2021

Stakeholder-friendly or Shareholder-friendly? A Study of Firm Polices During the COVID-19 Pandemic

Hannah Abouchar

Claremont McKenna College

Stakeholder-friendly or Shareholder-friendly? A Study of Firm Polices During the COVID-19 Pandemic

submitted to

Professor Nishant Dass

by

Hannah Abouchar

for

Senior Thesis in Economics

Spring 2021

May 3, 2021

Acknowledgements

I would like to start by thanking my thesis reader, Professor Nishant Dass, for his mentorship and support during the semester. The knowledge and time he shared with me was instrumental in the completion of my thesis. A big thank you to Professor Janet Kiholm Smith for offering her guidance throughout the thesis writing process. Her suggestions and encouragement made all the difference. I am grateful to Amanda Huang and Yusuf Ismaeel who I turned to for data and programming troubleshooting. I would also like to recognize my friends, family, Andrew from the Apple Genius Bar, and staff at the Dean of Students Office, specifically Dianna Graves, Sue Layden, and Shayla Chalker, for going above and beyond to help me when my computer broke unexpectedly.

Abstract

The far-reaching economic effects of the pandemic provide an opportunity to study the responses of corporations to exogenous shocks and the subsequent uncertainty. I investigate how firm characteristics impact dividend payout and employment policy changes during the COVID-19 pandemic. I focus on firm characteristics and actions of Russell 1000 firms in 2020, a year that captures firm behavior before and after the height of the pandemic. My paper covers three areas: dividend payout policy, employment policy, and the interaction between the two during an unexpected year defined by COVID-19. I use bivariate and multinomial logistic regressions to analyze the relationship between firm characteristics and the outcome variables in my models. My results indicate that firms with larger debt, greater cash, and fewer growth prospects in the previous quarter are more likely to cut dividends. I do not find significant firm determinants of employment cuts. Furthermore, I find that there are few firm characteristics in my model that define whether a company will choose a policy that prioritizes shareholders or stakeholders, but firm characteristics are more predictive of policies in which either employment or dividend payouts were cut while the other was maintained or increased. I contribute to the divided literature on dividend payout and employment during times of uncertainty. My research adds to the limited literature on the interaction of dividend payout and employment policies. I also provide additional analysis into the actions of companies during the COVID-19 pandemic.

Table of Contents

I. Introduction

The first reported case of the coronavirus (COVID-19) was on December 31, 2019, but COVID-19 took the global stage in the first months of 2020 as the virus spread rapidly around the world. Once the World Health Organization declared COVID-19 a pandemic on March 11, fear and uncertainty plagued the global economy. Individuals and countries in every part of the world undertook measures that prioritized virus prevention often at the expense of economic advancement. Some of the policies that governments adopted included stay-at-home orders, travel bans, curfews, business restrictions, and border closures. Companies within the Entertainment and Tourism industry were hit especially hard because in-person events and travel were halted (Rio-Chanona et al. 2020). The effects of the pandemic, however, both direct and ripple, were felt in every aspect of the economy. The United States government provided over five million loans to business owners through the Paycheck Protection Program (PPP) to keep companies afloat (Ponciano 2020). Furthermore, the unemployment rate in the United States reached a 21st century all-time high of 14.8% in April 2020 (Falk et al. 2020).

The far-reaching economic effects of the pandemic provide an opportunity to study the responses of corporations to exogenous shocks and the subsequent uncertainty. I investigate how firm characteristics impact dividend payout and employment policy changes during the COVID-19 pandemic. I focus on firm characteristics and actions of Russell 1000 firms in 2020, a year that captures firm behavior before and after the height of the pandemic. My paper covers three areas: dividend payout policy, employment policy, and the interaction between the two during an unexpected year defined by COVID-19.

Using data from COMPUSTAT, I observe year over year quarterly dividend payout changes from January through December 2020. I take advantage of *Just Capital*'s unique *COVID-19 Response Tracker* to identify firms that laid off or furloughed employees from March to June 2020.[1] This limited time frame shows which companies chose employment cuts as their immediate response to the pandemic. I use a bivariate logistic regression model to predict the odds of dividend cuts based on firm characteristics going into the quarter. Firm characteristics include firm profitability proxied by earnings before interest, tax, depreciation, and amortization ("EBITDA"); leverage proxied by debt in current and long-term liabilities; cash holdings proxied by the sum of cash and short-term investments; book-to-market ratio; and firm size proxied by the log of total assets. I include the same covariates when I regress employment cuts that took place during the first two quarters of 2020 on firm characteristics from Q1 and Q2 2020. I then combine employment and dividend payout decisions to create four distinct policy paths firms can take during the pandemic. I regress these policy choices on firm characteristics from the contemporaneous and lagged quarters to evaluate which characteristics impact the policies that firms choose. I control for industry fixed effects in all my regressions.

My results indicate that firms with higher debt, cash holdings, and book-to-market ratios in the previous quarter are more likely to cut dividends. Less profitable firms are only slightly more likely to cut dividends, though the effects are so small that they are empirically insignificant. I find that there are few firm characteristics in my model that

[1] *The COVID-19 Corporate Response Tracker* can be found here: https://justcapital.com/reports/the-covid-19-corporate-response-tracker-how-americas-largest-employers-are-treating-stakeholders-amid-the-coronavirus-crisis/

define whether a company will choose a policy that prioritizes shareholders or stakeholders, but firm characteristics are more predictive of policies in which either employment or dividend payouts were cut while the other was maintained or increased. Such policies are more indicative of firms that are stakeholder or shareholder friendly since either employment was cut or dividend payouts were cut. I also find earnings before adjustments in Qt are a statistically significant predictor for all four potential policy decisions, though the effects are small.

II. Literature Review

2.1 Dividend Payouts and Uncertainty

Dividends are a common form of sharing a firm's profits with its owners. The first dividends were paid in the seventeenth century, and dividend payout policy has changed significantly since then (Freedman 2006). In fact, Lintner's 1956 work published after WWII has become pivotal in understanding modern-day dividend policies. Lintner uses his findings from company surveys and executive interviews to develop a theoretical model of corporate dividend behavior. He discovers that net-income plays the largest role in shaping a firm's target payout ratio – a payout that is strictly adhered to by the firm. Through his field research, Lintner highlights the executive motivations behind dividends, emphasizing a sense of obligation to shareholders. The company's long-term projected earnings influence their dividend policies, and the ratio between their current earnings and their current dividend rate shapes the amount dividend payouts change over time (Lintner 1956).

Lintner's research is further supported by Brav et al.'s (2005) research on dividend policy. Many of the firms they sample start paying dividends as a result of sustainable earnings growth. Though most firms prioritize maintaining dividend payout levels over other cash obligations, they declare higher dividends only after investment and liquidity goals have been achieved. Likewise, Brav et al. (2005) find that 21st century firms set more payout ratio targets than witnessed in Lintner's findings a century prior.

Over half a century after Lintner published his work, DeAngelo et al. (2005) built on his findings by focusing on a firm's earned/contributed capital mix. The dividend policies of firms at different stages of their company life cycles indicate a positive relationship between retained earnings and dividend payouts. Older firms, with higher retained earnings relative to their total equity and assets, pay higher dividends. In contrast, companies in earlier stages pay little to no dividends because their biggest cash obligation is to reinvest profits towards growth (DeAngelo et al. 2005).

Chay and Suh (2009), on the other hand, find that a firm's long-term cash-flow trajectory has a larger impact on determining dividend payout policy than the firm's earned/contributed capital mix. Their empirical research establishes a strong and negative correlation between cash-flow uncertainty and dividend payouts by using stock return and operating profit volatility as a measure of a firm's cash-flow (Chay and Suh 2009).

Lintner's research also shines light on the rigidity of modern-day dividend policies. His findings emphasize managerial preferences for conservatism in setting dividend payouts (Lintner 1956). Historically the market has reacted negatively to dividend changes because shareholders see volatility in dividends as a signal of company

instability. Dividends are sticky, so firms approach investment opportunities with more adaptability to ensure shareholders can be paid stable dividends *(Ibid)*.

Though most literature depicts managerial motivations instilled in shareholder loyalty, Wu's (2018) dynamic agency model sheds light on other dominant incentives. Managers are likely to smooth dividends because a drop in market value can cost them their jobs. Executives face layoffs if dividends drop, so they smooth dividends to absorb the impact of negative quarters on their firm's shareholder value. Managers will even squash investing opportunities to continue paying consistent dividends (Wu 2018). Executives increasingly prefer share repurchases to dividends because they provide firms with more flexibility (Brav et al. 2005).

Much of the most cited literature on dividend payout policy focuses on long-term firm projections. However, many authors have studied the effects of uncertainty shocks. Avramov et al. (2014) find uncertainty shocks and first-moment shocks lead to reductions or omissions of dividend payouts. The authors use uncertainty-related keywords in corporate annual reports as a proxy for uncertainty from 2001 to 2010. This time period captures economic shocks like the 2008 recession and Argentina Peso Crisis. They implement the same method to observe first-moment shocks and analyze words related to these shocks (Avramov et al. 2014). These findings are in line with those of Hail et al (2014) who find dividend payout policies change in response to ambiguity. Hail et al. (2014) investigated information shocks resulting from changes in insider trading regulations, and they found firms are more likely to reduce or halt dividends when there is greater uncertainty due to a regulatory shock to the information environment.

2.2 Dividend Payouts and COVID-19

The literature on the impact of the COVID-19 pandemic on dividend payout is limited and delivers mixed results. The onset of the pandemic in March 2020 shocked the earnings trajectories of many firms. Mazur et al. (2020) observed the dividend policies of S&P 1500 firms during the COVID-19 pandemic and found a negative relationship between dividend yield and earnings. Mazur et al. (2020) defined dividend yield as the gross quarterly dividend per share on the ex-date over the company's close price on the same day. Over 80% of the firms they observed maintained or raised their dividend payments from Q4 2019 to Q2 2020 regardless of a change in earnings. The rarity of payout changes during the COVID-19 pandemic is in line with the existing literature on conservatism and smoothing when declaring dividends (Mazur et al. 2020).

In contrast, Krieger et al. (2020) find that firms, especially those in the *Industrials* sector, overwhelmingly cut dividends when the COVID-19 crisis hit. In fact, more firms in their sample lower or cease dividends in the quarter impacted by the COVID-19 pandemic than any other quarter in the last five years, demonstrating the reactivity of managers during times of crisis and unexpected jumps in net-income and debt (Krieger et al. 2020). Similarly, Pettenuzzo et al. (2020) note that more than 100 firms ceased dividends in March and April 2020. However, they also find that in the same months over 500 firms increased or maintained their dividend payouts. Most of the dividend cuts in April, which may account for some of the variability in literature because the month of April is excluded from Mazur et al.'s (2020) sample. Mazur et al. (2020) also look at fewer firms than Krieger et al. (2020) because they look at dividend-paying firms within

the S&P 1500, a sample number closer to 1000 firms, while Krieger et al. (2020) include 1400 U.S. dividend-paying firms in their sample.

The authors of these studies used different proxies to measure dividend payouts which may contribute to their contrasting results. Mazur et al. (2020) observed a firm's dividend yield, while Krieger et al. (2020) and Pettenuzzo et al. (2020) analyzed a firms per share dividend payouts and their total amount of cash allocated to regular quarterly dividends.

2.3 Employment and Uncertainty

The literature on a firm's employment and financial stability indicates human capital is at risk during economic shocks. Avramov et al. (2014) find that first-moment shocks, which result from tangible changes in a firm's position, lead to employment cuts. On the other hand, uncertainty shocks have no effect on employment because managers prefer to wait out the time of ambiguity (Avramov et al. 2014).

Likewise, Alnahedh et al. (2019) observe a negative relationship between corporate investment, employment, and short-term cash-flow uncertainty. The authors look at firms in the United States outside of the *Utilities* and *Financials* sectors, because these sectors are highly regulated by the government, from 1971 to 2015. They find that there is a significant negative relationship between cash flow uncertainty and both corporate investment and employment. Instead of measuring cash-flow by looking at stock volatility, they measure cash flow uncertainty by creating a time-varying distribution of cash flows that is based on assets not equity.

2.4 Employment and COVID-19

COVID-19 led to record breaking employment cuts throughout the world. Béland et al. (2020) looked at the short-term effects of the pandemic on labor market outcomes through March 2020. Even in the first months of 2020, the authors found unemployment rates in the United States increased, while the number of hours worked decreased.

The existing literature uncovers how the economic effects of COVID-19 differed across countries, industries, and types of workers. Fana et al. (2020) find low-wage and low-productivity service workers were more likely to face employment volatility. The authors looked at the effects of the pandemic in European countries.

2.5 Gaps in the Existing Literature

Stakeholder and shareholder theories have been studied in the past, but the literature on how firm characteristics determine the prioritization and interaction of dividend payout and employment policies is limited. The relationship between firm characteristics and dividend payout and employment policy has most commonly been studied separately. Many of these examples of isolated analysis also exclude COVID-19 from their models or include only the start of 2020. Although discussions on the rise in unemployment during the pandemic have occurred, employment policy determinants during the pandemic have not been studied at this point. Furthermore, the findings on dividend payouts during the pandemic are mixed. Mazur et al. (2020) found a majority of firms raised dividends during the pandemic, while Krieger et al. (2020) found an unparalleled number of firms cut or omitted dividend payments. I would like to provide results that offer additional information on firm policy actions during the pandemic, and I hope to better understand how firm characteristics increased or decreased the likelihood

of dividend and/or employment cuts during a year heavily impacted by the rise and uncertainty of COVID-19.

III. Data

3.1 Data Collection

I use two sets of data for my analysis. My sample consists of the 928 companies reviewed by the COVID-19 Corporate Response Tracker from Just Capital. The tracker consolidates information from company websites, press releases, and news articles and outlines the policy decisions of companies from the Russell 1000 during the onset of the pandemic. The Just Capital firm data is limited to company actions taken between March 1 to June 26, 2020. The tracker's variables of interest for my analysis are decisions regarding "Furloughs or Unpaid Leave" and "Layoffs." Furloughs and unpaid leave consist of temporary work and pay holds, while layoffs describe a company's decision to fully terminate an employee contract.

The accounting data used to construct financial variables for my Just Capital firm sample comes from Wharton Research Data Services' COMPUSTAT dataset. I pull North American Quarterly Fundamentals data posted between January 1, 2018 to April 1, 2021 for cash and short-term investments, debt in current liabilities, operating income before depreciation, dividends per share, total assets, total common/ordinary equity, total market value, total long-term debt, and GICS sector. I drop companies with missing COMPUSTAT data values which reduces the firm sample size by 14 companies. I exclude firms that did not pay regular quarterly dividends from Q1 2019 to Q4 2020. The resulting firm sample consists of 637 companies.

In order to best analyze the data within the timeline of the COVID-19 pandemic, I classify firm-level data from January, February, or March as Quarter 1; April, May, June as Quarter 2; July, August, or September as Quarter 3; and October, November, or December as Quarter 4. The number of companies with reported data for the last two quarters of 2020 is slightly lower than earlier quarters, so my sample decreases slightly from Q1 2020 to Q4 2020.

3.2 Variable Creation and Description

I create two indicator variables: one to explore differences in dividend policy and one to explore differences in employment policy. Firms whose quarterly dividends per share were lower in 2020 compared to the same quarter of 2019 were categorized as having cut dividends during the COVID-19 pandemic (*Dividend Cut*). Firms that laid off or furloughed workers from March 1 to June 26, 2020 were grouped and categorized as having cut employees (*Employment Cut*). The time period observed for dividend cuts includes the entire year of 2020, while the time period for employment cuts captures the months of March to June in which the global reach of the pandemic became apparent and escalated rapidly.

To capture firm-level differences that may affect payout and employment policy, I explore five explanatory variables that are constructed as follows. Operating income before depreciation, also known as *EBITDA*, is a proxy for cash-flow uncertainty in my model. Cash-flow uncertainty is one of the biggest determinants of dividend payouts and employment stability according to existing literature (Alnahedh et al. 2019). I also include *Cash Holdings*, the sum of cash and short-term investments. Proceeding Brav et al. (2005) findings, that firms with higher debt are more likely to indicate an inclination

to pay down debt with money that would be used for dividend payments, I ascribe *Debt* as an explanatory variable, and I compute it as the sum of current and long-term debt. For comparability across firms, *EBITDA*, *Debt*, and *Cash Holdings* are scaled by the firm's book value of total assets. Consistent with Brav et al. (2005) financial research, I include *Book-to-Market* ratio to account for firm growth, which I calculate as the total book value of common equity over the total market value of the firm. I choose this metric instead of the market value to book value of common equity because negative book values can skew the interpretation of market to book ratios. I control for industry and firm size effects as well. *Firm Size* is computed through the logarithm of total assets. I group companies into 1 of 11 sectors based on GICS sector codes: *Energy, Materials, Industrials, Consumer Discretionary, Consumer Staples, Health Care, Financials, Information Technology, Communication Services, Utilities, and Real Estate*.[2] My

[2] The GICS has 11 sector classifications that are as follows. *Energy* sector includes companies in energy equipment and services, as well as oil, gas, and consumable fuels. *Materials* sector includes firms in chemicals, construction materials, containers and packaging, metals and mining, and paper and forest products. *Industrials* sector includes firms in aerospace and defense, building products, construction and engineering, electrical equipment, industrial conglomerates, machinery, trading companies and distributors, commercial services and supplies, professional services, air freight and logistics, airlines, marine, road and rail, and transportation infrastructure. *Consumer discretionary* sector includes companies in auto components, automobiles, household durables, leisure products, textiles, apparel and luxury goods, hotels, restaurants and leisure, diversified consumer services, retail distributors, internet and direct marketing retail, and multiline and specialty retail. *Consumer staples* sector includes companies in food and staple retailing, beverages, food products, tobacco, household products, and personal products. *Health care* sector includes firms in health care equipment and supplies, health care providers and services, health care technology, biotechnology, pharmaceuticals, and life sciences tools and services. *Financials* sector includes firms in banks, thrifts and mortgage finance, diversified financial services, consumer finance, capital markets, mortgage real estate investment trusts, and insurance. *Information technology* sector includes companies in IT services, software, communications equipment, technology hardware, storage and peripherals, electronic equipment, instruments and components, and semiconductors and semiconductor equipment. Communication services sector includes firms in diversified and wireless telecommunication services, media, entertainment, and interactive media and services. *Utilities* sector includes companies in electric, gas, water, and multi-utilities, as well as independent power and renewable electricity producers. *Real estate* sector includes firms in equity real estate investment trusts, and real estate management and development ("GLOBAL INDUSTRY CLASSIFICATION STANDARD (GICS®) METHODOLOGY" 2020).

sample is not equally representative of the 11 GICS sectors. For example, roughly 20% of my sample are *Financial* sector firms, while only 3.1% are in Communication Services. Table 5 and Table 6 report the financial explanatory variable summary statistics for firms in my sample. The values for the contemporaneous and lagged quarters are very similar in size.

The frequency at which companies cut dividends in 2020 compared to 2019 increased from Q1 to Q4 as shown in Table 1. This is in line with dividend policy literature which describes firms' reluctance to cut dividends unless it is an absolute necessity. COVID-19 started making headlines at the start of 2020 in Q1, and the severity of the pandemic and its effect on company performance escalated as the year progressed. Almost half of my sample cut dividends at some point in 2020. My findings most closely support those of Krieger et al. (2020) who found firms overwhelmingly cut dividends during COVID-19. Consequently, they differ from the literature published by Mazur et al. (2020) that found a majority of firms maintained or increased dividends in 2020.

My data on employment cuts provides information on the decisions of firms during 2020, Q1 and 2020, Q2. From March (Q1) to June (Q2), 63 companies laid off workers and 103 furloughed or did not pay employees. Table 2 shows these frequencies. In total, 20.3% of my company sample made either of these employment cut decisions, with some firms implementing both policies. Over half of the *Consumer Discretionary* firms in my sample cut employees. These firms' success tends to be pro-cyclical. On the other hand, there are no *Utilities* firms in my sample that laid off or furloughed workers. Consequently, the *Utilities* industry control is dropped from my employment policy regression analysis. Industry employment decision breakdowns are shown in Table 4.

IV. Methodology

I use three regression equations to evaluate dividend and employment policy differences. I start with an equation to observe if firm characteristics, regardless of industry, impact the likelihood of cutting dividends during the pandemic. Then, again controlling for industry, I evaluate if firm characteristics determine the likelihood of a firm exercising employment cuts as an initial policy response to the pandemic. I drop the real estate industry variable from my regression due to collinearity, and it becomes the base-industry outcome for my odds ratio interpretations. Lastly, I combine the nominal outcome variables to create four policies that dividend-paying firms can employ during the pandemic: maintain or increase dividends while maintaining or increasing employment, maintain or increase dividends while cutting employment, cut dividends while maintaining or increasing employment, or cut dividends while cutting employment. I run a multinomial logistic regression to model how firm characteristics impact the odds of each policy outcome.

4.1 Characteristics of COVID-19 Dividend Cutting Firms

I begin with the following regression:

(1)

$$\hat{Y}_{it} = \wedge (\hat{\alpha} + \widehat{\beta_1} X_{1i(t-1)} + \widehat{\beta_2} X_{2i(t-1)} + \widehat{\beta_3} X_{3i(t-1)} + \widehat{\beta_4} X_{4i(t-1)} + \widehat{\beta_5} X_{5i(t-1)} + \widehat{\beta_6} \vartheta_{it} + \epsilon_{it})$$

where $\hat{Y}_{it}$ is the predicted odds of cutting dividends during 2020 for firm i. I use a bivariate logit model since it does not assume a linear relationship. $\wedge$ is a function that

converts the linear component of the model into predicted odds. α is a constant representing the outcome when the explanatory variables equal 0. I follow a method used by Krieger et al. (2020) and use the financial variables from the end of the previous quarter (Q_{t-1}) as the predictors of dividend cuts in Q_t. This method is appropriate since dividend payout of Q_t is declared at the start of the quarter. Therefore, $\widehat{\beta_1}$is the size of the effect of $X_{1i(t-1)}$, *EBITDA* from the prior quarter, on predicting the odds of firm i exercising dividend cuts in Q_t of the pandemic. Respectively, $\widehat{\beta_2}$is the size of the effect of *Debt* from Q_{t-1}, $X_{2i(t-1)}$; $\widehat{\beta_3}$is the size of the effect of *Book-to-Market* from Q_{t-1}, $X_{3i(t-1)}$; $\widehat{\beta_4}$is the size of the effect of *Cash Holdings* from Q_{t-1}, $X_{4i(t-1)}$; and $\widehat{\beta_5}$is the size of the effect of *Firm Size* from Q_{t-1}, $X_{5i(t-1)}$, on predicting the odds of dividend cuts in Q_t. $\vartheta_{it}$is a control term representing the 11 firm industries, and $\epsilon_{it}$is an error term.

4.2 Characteristics of Early COVID-19 Employment Cutting Firm

I use a second regression equation:

(2)

$$\hat{Y}_{it} = \wedge (\hat{\alpha} + \widehat{\beta_1}X_{1iQ2} + \widehat{\beta_2}X_{2iQ2} + \widehat{\beta_3}X_{3iQ2} + \widehat{\beta_4}X_{4iQ2} + \widehat{\beta_5}X_{5iQ2} + \widehat{\beta_6}X_{6iQ1} + \widehat{\beta_7}X_{7iQ1} + \widehat{\beta_8}X_{8iQ1} + \widehat{\beta_9}X_{9iQ1} + \widehat{\beta_{10}}X_{10iQ1} + \widehat{\beta_{11}}\vartheta_{iQ2} + \epsilon_{iQ2})$$

where $\hat{Y}_i$ is the predicted odds of firm i cutting employment as an early response to the pandemic. Comparable to regression (1), $\wedge$ is a link function, and α is a constant. In contrast to the first equation, I restrict my model to the second quarter of 2020 since my employment data is limited to March through June 2020. I include predictor variables measured at the end of the previous quarter$Q_{t-1}$and the same quarter Q_t that firm i cut

employment. I include covariates for firm characteristics in $Q_2 2020$ in addition to those from $Q_1 2020$because employment cuts are not subject to a schedule, unlike dividend payouts. The covariates in my model are as follows: $\widehat{\beta_1}$is the size of the effect of *EBITDA* fromQ_2, X_{1iQ2}, on predicting the odds of firm i implementing employment cuts from March to June 2020; $\widehat{\beta_2}$is the size of the effect of *Debt* fromQ_2, X_{2iQ2}; $\widehat{\beta_3}$is the size of the effect of *Book-to-Market* fromQ_2, X_{3iQ2}; $\widehat{\beta_4}$is the size of the effect of *Cash Holdings* fromQ_2, X_{4iQ2}; $\widehat{\beta_5}$is the size of the effect of *Firm Size* fromQ_2, X_{5iQ2}; $\widehat{\beta_6}$is the size of the effect of *EBITDA* fromQ_1, X_{6iQ1}; $\widehat{\beta_7}$is the size of the effect of *Debt* fromQ_1, X_{7iQ1}; $\widehat{\beta_8}$is the size of the effect of *Book-to-Market* fromQ_1, X_{8iQ1}; $\widehat{\beta_9}$is the size of the effect of *Cash Holdings* fromQ_1, X_{9iQ1}; $\widehat{\beta_{10}}$is the size of the effect of *Firm Size* fromQ_1, X_{10iQ1}. ϑ_{iQ2}represents industry controls, and $\epsilon_{it}$is an error term.

4.3 Firm Characteristics for Dividend and Employment Policy Decisions

I create four new variables that represent the unique policy paths companies can take during the first year of the pandemic. The variables are a combination of the employment and dividend decisions evaluated in the prior logistic regressions. Firms have two decisions regarding employment and dividend payout in my model: either cut the variable of interest OR maintain or increase it. These two options are combined in four different ways to reflect four distinct COVID-19 policy responses. *Policy 1* consists of firms that maintained or increased both dividends and employment, and *Policy 2* represents firms that maintained or increased dividends while cutting employment. Firms that cut dividends while maintaining or increasing their labor force are grouped into *Policy 3*, and *Policy 4* is made up of firms that cut dividends and employment during

COVID-19. The four policy paths are outlined in the matrix below (Table 9), and the frequency at which they occur at in my sample is shown in Table 10.

	Maintain or Increase Employment	*Cut Employment*
Maintain or Increase Dividends	**Policy 1** Maintain or Increase Dividends & Maintain or Increase Employment	**Policy 2 (Shareholder Friendly)** Maintain or Increase Dividends & Cut Employment
Cut Dividends	**Policy 3 (Stakeholder Friendly)** Cut Dividends & Maintain or Increase Employment	**Policy 4** Cut Dividends & Cut Employment

The majority of firms in my sample chose *Policy 1* in 2020. Furthermore, I observe that the number of firms that implemented *Policy 2* is nearly double the number of firms that chose to implement *Policy 3*.

I end with the following regression:

(3)

$$\hat{Y}_{it} = \wedge(\widehat{\alpha^{[P]}} + \widehat{\beta^{[P]}}_1 X_{1it} + \widehat{\beta_2{}^{[P]}} X_{2it} + \widehat{\beta_3{}^{[P]}} X_{3it} + \widehat{\beta_4{}^{[P]}} X_{4it} + \widehat{\beta_5{}^{[P]}} X_{5it} + \widehat{\beta_6{}^{[P]}} X_{6i(t-1)} +$$

$$\widehat{\beta_7{}^{[P]}} X_{7i(t-1)} + \widehat{\beta_8{}^{[P]}} X_{8i(t-1)} + \widehat{\beta_9{}^{[P]}} X_{9i(t-1)} + \widehat{\beta_{10}{}^{[P]}} X_{10i(t-1)} + \widehat{\beta_{11}{}^{[P]}} \vartheta_{iQt} + \epsilon_{iQt})$$

where there are P possible policy outcomes. Since there are more than two possible outcomes, I use a multinomial logistic regression in which $\wedge$ is a link function, and α is a

constant. I include the predictor variables of the same quarter Q_t and the previous quarter Q_{t-1} in my model. Therefore, $\widehat{\beta^{[P]}}_1$ is the size of the effect of X_{1it}, *EBITDA* from Q_t, on predicting the odds of firm i adopting policy P in the same quarter. Respectively, $\widehat{\beta^{[P]}}_2$ is the size of the effect of *Debt* from Q_t, X_{2it}; $\widehat{\beta^{[P]}}_3$ is the size of the effect of *Book-to-Market* from Q_t, X_{3it}; $\widehat{\beta^{[P]}}_4$ is the size of the effect of *Cash Holdings* from Q_t, X_{4it}; and $\widehat{\beta^{[P]}}_5$ is the size of the effect of *Firm Size* from Q_t, X_{5it}, on predicting the odds of policy type in Q_t. Furthermore, to look at the effects of the previous quarter, I include the following covariates: $\widehat{\beta^{[P]}}_6$ is the size of the effect of *EBITDA* from Q_{t-1}, $X_{6i(t-1)}$, on predicting the odds of firm i adopting policy P in Q_t. Respectively, $\widehat{\beta^{[P]}}_7$ is the size of the effect of *Debt* from Q_{t-1}, $X_{7i(t-1)}$; $\widehat{\beta^{[P]}}_8$ is the size of the effect of *Book-to-Market* from Q_{t-1}, $X_{8i(t-1)}$; $\widehat{\beta^{[P]}}_9$ is the size of the effect of *Cash Holdings* from Q_{t-1}, $X_{8i(t-1)}$; $\widehat{\beta^{[P]}}_{10}$ is the size of the effect of *Firm Size* from Q_{t-1}, $X_{10i(t-1)}$. ϑ_{it} is a control term representing the 11 industries in my sample, and ϵ_{it} is an error term.

V. Empirical Findings

I interpret the bivariate and multinomial logistic models' coefficients for direction and magnitude of associations. I convert the effects captured in the first two bivariate logistic regressions into odds ratios. The odds ratios are the exponentiated coefficients for the respective regression. I find the percent change in odds by subtracting 1 from the odds ratio and multiplying the difference by 100. However, I interpret many of the odds ratios at the 1% level because a 1-unit change interpretation would be unrealistic given that many of the covariates evaluating firm characteristics are ratios.

5.1 Characteristics of COVID-19 Dividend Cutting Firms

After regressing quarterly dividend cuts in 2020 on my proxy variables for firm characteristics from the previous quarter, I find a firm's *EBITDA*, *Debt*, *Book-to-Market* ratio, *Cash Holdings,* and *Size* are significant predictors of their likelihood to declare dividend cuts. These results are depicted in Table 7. Once I include industry controls, *Firm Size* loses its statistical significance in the model. Though I find a relationship between a firm's earnings and their decision to cut dividends during COVID-19, the effects of EBITDA in my model are not as prominent as existing dividend payout literature describes. I find that a 0.01 unit decrease in EBITDA scaled by total assets in the previous quarter increases the odds of cutting dividends by less than 1%. These findings demonstrate that earnings are not as important in dividend adjustments during shocks like COVID-19 as with long-term dividend policy setting (Lintner 1956). I find that a firm's debt and book-to-market ratio have larger effects in my model. Higher debt in the previous quarter increases the odds of cutting dividends throughout 2020. The odds of cutting dividends in a quarter impacted by the pandemic are 5.1% higher for every 0.01 unit increase in a firm's debt to assets ratio in the quarter prior. The significance of debt is to be expected following Brav et al. 's (2005) discussions with managers regarding their views on the allocation of funds for debt versus dividends. My results also illustrate the relationship between a firm's growth opportunities and their decision to cut dividends. Since the average book-to-market ratio in my sample of dividend-paying firms fluctuates at the 10% level from quarter to quarter, I interpret a 0.1 unit decrease in a firm's book-to-market ratio in the quarter prior, and I find that it decreases the odds of cutting dividend payout by roughly 10%. In other words, firms that are valued by

investors as having high-growth potential are less likely to cut dividends during the pandemic. This is surprising since previous literature found firms with high market-to-book ratios, and low book-to-market ratios, faced greater uncertainty than more mature companies during economic shocks (Avramov et al. 2004). Another surprising finding is the positive relationship between a firm's cash position and their decision to cut dividends during 2020. A 0.01 unit increase in cash scaled by total assets going into the quarter increases the odds a firm will cut dividends by 6.1%. I capture differences among industries in their likelihood of cutting dividends in 2020. As seen in Figure 3, dividend cuts are more frequent among firms in the *Consumer Discretionary* industry, while firms in the *Utilities* and *Communication Services* space are less likely to cut dividends.

5.2 Characteristics of COVID-19 Employment Cutting Firms

Table 8 shows my regression results. Similar to my earlier findings on dividend cutting firms, company earnings are statistically significant in predicting the odds a firm will choose to respond to the pandemic by reducing their workforce, but their impact is still small. In regard to employment cuts that occurred from March to June 2020, a 0.01 unit decrease in EBITDA for the second quarter, April through June, increases the odds a firm will cut dividends in that same quarter by around 1%, while a firm's earnings from the first quarter, January to March, are statistically insignificant in my model. I am able to separate the effects of the covariates on a firm's decision to layoff versus furlough or not pay workers by running additional bivariate logistic regressions that take on almost identical forms to the regression on employment cuts. The response variable changes from employment cuts to layoffs, and then again to furloughs or unpaid leave. I drop the healthcare industry from the regression focusing on firm layoffs because there are no

health care firms that laid off workers from March to June of the pandemic in my sample. I exclude the utilities industry from all the regressions in this section since my sample of firms in this industry did not cut employment in 2020 Q2. Through these additional regressions, I find that firms who had furloughs or unpaid leave are driving the results that earnings in the second quarter are telling of which companies will cut employment early in the pandemic. The results are still empirically insignificant though. A company's cash position and size in both Q1 and Q2 confound industry effects and differences on employment. The findings on the effects of firm size are initially puzzling because they differ in direction for Q1 and Q2. Firms that report larger total assets in the months prior to the employee cuts are more likely to cut employees in the second quarter of 2020. On the other hand, a 1% increase in firm size, measured as the log of total assets, in the second quarter decreases the odds of cutting employees in the second quarter. However, these firm size covariates lose significance once industry controls are included in the model. The industry controls separate the covariates by sector which ultimately leads to a decrease in the firm size effect after including sectors in the regression. I find the odds a *Consumer Discretionary* firm will lay off or furlough workers is roughly 4 times higher than firms in all other industries. Firms within the *Consumer Discretionary* industry cut employment and dividends at much higher rates. On the other hand, firms in the *Financial*s sector are not likely to respond to the pandemic by cutting employment. In line with previous literature, I find COVID-19 disproportionately affected different sectors, and policy responses differ across industries as well.

5.3 Firm Characteristics for Dividend and Employment Policy Decisions

I evaluate the four possible combinations of employment and dividend policies firms can take during 2020. *Policy 1*, maintaining or increasing both employment and dividend payout, is the base outcome for my model. I include industry controls in my regression. My results are presented in Table 11. I interpret the coefficients of my multinomial logistic regression for magnitude and direction. I find that identifiable firm characteristics increase the odds of which policy a company will choose relative to *Policy 1*.

A higher EBITDA from Qt decreases the likelihood that firms will choose a policy in which they cut dividends and/or cut employment. However, earnings from Qt-1 are insignificant predictors of policy choices in my model. Firms that have less cash and fewer short-term investments in the previous and current quarter are more likely to choose *Policy 2*, a shareholder friendly policy, instead of *Policy 1*. Likewise, the likelihood of implementing *Policy 2* increases as a firm's size in Qt-1 increases as well, but the odds decrease in Qt as firm's get larger. The same applies for firms choosing *Policy 3*, a stakeholder friendly policy, relative to *Policy 1.* The similarities between firms choosing stakeholder or shareholder friendly policies indicates that there are firm characteristics beyond financial metrics that determine if companies choose more divisive employment and dividend payout policies during times of heightened uncertainty. My findings also highlight how policies in which employment and dividend payout policy choices are distinctly different from each other*, Policy 2* and *Policy 3* for example, are more closely predicted by a firm's financials during the pandemic.

VI. Robustness

I investigate correlation among the covariates in my models to ensure the significance of my predicted outcomes are not skewed by their correlation to other variables. I find all firm characteristics are not significantly correlated with each other. I run additional Ordinary Least Squares (OLS) and probit regressions to compare the results from my logit model. The findings are similar across regressions. I exclude these robustness checks from this paper for simplicity and brevity.

VII. Conclusion

I study the determinants of dividend payout and employment policies in response to the COVID-19 pandemic. By observing the actions companies took from Q1 to Q4 2020, I am able to analyze firm policies at the onset and height of the pandemic. I divide my paper into three sections to best research company decisions of interest. First, I run a bivariate logistic regression to predict the effects of firm characteristics going into the quarter on the odds that firms will implement YoY dividend cuts in 2020. Then, I run a bivariate logistic regression analyzing the effects of firm characteristics from the first two quarters in 2020 on predicting the odds firms will cut employment as an immediate reaction to the spread of COVID-19. Lastly, I group employment and dividend payout policies to analyze the relationship between firm characteristics and their prioritization of stakeholders and shareholders. I include industry-level controls in all my models.

I contribute to the divided literature on dividend payout and employment during times of uncertainty. My research adds to the limited literature on the interaction of dividend payout and employment policies. I also provide additional analysis into the actions of companies during the COVID-19 pandemic since existing literature is limited

to the first two quarters of 2020. Similar to Krieger et al. (2020), I find firms reduced dividend payout at high rates in 2020.

Though earnings have been established as a significant predictor in setting dividend payout policy, I find EBITDA from the previous quarter has empirically insignificant effects in increasing the odds firms cut dividends in 2020. I observe a similar insignificance when analyzing the relationship between earnings and employment cuts in the first half of 2020. In fact, I find none of the firm characteristics included in my equations, aside from the industry controls, change the odds firms will cut employment in the months when COVID-19's potential for destruction became apparent throughout the world. On the contrary, I find a relationship between firm characteristics and dividend cuts in 2020. Larger debt, greater cash, and fewer growth prospects in the previous quarter increase the odds firms will reduce dividends. The effect of cash holdings is puzzling since I would suspect cash should protect things like dividend payout policy during times of uncertainty.

When I group dividend and employment decisions during 2020, I find firm size has a significant effect on the likelihood a company will choose a shareholder friendly (*Policy 2*) or stakeholder friendly (*Policy 3*) policy. A company that is larger in the previous quarter is more likely to implement *Policy 2* or *Policy 3* relative to *Policy 1*, while the opposite is true when observing company size during the quarter in which the policy is exercised. It is surprising that firm characteristics like firm size have similar directional effects on the odds firms will choose stakeholder friendly or shareholder friendly policies. This highlights how there may be other more salient firm-specific factors that dictate employment and dividend payout policy decisions. As discussed in

Brav et al. (2005), managerial preferences are a big determinant of dividend policy. I was not able to account for executive characteristics in my model.

I also find contrasting effects when evaluating firm characteristics observed in the previous quarter and firm metrics reported in the quarter in which a stakeholder friendly policy was observed. A firm that reported a stronger cash position in the previous quarter is less likely to implement a stakeholder friendly policy, while a firm demonstrating strong cash flows in the same quarter as the policy change is more likely to choose a policy that prioritizes employees over stockholders.

The intensity of the COVID-19 pandemic makes it a remarkable proxy to predict firm policy changes during economics shocks and uncertainty. However, due to the pandemic's complexity, there are many global factors that I was not able to isolate and account for in my model. Many firms with varying characteristics faced similar restrictions from lenders in 2020 which may have skewed my results. The Paycheck Protection Program was created with the intention of helping companies maintain or increase their employment during the pandemic, so employees had to be kept on the company payroll ("Paycheck Protection Program Resources " 2020). Additionally, companies that accepted money from the U.S. government through the Coronavirus Aid, Relief and Economic Security Act could not payout dividends within the period of the loan (Courtney, H.R.748 - CARES Act 2020). Another limitation in my paper lies in my firm sample. I evaluate firms from the Russell 1000 which excludes firms whose market capitalization falls under the top 1000 companies in the United States.

VIII. Tables and Figures

Table 1
Frequency of 2020 COVID-19 Dividend Cuts compared to 2019

This table gives the quarterly breakdown of the number of firms that cut dividends in 2020 in comparison to the contemporaneous quarter the year prior (2019). Firms that "cut" dividends are defined as having quarterly dividends per share that were lower in Qt 2020 respective to Qt 2019. The dividend payout information is from COMPUSTAT for the period of Q1 2019 to Q4 2020.

	YoY (post-COVID versus pre-COVID)		
	Cut	No Cut	% of Sample with Dividend Cuts
2020, Q1	19	618	3%
2020, Q2	89	548	14%
2020, Q3	98	536	15.5%
2020, Q4	99	529	15.8%
2020, Total	305	637	47.9%

Table 2

Frequency of Employment Cuts Early in the Pandemic

This table gives the breakdown of the number of firms that cut employment, either in the form of furloughs and unpaid leave or layoffs, from March 1, 2020 to June 26, 2020. These months fall within the first and second calendar quarters of the year, and employment cuts that occurred in these months signal an early policy response to the pandemic. An employment cut consists of a reduction of any size in the company payroll. The employment information is from Just Capital.

	Cut	No Cut	% of Sample with Cuts
Furloughs or Unpaid Leave	103	534	16.2%
Layoffs	63	574	9.9%
Either Employment Cut	129	508	20.3%

Table 3

Frequency of Quarters in which Dividend were Cut by GICS Sector

This table gives the industry breakdown of the number of quarters in which firms cut dividends in 2020 in comparison to the contemporaneous quarter the year prior (2019). Each n in "Quarters in 2020 Where Dividends Were Cut" represents the actions of one firm in one quarter in 2020. For example, if two firms cut dividends in Q1 2020, the quarters in 2020 where dividends were cut would equal two. The dividend payout and GICS sector information comes from COMPUSTAT. Firms that "cut" dividends are defined as having quarterly dividends per share that were lower in Qt 2020 respective to Qt 2019.

	Companies in Sample	Quarters in 2020 where Dividends Were Cut
Energy	34	32
Materials	46	14
Industrials	111	53
Consumer Discretionary	73	98
Consumer Staples	40	12
Healthcare	44	6
Financials	128	28
Information Technology	65	18
Communication Services	20	2
Utilities	37	5
Real Estate	39	37
Total	637	305

Table 4

Frequency of Employment Cuts Early in the Pandemic by GICS Sector

This table gives the industry breakdown of the number of firms that cut employment, either in the form of furloughs and unpaid leave or layoffs, from March 1, 2020 to June 26, 2020. These months fall within the first and second calendar quarter of the year, and employment cuts that occurred in these months signal an early policy response to the pandemic. An employment cut consists of a reduction of any size in the company payroll. The employment information is from Just Capital.

	Companies in Sample	Companies with Employment Cuts	% of Industry Sample with Employee Cuts
Energy	34	7	20.6%
Materials	46	6	13%
Industrials	111	43	38.7%
Consumer Discretionary	73	40	54.8%
Consumer Staples	40	6	15%
Healthcare	44	3	6.8%
Financials	128	3	2.3%
Information Technology	65	5	7.7%
Communication Services	20	8	40%
Utilities	37	0	0%
Real Estate	39	8	20.5%
Total	637	129	20.3%

Table 5
Summary of Firm Financial Metrics at the Close of the Lagged Quarter

This table shows the quarterly means and yearly minimums, maximums, and means of the financial variables at the lagged quarter close. The variables used in this paper are defined as follows: *EBITDA* is the operating income before depreciation scaled by total assets, *Cash Holdings* is the sum of cash and short-term investments scaled by total assets, *Debt* is the sum of current and long-term debt scaled by total assets, *Book-to-Market* ratio is the total book value of common equity over the total market value, and *Firm Size* is the logarithm of total assets.

	Financial Standing at Lagged Quarter Close (Qt-1)				
	EBITDA	Debt	Book-to-Market	Cash Holdings	Firm Size
2020, Q1	0.028	0.34	0.410	0.087	4.244
2020, Q2	0.021	0.364	0.641	0.104	4.251
2020, Q3	0.022	0.359	0.536	0.117	4.258
2020, Q4	0.027	0.348	0.550	0.116	4.268
2020, Minimum	-0.53	0	-0.884	0	2.793
2020, Maximum	0.256	3.15	5.338	0.703	6.511
2020, Average	0.025	0.353	0.534	0.106	4.255

Table 6
Summary of Firm Financial Metrics at the Close of the Contemporaneous Quarter

This table shows the quarterly means and yearly minimums, maximums, and means of the financial variables at the contemporaneous quarter close. The variables used in this paper are defined as follows: *EBITDA* is the operating income before depreciation scaled by total assets, *Cash Holdings* is the sum of cash and short-term investments scaled by total assets, *Debt* is the sum of current and long-term debt scaled by total assets, *Book-to-Market* ratio is the total book value of common equity over the total market value, and *Firm Size* is the logarithm of total assets.

	Financial Standing at Contemporaneous Quarter Close (Qt)				
	EBITDA	Debt	Book-to-Market	Cash Holdings	Firm Size
2020, Q1	0.021	0.364	0.641	0.104	4.251
2020, Q2	0.022	0.359	0.537	0.117	4.260
2020, Q3	0.027	0.35	0.549	0.116	4.264
2020, Q4	0.028	0.343	0.442	0.116	4.278
2020, Minimum	-0.53	0	-0.884	0	2.793
2020, Maximum	0.256	3.123	5.338	0.703	6.53
2020, Average	0.025	0.354	0.542	0.113	4.263

Table 7

Bivariate logistic regression predicting quarterly dividend cuts during the pandemic

The table presents the results of bivariate logistic regressions of dividend cuts on firm financial characteristics. *Dividend cut* is an indicator variable equal to 1 for each quarter in which a firm cut YoY dividends in 2020. Regression (1) does not control for industry fixed effects, while regression (2) does. *EBITDA* is the operating income before depreciation scaled by total assets, *Cash Holdings* is the sum of cash and short-term investments scaled by total assets, *Debt* is the sum of current and long-term debt scaled by total assets, *Book-to-Market* ratio is the total book value of common equity over the total market value, and *Firm Size* is the logarithm of total assets. I convert the effects captured in the second bivariate logistic regression into odds-ratios. The odds-ratios are the exponentiated coefficients for the respective regression.

	Dividend Cut		
Qt-1	(1)	(2)	Odds-Ratio
EBITDA	-19.439	-15.378	2.10e-07
	(6.95)**	(5.43)**	
Debt	2.879	1.811	6.114
	(9.85)**	(5.96)**	
Book-to-Market	0.688	0.750	2.118
	(6.09)**	(5.91)**	
Cash Holdings	1.960	1.961	7.103
	(3.13)**	(2.56)*	
Firm Size	-0.391	-0.030	0.971
	(3.15)**	(0.21)	
Sector:			
Energy		-0.255	0.775
		(0.80)	
Materials		-0.720	0.487
		(2.05)*	
Industrials		-0.124	0.884
		(0.47)	
Consumer Discretionary		0.703	2.019
		(2.82)**	
Consumer Staples		-0.725	0.484
		(1.95)	
Health Care		-1.365	0.255
		(2.84)**	
Financials		-1.499	0.223
		(4.58)**	
Information Technology		-0.782	0.458
		(2.20)*	
Communication Services		-2.134	0.118
		(2.83)**	
Utilities		-1.639	0.194
		(3.25)**	
_cons	-1.649	-2.430	
	(2.91)**	(3.85)**	
N	2,536	2,536	2,536

* $p<0.05$; ** $p<0.01$

Table 8

Bivariate logistic regression predicting employment cuts as a policy response early in the pandemic

The table presents the results of bivariate logistic regressions of employment cuts on firm financial characteristics. *Employment cut* is an indicator variable equal to 1 for each firm that cut employment, either in the form of furloughs and unpaid leave or layoffs, from March 1, 2020 to June 26, 2020. *Layoffs* is an indicator variable equal to 1 for each firm that laid off workers in the observed period. *Furloughs or Unpaid Leave* is an indicator variable equal to 1 for each firm that furloughed or did not pay workers in the observed period. Regression (1) of *Employment* does not control for industry fixed effects, while regression (2) does. Regression (1) of *Layoffs* and *Furloughs or Unpaid Leave* controls for industry fixed effects. The covariates are defined as follows: *EBITDA* is the operating income before depreciation scaled by total assets, *Cash Holdings* is the sum of cash and short-term investments scaled by total assets, *Debt* is the sum of current and long-term debt scaled by total assets, *Book-to-Market* ratio is the total book value of common equity over the total market value, and *Firm Size* is the logarithm of total assets. I convert the effects captured in the regressions into odds-ratios. The odds-ratios are the exponentiated coefficients for the respective regression.

	Employment Cut			Layoffs		Furloughs or Unpaid Leave	
2020, Q2	(1)	(2)	Odds Ratio	(1)	Odds Ratio	(1)	Odds Ratio
EBITDA	-18.713	-15.198	2.51E-07	-9.777	5.67E-05	-18.011	1.51E-08
	(3.42)**	(2.67)**		(1.44)		(3.00)**	
Debt	-1.618	-2.505	0.082	5.332	206.935	-3.112	0.045
	(0.51)	(0.68)		(1.12)		(0.79)	
Book-to-Market	-0.801	-0.380	0.684	-1.892	0.151	1.727	5.626
	(1.24)	(0.48)		(1.78)		(1.69)	
Cash Holdings	9.408	3.686	39.873	-0.133	0.875	5.317	203.718
	(2.54)*	(0.89)		(0.03)		(1.15)	
Firm Size	-16.358	-7.519	0.001	-12.884	2.54E-06	-9.394	8.32E-05
	(2.96)**	(1.26)		(1.79)		(1.39)	
2020, Q1							
EBITDA	0.785	-1.263	0.283	1.479	4.390	-3.619	0.027
	(0.31)	(0.45)		(0.37)		(1.19)	
Debt	2.618	2.533	12.591	-5.042	0.006	3.422	30.636
	(0.86)	(0.72)		(1.08)		(0.91)	
Book-to-Market	0.485	0.457	1.580	1.278	3.589	-1.255	0.285
	(1.12)	(0.83)		(1.86)		(1.53)	
Cash Holdings	-7.779	-1.704	0.182	0.900	2.459	-2.738	0.065
	(2.12)*	(0.42)		(0.18)		(0.59)	
Firm Size	15.790	7.544	1889.950	12.970	429,350.300	9.435	12,512.780
	(2.87)**	(1.26)		(1.80)		(1.40)	
Sector:							
Energy		-0.612	0.542	-0.215	0.806	-1.159	0.314
		(0.82)		(0.22)		(1.29)	
Materials		-0.188	0.829	0.240	1.271	-0.767	0.464
		(0.30)		(0.29)		(1.03)	
Industrials		1.234	3.435	1.067	2.907	1.069	2.913
		(2.55)*		(1.53)		(2.16)*	
Consumer Discretionary		1.569	4.804	1.397	4.042	1.414	4.112
		(3.17)**		(2.01)*		(2.81)**	
Consumer Staples		-0.002	0.998	-0.967	0.380	0.063	1.065
		(0.00)		(0.80)		(0.10)	
Health Care		-0.875	0.417	(omitted)	1.000	-0.756	0.469
		(1.15)				(0.98)	
Financials		-2.413	0.090	-1.895	0.150	-2.977	0.051
		(3.06)**		(1.53)		(3.24)**	
Information Technology		-0.868	0.420	0.120	1.128	-2.482	0.084
		(1.27)		(0.14)		(2.19)*	
Communication Services		1.122	3.071	1.525	4.593	0.775	2.170
		(1.72)		(1.79)		(1.13)	
Utilities		(omitted)	1	(omitted)	1	(omitted)	1
_cons	0.449	-1.608		-2.770		-1.897	
	(0.44)	(1.46)		(1.90)		(1.58)	
N	637	600		556		600	

* $p<0.05$; ** $p<0.01$

Table 9
Matrix showing the four possible policy paths companies can take during the pandemic

	Maintain or Increase Employment	*Cut Employment*
Maintain or Increase Dividends	**Policy 1** Maintain or Increase Dividends & Maintain or Increase Employment	**Policy 2 (Shareholder Friendly)** Maintain or Increase Dividends & Cut Employment
Cut Dividends	**Policy 3 (Stakeholder Friendly)** Cut Dividends & Maintain or Increase Employment	**Policy 4** Cut Dividends & Cut Employment

Table 10
Frequency of Company Policies

This table gives the policy breakdown for the firms in my sample. *Policy 1* indicates firms that maintained or increased both dividends and employment. *Policy 2* indicates firms that maintained or increased dividends while cutting employment. *Policy 3* indicates firms that cut dividends while maintaining or increasing their labor force. *Policy 4* indicates firms that cut both dividends and employment during 2020.

	Number of Companies	% of Sample
Policy 1	465	73%
Policy 2	83	13%
Policy 3	43	6.8%
Policy 4	46	7.2%

Table 11

Multinomial logistic regression predicting firm employment and dividend decisions during the pandemic

The table presents the results of multinomial logistic regressions of policy choices on firm financial characteristics. The four policy outcomes are indicator variables equal to 1 for each firm that exercised that policy in 2020. *Policy 1* indicates firms that maintained or increased both dividends and employment. *Policy 2* indicates firms that maintained or increased dividends while cutting employment. *Policy 3* indicates firms that cut dividends while maintaining or increasing their labor force. *Policy 4* indicates firms that cut both dividends and employment during 2020. I control for industry fixed effects in the regressions. The covariates are constructed as follows: *EBITDA* is the operating income before depreciation scaled by total assets, *Cash Holdings* is the sum of cash and short-term investments scaled by total assets, *Debt* is the sum of current and long-term debt scaled by total assets, *Book-to-Market* ratio is the total book value of common equity over the total market value, and *Firm Size* is the logarithm of total assets.

	Policy 1	Policy 2	Policy 3	Policy 4
Qt-1	(base outcome)			
EBITDA		1.129	-1.267	-2.623
		(0.21)	(0.38)	(0.79)
Debt		0.361	4.124	7.680
		(0.08)	(0.80)	(1.50)
Book-to-Market		-0.509	-0.614	0.896
		(0.58)	(0.86)	(1.21)
Cash Holdings		-5.001	-16.836	-3.346
		(0.99)	(2.63)**	(0.47)
Firm Size		14.599	18.316	3.944
		(2.01)*	(2.01)*	(0.35)
Qt				
EBITDA		-15.787	-30.292	-36.696
		(2.00)*	(3.22)**	(4.10)**
Debt		-0.669	-1.606	-6.399
		(0.15)	(0.30)	(1.20)
Book-to-Market		0.693	1.366	-0.776
		(0.63)	(1.48)	(0.67)
Cash Holdings		6.523	13.978	4.891
		(1.27)	(2.30)*	(0.70)
Firm Size		-14.616	-18.619	-3.956
		(2.01)*	(2.04)*	(0.35)
Controls		Yes	Yes	Yes
_cons		-1.502	-1.959	-2.955
		(1.19)	(1.13)	(1.53)

* $p<0.05$; ** $p<0.01$

IX. References

Alnahedh, Saad, Sanjai Bhagat, and Iulian Obreja. "Employment, Corporate Investment and Cash Flow Risk." SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, September 25, 2017. https://papers.ssrn.com/abstract=3459636.

Avramov, Doron, Minwen Li, and Hao Wang. "Risk Shocks, Uncertainty Shocks, and Corporate Policies." SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, December 4, 2014. https://doi.org/10.2139/ssrn.2538287.

Béland, Louis-Philippe, Abel Brodeur, and Taylor Wright. "COVID-19, Stay-At-Home Orders and Employment: Evidence from CPS Data." IZA Institute of Labor Economics, May 2020. https://www.iza.org/publications/dp/13282/covid-19-stay-at-home-orders-and-employment-evidence-from-cps-data.

Brav, Alon, John R Graham, Campbell R Harvey, and Roni Michaely. "Payout Policy in the 21st Century." *Journal of Financial Economics* 77, no. 3 (May 13, 2005): 45. https://doi.org/10.1016/j.jfineco.2004.07.004.

Chay, J. B., and Jungwon Suh. "Payout Policy and Cash-Flow Uncertainty." *Journal of Financial Economics* 93, no. 1 (2009): 88–107. https://doi.org/10.1016/j.jfineco.2008.12.001.

Courtney, Joe. H.R.748 - CARES Act, Pub. L. No. 116–136, H.R.748 (2020). https://www.congress.gov/bill/116th-congress/house-bill/748/text.

DeAngelo, Harry, Linda DeAngelo, and René M. Stulz. "Dividend Policy and the Earned/Contributed Capital Mix: A Test of the Lifecycle Theory." SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, May 2, 2005. https://doi.org/10.2139/ssrn.766086.

Falk, Gene, Jameson A Carter, Isaac A Nicchitta, Emma C Nyhof, and Paul D Romero. "Unemployment Rates During the COVID-19 Pandemic: In Brief." CRS Report Prepared for Members and Committees of Congress. Congressional Research Service, January 12, 2021. https://fas.org/sgp/crs/misc/R46554.pdf.

Fana, Marta, Sergio Torrejón Pérez, and Enrique Fernández-Macías. "Employment Impact of Covid-19 Crisis: From Short Term Effects to Long Terms Prospects." *Journal of Industrial and Business Economics* 47, no. 3 (July 15, 2020): 391–410. https://doi.org/10.1007/s40812-020-00168-5.

Freedman, Roy S. *Introduction to Financial Technology*. 1st edition. Amsterdam ; Boston, MA: Academic Press, 2006.

"GLOBAL INDUSTRY CLASSIFICATION STANDARD (GICS®) METHODOLOGY," 2020. https://www.msci.com/documents/1296102/11185224/GICS+Methodology+2020.pdf/9caadd09-790d-3d60-455b-2a1ed5d1e48c?t=1578405935658.

Hail, Luzi, Ahmed Tahoun, and Clare Wang. "Dividend Payouts and Information Shocks." *Journal of Accounting Research* 52, no. 2 (May 1, 2014): 403–56. https://doi.org/10.1111/1475-679X.12040.

Krieger, Kevin, Nathan Mauck, and Stephen W. Pruitt. "The Impact of the COVID-19 Pandemic on Dividends." *Finance Research Letters*, December 31, 2020, 101910. https://doi.org/10.1016/j.frl.2020.101910.

Lintner, John. "Distribution of Incomes of Corporations Among Dividends, Retained Earnings, and Taxes." *The American Economic Review* 46, no. 2 (1956): 97–113.

Mazur, Mieszko, Man Dang, and Thi Thuy Anh Vo. "Dividend Policy and the COVID-19 Crisis." SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, November 2, 2020. https://doi.org/10.2139/ssrn.3723790.

U.S. Committee on Small Business & Entrepreneurship. "Paycheck Protection Program Resources." Accessed May 2, 2021. https://www.sbc.senate.gov/public/index.cfm/paycheck-protection-program.

Pettenuzzo, Davide, Riccardo Sabbatucci, and Allan Timmermann. "Dividend Suspensions and Cash Flow Risk During the Covid-19 Pandemic." SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, June 1, 2020. https://papers.ssrn.com/abstract=3638025.

Ponciano, Jonathan. "New PPP Loan Data Reveals Most Of The $525 Billion Given Out Went To Larger Businesses—And A Few With Trump, Kushner Ties." Forbes, December 2, 2020. https://www.forbes.com/sites/jonathanponciano/2020/12/02/new-ppp-loan-data-reveals-most-of-the-525-billion-given-out-went-to-larger-businesses-some-with-trump-kushner-ties/.

Rio-Chanona, R Maria del, Penny Mealy, Anton Pichler, François Lafond, and J Doyne Farmer. "Supply and Demand Shocks in the COVID-19 Pandemic: An Industry and Occupation Perspective." *Oxford Review of Economic Policy* 36, no. Supplement_1 (September 28, 2020): S94–137. https://doi.org/10.1093/oxrep/graa033.

Wu, Yufeng. "What's behind Smooth Dividends? Evidence from Structural Estimation." *Review of Financial Studies* 31, no. 10 (October 1, 2018): 3979–4016. https://doi.org/10.1093/rfs/hhx119.