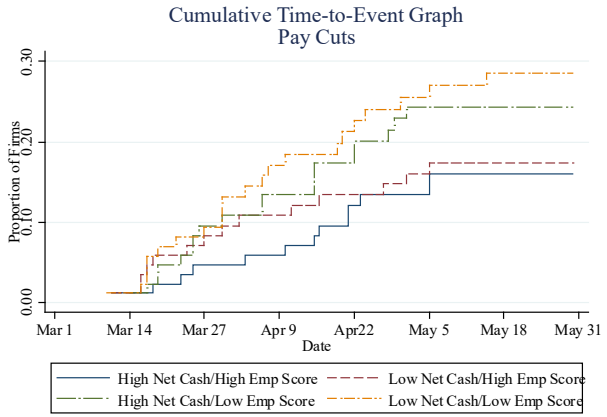


This figure plots the timing of firm actions by day during the period March 1 through May 31, 2020. The graphs on this page correspond to actions that maintain or increase employee compensation and status. *ACCOMMODATIONS* includes employee benefits, such as back-up dependent care and paid sick leave. *CONTINUED PAY* reflects those firms that announced continued payment of workers' full wages, even if facilities or offices are closed. *PAY INCREASE* reflects those firms announcing hiring of new employees or increased wages, such as through changes in hourly wages or bonuses. The sample is split into four subsamples using median values of *NET CASH*, which is the proportion of cash (net of short-term obligations) to total assets as of the firm's 2019 year-end, and median values of *EMPLOYMENT SCORES*, which is each firm's 2019 score by JUST Capital on the basis of wages, benefits, training opportunities, and safety measures offered to employees. Table 4, Panel C presents statistical tests of the differences between these four lines.

Figure 4
Timing of Employment Action by Financial Flexibility and Historical Employment Scores (cont'd.)

Panel B: Actions to decrease employee compensation/status





This figure plots the timing of firm actions by day during the period March 1 through May 31, 2020. The graphs on this page correspond to actions that decrease employee compensation and status. *WORKFORCE REDUCTION* includes firms that announced layoffs or furloughs. *CUT PAY* reflects those firms that announced reductions in non-executive employee wages. The sample is split into four subsamples using median values of *NET CASH*, which is the proportion of cash (net of short-term obligations) to total assets as of the firm's 2019 year-end, and median values of *EMPLOYMENT SCORES*, which is each firm's 2019 score by JUST Capital on the basis of wages, benefits, training opportunities, and safety measures offered to employees. Table 4, Panel C presents statistical tests of the differences between these four lines.

Table 1
Sample Composition

SIC	Industry Description	# Firms (1)	% of Sample (2)	% of Worldwide Employment (3)	% of Total Assets (4)
10-19	Mining and construction	11	3.14%	1.69%	1.32%
20-39	Manufacturing	116	33.14%	24.18%	17.42%
40-49	Transportation and communication	55	15.71%	12.31%	11.50%
50-59	Wholesale and retail trade	57	16.29%	34.78%	5.14%
60-69	Finance, insurance, and real estate	57	16.29%	11.31%	57.75%
70-89	Services	52	14.86%	14.56%	5.89%
90-99	Public administration and other	2	0.57%	1.18%	0.98%
	Total Firms	350	100.00%	100.00%	100.00%

Table 1 reports descriptive statistics about the composition of our sample. Firms are grouped by industry code. The sample includes firms across all industries, with the greatest concentration in manufacturing; see Figure 1. We calculate each group's proportion of the total sample's employment and assets in Columns (3) and (4) using worldwide employment as disclosed in firms' financial statements. All variables are defined in the appendix.

Table 2
Descriptive Statistics

Panel A: Descriptive statistics on all variables

	N	Mean	Std. Dev.	P25	P50	P75
Measures of financial flexibility						
NET CASH$_i$	350	0.053	0.110	-0.010	0.027	0.088
CASH$_i$	350	0.094	0.101	0.023	0.062	0.131
Actions to maintain/increase employee status or compensation						
ACCOMMODATIONS$_i$	350	0.463	0.499	0.000	0.000	1.000
CONTINUED PAY$_i$	350	0.171	0.377	0.000	0.000	0.000
PAY INCREASE$_i$	350	0.249	0.433	0.000	0.000	0.000
Actions to reduce employee status or compensation						
CUT PAY$_i$	350	0.197	0.398	0.000	0.000	0.000
WORKFORCE REDUCTION$_i$	350	0.280	0.450	0.000	0.000	1.000
Control and other variables						
EMPLOYMENT$_i$	350	3.770	0.981	2.974	3.689	4.381
PROFITABILITY$_i$	350	0.053	0.069	0.024	0.045	0.082
TANGIBILITY$_i$	350	0.280	0.246	0.077	0.197	0.470
INVENTORY$_i$	350	0.072	0.098	0.003	0.027	0.105
SALES GROWTH$_i$	350	0.058	0.180	-0.005	0.039	0.087
INVESTMENT GRADE INDICATOR$_i$	350	0.623	0.485	0.000	1.000	1.000
EMPLOYMENT SCORE – JUST CAPITAL$_i$	350	50.231	15.457	39.428	51.897	61.767
EMPLOYMENT SCORE – DRUCKER INSTITUTE$_i$	308	52.099	9.335	46.750	52.200	58.700

Table 2 reports descriptive statistics for the variables used in the empirical tests. The descriptive statistics related to the five employment actions studied are plotted on a biweekly basis in Figure 2. All variables are defined in Appendix A.

Table 3
Financial Flexibility and Employment Actions

Panel A: Linear probability model to measure likelihood of employment action

	Maintain or Increase Compensation and Employment Status			*Reduce Compensation or Empt. Status*	
	CONTINUED PAY	*ACCOM.*	*PAY INCREASE*	*WORKFORCE REDUCTION*	*CUT PAY*
	(1)	(2)	(3)	(4)	(5)
HIGH NET CASH	**0.133*** **	**-0.048**	**-0.055**	**0.052**	**-0.002**
	(3.32)	**(-0.89)**	**(-1.16)**	**(1.08)**	**(-0.03)**
EMPLOYMENT	0.062***	0.149***	0.076***	0.043*	0.047**
	(2.82)	(6.13)	(3.07)	(1.74)	(2.14)
PROFITABILITY	0.492**	-0.009	0.363	-0.157	0.129
	(1.98)	(-0.02)	(1.00)	(-0.50)	(0.52)
TANGIBILITY	0.012	0.071	-0.042	0.176*	0.170*
	(0.16)	(0.67)	(-0.47)	(1.89)	(1.88)
INVENTORY	-0.006	0.103	0.094	0.949***	0.443*
	(-0.03)	(0.40)	(0.36)	(3.11)	(1.87)
SALES GROWTH	-0.026	0.118	0.187	0.004	0.010
	(-0.34)	(0.94)	(1.61)	(0.03)	(0.14)
INVESTMENT GRADE IND	-0.002	-0.011	-0.024	-0.108**	-0.003
	(-0.04)	(-0.20)	(-0.50)	(-2.19)	(-0.06)
OBSERVATIONS	350	350	350	350	350
R-SQUARED	0.069	0.094	0.046	0.084	0.044

Table 3, Panel A reports results from a linear probability model measuring the likelihood of five specific employment actions between March 1 and May 31, 2020 by the 350 largest U.S. employers. The actions include *CONTINUED PAY*, *ACCOMMODATIONS*, *PAY INCREASE*, *WORKFORCE REDUCTION*, and *CUT PAY*. Policies and variables are defined in Appendix A. We present t-statistics in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% level, respectively.

Table 3 (cont'd.)
Financial Flexibility and Employment Actions

Panel B: Measures of statistical differences from hazard model for timing of employment actions

	Equality of survivor functions	
	chi(2)	*p-value*
Firm employment actions	(1)	(2)
Actions to maintain/increase employee status or compensation		
CONTINUED PAY	11.61	0.0007
ACCOMMODATIONS	1.59	0.2072
PAY INCREASE	1.09	0.2971
Actions to reduce employee status or compensation		
WORKFORCE REDUCTION	0.71	0.3984
CUT PAY	0.32	0.5690

Table 3, Panel B presents statistical tests of the differences in the timing of firms' actions after partitioning the sample on *NET CASH*. *HIGH* (*LOW) NET CASH* firms are those with above- (below) median values for the proportion of cash (net of short-term obligations) to total assets as of the firm's 2019 year-end. The policies are described in detail in Appendix A. The model is estimated controlling for *EMPLOYMENT, PROFITABILITY, TANGIBILITY, INVENTORY, SALES GROWTH*, and whether the firm has an investment grade debt rating (*INVESTMENT GRADE*).

Table 4
Financial Flexibility, Employment Scores, and Employment Actions

Panel A: Financial flexibility, pre-pandemic worker scores, and the likelihood of policies increasing worker status or compensation

	CONTINUED PAY		*ACCOMMODATIONS*		*PAY INCREASE*	
	(1)	(2)	(3)	(4)	(5)	(6)
HIGH NET CASH	**0.085***	**0.056**	**0.022**	**-0.039**	**-0.140****	**-0.128***
	(1.69)	**(0.99)**	**(0.29)**	**(-0.50)**	**(-2.18)**	**(-1.79)**
HIGH EMP SCORE	0.056	0.039	-0.021	0.001	-0.077	-0.135*
	(1.15)	(0.68)	(-0.28)	(0.01)	(-1.09)	(-1.90)
HIGH NET CASH*HIGH EMP SCORE	**0.104**	**0.161***	**-0.149**	**-0.066**	**0.177***	**0.178***
	(1.33)	**(1.85)**	**(-1.43)**	**(-0.60)**	**(1.86)**	**(1.83)**
EMPLOYMENT	0.062***	0.056**	0.151***	0.145***	0.073***	0.086***
	(2.83)	(2.44)	(6.14)	(5.71)	(2.94)	(3.46)
PROFITABILITY	0.379	0.227	0.117	0.444	0.276	0.275
	(1.51)	(0.67)	(0.28)	(0.90)	(0.73)	(0.53)
TANGIBILITY	0.050	0.046	0.028	0.104	-0.012	-0.040
	(0.66)	(0.51)	(0.27)	(0.90)	(-0.13)	(-0.43)
INVENTORY	0.140	0.051	-0.027	0.048	0.110	0.131
	(0.57)	(0.21)	(-0.11)	(0.18)	(0.40)	(0.48)
SALES GROWTH	0.007	0.017	0.086	0.247*	0.199*	0.333***
	(0.09)	(0.17)	(0.65)	(1.88)	(1.69)	(2.90)
INVESTMENT GRADE IND	-0.019	-0.027	0.001	-0.027	-0.016	0.003
	(-0.46)	(-0.57)	(0.02)	(-0.46)	(-0.34)	(0.05)
OBSERVATIONS	350	308	350	308	350	308
R-SQUARED	0.091	0.094	0.107	0.105	0.056	0.078

Table 4, Panel A reports results from a linear probability model measuring the likelihood of three employment actions between March 1 and May 31, 2020 that maintain or increase employee compensation and status. The odd (even) columns use the JUST Capital (Drucker Institute) Employment Score. Variables are defined in Appendix A, and t-statistics are in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% level, respectively.

Table 4
Financial Flexibility, Employment Scores, and Employment Actions (cont'd.)

Panel B: Financial flexibility, pre-pandemic worker scores, and the likelihood of policies decreasing worker status or compensation

	WORKFORCE REDUCTION		*CUT PAY*	
	(1)	(2)	(3)	(4)
HIGH NET CASH	**0.184****	**0.186****	**-0.017**	**-0.046**
	(2.56)	**(2.57)**	**(-0.26)**	**(-0.68)**
HIGH EMP SCORE	-0.010	0.071	-0.058	-0.115*
	(-0.15)	(0.98)	(-0.96)	(-1.74)
HIGH NET CASH*HIGH EMP SCORE	**-0.281*****	**-0.234****	**0.030**	**0.119**
	(-2.97)	**(-2.33)**	**(0.34)**	**(1.28)**
EMPLOYMENT	0.045*	0.052**	0.045**	0.057***
	(1.88)	(2.05)	(2.05)	(2.68)
PROFITABILITY	0.063	-0.457	0.141	-0.092
	(0.19)	(-1.11)	(0.54)	(-0.25)
TANGIBILITY	0.102	0.196*	0.166*	0.239**
	(1.10)	(1.91)	(1.80)	(2.35)
INVENTORY	0.746***	0.927***	0.385	0.427*
	(2.62)	(3.03)	(1.65)	(1.79)
SALES GROWTH	-0.049	-0.075	0.000	0.022
	(-0.43)	(-0.57)	(0.01)	(0.24)
INVESTMENT GRADE IND	-0.091*	-0.084	0.008	0.030
	(-1.88)	(-1.57)	(0.19)	(0.64)
OBSERVATIONS	350	308	350	308
R-SQUARED	0.132	0.119	0.046	0.070

Table 4, Panel B reports results from a linear probability model measuring the likelihood of two employment actions between March 1 and May 31, 2020 that maintain or increase employee compensation and status. The odd (even) columns use the JUST Capital (Drucker Institute) Employment Score. Variables are defined in Appendix A, and t-statistics are in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% level, respectively.

Table 4
Financial Flexibility, Employment Scores, and Employment Actions (cont'd.)

Panel C: Analysis of the daily timing of policy implementation

Firm employment actions	Equality of survivor functions (1) *chi(2)*	(2) *p-value*
Policies to maintain/increase employee status or compensation		
CONTINUED PAY	19.38	0.0002
ACCOMMODATIONS	6.76	0.0799
PAY INCREASE	6.31	0.0976
Policies to reduce employee status or compensation		
WORKFORCE REDUCTION	32.18	0.0000
CUT PAY	3.85	0.2785

Panel D: Comparison of firm action across subsamples

	Equality of survivor functions							
	High Net Cash & High Emp Score		*High Net Cash & Low Emp Score*		*Low Net Cash & High Emp Score*		*Low Net Cash & Low Emp Score*	
Firm employment actions	(1) *chi(2)*	(2) *p-value*	(3) *chi(2)*	(4) *p-value*	(5) *chi(2)*	(6) *p-value*	(7) *chi(2)*	(8) *p-value*
CONTINUED PAY	17.8	0.0000	2.51	0.1129	0.04	0.8362	5.26	0.0218
ACCOMMODATIONS	5.68	0.0172	0.00	0.9472	1.02	0.3137	2.43	0.1188
PAY INCREASE	0.36	0.5475	0.65	0.4216	3.21	0.0734	4.17	0.0412
WORKFORCE REDUCTION	13.50	0.0002	2.40	0.1216	25.78	0.0000	0.36	0.5497
CUT PAY	1.62	0.2028	0.75	0.3876	0.40	0.5265	2.36	0.1245

Table 4, Panels C and D presents statistical tests of the differences in the timing of firms' actions after partitioning the sample on *NET CASH* and *EMPLOYMENT SCORES*. *HIGH* (*LOW) NET CASH* firms are those with above- (below) median values for the proportion of cash (net of short-term obligations) to total assets as of the firm's 2019 year-end; *HIGH (LOW) EMP SCORE* are firms with above- (below) median values in JUST Capital's 2019 ranking for employment matters. Panel C tests differences across the model, whereas Panel D tests statistical differences comparing one group to the other three groups. The policies are described in Appendix A.

Table 5:
The Effect of the CARES Act on the Likelihood of Labor Policy Actions

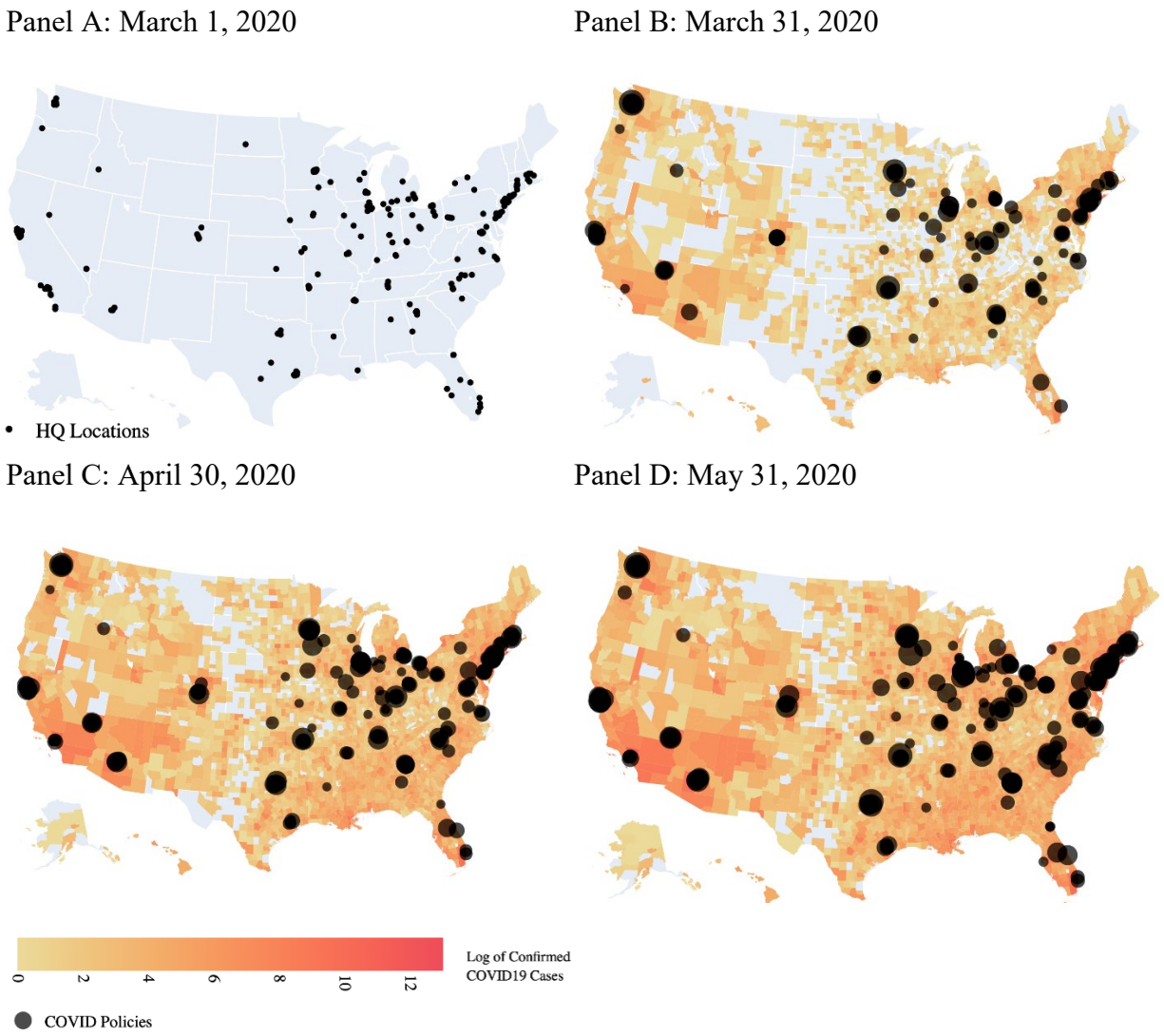
	Maintain or Increase Employment Status			*Reduce Empt. Status*	
	CONTINUED PAY	*ACCOM.*	*PAY INCREASE*	*WORKFORCE REDUCTION*	*CUT PAY*
	(1)	(2)	(3)	(4)	(5)
HIGH NET CASH & EMP SCORE	**0.147*** **	**-0.124** **	**0.073**	**-0.129*** **	**0.001**
	(2.82)	**(-2.07)**	**(1.26)**	**(-2.59)**	**(0.01)**
CARES WINDOW	0.907***	0.505***	0.779***	0.672***	0.833***
	(25.98)	(9.86)	(18.06)	(16.87)	(22.93)
HIGH NET CASH & EMP SCORE* POST CARES WINDOW	**-0.138** **	**0.206** **	**-**	**0.130** **	**-0.061**
	(-2.10)	**(2.39)**		**(2.20)**	**(-1.07)**
EMPLOYMENT	0.062***	0.148***	0.069***	0.036*	0.052**
	(3.04)	(6.21)	(2.86)	(1.66)	(2.47)
PROFITABILITY	0.428*	0.068	0.078	0.054	0.170
	(1.72)	(0.16)	(0.22)	(0.19)	(0.71)
TANGIBILITY	0.076	0.035	-0.002	0.076	0.178**
	(1.09)	(0.35)	(-0.03)	(0.85)	(2.04)
INVENTORY	-0.021	-0.000	0.116	0.642**	0.346
	(-0.12)	(-0.00)	(0.46)	(2.42)	(1.61)
SALES GROWTH	-0.069	0.104	0.249**	-0.048	0.002
	(-1.01)	(0.82)	(2.24)	(-0.41)	(0.03)
INVESTMENT GRADE IND	0.013	-0.016	-0.012	-0.070	-0.011
	(0.36)	(-0.29)	(-0.27)	(-1.54)	(-0.26)
OBSERVATIONS	350	350	350	350	350
R-SQUARED	0.091	0.107	0.055	0.232	0.046

Exhibit 5 reports results of OLS regressions how the likelihood of firms' employment actions changed around in the 10 day window following the CARES Act. No coefficient is presented for *PAY INCREASE* because none of the firms captured by the interaction term announced this policy during the short window. All variables are defined in the appendix. ***, **, and * indicates statistical significance at the 1%, 5%, and 10% level, respectively.

Online Appendix

Not intended for print publication

Online Appendix Figure A1
Companies and Employment Actions by Time As Compared to Covid-19 Outbreak



Panel A depicts the headquarters locations of the 350 companies in our sample. Panels B, C, and D plot the number of employment actions at the end of March, April, and May, respectively, where the size of each black dot relates to the number of actions by each firm. The headquarters location and policy intensity are mapped against the number of Covid-19 cases as measured at the county level, where lighter colors such as yellow (darker colors such as orange) imply fewer (more) cases.

Online Appendix Table 1
List of Companies included in the Sample

3M
Abbott
AbbVie
Acadia
Accenture
Activision Blizzard
ADM
Adobe Inc.
ADP
ADT
Advance
AECOM
AEP
AES Corp
Aflac
AIG
Alaska Air
ALLEGHANY CORP
Allstate
Ally Financial
Alphabet
Altice USA Inc
ALTRIA GROUP INC
Amazon
AMERCO
Ameren Corp
American Airlines
American Express
American Tower
Ameriprise
AmerisourceBergen
Amgen
Amphenol
Anthem
Aon
Apple
Aramark
Assurant
AT&T
AutoNation
AutoZone
Baker Hughes
Ball Corp
Bank of America
Baxter
BD
Berry
Best Buy
Biogen
Blackrock
BNY Mellon
Boeing
Booking Holdings Inc
Booz Allen
Boston Scientific
Bristol-Myers Squibb
Broadcom
Brunswick
Burlington Stores
CACI
Caesars
Campbell
Capital One
Cardinal Health
CarMax
Carnival
Carter's
Casey's General Stores
Caterpillar
CBRE
Centene
CenterPoint
CenturyLink
Ceridian
Cerner
CH Robinson
Charter
Chemed
Chevron
Chipotle
Chubb
Cigna
Cintas
Cisco
Citi
Citizens
Clean Harbors
Coca-cola C
Cognizant
Colgate-Palmolive
Comcast
Conagra Brands
Connoco Phillips
Consolidated Edison
Corning
Costco Wholesale Corp
Crown Holdings
CSX Corp
Cummins
CVS
Danaher
Darden
DaVita
Deere
Dell Technologies
Delta
Dick's
Discover Financial Services
DISH Network
Disney
Dollar General
Dollar Tree
Dominion Energy
Domino's
Dow
Duke Energy
DuPont
DXC
Eaton
Ecolab
Edison International
Eli Lilly
Emerson
Entergy
Estee Lauder
Eversource Energy
Exelon
Expedia Group
ExxonMobil
Facebook
Fastenal
FedEx
Fidelity National Info Svs
Fifth Third
First American
First Energy Corp
Fiserv
Five Below
Fluor
FNF
Foot Locker
Ford
Fortive
Freeport-McMoran inc.
Gallagher
Gap
GD
GE
General Mills
Genuine Pars
Gilead Sciences
Global Payments
GM
Goldman Sachs
Graphic Packaging
Halliburton
Harris
Hartford Financial
HCA Holdings
HERSHEY CO
Hilton
Home Depot
Honeywell
Hormel
HP
HPE
Humana
Huntington
Huntington Ingalls
Hyatt
IBM
Illinois Tool Works
Intel
Intercontinental Exchange
International Paper
Interpublic
IQVIA
Jabil
Jacobs
JB Hunt
JetBlue
JLL
Johnson & Johnson
Johnson Controls
JPMorgan Chase
Kellogg
Keurig Dr Pepper
KeyCorp
Kimberly-Clark Corp
Kinder Morgan Inc
Knight-Swift
Kohl's
Kraft Heinz
Kroger
L Brands
LabCorp
Las Vegas Sands
LEAR Corp
Leidos
Linde

Online Appendix Table 1
List of Companies included in the Sample (cont'd.)

LKQ
Lockheed Martin
Loews
Lowe's
M&T
Macy's
Marathon Petroleum
Markel
Marriott
Marsh & McLennan
McDonald's
McKesson
MDU Resources
Medtronic
Merck
MetLife
MGM Resorts
Micron Technology Inc
Microsoft
Mohawk
Molson Coors Beverages
Mondelez International
Morgan Stanley
Motorola Solutions Inc
Netflix Inc
Newell Brands
Newmont Corp
NextEra
Nike
Nordstrom
Norfolk Southern
Northern Trust
Northrop Grumman
NOV
Nucor Corp
NVIDIA
Occidental Petroleum
Old Dominion
Omnicom
Oracle
O'Reilly
Oshkosh
P&G
PACCAR
Parker Hannifin
Paychex
PCA
Penske
PepsiCo
Pfizer
PG&E
Phillips 66
Pilgrim's Pride
PNC
PPG
Principal
Progressive
Prudential
PSEG
PVH
Qualcomm
Quanta
Quest Diagnostics
Qurate Retail
Ralph Lauren
Raymond James
Regions
Reliance
Republic Services
Rollins
Roper Technologies
Ross Stores
Ryder
S&P Global Inc
Salesforce
Schlumberger
Schneider
Schwab
SCI
Sempra Energy
Sherwin-Williams
Sonoco
Southern Company
Southern Copper Corp
Southwest
Spirit AeroSystems
Sprint
Sprouts Farmers Market
SS&C Technologies
Stanley Black & Decker
Starbucks
State Street
Stericycle
Stryker
Synchrony Financial
SYNNEX
Sysco
Target
Tesla
Texas Instruments Inc
Textron
Thermo Fisher
Thor Industries
Timken
TJX
T-Mobile
Tractor Supply
TransDigm
Travelers
Tyson
Uber Technologies
UHS
Ulta Beauty
Under Armour
Union Pacific
United
United Rentals
UnitedHealth
UPS
Urban Outfitters
US Bancorp
US Foods
Valero Energy Corp
Verizon
VF Corp
ViacomCBS
Visa
VMWARE
Wabtec
Walgreens Boots Alliance
Walmart
Waste Management
Wayfair
WD
WEC Energy Group
Wells Fargo
Wendy's
WestRock
Whirlpool
Williams-Sonoma
Willis Towers Watson
Wyndham Destinations
Wyndham Hotels
Wynn Resorts
XCEL Energy Inc
Xerox
XPO
YUM!
Zimmer Biomet
Zoetis Inc

Online Appendix Table 2
Robustness to Alternative Measurement of Financial Flexibility

Panel A: CONTINUED PAY

	HIGH NET CASH	*HIGH CASH*	*NET CASH*	*CASH*
	(1)	(2)	(3)	(4)
HIGH FINANCIAL FLEXIBILITY	**0.085***	**0.154*****	**0.494****	**0.590***
	-1.69	**(3.02)**	**(1.97)**	**(1.90)**
HIGH EMP SCORE	0.056	0.092*	0.080*	0.058
	-1.15	(1.78)	(1.85)	(1.09)
HIGH FF*HIGH EMP SCORE	**0.104**	**-0.004**	**0.260**	**0.294**
	-1.33	**(-0.05)**	**(0.73)**	**(0.69)**
OBSERVATIONS	350	350	350	350
CONTROLS?	Yes	Yes	Yes	Yes

Panel B: ACCOMMODATIONS

	HIGH NET CASH	*HIGH CASH*	*NET CASH*	*CASH*
	(1)	(2)	(3)	(4)
HIGH FINANCIAL FLEXIBILITY	**0.022**	**0.061**	**0.663***	**0.800***
	-0.29	**(0.82)**	**(1.73)**	**(1.66)**
HIGH EMP SCORE	-0.021	-0.015	-0.053	-0.024
	(-0.28)	(-0.19)	(-0.87)	(-0.32)
HIGH FF*HIGH EMP SCORE	**-0.149**	**-0.154**	**-0.897***	**-0.871**
	(-1.43)	**(-1.41)**	**(-1.90)**	**(-1.54)**
OBSERVATIONS	350	350	350	350
CONTROLS?	Yes	Yes	Yes	Yes

Online Appendix Table 2 (cont'd.)
Robustness to Alternative Measurement of Financial Flexibility

Panel C: PAY INCREASE

	HIGH NET CASH	*HIGH CASH*	*NET CASH*	*CASH*
	(1)	(2)	(3)	(4)
HIGH FINANCIAL FLEXIBILITY	**-0.140****	**-0.112***	**-0.130**	**-0.111**
	(-2.18)	**(-1.76)**	**(-0.33)**	**(-0.22)**
HIGH EMP SCORE	-0.077	-0.026	-0.002	-0.017
	(-1.09)	(-0.35)	(-0.04)	(-0.23)
HIGH FF*HIGH EMP SCORE	**0.177***	**0.089**	**0.299**	**0.310**
	-1.86	**(0.90)**	**(0.60)**	**(0.53)**
OBSERVATIONS	350	350	350	350
CONTROLS?	Yes	Yes	Yes	Yes

Panel D: WORKFORCE REDUCTION

	HIGH NET CASH	*HIGH CASH*	*NET CASH*	*CASH*
	(1)	(2)	(3)	(4)
HIGH FINANCIAL FLEXIBILITY	**0.184****	**0.180****	**0.148**	**0.346**
	-2.56	**(2.50)**	**(0.37)**	**(0.74)**
HIGH EMP SCORE	-0.01	-0.043	-0.114**	-0.072
	(-0.15)	(-0.63)	(-2.10)	(-1.11)
HIGH FF*HIGH EMP SCORE	**-0.281*****	**-0.229****	**-0.675**	**-0.845***
	(-2.97)	**(-2.34)**	**(-1.53)**	**(-1.71)**
OBSERVATIONS	350	350	350	350
CONTROLS?	Yes	Yes	Yes	Yes

Online Appendix Table 2 (cont'd.)
Robustness to Alternative Measurement of Financial Flexibility

Panel E: CUT PAY

	HIGH NET CASH (1)	*HIGH CASH* (2)	*NET CASH* (3)	*CASH* (4)
HIGH FINANCIAL FLEXIBILITY	**-0.017**	**-0.024**	**-0.428**	**-0.213**
	(-0.26)	**(-0.38)**	**(-1.25)**	**(-0.61)**
HIGH EMP SCORE	-0.058	-0.042	-0.060	-0.061
	(-0.96)	(-0.67)	(-1.26)	(-1.03)
HIGH FF*HIGH EMP SCORE	**0.03**	**0.003**	**0.414**	**0.227**
	-0.34	**(0.03)**	**(0.94)**	**(0.50)**
OBSERVATIONS	350	350	350	350
CONTROLS?	Yes	Yes	Yes	Yes

This table reports the robustness of results to alternative measurement of financial flexibility; each of the five panels reports results for each of the five policies studied. Column (1) repeats results from Table 4, Panel A and B using *HIGH NET CASH* as the dependent variable; Columns (2), (3), and (4) replace the dependent variable with *HIGH CASH*, *NET CASH*, and *CASH,* respectively. Variables are defined in Appendix A, and t-statistics are in parentheses. *, **, and *** represent statistical significance at the 10%, 5%, and 1% level, respectively.