# Politics and Gender in the Executive Suite* 

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#### Abstract

Recent years have seen a surge of interest in gender diversity in corporate America. Simultaneously, CEOs' political preferences have been shown to affect a wide range of corporate decisions. Evidence suggests that an individual's views on gender equality are more associated with their political preferences than with that individual's own gender. Accordingly, we ask whether the political preferences of CEOs are associated with the representation and compensation of women in the executive suite. We find that Democratic CEOs (those who contribute more to Democratic candidates) are associated with higher representation of women in the executive suite. To explore causality, we use an event-study approach and find that replacing a Republican with a Democratic CEO is associated with a $20 \%-50 \%$ increase in the fraction of women in the executive suite. Finally, we find that Democratic CEOs are associated with a significant reduction (or even disappearance) of the gender gap in the level and performancesensitivity of executive pay.


Keywords: Gender Gap, Executive Suite, CEO, Political Preferences, Compensation
JEL: J16, J30, M12, M14, M51, G30

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## 1 Introduction

Recent years have seen a surge of interest in gender diversity in corporate America. ${ }^{1}$ Given the power that a CEO has over hiring and compensation in the executive suite, it is natural to ask what characteristics of a CEO might be associated with greater gender equality. Perhaps surprisingly, recent evidence suggests that an individual's political preferences are more closely associated with their views on gender equality than the individual's own gender. For instance, a recent report found that only $28 \%$ and $38 \%$ of Republican men and women, respectively, believe that the U.S. has not gone far enough in promoting gender equality. By contrast, $70 \%$ and $82 \%$ of Democratic men and women share this view, indicating a dramatically greater role of political preferences in views on gender equality than gender itself (Horowitz and Igielnik, 2020). Similarly, another report found that $66 \%$ of Democrats feel that gender diversity is "very important" in the workplace, while only $33 \%$ of Republicans agree. This gap is much larger than that between the $58 \%$ of women and $44 \%$ of men who agree (TAFT Communications, 2022). Given that a growing literature, discussed below, documents the importance of CEOs' political preferences for a wide range of corporate decisions including environmental, social, and governance (ESG) issues, corporate and social responsibility (CSR), risk tolerance, lobbying, dividend policy, and more, it is natural to ask whether these preferences also affect gender diversity. Thus, this paper asks whether CEOs' political preferences are associated with the representation of women in the team of top non-CEO executives ("the executive suite"), as well as with the level and structure of the compensation of female executives in the executive suite. Our analysis covers all U.S. companies listed on the S\&P 1500 during the period 2000-2018.

We hypothesize that CEOs who are more financially supportive of Democratic candidates (have "stronger Democratic candidate preferences") are associated with higher female representation in the executive suite. We also hypothesize that these CEOs ("Democratic CEO") are associated with a smaller gender gap in the level and performance sensitivity of pay in the executive suite. Our analysis provides evidence that is consistent with both hypotheses. We discuss (Section 5) a number of mechanisms that could contribute to producing the hypothesized associations. In that section, we also focus our analysis on the executive suite as CEOs likely have much more power over the executive suite than the does board of directors.

To study our subject, we put together data about the political preferences of CEOs with data about the gender and compensation of top executives. Following the literature (e.g., Bonica, 2016; Hutton et al., 2014), we assume that the political preferences of CEOs are reflected in their political contributions, and we base our analysis on a dataset that we constructed that contains information about the political contributions of CEOs extracted from Federal Election Commission records. In addition to merging this dataset with the standard ExecuComp and Compustat datasets, we add

[^1]a novel dataset that we put together based on Form 4 filings by executives. This novel dataset enables us to include in our analysis of the executive suite all executives that are sufficiently senior to be required to publicly report their trades under the securities laws. We discuss the assumption that CEOs' political contributions reflect their personal beliefs and the construction of our dataset based on Form 4 data in depth in Section 2.

Using an OLS analysis, we find that CEOs with stronger Democratic preferences are associated with higher representation of women - to an extent that is both statistically and economically significant - among members of the executive suite. In particular, a CEO who contributes only to Democratic candidates is associated with about a $15 \%-25 \%$ greater fraction of women in the executive suite compared to a CEO who contributes only to Republican candidates.

To explore further the association between political preferences and female representation in the executive suite, we use an event-study approach to study events where companies replace their CEO. ${ }^{2}$ We classify an outgoing CEO or an incoming CEO as a Republican CEO (Democratic CEO) if the fraction of the CEO's contributions to Republicans (Democrats) exceeds a specified threshold (using for robustness three alternative values of the threshold). We find that replacing an outgoing Republican CEO with an incoming Democratic CEO, rather than an incoming Republican CEO, is accompanied by an increase in female representation in the executive suite. This effect is statistically and economically significant, and can reach as much as $50 \%$ over three years, consistent with our hypothesis. We also find that these results are driven by the new Democratic CEO hiring more women into the executive suite rather than reducing the size of the executive suite while keeping the number of women intact. It is possible that these results reflect endogeneity: the company board may hire Democratic CEOs, at least in part, to increase female representation. However, it is also possible that changes in the company simultaneously yield a new, Democratic CEO and more women, without a causal connection.

Much of the labor economics literature on gender gaps, including the literature on executives, looks at both gaps in pay and composition. Our data allows us to analyze both phenomena. Using ExecuComp data on executive compensation, we find that whether non-CEO executives receive different compensation by gender depends on whether the CEO of their firm is a Democrat or Republican. We find that gender compensation gaps differ greatly with the political preferences of the CEO. In particular, we find that the level of compensation paid to female executives is lower than that paid to their male counterparts, and similar to the gap documented in the literature discussed below. However, once we also control for CEOs' political preferences, we find that CEOs with Democratic preferences are associated with a significantly smaller gender pay gap. To illustrate, a move from a CEO that contributes only to Democrats to a CEO who contributes only to Republicans is associated with a more than doubling of the gender pay gap. Under some measures of CEOs' political preferences, we cannot reject the hypothesis that there is no gender pay gap under CEOs who donate only to Democrats.

[^2]In addition, using three standard measures of the performance sensitivity of compensation, we find that the compensation of female executives is less sensitive to performance. ${ }^{3}$ However, we find a significant association between the magnitude of these gender gaps and CEOs' political preferences. Using each of the three standard measures, the gender gap in the performance sensitivity of pay is significantly smaller for CEOs who are more supportive of the Democratic Party than for CEOs who are more supportive of the Republican Party, and even nonexistent for CEOs who support only Democratics. Thus, our findings indicate that the gender gaps in the level and structure of pay identified by the literature are substantially related to CEOs' political preferences.

There are substantial literatures on the representation of women in the executive suite, their pay, as well as the importance of the political preferences of CEOs for corporate decision making. We now relate our paper to each of these literatures.

The literature on the hiring of female non-CEO executives in the U.S. is substantial. Studies on the gender composition of the executive suite, which have thus far not considered CEOs' political preferences, include Bell (2005) and Matsa and Miller (2011). ${ }^{4}$ The literature on gender pay gaps in the executives suite includes Bertrand and Hallock (2001), Munoz-Bullon (2010), Gayle et al. (2012), Albanesi et al. (2015), Newton and Simutin (2015), Carter et al. (2017), and Quintana-Garcia and Elvira (2017). Like the literature on female representation among top executives, this literature has thus far not examined the relationship between its subject of investigation and the political preferences of CEOs.

The literature on the political preferences of CEOs is also significant. Studies that focus on the distribution of CEOs' preferences between the two major parties include Bonica (2016) and Cohen et al. (2019). A number of studies have examined the relationship between CEOs' political preferences and various decisions made by their companies, including decisions regarding mergers and acquisitions (Elnahas and Kim, 2017), riskiness of investments and corporate debt levels (Hutton et al., 2014), tax sheltering (Francis et al., 2016), lobbying (Unsal et al., 2016), types of litigation (Hutton et al., 2015), corporate social responsibility (Di Giuli and Kostovetsky, 2014; Gupta et al., 2020; Gangopadhyay and Homroy, 2022), transparency of political spending (Cohen et al., 2019), pay dispersion and diversity in the executive suite (Chin and Semadeni, 2017), the political donations of employees (Babenko et al., 2019), dividend policy (Bayat and Goergen, 2020), management earnings forecasts (Elnahas et al., 2020), and credit rating (Kempf and Tsoutsoura, 2021; Bhndari and Golden, 2021). ${ }^{5}$ Relatedly, Fos et al. (2023) find that political polarization among executives affects executive retention. However, researchers have not yet considered how CEOs' political preferences are associated with gender-

[^3]related choices in general and in the hiring and compensation of female executives in particular. ${ }^{6}$
Is diversity a goal for its own sake? Or are there tangible benefits that derive from gender diversity in the executive suite? There is a growing literature that examines this question. Huang and Kisgen (2013) test whether firms with female CEOs or CFOs make different financing or acquisition decisions. They find that firms with female executives grow more slowly and make fewer acquisitions. However, the acquisitions made by female executives have higher announcement returns than those made by male executives. Gompers and Wang (2021) find that venture capital firms in which the senior partners have daughters tend to hire more women as partners. They then find that this increase in gender diversity improves deal and fund performance. Hoogendoorn et al. (2013) perform a field experiment in which they create groups of students in an entrepreneurship program in Amsterdam. They find that more gender-diverse groups perform better in terms of sales and profits, though they are unable to identify the underlying mechanism driving their results. Thus, while the literature has yet to conclusively document an impact of gender diversity on firm performance, the evidence that exists so far suggests that the impact is likely positive. ${ }^{7}$

Finally, our research is part of, and contributes to, the broad literature that highlights the impact of CEOs' personal characteristics and circumstances on corporate decisions. This literature includes studies that show how corporate decisions are related to a CEO's attributes, such as whether the CEO is overconfident (Malmendier and Tate, 2009; Malmendier et al., 2011), whether the CEO is optimistic and risk-tolerant (Graham et al., 2013), whether the CEO has daughters (Cronqvist and Yu, 2017; Dahl et al., 2011; Dasgupta et al., 2018; Wang et al., 2019), whether the CEO is in the media limelight (Malmendier and Tate, 2009), whether the CEO served in the military (Malmendier et al., 2011; Benmelech and Frydman, 2015), the cultural and socioeconomic backgrounds of the CEO (Nguyen et al., 2017; Duchin et al., 2020), and the timing of the decisions within the CEO's life cycle (e.g. Pan et al., 2016). We observe that analyses of CEOs' characteristics on corporate decisions, such as done in this paper, is not free of the concern that firms chose to hire a particular CEO because of her specific characteristics. We therefore urge caution with the interpretation of our results.

The fact that Democratic and Republican CEOs differ so much with respect to the gender composition and compensation of their executive suites is suggestive of particular mechanisms to elucidate the causes of gender differences. We thus include a discussion of various mechanisms that

[^4]can explain our findings. Broadly speaking, our mechanisms fall under two umbrellas. The first is that there may be differences in preferences or beliefs over gender between different types of CEOs, while the second is that the networks that CEOs are part of may yield different endogenous matching and contracting environments. We conclude with a discussion of how these mechanisms potentially inform on policy.

We proceed as follows. Section 2 describes our data sources and the calculation of our main variables of interest. Section 3 studies how the political preferences of a CEO influence the gender composition of the executive suite, and analyzes our event study. Section 4 examines differences in level and structure of compensation between men and women in light of the CEO's political preferences. Section 5 discusses our findings in the context of the institutional background and potential mechanisms that can account for the documented relationships. Finally, Section 6 concludes.

## 2 Data and Summary Statistics

This section describes how we build our datasets and construct our main variables of interest. Section 2.1 describes the companies that make up our data universe, and the financial information we collect on them. In Section 2.2, we describe the two samples of corporate executives that we employ for our analyses, drawn from ExecuComp and Form 4 data. Section 2.3 explains how we infer an executive's gender, if it is not explicitly given in any of our data sources, and how we calculate our stock option-based measures of incentive pay (delta and vega). In Section 2.4, we describe in detail how we determine the political preferences of the CEOs in our sample. Section 2.6 provides summary statistics of the main variables used in our analyses.

### 2.1 Companies

Our sample consists of executives at companies included in the S\&P 1500 at any point during the period 2000-2018. The S\&P 1500 is a composite index that combines three separate indices: the S\&P 500, which consists of 500 companies with large market capitalization; the S\&P MidCap 400, consisting of 400 companies with medium capitalization; and the S\&P SmallCap 600, consisting of 600 companies with small capitalization. In the aggregate, the S\&P 1500 represents about $90 \%$ of total U.S. market capitalization. Thus our sample includes executives, including CEOs, of companies representing the great majority of public-company assets.

In addition to data on executives at these companies, we collect corporate financial information from the Compustat database. Specifically, we obtain information on industry (SIC code), headquarters location, assets, return on assets, book-to-market ratio, cash, dividends, and total debt.

### 2.2 Executives

Our primary source of information on CEOs and top executives of public companies is Standard \& Poor's ExecuComp database, which covers companies in the S\&P 1500 index. For all of the
highest-paid executives (including CEOs), ExecuComp provides total compensation (TDC1), stock compensation, age, title, and gender. From this data, we can also infer a CEO's tenure.

We complement the ExecuComp dataset with Form 4 filing data from the Securities and Exchange Commission (SEC), accessed via EDGAR. These are reports made in compliance with Section 12 of the Securities Exchange Act of 1934, which requires every director, officer, or owner of more than $10 \%$ of a company's equity to report to the SEC his or her relationship to the company and provide information about any acquisitions or dispositions of company securities. ${ }^{8}$ Under the assumption that all officers transact in the company stock, this data should allow us to paint a comprehensive picture of the officers in a firm.

To assess the reliability of Form 4 data, we first determined whether the executives listed in ExecuComp also appear in the Form 4 data. Very few executives who appear in ExecuComp are absent from our Form 4 data. We then determined whether executives employed at a given firm in our database are observed at a high frequency, which provides an accurate indication of their continued employment. As the vast majority of executives file reports annually, their presence in our data is continuous. For completeness, we assume that an executive who files a Form 4 report at least once every four years is continuously employed. Overall, less than $3 \%$ of our observations involve such imputations, and the vast majority of those are cases of an executive filing a Form 4 report for one to two years. Furthermore, we find no systematic differences in the frequency of imputations between male and female executives under CEOs with different political preferences.

We then merge the Form 4 data by company and year with our ExecuComp data to produce a more comprehensive list of executives by company-year. ${ }^{9}$

As noted, using Form 4 data allows us to identify a larger set of corporate executives than merely the most highly paid. This advantage is crucial for our ability to perform the event study described below in Section 3.2.

[^5]The disadvantage is that we lack a full set of information about these observations, including compensation packages and gender, age, and other demographic characteristics. ${ }^{10}$ All of our analyses of the representation of women in the executive suite use two samples: the sample of all executives appearing in ExecuComp (the "ExecuComp sample") and the union of executives appearing in the amalgamation of information on executives from ExecuComp and Form 4, described here (the "Form 4 sample").

### 2.3 Gender and Compensation

Form 4 provides no data on gender, while ExecuComp includes gender beginning in 2007. We thus determine gender by means of textual analysis of executives' first names, performed by genderapi.com. In cases for which we have data from both gender-api.com and ExecuComp, they agree about $90 \%$ of the time, increasing our confidence in this source of data. When they disagree, we defer to the gender listed in ExecuComp.

We have compensation data only for executives listed in ExecuComp. To supplement that data, which specifies total compensation, we also calculate each executive's delta and vega, or the price and volatility sensitivities, respectively, of their stock-option portfolios. ${ }^{11}$

### 2.4 Political Preferences

We obtain information on CEOs' contributions to political parties from records made public by the Federal Election Commission (FEC). This is not a straightforward task; it involves linking the two datasets using names and companies, and inferring political preferences from contributions. We describe this process more fully in Online Appendix A.

To infer CEOs' political preferences we match CEOs with their political contributions, and identify the party that received their contributions. We derive a variety of measures of a CEO's political preference for use in our econometric analyses and use them in each of our analyses discussed below to show the robustness of our findings.

Because many CEOs make significant contributions in some years but not others, we define a CEO's political preference by calculating the fraction of the CEO's political contributions to either Democrats or Republicans that went to Republicans during a number of different periods. ${ }^{12}$ For example, a value of 0 (1) implies that $100 \%$ of a CEO's political contributions went to Democrats (Republicans), while a value of 0.5 implies that political contributions were split evenly between the parties. Within this set of measures, the differences come down to which time periods are used together in order to measure a CEO's political preference.

[^6]We perform our exercises with the "sample average" measure, which combines contributions from all years to create a single, constant measure of a CEO's average political contributions to Republicans. We use this measure since it maximizes our sample size: any CEO who contributed at any point is included. In our main exercises we do not include CEOs whom we fail to match. However, our empirical findings in Table 3 suggest that this is not a first-order concern. We perform a robustness exercise where we assume that CEOs we did not match contribute evenly to Democrats and Republicans. We discuss in Cohen et al. (2019) reasons why a CEO might be missing, such as the CEO being foreign and thus ineligible to donate. We relegate to Appendix D robustness exercises using the other measures. Our first other measure is the "election cycle." This measure groups all contributions from a four-year presidential cycle together, such as 2001-2004 for the 2004 election. As such, this measure of political preference is fixed by a CEO during the entirety of the presidential cycle. Our second other measure is a "four-year moving average." This measure sets a CEO's political preference in year $t$ to be based on donations between years $t-2$ and $t+1$. Notice that this measure is somewhat similar to the election cycle measure, as they both cover a four-year time period and only one presidential election at a time. Our third other measure is the "last four years" ("Prev 4 Yrs." in the tables). This measure determines a CEO's political preference in year $t$ to be based on donations between years $t$ and $t-3$.

The question that arises from our measures of CEOs' political preferences is whether our measures capture CEOs' actual political preferences, as opposed to strategic considerations. Bonica (2016) performs a number of analyses to show that corporate elites make political contributions to advance their personal preferences or their business interests. Using companies from Fortune 500 he shows that the vast majority of CEOs contribute to only one party, whereas their corporation contributes strategically. He also shows that CEOs are much less likely to pick winners than are their corporations.

Consistent with Bonica's work, Hutton et al. (2014) also argue that, unlike corporate political action committees (PACs) that contribute strategically to serve corporate purposes, CEOs' political contributions reflect their personal beliefs. ${ }^{13}$

Another question that can arise in connection with our measure is whether CEOs' political preferences are relatively stable over time. Several studies document that during the years in which individuals serve as top corporate executives there is very little change over time in their political preferences as reflected in their political contributions (Bonica, 2016; Fremeth et al., 2013; Hutton et al., 2014, 2015; Elnahas and Kim, 2017; Bayat and Goergen, 2020). We confirm that this stability of preferences is also present in our data.

### 2.5 Other Controls

In some of our exercises, we use additional state-year-level controls. Using the American Community Survey from 2000-2019, we calculate for every state and year, the share of the population

[^7]that is non-White, the share of the population that is native born, the share of households that are interracial (including both interracial marriages and adoptions), the share of households that live below the poverty line, and the share of the adult population that graduated from college (Ruggles et al., 2020). We also calculate the married women's labor force participation rate for each state-year. Finally, we include the gender pay gap for college graduates. We calculate this gap by regressing the log of hourly wage of college graduates on age, age squared, race, and a dummy for a person being female (this is our coefficient of interest).

Additionally, we use data from the Center for Disease Control (CDC) on abortion surveillance to calculate the yearly state abortion rate, which is the number of abortions per thousand women, in ever year. We also use the share of the population that voted for the Republican senatorial candidate in the previous two elections. ${ }^{14}$ Finally, we include the share of a state's population in a given year that underwent background checks for gun purchases, as calculated by the number of background checks registered in the National Instant Criminal Background Check System (NICS), from the Federal Bureau of Investigation, divided by the state-year population.

### 2.6 Summary Statistics

Figure 1 shows the average fraction of CEOs' political contributions that go to Republicans by each of our four measures over time. On average, $60 \%-70 \%$ of contributions from CEOs in our sample go to Republicans. ${ }^{15}$ This fraction is most stable for the sample average measure, as that measure does not allow individual CEOs to change preferences over time. ${ }^{16}$ All measures detect a slight decline in the average fraction of donations going to Republicans over time.

Tables 1 and 2 report summary statistics for our main analyses and our event study, respectively. We report the mean and the standard deviation (in parentheses) for our variables of interest for all observations in the analysis, as well as those conditional on the political preferences of the CEOs, and for those not in the sample (that is, we did not match the CEO with political contributions). We also report the number of observations for each variable, both overall and by CEOs' political preferences. Our measure of CEOs' political preferences for these tables is the sample mean.

The first column of Table 1 reports statistics on CEOs who contribute less than $50 \%$ of their contributions to Republicans (and hence more than $50 \%$ to Democrats). The second column reports statistics on CEOs who contribute more than $50 \%$ of their contributions to Republicans (and thus, less than $50 \%$ to Democrats). The third column reports statistics on all CEOs whom we can identify politically. The final column reports statistics on CEOs not in our sample (NIS).

[^8]Panel A of Table 1 presents summary statistics on CEOs, including gender, age, tenure as CEO, and whether they also chair the board of directors. Three percent of all CEOs are female, while $4 \%(2 \%)$ of those who contribute more to Democrats (Republicans) are female. Four percent of CEOs not in our sample are women. The average age of all groups of CEOs in our sample is about 56 years old, while those not in our sample are slightly younger. The average tenure for CEOs in our sample is 7.6 years, with the average slightly higher ( 8.3 years) for CEOs who contribute more to Democrats than for those who contribute more to Republicans (7.3 years). CEOs not in our sample have slightly shorter tenure ( 5.2 years), which is consistent with the idea that CEOs contribute more during their tenure (Fremeth et al., 2013), such that CEOs with shorter tenure are less likely to have contributed.

Fifty-five percent of all CEOs also chair their board of directors, with the percentage being slightly lower for those who contribute more to Democrats (52\%) than for those who contribute more to Republicans (56\%). CEOs not in our sample are significantly less likely to chair their board of directors (34\%). It is likely that CEOs who are not also the chair of their board are less likely to give contributions, similar to the fact that CEOs contribute most during their tenure.

Panel B presents summary statistics on the non-CEO executives in our samples: their age, total compensation, ratio of salary and bonus to total compensation ("ratio"), delta, and vega, with total compensation, delta, and vega reported in thousands of dollars. All of this data comes from ExecuComp, and is thus reported only for the ExecuComp sample. Finally, Panel B also reports whether an executive is an insider (as defined above). Insider status is calculated using Form 4 data, because that broader sample of data is more likely to capture an executive having been employed at the firm in a previous time period. There are no major differences in these variables between CEOs with different political preferences. However, executives at firms not in our sample are somewhat less likely to be identified as insiders, they have lower compensation (of all forms), and they have a higher ratio of salary and bonus to total compensation. This is consistent with the evidence, discussed below, that CEOs of larger firms are more likely to be identified politically by our algorithm.

Panel C presents summary statistics on firm characteristics: number of female executives, total number of executives, and fraction of female non-CEO executives in both the ExecuComp and Form 4 samples. There are approximately 5.7 and 9.6 executives in the ExecuComp and Form 4 samples, respectively, and these numbers do not vary much in relation to CEOs' political preferences. Nine percent of ExecuComp non-CEO executives and $12 \%$ of their Form 4 counterparts are female. In both samples, CEOs who contribute more money to Democrats employ more women than those who contribute more to Republicans.

Figure 2 shows the fractions of non-CEO executives who are female, in both samples, by the political preferences of the CEOs. This shows a more continuous measure of how female representation in the executive suite varies by CEOs' political preferences. In the ExecuComp sample, the fraction of women in the executive suite declines monotonically with the fraction of a CEO's political
contributions that go to Republicans. In the Form 4 sample, the fraction of women in the executive suite is roughly constant among CEOs who give no more than $40 \%-60 \%$ of their contributions to Republicans, but then declines monotonically among CEOs who give to Republicans at higher rates.

Log of assets is roughly uniform among the three groups of CEOs. Companies run by CEOs who contribute more to Republicans have a higher return on assets (ROA) than companies run by other CEOs. Cash, dividends, and debt all vary somewhat from group to group, but their variance can be attributed to differences in other variables, such as industry and company size. ${ }^{17}$ By comparison, companies led by CEOs not in our sample have similar numbers of executives, executives who are female, and fractions of executives who are female as those in the sample. However, companies not in the sample are substantially smaller, as measured by total assets. They also have a lower return on assets, cash, dividends, and debt. Their book to market ratio is approximately the same as that of the firms in our sample.

Table 2 duplicates Panel A of Table 1 for a subset of CEOs who are new to the position, if both their political preferences and those of their predecessors can be identified, and who thus constitute the sample used in our event-study analysis, reported in Section 3.2, as well as for the CEOs not in the sample (NIS).

Relative to Table 2, we add the fraction of the executive suite that is female in the year prior to the change of CEO. We report statistics of the incoming CEO by the type of leadership change observed in the data. The first letter denotes the political preference of the outgoing CEO; the second letter denotes that of the incoming CEO: RR specifies a Republican CEO replacing a Republican, RD a Democratic CEO replacing a Republican, DD a Democratic CEO replacing a Democrat, and DR a Republican CEO replacing a Democrat. The column labeled "All" includes statistics on all CEOs in our sample, while the column labeled "NIS" includes statistics on the CEOs not in our sample.

Panel A of Table 2 designates a CEO to be a Republican (Democrat) if they contribute at least 50\% of their contributions to Republicans (Democrats). Panels B and C do the same, but set the cutoff levels at $67 \%$ and $75 \%$ of their contributions, respectively.

Overall, there were 4,021 firms whose CEOs changed during our period of study. For one-third of these firms, we have information on the political preferences of the outgoing and incoming CEOs. Table 2 shows that for $76 \%-83 \%$ of the firms that switched a CEO and for which we have information on both CEOs' political preferences, the outgoing CEO was a Republican.

Patterns in CEO gender are very similar to those reported in Table 1. Incoming CEOs designated as Democrats are more likely to be women, and somewhat younger than their Republican counterparts. We note that the stricter the cutoff for designating a CEO's political preference is, the

[^9]smaller the number of observations in our sample and the larger the number of observations not in our sample.

## 3 The Gender Composition of the Executive Suite

This section documents differences in the gender composition of the non-CEO executive teams by political preference of the CEO. Section 3.1 looks at differences across the entire sample of companies. Section 3.2 then uses an event-study approach to examine the dynamics of the executive suite's gender composition around the time of a change of CEO.

### 3.1 All Companies

Our first exercise studies the relationship between the political preference of a company's CEO and the gender composition of its executives. To this end, we estimate regressions of the following structure:

$$
\begin{equation*}
Y_{c t}=\alpha_{0}+\alpha \cdot \text { FracRep }_{c t}+\beta \cdot \text { Female }_{c t}+d_{t}+I_{c}+X_{c t}^{\prime} \xi+\epsilon_{c t}, \tag{1}
\end{equation*}
$$

where $Y_{c t}$ is the fraction of company $c^{\prime}$ s non-CEO executives in year $t$ who are women. FracRep ${ }_{c t}$ is the fraction of a CEO's political contributions that went to Republicans. Female ${ }_{c t}$ is a dummy variable equal to 1 if the CEO is female. $d_{t}$ is a set of year fixed effects and $I_{c}$ represents firm fixed effects. $X_{c t}^{\prime}$ is a vector of firm characteristics, including (a) a quadratic in the CEO's age, (b) the $\log$ of the CEO's tenure, (c) whether the CEO also chairs the board of directors, (d) whether the CEO is an "insider" (defined above), (e) the interaction of insider status and being female, and (f) the log of the firm's total assets. ${ }^{18}$ Standard errors are clustered at the firm level. We estimate (1) using either the Form 4 or the ExecuComp sample. Thus, the odd-numbered columns will use the Form 4 sample while the even-numbered columns will use the ExecuComp sample.

Table 3 shows the results of these regressions. Column (1) uses the sample of executives from Form 4. The point estimate for FracRep $_{c t}$ is -0.019 , and statistically significant at the $5 \%$ level. This suggests that CEOs who contribute only to Republicans (FracRep ${ }_{c t}=1$ ) have a lower fraction of women on their executive teams by about 1.9 percentage points. Given that the fraction of executives who are women is $12.6 \%$ in the Form 4 sample, this estimate is not small. CEOs who contribute at least $67 \%\left(\right.$ FracRep $\left._{c t}=0.67\right)\left(75 \%\left(\right.\right.$ FracRep $\left.\left._{c t}=0.75\right)\right)\left[100 \%\left(\right.\right.$ FracRep $\left.\left._{c t}=1\right)\right]$ to Republicans employ $10 \%$ (11\%) [15\%] fewer women than CEOs who contribute $100 \%$ (FracRep ${ }_{c t}$ $=0$ ) to Democrats. Column (2) duplicates Column (1) except that it uses the sample of executives from ExecuComp, and finds a coefficient of -0.023 , which is statistically significant at the $5 \%$ level. Given that the average fraction of executives who are women in the ExecuComp sample is about

[^10]9\%, this implies that CEOs who contribute at least $67 \%$ ( $75 \%$ ) [100\%] to Republicans employ about $17 \%(19 \%)$ [ $25 \%$ ] fewer women than CEOs who contribute $100 \%$ to Democrats. ${ }^{19}$

Columns (3) and (4) repeat this pattern, but add in controls at the state-year level. These controls include the share of the population that is non-White, the share of the population that is native born, the share of households that are interracial, the share of households that live below the poverty line, the share of the adult population that graduated from college, the female labor force participation, the abortion rate, the share of the population that voted for the Republican candidate in the previous two senatorial elections, and the background check rate for gun purchases. These controls also include the gender pay gap for college graduates, as described above. Columns (5) and (6) also repeat this pattern, but replace these state-level controls with year effects interacted with state fixed effects, and thus capture all variation at the state-year level. The point estimates and statistical significance of Columns (3)-(6) are very similar to those of their counterparts in Columns (1) and (2). Thus, it seems that the state-level controls did not accomplish much. However, it is possible that other state-level controls do matter, and therefore we use state-year controls in our analysis henceforth.

In all of these specifications, we exclude observations for which we do not see the political affiliation of the CEO. In Columns (7) and (8) we repeat Columns (5) and (6), but designate any CEOs whose political affiliation cannot be ascertained as having donated half their money to Democrats and half to Republicans. In doing so, we are introducing noise into our measure, and designate the independent variable "Frac Republican Noise." The coefficients in these specifications are slightly lower, which we might expect from attenuation bias due to the measurement error we introduce.

There has been a movement to increase gender diversity in corporate America, which substantially accelerated toward the end of our sample time period in 2015. One prominent example is State Street, which began engaging with companies on gender diversity on corporate boards in 2015 (Goodman and O'Kelley, 2017), while another is LeanIn.org, which began working with McKinsey \& Company in 2015 to advocate explicitly for gender equality in corporate America, publishing annually the "Women in the Workplace Survey." They specifically call for gender parity in corporate America by 2030, meaning $50 \%$ female representation in both the C-suite and corporate boards Paradigm for Parity 2018.

It is possible that this heightened attention to gender diversity in the latter part of the sample period could affect our findings. If CEOs of all political persuasions were pressured to add women, it is possible that an individual CEO's political preference would stop mattering for gender diversity. In untabulated results, we redid this representation analysis (Table 3) with an interaction between CEOs' political preferences and an observation in the later part of the time period (start-

[^11]ing in 2015). Our findings suggest that CEOs' political preferences matter most in the earlier part of the sample period, as per this hypothesis. Interestingly, this finding only applies when we use our Form 4 sample, but not when we use the ExecuComp sample. One possible explanation is that CEOs submitted to pressure to add women in the latter part of the sample period, which would affect the Form 4 sample, but they did not add them to the highest-paid positions, which would not affect the ExecuComp sample. However, due to limited sample sizes in the later part of the sample period, we cannot make any conclusive statements.

Table A2 in Appendix D performs a robustness analysis of this composition exercise using our other measures of political preference.

We conclude that companies run by CEOs who exhibit a strong Republican preference employ fewer women. This finding holds both for the broad sample of executives in the Form 4 sample, and for the more restricted sample of highly paid executives in the ExecuComp sample.

### 3.2 Event-Study Design

The previous analysis established an association between a CEO's political preference and the gender composition of the executive suite. We next use below an event-study design, where the event is a change of a company's CEO. Our event-study analysis compares the gender composition of the executive suite at companies whose outgoing CEO is replaced by a successor of the opposite political preference with companies whose outgoing and incoming CEOs have the same political preferences. Relative to our previous analysis, this approach allows us to view the association between CEOs' political preferences and the gender composition of the executive suite through two new lenses. The first is the timing of the association. That is, we show below that replacing a Republican CEO with a Democratic CEO happens prior to the increase in gender diversity, rather than vice versa. Second, this approach allows us to use a difference-in-differences approach as an alternative type of variation in the data.

We hypothesize that replacing a Republican CEO with a Democratic CEO will be followed by an increase in the representation of women in the executive suite. The company might have put in place a Democratic CEO in part because of the expectation that this CEO would facilitate an increase in gender diversity, or this increase might have been a mere by-product of a CEO appointment motivated by completely different reasons. For our purposes, what matters is only whether, as we hypothesize, a switch from a Republican CEO to a Democratic CEO tends to be followed by an increase in the incidence of women in the executive suite.

For an event study focusing on change, we need to use, instead of the continuous measure of political preferences, a classification of some CEOs as Democratic or Republican if their contributions lean sufficiently strongly in favor of the relevant major party.

To do so, we use the sample average measure of political preferences, and use three possible
cutoffs. ${ }^{20}$ The first one is to label a CEO as a Republican (Democrat) if at least $50 \%$ of their contributions went to Republicans (Democrats). The second and third are to set this cutoff at $67 \%$ and $75 \%$ of contributions, respectively. The benefit of using a lower cutoff is that more CEOs are identified as being affiliated with a political party, thus enlarging the sample, while the cost is that more CEOs may be erroneously affiliated with a political party, even if their political preferences are more moderate.

We begin by discussing the selection of companies in our sample. As discussed in Section 2.6, Table 2, the main difference between companies in and out of this event-study sample is that the CEOs not in our sample are slightly younger and less likely to chair their board of directors. Another possible concern could be that the probability of an event (a change of CEO) being included in our sample might change over time, potentially biasing our results with data from time periods with more (or fewer) women in the executive suite. Table 4 shows the number of changes of CEOs, both in and out of our sample, by a cutoff used to label CEOs' political preferences over time. We break our time period into four subperiods: 2000-2004, 2005-2009, 2010-2014, and 2015-2018. ${ }^{21}$ There is no clear pattern of the propensity for a change of CEO to be included in our sample over time.

Similarly, one might be concerned that companies included in our sample have different levels of gender diversity relative to those excluded from our sample. Table 5 shows the fraction of women in the executive suite, using the Form 4 sample, in the year prior to a change of CEO for companies included and not included the sample, by the cutoff used to identify CEOs' political preferences, and over time. When the cutoff is $50 \%$, there is no meaningful difference in female representation between the companies or over time. When the cutoff is $67 \%$ or $75 \%$, there are slightly more women in the executive suite for those companies not included in the sample. However, this difference is roughly constant over time, and may reflect small sample sizes, especially in later years.

We perform the event-study exercises, detailed below, separately for companies whose outgoing CEOs are Republicans and Democrats. This approach is advantageous as it enables us to better measure trends in female executive employment at companies run by Republicans or Democrats before a change in their leaders' political preferences. That is, we are able to show that trends in executive gender composition do not differ, prior to a change of CEO, between companies that replace a Republican with a Democrat and those that select another Republican. Doing so increases confidence that the event-study design captures the effect of a change in the CEO's political preference on the gender composition of the executive suite, rather than differing trends at companies that replace a Republican with a Democrat or with another Republican. It is important, however, to do the event study separately by the identity of the outgoing CEO as companies run by

[^12]outgoing Democrats have more women than those run by outgoing Republicans. ${ }^{22}$
We also note that it is possible that changes in the company or local conditions may affect the executive suite just as a CEO is being replaced. Such a concern is hard to entirely address, and thus we do not rule out the possibility that our results are tainted by omitted variable bias. However, as discussed below, we include both company fixed effects and state-year fixed effects, which presumably mitigate some of these concerns.

We proceed in two steps. First, Section 3.2.1 performs the main event study, and shows that replacing a Republican CEO with an incoming Democratic CEO yields a dynamic increase in the fraction of the executive suite that is female. Second, Section 3.2.2 breaks down this result, and shows that the increased fraction of women among executives is due to hiring more women (an increase in the numerator) rather than reducing the number of executives (a decrease in the denominator). We relegate to Online Appendix $C$ the event study exploring the implications of replacing Democratic CEOs. We do so as the sample is much smaller, yielding estimates that are noisy.

### 3.2.1 Event Study

Our event study includes a number of firms that have changed CEOs at various points over time. Using a classic event-study with two-way fixed effects over companies and time may yield potential problems, as studied by a recent literature (de Chaisemartin and D'Haultféuille, 2020; Sun and Abraham, 2021; Goodman-Bacon, 2021; Gardner, 2021; Baker et al., 2022; Borusyak et al., 2024). The main issue is that, if the treatment effect is heterogeneous across companies and time, then the classic event-study estimator will not necessarily capture an average treatment effect. For instance, this issue may arise if the effect of replacing a Republican CEO with a Democratic CEO changes over time within our sample. This could be, for example, due to time-varying abilities of CEOs to effect change within their organizations. Furthermore, it is also possible that, if the effects are heterogeneous but assumed to be homogeneous, then estimates of some fixed effects will be biased. Additionally, the use of a treated company as a control group can be problematic if the effects are dynamic, a point made forcefully by Goodman-Bacon (2021). The approach outlined in Thakral and Tô (2020) and Gardner (2021), and used in Hazan et al. (2023), addresses these concerns by taking a two-step approach to the analysis that is valid under the parallel trends assumptions. Similarly, this approach relies on the assumption that there are no anticipatory effects (Borusyak et al., 2024). That is, firms do not change their behavior in anticipation of a future CEO change.

The first stage estimates all coefficients, except for the event-study coefficients, excluding firms in the first six years after a change of CEO. ${ }^{23}$ Specifically, the first-stage estimates regressions of the

[^13]following form:
\[

$$
\begin{equation*}
Y_{c t}=\alpha_{0}+I_{c}+I_{t}+X_{c t}^{\prime} \delta+v_{c t}, \tag{2}
\end{equation*}
$$

\]

where $Y_{c t}$ is the fraction company $c^{\prime}$ s non-CEO executives who are women, $I_{c}$ are company fixed effects, $I_{t}$ are year fixed effects, and $X_{c t}^{\prime}$ is a vector of firm characteristics, including a quadratic in the CEO's age, whether the CEO also chairs the board of directors, whether the CEO is female, whether the CEO is an insider, the interaction of the CEO's insider status and being female, and the log of the firm's total assets, in year $t$. In some specifications, we also include state-year fixed effects, as above. To estimate this equation, we use the whole sample of data from Section 3.1, excluding firms in the first six years after a change in CEO. The use of the larger dataset from Section 3.1 allows us to estimate the influence of control variables using all available data, rather than the limited sample used in this event study, and, in particular, to accurately control for the general rise in female representation in the executive suite over time. Excluding from this regression observations in the first six years after a firm changes its CEO allows us to estimate this equation with data that has not been affected by the event of a change of CEO, and thus allows us to address the issues in the two-way fixed effects literature. Thus, the estimates of these parameters are not contaminated by the effects of CEOs being replaced, as discussed above. We note that, in this step, we include never treated firms, but not in the second step as explained below.

In the second stage, we estimate regressions of the following structure:

$$
\begin{align*}
Y_{c t k}= & \alpha_{0}+\sum_{k=-3}^{3} \alpha_{k} \cdot t^{k}+\text { Switch }_{p,-p}+\sum_{k=-3}^{3} \gamma_{k} \cdot \text { Switch }_{p,-p} \cdot t^{k}  \tag{3}\\
& +\hat{I}_{c}+\hat{I}_{t}+X_{c t k}^{\prime} \hat{\delta}+\epsilon_{c t k}
\end{align*}
$$

where $Y_{c t k}$ is the fraction company $c$ 's non-CEO executives who are women, $k$ years around the year of a change of CEO, $t$, where the lag $k$ ranges from -3 to 3 (i.e., from three years before to three years after the change of CEO). ${ }^{24}$ The fraction of executives who are female is measured using the Form 4 sample. ${ }^{25}$ All other variables are as described above, and parameters $\hat{I}_{c}, \hat{I}_{t}, \hat{\delta}$ are as estimated in Equation (2). Under the parallel trends assumption, this estimator is unbiased (for more, see Thakral and Tô, 2020; Gardner, 2021). Note that this two-step estimator allows us to control for aggregate trends using all of our available data in the first step. This is an attractive feature, given that the sample of firms that actually experience a change in CEO is small in any

[^14]given year. Using such a limited sample would make it difficult to estimate year and industry fixed effects. Thus, this approach is our preferred among those proposed by the literature. In order to adjust the standard errors in the second step (Equation 3) for the fact that we using estimates from the first step (Equation 2), we bootstrap our standard errors.

Switch $_{p,-p}$ is a dummy variable indicating that an outgoing CEO of political preference $p$ is replaced by an incoming CEO of the opposite political preference $-p .{ }^{26}$ We also include the interactions of Switch with $t^{k}$, with coefficients $\gamma_{k}$; these interactions capture differences between (a) the fraction of non-CEO executives who are female in the years before and after a CEO of party $p$ is replaced with a CEO of party $-p$, and (b) the same changes at companies whose outgoing and incoming CEOs share a political preference. Thus, $\gamma_{k}$ are our parameters of interest.

Table 6 reports the results of our event study when studying the sample of companies replacing a Republican CEO with either a Democrat or Republican. Column (1) uses the $50 \%$ cutoff to determine CEOs' political preferences, and does not include the firm controls in X. Column (2) repeats Column (1), but includes these firm controls and the state-year fixed effects. Columns (3) and (4) ((5) and (6)) repeat Columns (1) and (2), respectively, but use the $67 \%$ ( $75 \%$ ) cutoff for determining CEOs' political preferences. We omit the interaction between Switch and $t=0$. As a result, the interpretation of the coefficients on these interactions is a comparison to the year a company changed CEOs. In all specifications, the coefficients on $t^{k}$ are generally economically and statistically insignificant, indicating no trends in female executive employment around the time of a change of CEO, for this sample of companies.

In all specifications, Switch is insignificant, with the potential exception of Column (6) where it is statistically significant at the $15 \%$ level. However, estimates on the interaction between Switch and $t^{k}$ prior to the change of CEO indicate no difference in trend in the fraction of the executive suite that is female between companies whose Republican CEOs are replaced with Democrats and with Republicans in all specifications. This finding supports the parallel-trends assumption. All specifications find an increase in female representation in the executive suite a year after a Republican CEO is replaced by a Democrat. This increase is 1.3 percentage points in Columns (1) and (2), 1.9-2.2 percentage points in Columns (3) and (4), and $2.5-2.9$ percentage points in Columns (5) and (6). The estimates are significant at the $10 \%$ level in Columns (1) - (5), and at the $15 \%$ level in Column (6).

Two years after the change in CEO, female representation in the executive suite increases by 1.8 2.0 percentage points in Columns (1) and (2), 3.8-3.9 percentage points in Columns (3) and (4), and 4.9 percentage points in Columns (5) and (6). The estimates are statistically significant at the $1 \%$ level in Columns (1) and (2), the $5 \%$ level in Columns (3) and (4) and the $10 \%$ level in Columns (5) and (6). Three years after the change in CEO, female representation in the executive suite increases

[^15]by 1.9-2.3 percentage points in Columns (1) and 2, 4.0-4.4 percentage points in Columns (3) and (4), and 5.3-6.0 percentage points in Columns (5) and (6). The estimates are statistically significant at the level in Columns (1), (2), (5), and (6), and at the $15 \%$ level in Column (3). The estimate in Column (4) is not statistically significant.

We note that the magnitude of the estimates becomes larger when using stricter thresholds, but statistical significance does not always increase due to smaller sample sizes. We also note that these estimates are quite large, considering that the average fraction of executives who are women ranges from $11 \%$ (Column (5)) to $12.4 \%$ (Column (2)). Indeed, when using a $50 \%$ ( $67 \%$ ) [ $75 \%$ ] cutoff, these estimates represent an increase of about $20 \%(40 \%)$ [50\%] in the fraction of the executive suite that is female.

Finally, we employ the method developed by Oster (2019) to check for omitted variable bias. When using a $50 \%(67 \%)$ [75\%] cutoff, the delta values range from 2.0-3.4 (2.2-3.9) [2.8-6.2], suggesting that omitted variable bias is not a first-order concern. ${ }^{27}$

### 3.2.2 Breakdown of Results

We next break down the results of this exercise by asking: does the fraction of women in the executive suite rise because incoming Democratic CEOs hire new female executives (i.e., the numerator increases), or because the number of executives drops (i.e., the denominator decreases)? ${ }^{28}$ Figure 3 breaks down the results described above for the $50 \%$-threshold event study when a company replaces a Republican CEO by another CEO. The top left panel shows that companies that replace a Republican with another Republican CEO see only a small trend in the increase in the number of female executives employed. By contrast, the top right panel shows that companies that replace a Republican CEO with a Democrat see a 0.6 increase in the number of female executives.

The middle panel shows that both types of companies see only small fluctuations in the number of executives they employ. ${ }^{29}$ The bottom panel shows the net effect of these two facts: the fraction of executives who are women rises slightly when a Republican replaces a Republican, but much more when a Democrat replaces a Republican, where female representation rises from $12 \%$ to $18 \%$ of the executives. Given that the number of executives is approximately constant at 10 , these results suggest that the extra women added to the executive suite can account fully for the change in the fraction of executives who are women.

Figures 4 and 5 repeat Figure 3 for the $67 \%$ and $75 \%$ threshold exercises, respectively. The same patterns holds as in Figure 3. Under the $67 \%$ ( $75 \%$ ) threshold, the number of female executives increases when a Republican is replaced by a Democrat by approximately 0.8 (1.0) women. Given

[^16]that the fraction of executives who are women rises by about 0.08 ( 0.1 ), and that the number of executives is approximately constant at 10 , these results again suggest that the extra women added to the executive suite can entirely account for the change in the fraction of executives who are women. Notice that the increase in the number of women in the executive suite upon replacing a Republican with a Democrat is increasing in the cutoff used to determine political preferences. This is consistent both with the results shown in Table 6 and as with the notion that stricter cutoffs yield CEOs with stronger political preferences. ${ }^{30}$

We cannot completely rule out the possibility that confounding factors cause companies to simultaneously replace a Republican CEO with a Democrat and increase female representation in the executive suite. However, our results are highly suggestive that replacing a Republican CEO with a Democrat is associated with an increase in female representation among executives. As discussed above, the sample of companies replacing a Democratic CEO is quite small, and thus the analysis is relegated to Online Appendix C. However, we note that the results shown there indicate that replacing a Democratic CEO with a Republican CEO does not seem to impact female representation in the executive suite. The results presented here thus suggest that Democratic CEOs hire women, rather than that Republican CEOs fire women.

## 4 Gender Differences in Executive Pay

As discussed above, studies on the gender gap in labor markets usually look at both representation and compensation. While the previous section studies the gap in representation, this one looks at the gap in compensation. Specifically, we document how gender differences in total compensation and performance-sensitive pay vary with the political preference of a company's CEO.

To analyze gender differences in non-CEO executive compensation between companies run by CEOs with different political preferences, we estimate regressions of the following structure:

$$
\begin{align*}
Y_{p c t}= & \alpha_{0}+\alpha \cdot \text { FracRep }_{c t}+\beta \cdot \text { Female }_{c t}+\gamma \cdot \text { ExecFemale }_{p c t} \\
& +\delta \cdot \text { ExecFemale }_{\text {pct }} \cdot \text { FracRep }_{c t}+\omega \cdot \text { ExecFemale }_{\text {pct }} \cdot \text { Female }_{c t}  \tag{4}\\
& +d_{s t}+I_{c}+X_{c t}^{\prime} \xi+Z_{p c t}^{\prime} \chi+\epsilon_{p c t},
\end{align*}
$$

where $Y_{p c t}$ is our compensation outcome variable of non-CEO executive $p$ at company $c$ in year $t$. We have four potential outcome variables. The first is the log of the executive's total compensation. The second is the ratio of salary and bonus to total compensation, which we call the "cash ratio." Our third and fourth variables are the $\log$ of delta and the $\log$ of vega, respectively. ${ }^{31}$ FracRep $p_{c t}$ is

[^17]the fraction of a CEO's political contributions that went to Republicans. As in Section 3.1, we use the sample average definition as our benchmark specification, and relegate robustness tests with other definitions to Appendix D. Female $e_{c t}$ is a dummy variable equal to 1 if the CEO is female. ExecFemale $_{p c t}$ is a dummy variable equal to 1 if executive $p$ is female. We interact ExecFemale ect with FracRep ${ }_{c t}$, with coefficient $\delta$. This is the coefficient of interest and measures how a female executive's compensation varies with the political preference of the CEO. Our coefficients of interest are $\beta$ and $\delta$; they compare gender differences in compensation and how these differences change with the political preference of the CEO . We also include an interaction between ExecFemale pct and Female ${ }_{c t}$ (listed above with coefficient $\omega$ ). $d_{s t}$ is a set of year fixed effects interacted with state fixed effects. $I_{c}$ is a set of firm fixed effects. $X_{c t}^{\prime}$ is a vector of firm characteristics. When the dependent variable is either the log of delta or the log of vega, we include as a control the sum of the executive's salary and bonus; higher levels of non-stock-option compensation are presumably correlated with higher levels of stock-option compensation.

As before, $X$ includes a quadratic in the CEO's age, the log of the CEO's tenure, an indicator for whether the CEO also chairs the board of directors, an indicator for whether the CEO is an insider, interacted with whether the CEO is female, and the log of total assets. We now add the return on assets, book-to-market value, cash, dividends, and total debt. $Z_{p c t}^{\prime}$ is a set of individual controls for executive $p$, including a quadratic in his/her age, an indicator for whether the executive is an insider, and a set of dummy variables for the executive position's title. ${ }^{32}$ Thus, the controls we use are similar to those in the literature (Munoz-Bullon, 2010; Elkinawy and Stater, 2011; Carter et al., 2017; Quintana-Garcia and Elvira, 2017). Standard errors are clustered at the firm level.

Table 7 reports the estimation results. Column (1) regresses log total compensation on ExecFemale, Female, their interaction, and includes our firm controls $X$, individual controls $Z$, year fixed effects, and firm fixed effects. The estimate on ExecFemale suggests that female executives are paid about $9 \%$ less than their male counterparts, with this difference being statistically significant at the $1 \%$ level. Column (2) adds CEOs' political preferences FracRep as well as an interaction of the political preference with ExecFemale. One might hypothesize that Republican CEOs differ from Democratic CEOs in the level of compensation offered to their executives. However, the estimated relationship between CEOs' political preferences (FracRep) and the average level of pay in the executive suite is quantitatively and statistically insignificant. ${ }^{33}$

The estimate on ExecFemale in Column (2) suggests that women are paid about 3\% less than men, but this estimate is not statistically significant. Notice that this estimate is implicitly the gender compensation gap under CEOs who contribute all of their contributions to Democrats. As a result, we cannot reject the hypothesis that there is no gender compensation gap under Democratic CEOs. The estimate on the interaction between FracRep and ExecFemale is -0.093 , and is statistically significant at the $1 \%$ level. This implies that the gender compensation gap rises from $3 \%$ to $9.3 \%$

[^18](10.1\%) [12.4\%] under CEOs who contribute at least $67 \%$ ( $75 \%$ ) [100\%] of their contributions to Republicans. ${ }^{34}$

Columns (3) and (4) repeat this pattern, but change the dependent variable to be the cash ratio. A higher value for this ratio indicates a higher share of total compensation that is paid in cash rather than equity compensation. The coefficient on ExecFemale in Column (3) reports our finding that women are paid 1 percentage point more of their salary in cash, with the difference being statistically significant at the $1 \%$ level. However, this difference entirely disappears in Column (4), suggesting that quantitatively and statistically there is no difference in the cash ratio between men and women when the CEO is a Democrat. The estimate on the interaction between FracRep and ExecFemale is 0.024 , suggesting that the gender gap in the cash ratio under CEOs who contribute at least $67 \%(75 \%)$ [ $100 \%$ ] to Republicans is 1.6 (1.8) [2.4] percentage points higher than it would be under CEOs whose entire contributions go to Democrats. This estimate is statistically significant at the $1 \%$ level. Taken together, these results suggest that we cannot reject the hypothesis that the cash ratio is the same for male and female executives under CEOs who contribute all of their contributions to Democrats, and that gender differences in the cash ratio can potentially be entirely accounted for by the political preference of a firm's CEO. ${ }^{35}$ Finally, we note that, in both specifications, there is no economically meaningful or statistically significant relationship between the fraction of a CEO's donations that go to Republicans and the cash ratio. That is, CEOs' political preferences are not associated with the overall composition of pay, regardless of the gender of the executive.

Columns (5) and (6) again repeat this pattern, but change the dependent variable to be the log of delta. As discussed above, we also include in these specifications as a control the total compensation an executive receives. A higher value of the log of delta indicates that the executive's stock options are more sensitive to the company's stock price, indicating a higher level of performance incentives. The coefficient on ExecFemale in Column (5) reports our finding that women have a delta that is about $26 \%$ lower than that of men, with the difference being statistically significant at the $1 \%$ level. However, this difference entirely disappears in Column (6), suggesting that quantitatively and statistically there is no difference in delta between men and women when the executive is a Democrat. The estimate on the interaction between FracRep and ExecFemale is -0.439 , suggesting that the gender gap in the delta under CEOs who contribute at least $67 \%(75 \%)$ [100\%] to Republicans is 25 (28) [35] percentage points lower than it would be under CEOs whose entire contributions go to Democrats. This estimate is statistically significant at the $1 \%$ level. Taken together, these results suggest that we cannot reject the hypothesis that delta is the same for male and female executives under CEOs who contribute all of their contributions to Democrats, and that gender differences in delta can potentially be entirely accounted for by the political preference of a firm's

[^19]CEO. ${ }^{36}$ Finally, we note that, in both specifications, there is no significant relationship between the fraction of a CEO's donations that go to Republicans and delta. That is, CEOs' political preferences are not associated with the overall composition of pay, regardless of the gender of the executive.

Columns (7) and (8) repeat this pattern yet again, but change the dependent variable to be the $\log$ of vega. A higher value of the log of vega indicates that the executive's stock options are more sensitive to the company's stock price volatility, indicating a higher level of performance incentives (specifically, for risk taking). The coefficient on ExecFemale in Column (7) reports our finding that women have a vega that is about $25 \%$ lower than that of men, with the difference being statistically significant at the $1 \%$ level. However, this estimate decreases by half in Column (8), and loses its statistical significance. We cannot reject the hypothesis that vega is the same for female and male executives when the CEO contributes only to Democrats. The estimate on the interaction between FracRep and ExecFemale is -0.217, suggesting that the gender gap in delta under CEOs who contribute at least $67 \%$ ( $75 \%$ ) [100\%] to Republicans is 25 (27) [30] percentage points lower than it would be under CEOs whose entire contributions go to Democrats, though this interaction is not significant. Taken together, these results suggest that a CEO's political affiliation can account for much (if not all) of the gender differences in vega. ${ }^{37}$ Finally, we note that, in both specifications, there is no significant relationship between the fraction of a CEO's donations that go to Republicans and vega.

Ideally, we would perform an analysis along the lines of the event study done in Section 3.2. However, we only have data on executive compensation in the ExecuComp sample. In that sample, more than half of the firms do not employ any female executives at all. Given that the event study we perform is already on a small sample, this data limitation renders the analysis impossible. Additionally, our results discussed above show that Democratic CEOs hire more women. Since we cannot follow these women prior to their hiring, we would not be able to analyze how their wages change when the Democrat becomes CEO. Similarly, it is not clear how the CEO would affect wages of women who were hired prior to the CEO taking office. While it is possible that the CEO would work to equalize wages, it is also possible that the CEO would affect only new hires.

We conclude that companies run by CEOs who only donate to Democrats have much smaller, and potentially nonexistent, gender pay gaps among top executives. Other companies, by contrast, have significant pay gaps. Interestingly, this pattern characterizes not only total compensation but also the makeup of the compensation package: significant gender gaps are apparent in the cash ratio, delta, and vega of compensation under CEOs with stronger Republican preferences. Thus, not only do female executives under such CEOs receive lower total compensation than their male counterparts; their compensation also has a much smaller equity component. The existing

[^20]literature has argued that lower delta and vega for female executives indicate higher female risk aversion (Carter et al., 2017), which in turn is in line with the broader literature on gender differences in risk preference (Eckel and Grossman, 2008). At face value, our results indicate that the gender differences in the composition of compensation can be explained by the political preferences of CEOs, which rules out the notion that it is differences in risk preferences by gender that explain gaps in delta and vega. However, it is possible that gender risk-aversion gaps are systematically higher at Republican-led firms, which could also generate our empirical findings.

## 5 Discussion

We have documented that the political preferences of CEOs are strongly associated with both gender diversity and the gender compensation gap. What can explain these findings? In this section, we first discuss the CEO's role in hiring and compensating executives, which confirms that it is plausible that CEOs' political preferences can impact the executive suite. We then discuss various hypotheses as to how CEOs' political preferences may be associated with the facts we document in this paper.

Before turning to these discussions, we note that there has been a growing interest in the representation of women in high-level positions in general, and in the ranks of corporate executive suites in particular. Many companies have expressed an interest in or even a commitment to growing the incidence of female executives (e.g., Larcker and Tayan (2020)) . In recent years, more investors and the media have been paying close attention to this issue. Thus, understanding all the factors that shape the hiring and compensation of women in top executive positions is of significant interest.

### 5.1 CEOs' Role in Hiring and Compensating Other Top Executives

CEOs are widely assumed to be key players in the making of corporate decisions, and this assumption motivated the large body of literature noted in Section 1 regarding the association between personal characteristics of CEOs and corporate decisions. One corporate decision that CEOs have notable impact on is concerns the hiring and compensation of members of the executive suite. ${ }^{38}$ It is desirable for the CEO to be comfortable working with members of the executive team and to have confidence in their ability to effectively carry out responsibilities assigned to them by the CEO.

Furthermore, the CEO is likely to have private information pertaining to the suitability and performance of executive suite members. Thus, corporate directors are likely to attach substantial weight, if not largely defer, to the CEO's preferences and recommendations concerning the hiring and compensation of the CEO's top executive team. This discussion regarding the significant influence that CEOs have on such hiring and compensation is consistent with input on these issues

[^21]we have received from a number of senior experts from leading executive pay and search advisory firms. ${ }^{39}$

### 5.2 Hypotheses

We hypothesize that the political preferences of CEOs are associated with decisions regarding the hiring and the compensation of female executives. The different mechanisms that we consider are not necessarily exhaustive of all potential mechanisms, and can be grouped into two broad categories:

## 1. Preferences and Beliefs over Gender

- Gender Perceptions: CEOs with stronger Democratic preferences may have more favorable views regarding women's relative skills and their effectiveness in top executive positions. They would thus be more willing to include women in the executive suite.
This mechanism can also contribute to understanding how gender pay gaps differ by the CEOs' political preferences. A Democratic CEO with a more favorable view of female executives might be more willing to pay female executives on par with their male counterparts. Similarly, such a CEO might attach more importance to providing incentives to female executives, and thus narrow the gender gap in the performance sensitivity of pay.
- Openness to Change: Increasing the representation of women in the executive suite may well involve significant changes to the work environment ("the old boys club") and to corporate culture, increasing uncertainty. To the extent that liberal CEOs (those with stronger Democratic preferences) are more open to changes in the work environment than conservative CEOs (those with stronger Republican preferences), liberal CEOs will be more willing to include women in their executive teams.
- Preferences for Gender Diversity/Equality: CEOs with stronger Democratic preferences may be more inclined to attach independent weight to greater gender diversity. This tendency could contribute to an association between the Democratic preferences of the CEOs and higher female representation in the executive suite.

[^22]Similarly, this mechanism could yield a reduction in gender pay gaps under a Democratic CEO. This would be true even if the female executive has worse outside options than her male colleague.

## 2. Endogenous Matching and Optimal Contracting

- Corporate Strategies: Companies that have or that adopt strategies requiring more interaction with or appeal to Democratic or female audiences (e.g., Democratic or female politicians or public officials) might be more likely to hire a Democratic CEO. In such cases, the value of having a Democratic CEO might also lie in the expectation that such a CEO would facilitate more women and Democratic executives in the executive suite. These executives would in turn assist the CEOs in interacting with the relevant audiences.
- Network Effects: CEOs with stronger Democratic preferences may have more exposure to career-focused and high-level professional women (e.g., in fund raising and related activities), increasing both their network for hiring such women and their comfort in working with such women.
- Affinity Effects: ${ }^{40}$ Female executives are more likely to have Democratic preferences than male executives (e.g., Cohen et al., 2019). To the extent that CEOs may feel more affinity to executives with similar political views, and consequently prefer to include such executives in their executive suite, CEOs with stronger Democratic preferences may be more open to including in their executive suite women who are likely to have Democratic preferences. Under this mechanism, the association between the Democratic preferences of the CEO and those of the female executives is driven by CEOs' preference for like-minded executives rather than by the CEO's preference for women.

Whereas the potential presence of these mechanisms informs and motivates our hypotheses, we do not attempt to identify the relative role and importance of these mechanisms. Our focus is on examining whether the hypothesized associations do exist. Given our findings that they do, we leave for future research the investigation into the extent to which the different mechanisms drive our findings. However, some of these mechanisms indicate a potential impact of gender diversity on firm outcomes. In Appendix B we employ the event study estimator to examine whether replacing a Republican with a Democratic CEO affects firm performance, as measured by either Tobin's $Q$ or return on equity. We find no evidence to suggest such an impact; however, we cannot entirely rule out the possibility either.

Finally, we note that we do not attempt to evaluate normatively the outcomes produced by any group of CEOs, and we do not assess whether any such group makes gender-related choices in an optimal or suboptimal way. We focus on examining whether the gender-related outcomes

[^23]associated with Democratic and Republican CEOs are different, not on which group makes better decisions. Thus, while our results indicate that Democratic CEOs are associated with more women in the executive suite relative to Republican CEOs, these results do not indicate whether and to what extent any of these groups is acting suboptimally.

## 6 Conclusion

This paper provides the first empirical evidence about the association between CEOs' political preferences and gender-related choices regarding the representation of women in the executive suite and the level and structure of their compensation. The evidence is consistent with our hypothesis that CEOs whose political preferences are more aligned with Democrats are associated with the presence of more women in the executive suite and with a reduced gender gap in compensation of non-CEO executives. To better understand the direction of the association, we use an event-study analysis; the event is a change of a company's CEO. We show that when a Republican CEO is replaced with a Democrat rather than another Republican, the fraction of women in the executive suite increases.

Our findings can be potentially explained by a variety of mechanisms, largely falling into two categories: preference or belief over gender and endogenous matching and optimal contracting. Each mechanism has different potential implications for policy. For example, if Democrats and Republicans differ in terms of beliefs over women's ability, then one potential policy to help attenuate this issue could be to increase the saliency of successful women. However, if the issue is more one of endogenous matching (that Democrats are more likely to have women in their circles), then such a policy would not be helpful. This mechanism would instead call for methods to increase the diversity of professional network, perhaps through corporate boards. We therefore believe that our findings motivate further research into the specific mechanisms underlying our results.

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Figure 1: CEOs' Political Preferences, 2000-2018.


Notes: This figure plots the average fraction of CEOs' political donations that went to Republicans, by year, for each of our four measures. "Cycle" refers to the election cycle measure. " 4 Yr . MA" represents the four-year moving average measure. "Prev 4 Yr." represents the average of the four years prior to current year. "\% Rep" represents the sample average measure. All variables as defined in the main text.

Figure 2: Fraction of Executives who are Female, 2000-2018.


## $\longrightarrow$ Frac Women F4 $\quad$ Frac Women ExC

Notes: This figure plots the average fraction of women among executives in the Form 4 sample ("Frac Women F4") and in the ExecuComp sample ("Frac Women ExC") by the fraction of a CEO's contributions that were donated to Republicans, as measured by the sample average measure. The bands represent the $95 \%$ confidence interval for these estimates. The bins on the X -axis represent the range of CEO donation types grouped together. For instance, " $0-20$ " groups together CEOs who gave $0-20 \%$ of their political donations to Republicans.

Figure 3: Replacing a Republican CEO:
50\% Threshold
Raw Data







Notes: The top panel shows the number of female executives relative to the timing of a change of CEO, by type of change of CEO. The middle panel shows the total number of executives relative to the timing of a change of CEO, by type of change of CEO. The bottom panel shows the fraction of executives who are female relative to the timing of a change of CEO, by type of change of CEO. The change of CEO happens at time 0 . "RR" represents an outgoing Republican CEO replaced by another Republican. "RD" represents an outgoing Republican CEO replaced by a Democrat. The data is from the Form 4 sample. All variable definitions are as in the main text.

Figure 4: Replacing a Republican CEO:

67\% Threshold<br>Raw Data



Notes: The top panel shows the number of female executives relative to the timing of a change of CEO, by type of change in CEO. The middle panel shows the total number of executives relative to the timing of a change of CEO, by type of change of CEO. The bottom panel shows the fraction of executives who are female relative to the timing of a change of CEO, by type of change of CEO. The change of CEO happens at time 0 . "RR" represents an outgoing Republican CEO replaced by another Republican. "RD" represents an outgoing Republican CEO replaced by a Democrat. The data is from the Form 4 sample. All variable definitions are as given in the main text.

Figure 5: Replacing a Republican CEO:
75\% Threshold
Raw Data


Notes: The top panel shows the number of female executives relative to the timing of a change of CEO, by type of change of CEO. The middle panel shows the total number of executives relative to the timing of a change of CEO, by type of change of CEO. The bottom panel shows the fraction of executives who are female relative to the timing of a change of CEO, by type of change of CEO. The change in CEO happens at time 0 . "RR" represents an outgoing Republican CEO replaced by another Republican. "RD" represents an outgoing Republican CEO replaced by a Democrat. The data is from the Form 4 sample. All variable definitions are as given in the main text.

Table 1: Summary Statistics: Firms, CEOs. Means (Standard Deviations)

| Variable | Below 50\% | Above 50\% | All | NIS |
| :---: | :---: | :---: | :---: | :---: |
|  | Panel A: CEO Characteristics |  |  |  |
| CEO Female | $\begin{gathered} 0.04 \\ (0.21) \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.16) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.17) \end{gathered}$ | $\begin{gathered} 0.04 \\ (0.20) \end{gathered}$ |
| CEO Age | $\begin{aligned} & 55.70 \\ & (7.86) \end{aligned}$ | $\begin{aligned} & 56.48 \\ & (7.00) \end{aligned}$ | $\begin{aligned} & 56.27 \\ & (7.25) \end{aligned}$ | $\begin{aligned} & 54.65 \\ & (7.25) \end{aligned}$ |
| CEO Tenure | $\begin{gathered} 8.31 \\ (8.14) \end{gathered}$ | $\begin{gathered} 7.34 \\ (7.28) \end{gathered}$ | $\begin{gathered} 7.61 \\ (7.54) \end{gathered}$ | $\begin{gathered} 5.19 \\ (5.72) \end{gathered}$ |
| CEO Chairman | $\begin{gathered} 0.52 \\ (0.50) \end{gathered}$ | $\begin{gathered} 0.56 \\ (0.50) \end{gathered}$ | $\begin{gathered} 0.55 \\ (0.50) \end{gathered}$ | $\begin{gathered} 0.34 \\ (0.47) \end{gathered}$ |
| N | 6,891 | 18,628 | 25,519 | 8,551 |
|  | Panel B: Executive (non-CEO) Characteristics |  |  |  |
| Age(ExC) | $\begin{aligned} & 51.76 \\ & (7.41) \end{aligned}$ | $\begin{aligned} & 52.17 \\ & (7.08) \end{aligned}$ | $\begin{aligned} & 52.06 \\ & (7.17) \end{aligned}$ | $\begin{aligned} & 51.18 \\ & (7.47) \end{aligned}$ |
| Insider | $\begin{gathered} 0.91 \\ (0.29) \end{gathered}$ | $\begin{gathered} 0.92 \\ (0.27) \end{gathered}$ | $\begin{gathered} 0.92 \\ (0.28) \end{gathered}$ | $\begin{gathered} 0.82 \\ (0.38) \end{gathered}$ |
| Compensation | $\begin{gathered} 2587.06 \\ (4832.28) \end{gathered}$ | $\begin{gathered} 2289.23 \\ (3697.35) \end{gathered}$ | $\begin{gathered} 2370.07 \\ (4039.20) \end{gathered}$ | $\begin{gathered} 1505.84 \\ (2586.86) \end{gathered}$ |
| Salary \& Bonus | $\begin{gathered} 700.87 \\ (1128.29) \end{gathered}$ | $\begin{gathered} 602.44 \\ (714.55) \end{gathered}$ | $\begin{gathered} 629.16 \\ (848.19) \end{gathered}$ | $\begin{gathered} 453.28 \\ (826.73) \end{gathered}$ |
| Ratio | $\begin{gathered} 0.42 \\ (0.26) \end{gathered}$ | $\begin{gathered} 0.40 \\ (0.24) \end{gathered}$ | $\begin{gathered} 0.41 \\ (0.25) \end{gathered}$ | $\begin{gathered} 0.47 \\ (0.26) \end{gathered}$ |
| Delta | $\begin{gathered} 177.83 \\ (1472.27) \end{gathered}$ | $\begin{gathered} 214.29 \\ (5475.16) \end{gathered}$ | $\begin{gathered} 204.41 \\ (4736.97) \end{gathered}$ | $\begin{gathered} 82.21 \\ (742.36) \end{gathered}$ |
| Vega | $\begin{gathered} 41.56 \\ (105.53) \end{gathered}$ | $\begin{gathered} 41.13 \\ (128.91) \end{gathered}$ | $\begin{gathered} 41.25 \\ (123.01) \end{gathered}$ | $\begin{gathered} 18.54 \\ (59.55) \end{gathered}$ |
| N | 26,754 | 71,819 | 98,573 | 44,551 |

Table 1 - Continued from previous page

|  | Below 50\% | Above 50\% | All | NIS |
| :--- | :---: | :---: | :---: | :---: |
|  | Panel C: Firm Characteristics |  |  |  |
|  |  |  |  |  |
| \# Female Executives (ExC) | 0.580 | 0.421 | 0.464 | 0.492 |
|  | $(0.790)$ | $(0.669)$ | $(0.707)$ | $(0.759)$ |
| \# Executives (ExC) | 5.641 | 5.683 | 5.672 | 5.629 |
|  | $(1.201)$ | $(1.203)$ | $(1.203)$ | $(1.383)$ |
| Frac Female (ExC) | 0.114 | 0.084 | 0.092 | 0.097 |
|  | $(0.161)$ | $(0.138)$ | $(0.145)$ | $(0.152)$ |
| \# Female Executives (F4) | 1.237 | 1.065 | 1.112 | 0.899 |
| \# Executives (F4) | $(1.341)$ | $(1.238)$ | $(1.269)$ | $(1.145)$ |
| Frac Female (F4) | 9.163 | 9.493 | 9.404 | 8.156 |
|  | $(4.214)$ | $(4.440)$ | $(4.383)$ | $(3.606)$ |
| Log Assets | 0.140 | 0.114 | 0.121 | 0.115 |
|  | $(0.144)$ | $(0.126)$ | $(0.132)$ | $(0.143)$ |
| Return on Assets | 7.974 | 8.165 | 8.114 | 6.879 |
| N | $(1.876)$ | $(1.694)$ | $(1.747)$ | $(1.620)$ |
| Book to Market | 0.027 | 0.039 | 0.035 | 0.006 |
| Dash | $(0.147)$ | $(0.192)$ | $(0.181)$ | $(0.669)$ |
|  | 0.520 | 0.526 | 0.524 | 0.545 |
|  | $(0.445)$ | $(0.440)$ | $(0.441)$ | $(0.522)$ |
|  | 1844.969 | 1312.606 | 1456.374 | 463.682 |
|  | $(6237.085)$ | $4498.337)$ | $(5032.940)$ | $(2127.477)$ |
|  | 152.814 | 203.865 | 190.042 | 70.296 |
|  | $(518.246)$ | $(620.084)$ | $(594.658)$ | $(384.047)$ |
|  | 4179.213 | 3781.838 | 3889.015 | 1161.331 |
|  | $(13550.633)$ | $(10375.568)$ | $(11321.063)$ | $(5540.483)$ |
|  | 18,628 | 25,519 | 8,551 |  |

Notes: All variables are as defined in the main text. The variables Salary \& Bonus, delta, and vega are in USD'000. The rows labeled N report the number of observations. ExC denotes the ExecuComp sample, while F4 denotes the Form 4 sample. All age and compensation variables are from the ExecuComp sample. "Below $50 \%$ " is the set of CEOs who contributed less than half of their political contributions to Republicans, while "Above 50\%" is the set of CEOs who contributed at least half of their political contributions to Republicans. "All" is the full set of CEOs in our sample. "NIS" is the set of CEOs not in our sample as their political preferences could not be ascertained.

Table 2: Summary Statistics: Event-Study CEO Characteristics Means (Standard Deviations)

|  | RR | RD | DD | DR | All | NIS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frac Female -1 | Panel A. Cutoff $50 \%$ |  |  |  |  |  |
|  | 0.11 | 0.12 | 0.17 | 0.13 | 0.12 | 0.11 |
|  | (0.12) | (0.13) | (0.14) | (0.13) | (0.12) | (0.13) |
| CEO Female | 0.04 | 0.06 | 0.10 | 0.02 | 0.04 | 0.05 |
|  | (0.19) | (0.24) | (0.30) | (0.15) | (0.21) | (0.21) |
| CEO Age | 53.39 | 53.31 | 52.26 | 53.89 | 53.32 | 52.77 |
|  | (6.27) | (7.15) | (7.09) | (7.27) | (6.63) | (7.18) |
| CEO Chairman | 0.33 | 0.28 | 0.31 | 0.27 | 0.31 | 0.20 |
|  | (0.47) | (0.45) | (0.46) | (0.45) | (0.46) | (0.40) |
| Insider | 0.89 | 0.84 | 0.84 | 0.93 | 0.89 | 0.77 |
|  | (0.31) | (0.36) | (0.36) | (0.26) | (0.32) | (0.42) |
| N | 890 | 185 | 154 | 179 | 1,408 | 2,613 |
|  | Panel B. Cutoff 67\% |  |  |  |  |  |
| Frac Female -1 | 0.10 | 0.11 | 0.15 | 0.14 | 0.11 | 0.12 |
|  | (0.11) | (0.13) | (0.14) | (0.14) | (0.12) | (0.13) |
| CEO Female | 0.03 | 0.03 | 0.07 | 0.02 | 0.03 | 0.05 |
|  | (0.17) | (0.18) | (0.26) | (0.13) | (0.18) | (0.22) |
| CEO Age | 53.30 | 52.81 | 50.99 | 54.07 | 53.10 | 52.93 |
|  | (6.25) | (6.94) | (8.09) | (7.26) | (6.60) | (7.07) |
| CEO Chairman | 0.34 | 0.28 | 0.30 | 0.30 | 0.33 | 0.22 |
|  | (0.47) | (0.45) | (0.46) | (0.46) | (0.47) | (0.41) |
| Insider | 0.90 | 0.76 | 0.81 | 0.98 | 0.89 | 0.79 |
|  | (0.30) | (0.43) | (0.39) | (0.13) | (0.31) | (0.41) |
| N | 562 | 58 | 69 | 56 | 745 | 3,276 |
| Continued on next page |  |  |  |  |  |  |

Table 2 - Continued from previous page

|  | RR | RD | DD | DR | All | NIS |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Panel C. Cutoff 75\% |  |  |  |  |  |
| Frac Female -1 | 0.10 | 0.10 | 0.13 | 0.15 | 0.10 | 0.12 |
|  | $(0.11)$ | $(0.13)$ | $(0.13)$ | $(0.15)$ | $(0.12)$ | $(0.13)$ |
| CEO Female | 0.02 | 0.06 | 0.04 | 0.03 | 0.03 | 0.05 |
|  | $(0.15)$ | $(0.24)$ | $(0.19)$ | $(0.16)$ | $(0.17)$ | $(0.22)$ |
| CEO Age | 53.13 | 52.49 | 50.90 | 55.15 | 53.02 | 52.95 |
|  | $(6.43)$ | $(7.19)$ | $(8.70)$ | $(7.21)$ | $(6.83)$ | $(7.01)$ |
| CEO Chairman | 0.34 | 0.34 | 0.29 | 0.30 | 0.33 | 0.23 |
|  | $(0.48)$ | $(0.48)$ | $(0.46)$ | $(0.46)$ | $(0.47)$ | $(0.42)$ |
| Insider | 0.90 | 0.80 | 0.83 | 0.97 | 0.89 | 0.80 |
|  | $(0.30)$ | $(0.41)$ | $(0.38)$ | $(0.16)$ | $(0.31)$ | $(0.40)$ |
| N | 409 | 35 | 52 | 40 | 536 | 3,485 |

Notes: All variables are as defined in the main text, with Frac Female -1 being the fraction of the executive suite, as measured by the Form 4 sample, who are women in the period before a change of CEO. The RR column reports statistics on a Republican replacement for an outgoing Republican CEO, the RD column reports statistics on a Democratic replacement for a Republican CEO, the DD column reports statistics on a Democratic replacement for a Republican CEO, the DR column reports statistics on a Republican replacement for a Democratic CEO, the "All" column reports statistics for all of the aforementioned cases together, and the "NIS" column reports statistics for cases not in our sample (in case either the incoming or outgoing CEO cannot be identified as being either a Democrat or Republican). The rows denoted by N report numbers of observations. The political preference of a CEO is defined using the sample mean measure. Panel A defines a CEO as being a member of a party if they contributed at least $50 \%$ of their contributions to that party. Panels B and C increase the cutoff to $67 \%$ and $75 \%$, respectively.

Table 3: Fraction of Women Executives

|  |  | (2) | (3) |  | (5) | (6) | (7) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | F4 | ExC | F4 | ExC | F4 | ExC | F4 | ExC |
| Frac Republican | $\begin{gathered} \hline-0.019^{* *} \\ (0.009) \end{gathered}$ | $\begin{gathered} \hline-0.023^{* *} \\ (0.011) \end{gathered}$ | $\begin{gathered} \hline-0.019^{* *} \\ (0.009) \end{gathered}$ | $\begin{gathered} \hline-0.022^{* *} \\ (0.011) \end{gathered}$ | $\begin{aligned} & \hline-0.018^{*} \\ & (0.009) \end{aligned}$ | $\begin{aligned} & \hline-0.020^{*} \\ & (0.011) \end{aligned}$ |  |  |
| Frac Republican Noise |  |  |  |  |  |  | $\begin{gathered} -0.016^{* *} \\ (0.007) \end{gathered}$ | $\begin{gathered} -0.018^{* *} \\ (0.008) \end{gathered}$ |
| Chair | $\begin{gathered} 0.003 \\ (0.003) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.004) \end{aligned}$ | $\begin{gathered} 0.003 \\ (0.003) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.004) \end{aligned}$ | $\begin{gathered} 0.002 \\ (0.003) \end{gathered}$ | $\begin{aligned} & -0.002 \\ & (0.004) \end{aligned}$ | $\begin{aligned} & 0.005^{*} \\ & (0.003) \end{aligned}$ | $\begin{gathered} 0.001 \\ (0.003) \end{gathered}$ |
| CEO Female | $\begin{aligned} & -0.040 \\ & (0.039) \end{aligned}$ | $\begin{aligned} & -0.066^{*} \\ & (0.039) \end{aligned}$ | $\begin{aligned} & -0.041 \\ & (0.039) \end{aligned}$ | $\begin{aligned} & -0.067^{*} \\ & (0.040) \end{aligned}$ | $\begin{aligned} & -0.046 \\ & (0.039) \end{aligned}$ | $\begin{gathered} -0.078^{*} \\ (0.043) \end{gathered}$ | $\begin{aligned} & -0.008 \\ & (0.024) \end{aligned}$ | $\begin{aligned} & -0.018 \\ & (0.026) \end{aligned}$ |
| CEO Age | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{gathered} -0.004^{+} \\ (0.003) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{gathered} -0.004^{+} \\ (0.003) \end{gathered}$ | $\begin{aligned} & -0.002 \\ & (0.002) \end{aligned}$ | $\begin{gathered} -0.004^{+} \\ (0.003) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.002) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ |
| CEO Age ${ }^{2}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{aligned} & 0.000^{+} \\ & (0.000) \end{aligned}$ | $\begin{aligned} & -0.000 \\ & (0.000) \end{aligned}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ |
| $\log$ CEO Tenure | $\begin{gathered} 0.000 \\ (0.002) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{gathered} 0.000 \\ (0.002) \end{gathered}$ | $\begin{aligned} & -0.000 \\ & (0.002) \end{aligned}$ | $\begin{aligned} & -0.000 \\ & (0.002) \end{aligned}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{gathered} -0.003^{*} \\ (0.002) \end{gathered}$ |
| CEO Insider | $\begin{gathered} 0.011^{* *} \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.013^{* *} \\ (0.006) \end{gathered}$ | $\begin{aligned} & 0.010^{*} \\ & (0.006) \end{aligned}$ | $\begin{gathered} 0.012^{* *} \\ (0.006) \end{gathered}$ | $\begin{aligned} & 0.011^{* *} \\ & (0.006) \end{aligned}$ | $\begin{aligned} & 0.012^{*} \\ & (0.006) \end{aligned}$ | $\begin{gathered} 0.012^{* * *} \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.015^{* * *} \\ (0.004) \end{gathered}$ |
| CEO Insider $\times$ CEO Female | $\begin{aligned} & -0.021 \\ & (0.037) \end{aligned}$ | $\begin{aligned} & -0.027 \\ & (0.038) \end{aligned}$ | $\begin{aligned} & -0.021 \\ & (0.038) \end{aligned}$ | $\begin{aligned} & -0.027 \\ & (0.038) \end{aligned}$ | $\begin{aligned} & -0.017 \\ & (0.037) \end{aligned}$ | $\begin{aligned} & -0.013 \\ & (0.042) \end{aligned}$ | $\begin{aligned} & -0.029 \\ & (0.024) \end{aligned}$ | $\begin{aligned} & -0.046^{*} \\ & (0.026) \end{aligned}$ |
| $\log$ (Assets) | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.003 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.003 \\ & (0.002) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ |
| State-Level Controls | No | No | Yes | Yes | No | No | No | No |
| State-Year FE | No | No | No | No | Yes | Yes | Yes | Yes |
| N | 25,521 | 25,519 | 25,349 | 25,347 | 25,393 | 25,391 | 33,557 | 33,546 |
| Adj. $R^{2}$ | 0.6132 | 0.5684 | 0.6132 | 0.5681 | 0.6149 | 0.5693 | 0.5835 | 0.5394 |
| Mean Dep. Variable | 0.1263 | 0.0912 | 0.1263 | 0.0912 | 0.1263 | 0.0912 | 0.1220 | 0.0916 |

Notes: ${ }^{+} p<0.15,{ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$. Standard errors (in parentheses) are clustered at the firm level. All specifications include firm fixed effects. Columns (1)-(4) include year fixed effects, while Columns (5)-(8) include state $\times$ year fixed effects. Yearly state level controls, used in Columns (3) and (4) include the share of the population that is non-White, the share of the population that is native born, the share of households that are interracial, the share of households that live below the poverty line, the share of the adult population that graduated college, the married women's labor force participation, the abortion rate, the share of the population that voted for the Republican for the senatorial candidates in the previous two elections, and the share of background checks for gun purchases. They also include the gender pay gap for college graduates, which is the coefficient on female from regressing the log of hourly wage on age, age squared, race, and a dummy variable for females. See the main text for details on all of these variables.

Table 4: Number of Event-Study Observations

|  | Cutoff 50\% |  | Cutoff 67\% |  | Cutoff 75\% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Period | All | NIS | All | NIS | All | NIS |
| 2000-2004 | 400 | 600 | 238 | 762 | 179 | 821 |
| 2005-2009 | 383 | 815 | 198 | 1,000 | 143 | 1,055 |
| 2010-2014 | 370 | 637 | 186 | 821 | 128 | 877 |
| 2015-2018 | 255 | 561 | 123 | 693 | 86 | 730 |
| Total | 1,408 | 2,613 | 745 | 3,276 | 536 | 3,483 |

Notes: Number of changes of CEO by time period and whether the event is ("All" column) or is not ("NIS" column) in our sample.

Table 5: Fraction of Women Executives, one Period before Change of CEO

|  | Cutoff 50\% |  | Cutoff 67\% |  | Cutoff 75\% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Period | All | NIS | All | NIS | All | NIS |
| 2000-2004 | 0.10 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| 2005-2009 | 0.12 | 0.10 | 0.10 | 0.11 | 0.09 | 0.11 |
| 2010-2014 | 0.13 | 0.12 | 0.12 | 0.13 | 0.11 | 0.13 |
| 2015-2018 | 0.14 | 0.14 | 0.13 | 0.15 | 0.12 | 0.15 |

Notes: Fraction of women executives one period before a change of CEO by time period, whether the event is in our sample ("All" column) or not ("NIS" column), and by threshold for determining the political preferences of the incoming and outgoing CEOs.

Table 6: Event Study - The Outgoing CEO is Republican

| Dep. Variable | Fraction of Women Executives |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Cutoff 50\% |  | Cutoff 67\% |  | Cutoff 75\% |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Switch $_{R, D} \times(t=-3)$ | 0.007 | 0.007 | -0.005 | 0.000 | -0.012 | 0.008 |
|  | [-0.009,0.027] | [-0.012,0.025] | [-0.035,0.028] | [-0.037,0.029] | [-0.052,0.034] | [-0.048,0.047] |
| Switch $_{R, D} \times(t=-2)$ | 0.009 | 0.005 | 0.012 | -0.005 | -0.003 | -0.000 |
|  | [-0.009,0.026] | [-0.012,0.020] | [-0.027,0.044] | [-0.036,0.021] | [-0.040,0.021] | [-0.044, 0.032] |
| Switch $_{R, D} \times(t=-1)$ | -0.002 | -0.004 | -0.006 | -0.005 | 0.004 | 0.011 |
|  | [-0.014, 0.010] | [-0.017,0.010] | [-0.032,0.013] | [-0.033,0.017] | [-0.031,0.032] | [-0.030,0.041] |
| Switch $_{R, D} \times(t=1)$ | 0.013* | 0.013* | 0.019* | 0.022* | 0.025* | $\mathbf{0 . 0 2 9}{ }^{+}$ |
|  | [-0.001,0.023] | [-0.002,0.022] | [-0.002,0.034] | [-0.002,0.041] | [-0.003, 0.048 ] | [-0.009,0.058] |
| Switch $_{R, D} \times(t=2)$ | $\mathbf{0 . 0 2 0}{ }^{* * *}$ | 0.018 ${ }^{* * *}$ | 0.039** | 0.038** | 0.049* | 0.049* |
|  | [0.007,0.039] | [0.006,0.040] | [0.006,0.065] | [0.006,0.071] | [-0.005,0.081] | [-0.004,0.093] |
| Switch $_{R, D} \times(t=3)$ | 0.019* | 0.023* | $\mathbf{0 . 0 4 0}{ }^{+}$ | 0.044 | 0.053* | 0.060* |
|  | [-0.003, 0.035] | [-0.002,0.038] | [-0.011,0.073] | [-0.012,0.076] | [-0.007,0.111] | [-0.010,0.119] |
| $t=-3$ | -0.002 | -0.001 | -0.005* | -0.003 | -0.004 ${ }^{+}$ | -0.003 |
|  | [-0.009,0.003] | [-0.008,0.006] | [-0.013, 0.001$]$ | [-0.012,0.004] | [-0.015, 0.001 ] | [-0.014,0.005] |
| $t=-2$ | -0.001 | 0.001 | -0.003 | -0.000 | -0.003 | -0.001 |
|  | [-0.007,0.004] | [-0.006,0.007] | [-0.009,0.003] | [-0.009,0.006] | [-0.012,0.003] | [-0.011,0.007] |
| $t=-1$ | -0.000 | 0.002 | $-0.005^{* *}$ | -0.002 | $-0.006^{* *}$ | -0.003 |
|  | [-0.005,0.004] | [-0.005,0.008] | [-0.011, 0.000$]$ | [-0.001,0.004] | [-0.014,-0.002] | [-0.013,0.004] |
| $t=1$ | $0.006{ }^{* * *}$ | 0.006** | $0.006^{* *}$ | $0.005^{+}$ | $0.007 * *$ | 0.007 |
|  | [0.003,0.012] | [0.000,0.010] | [-0.001, 0.012 ] | [-0.002,0.010] | [0.000,0.013] | [-0.002,0.011] |
| $t=2$ | $0.005^{+}$ | 0.005 | 0.004 | 0.004 | 0.006 | 0.006 |
|  | [-0.002,0.010] | [-0.004,0.008] | [-0.003, 0.010 ] | [-0.005,0.009] | [-0.002,0.014] | [-0.050,0.013] |
| $t=3$ | 0.004 | 0.003 | 0.004 | 0.003 | 0.005 | 0.004 |
|  | [-0.002,0.010] | [-0.006,0.008] | [-0.004,0.011] | [-0.008,0.009] | [-0.006,0.012] | [-0.009,0.011] |
| Switch $_{R, D}$ | -0.005 | -0.009 | -0.006 | -0.019 | -0.011 | -0.032+ |
|  | [-0.021,0.007] | [-0.023,0.005] | [-0.032,0.011] | [-0.039,0.011] | [-0.040,0.009] | [-0.055,0.008] |
| Firm Controls | No | Yes | No | Yes | No | Yes |
| State-Year FE | No | Yes | No | Yes | No | Yes |
| N | 5,652 | 5,397 | 3,263 | 3,106 | 2,323 | 2,209 |
| Mean Dep. Variable | 0.122 | 0.124 | 0.115 | 0.116 | 0.110 | 0.112 |

Notes: ${ }^{+} p<0.15,{ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$. Bootstrapped confidence intervals (in brackets) are clustered at the firm level. Firm controls include the log of firm assets, indicators for whether the CEO is female, chair of the board, an insider (also interacted with the CEO being female), and a quadratic in the CEO's age. All specifications include firm fixed effects and state-year fixed effects. Estimations are made using the two-step process described in the main text.

Table 7: Executive Compensation/Composition (non-CEO)

| Dep. Variable | Log Total Comp. |  | Ratio |  | Log Delta |  | Log Vega |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Exec Female | $\begin{gathered} \hline-0.089^{* * *} \\ (0.011) \end{gathered}$ | $\begin{aligned} & \hline-0.031 \\ & (0.024) \end{aligned}$ | $\begin{gathered} \hline 0.010^{* * *} \\ (0.003) \end{gathered}$ | $\begin{gathered} -0.005 \\ (0.006) \end{gathered}$ | $\begin{gathered} \hline-0.295^{* * *} \\ (0.052) \end{gathered}$ | $\begin{gathered} \hline-0.021 \\ (0.109) \end{gathered}$ | $\begin{gathered} \hline-0.282^{* * *} \\ (0.059) \end{gathered}$ | $\begin{gathered} -0.146 \\ (0.127) \\ \hline \end{gathered}$ |
| Frac Republican |  | $\begin{gathered} 0.032 \\ (0.038) \end{gathered}$ |  | $\begin{gathered} -0.014 \\ (0.011) \end{gathered}$ |  | $\begin{gathered} 0.048 \\ (0.133) \end{gathered}$ |  | $\begin{gathered} 0.094 \\ (0.226) \end{gathered}$ |
| Frac Republican $\times$ Exec Female |  | $\begin{gathered} -0.093^{* * *} \\ (0.033) \end{gathered}$ |  | $\begin{gathered} 0.024^{* *} \\ (0.008) \end{gathered}$ |  | $\begin{gathered} -0.439^{* * *} \\ (0.156) \end{gathered}$ |  | $\begin{gathered} -0.217 \\ (0.174) \end{gathered}$ |
| CEO Female | $\begin{gathered} -0.124 \\ (0.155) \end{gathered}$ | $\begin{gathered} -0.121 \\ (0.156) \end{gathered}$ | $\begin{gathered} 0.008 \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.037) \end{gathered}$ | $\begin{gathered} -0.560^{*} \\ (0.340) \end{gathered}$ | $\begin{gathered} -0.549 \\ (0.341) \end{gathered}$ | $\begin{gathered} -1.580^{* *} \\ (0.647) \end{gathered}$ | $\begin{gathered} -1.572^{* *} \\ (0.644) \end{gathered}$ |
| Exec Female $\times$ CEO Female | $\begin{gathered} 0.069 \\ (0.046) \end{gathered}$ | $\begin{gathered} 0.060 \\ (0.045) \end{gathered}$ | $\begin{gathered} 0.001 \\ (0.012) \end{gathered}$ | $\begin{gathered} 0.003 \\ (0.011) \end{gathered}$ | $\begin{aligned} & 0.553^{* *} \\ & (0.233) \end{aligned}$ | $\begin{aligned} & 0.501^{* *} \\ & (0.231) \end{aligned}$ | $\begin{gathered} 0.512^{* *} \\ (0.243) \end{gathered}$ | $\begin{aligned} & 0.489^{* *} \\ & (0.243) \end{aligned}$ |
| State $\times$ Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 98,479 | 98,479 | 98,482 | 98,482 | 105,321 | 105,321 | 105,321 | 105,321 |
| Adj. $R^{2}$ | 0.6111 | 0.6111 | 0.4805 | 0.4806 | 0.2342 | 0.2343 | 0.3932 | 0.3932 |

Notes: ${ }^{+} p<0.15,{ }^{*} p<0.10,{ }^{* *} p<0.05,^{* * *} p<0.01$. Standard errors (in parentheses) are clustered at the firm level. All specifications include controls for whether the executive is an insider, title fixed effects (defined in the main text), a quadratic in the executive's age, indicators for whether the CEO is female, chair of the board, an insider (also interacted with the CEO being female), a quadratic in the CEO's age, the log of the CEO's tenure, the log of total firm assets, return on assets, book-to-market value, cash, dividends, total debt, firm fixed effects and state fixed effects interacted with year fixed effects.

## Appendices

## A Identifying the Political Contributions of CEOs

In this appendix, we detail how we identify the political contributions that CEOs make. This involves two steps. The first step is to map the information we have on each CEO, such as their name, company, and address, onto the FEC dataset to identify what contributions a CEO made. We detail this in Section A.1. The second step is to identify whether a given contribution counts as being towards Democrats or Republicans, which we detail in Section A.2. Much of the information here is very similar to that described in a companion paper of Cohen et al. (2019).

## A. 1 Matching CEOs to Contributions

Information on CEO contributions comes from the Federal Election Commission (FEC). The FEC is a regulatory agency, created by the 1974 Amendments to the Federal Election Campaign Act (FECA Amendments of 1974, Pub. L. No. 93-443, 88 Stat. 1263 (1974)). All candidates for federal office, and committees affiliated with them, must register with the FEC and report contributions received from all donors that exceed (individually or combined) $\$ 200$. Similarly, party committees and political committees not affiliated with any particular candidate must also periodically report donations ( 52 U.S.C. Section $30104(\mathrm{~b})(3)(\mathrm{A})$ ). Thus, the database that the FEC publishes includes all nontrivial donations made to candidates or to active political committees, amounting to tens of millions of dollars each year. Each FEC report has to indicate names of the donor and recipient, and the donor's home address, employer, and job title. However, in many reports the information about the donor's home address, employer, and job title is missing or incomplete.

We match the FEC database with our CEO database described in Section 2. The process is not straightforward. There may be more than one donor with the same name as a CEO. A CEO might use his/her nickname in one dataset, and not in the other. They might sometimes use a nickname and sometimes their full name, with or without a middle name. ${ }^{41}$

Using ExecuComp, we identify the names of every CEO of every company ever listed in the S\&P 1500 between 2000 and 2018, along with the name of the company and zip code of the company headquarters. ${ }^{42}$ We use the Python library "whoswho" to do a preliminary match with all FEC contributions where the name of the contributor is the same as the name of the CEO. ${ }^{43}$ From this preliminary match, we create three sets of matches.

[^24]The first set selects all the contributions in which either the "employer" or "occupation" fields match precisely the name of the company for which the CEO worked. This involves creating a database of consistent company names for matching purposes. ${ }^{44}$ The second set checks whether the occupation entry is consistent with the contributor holding an executive position. ${ }^{45}$ If it is, and either there is a lenient company-name match or the zip code of the contributor is within 80 kilometers of the company headquarters, we accept the match. ${ }^{46}$ The third match is similar to the second match, but instead of requiring that the contributor's occupation entry be consistent with an executive position, a match on the middle name of the executive and of the contributor is sufficient.

We then expand all three of these sets of matches to include any other contributions that come from someone with the same name and zip code as in these sets of matches. Thus, our set of contributions for a given CEO includes all the contributions found in either set, after expanding to include other contributions associated with the same name and zip code. Of the 7,469 CEOs in our dataset, we are able to match 5,597 executives.

## A. 2 Identifying the Party of a Contribution

We now describe how we infer whether a contribution is made to Democrats or Republicans. To do so, we ask whether a given contribution ultimately benefits Republicans or Democrats. This analysis is not as straightforward as it may seem. Technically, most contributions are made to committees. For many political committees, the FEC database contains information regarding the committee's party affiliation, in which case we simply use the identity given by the FEC. ${ }^{47}$ Some of these committees are the main campaign committees of specific candidates affiliated with a major party, are explicitly authorized by these candidates to raise funds on their behalf, or at least are not expressly disavowed by the candidate they support. In these cases, there is an official connection between a committee and a candidate.

Other committees, although not explicitly or implicitly authorized by a candidate, are connected with a political party, either because they are part of the official party structure (party committees) or because they are established by officeholders belonging to a political party (so-called leadership PACs). In all of these cases, the FEC database contains information regarding the committee's party affiliation. We consider, therefore, all donations made to authorized candidate committees, party committees, and leadership PACs as made to candidates of the affiliated party.

Other political committees, however, are not clearly linked to a party because they are not affiliated in any of the above ways with a political party or a candidate of that party. In such cases, we analyze the

[^25]FEC records regarding the expenditures that these committees make. ${ }^{48}$ When a CEO donates a given amount to such a committee, we allocate this amount between Republicans and Democrats based on how the committee allocates its total spending between both parties. There are some committees whose political affiliation we do not manage to identify based on how they give money. For these committees, we identify their affiliation based on which committees contribute to them. For instance, a committee that receives large contributions from a Republican political committee is presumably Republican. There are 31 committees that receive a total of about $\$ 70$ million in contributions from our executives that remain unidentified even after this process. We manually identify these committees based on their names and looking for them on Google. ${ }^{49}$

In short, if a given contribution is identified by the FEC as going to a Democrat (Republican), we assume that $100 \%$ of that contribution goes to Democrats (Republicans). If the FEC does not identify the committee's political affiliation, we explore the contributions made by that committee, infer the percentage thereof that the committee gives to each party, and divide the contribution accordingly, ignoring contributions to unknown recipients. For example, assume that a CEO gave $\$ 1,000$ to the Example PAC. The Example PAC is not identified by the FEC as affiliated with any party. However, by analyzing Example PAC's contribution data, we infer that Example PAC gives $30 \%$ of its money to Republicans, $10 \%$ to Democrats, $10 \%$ to Independent candidates, and $50 \%$ is unknown. We treat this $\$ 1,000$ contribution as being a $\$ 600$ contribution to Republicans and a $\$ 200$ contribution to Democrats.

Of the 54,911 committees reported in the FEC dataset between 1996-2020, we identify the political affiliations of 27,124 via the FEC. A further 12,338 we identify by the expenditures the committees made. A further 557 committees we identify from the political affiliation of committees that donate to them. An additional 31 we identify manually, as described above. Finally, 14,861 are unidentified. However, note that not all of these committees actually received contributions from CEOs in our sample.

Of the $\$ 996,357,180$ in contributions from the CEOs we match, $\$ 700,877,185$ goes to Republicans, $\$ 279,560,419$ to Democrats, and $\$ 11,926,073$ to Independents. This leaves $\$ 3,993,943$, or about $0.4 \%$, of CEOs' political contributions unidentified. $\$ 406,685,437$ of these donations are is identified by the political affiliation of the receiving committee designated by the FEC, while $\$ 514,725,285$ is identify based on of the committee's activity. $\$ 356,032$ is identified based on the political affiliation of the contributing committee. $\$ 70,596,483$ is to the 31 manually identified committees discussed above.

## B Event Study, Other Outcomes

In this appendix, we perform the event study described in Section 3.2.1 on the sample of firms replacing a Republican CEO with either an incoming Democrat or Republican; however, we replace the dependent

[^26]variable with either return on equity (ROE) or Tobin's $Q$. This allows us to examine whether replacing a Republican CEO with a Democratic CEO affects firm performance.

Table A1 tabulates the results. The odd columns use Tobin's Q as the dependent variable, while the even columns use ROE. The first two columns use the $50 \%$ threshold for identifying CEOs' political preferences. The next two (final two) columns use the $67 \%$ ( $75 \%$ ) thresholds. We control for year and company fixed effects, and use the multistep estimator described in Section 3.2.1.

While there is some evidence in Column (1) (Column (6)) that replacing a Republican CEO with a Democratic CEO yields an increase in Tobin's $Q$ (ROE), this result is not robust to other thresholds, and may potentially be the result of unidentified pretrends. We therefore dismiss these findings. All other specifications indicate no relationship between replacing a Republican CEO with a Democratic CEO and firm performance.

## C Event Study, Replacing Democratic CEOs

In this appendix, we perform the event study described in Section 3.2.1, as well as the breakdown of results described in Section 3.2.2, on the sample of firms replacing a Democratic CEO with either a Democratic or Republican CEO. As a reminder to the reader, we relegate this analysis to an appendix due to small sample sizes.

Table A7 repeats Table 6 on this sample. In all specifications, the coefficients on $t^{k}$ are generally economically and statistically insignificant, indicating no trends in female executive employment around the time of a change of CEO, for this sample of companies. Switch is statistically insignificant in all specifications, with the possible exception of Column (2) where it is marginally significant but quantitatively small. The estimates on the interaction between Switch and $t^{k}$ prior to the change of CEO indicate no difference in trend in the fraction of the executive suite that is female between companies whose Democratic CEO is replaced with either a Democratic or Republican CEO in all specifications. Similarly, after the change of CEO, there is no consistent or statistically significant evidence that the fraction of women in the executive suite changes after replacing a Democrat CEO with a Republican CEO.

## D Robustness: Other Measures of CEOs' Political Affiliations

In Section 2.4 we detailed three other measures of CEOs' political affiliations beyond the "sample average" we use in our main analysis. They are the "election cycle," which groups all contributions from a four-year presidential cycle together, such as 2001-2004 for the 2004 election. Our second measure is a "four-year moving average." This measure sets a CEO's political preference in year $t$ to be based on donations between years $t-2$ and $t+1$. Our third measure is the "last four years" ("Prev 4 Yr ." in the tables), which takes contributions from the previous four years into account. The following tables report results consistent with our findings in Table 3 of Section 3.1 and Table 7 of Section 4.

We begin with Table A2. Columns (1) and (2) repeat Columns (1) and (2) of Table 3 using the election cycle metric of measuring political affiliations. Columns (3) and (4) repeat this pattern for the four-year
moving average while Columns (5) and (6) do so for the previous four years measure. Columns (7) and (8) repeat the first two columns of Table 3 exactly, that is, using the sample average measure, for comparison. In general, our findings are robust: all measures yield a statistically significant and economically meaningful relationship between a CEO's political affiliation and the fraction of the executive suite that is female. We note that the magnitude of the estimates, as well as their statistical significance, increases with the length of the time period used to calculate a CEO's political preference. This is because longer time periods include more contributions, and hence more CEOs and less noise.

We next redo our compensation analysis with the various measures of political preferences. Table A3 reports the estimation results when our dependent variable is the log of total compensation. The pattern of columns, in terms of which controls are used, follows that of Table 7: Columns (1), (4), and (6) do not include FracRep or its interaction with ExecFemale while the other columns do. Columns (1)-(2) use the election cycle metric of political affiliations, while Column (3) uses the four-year moving average, Columns (4) and (5) use the previous four year metric, and Columns (6)-(7) report the sample average metric, as done in Table 7, for comparison. ${ }^{50}$ The estimate on ExecFemale suggests that female executives are paid about $9 \%$ less than their male counterparts in Columns (1), (4), and (6), with this difference being statistically significant at the $1 \%$ level. Thus, the use of different measures of political affiliation do not substantially affect the benchmark level of the estimated gender wage gap. This is not surprising: these specifications do not include measures of political preferences of CEOs. However, the samples differ slightly in order to be comparable to their companion specifications that do use these measures.

The estimate on ExecFemale in Column (2) suggests that women are paid about 5\% less than men, and is statistically significant at the $5 \%$ level. Notice that this estimate is implicitly the gender compensation gap under CEOs who contribute all of their contributions to Democrats. The estimate on the interaction between FracRep and ExecFemale is -0.064 , and is statistically significant at the $5 \%$ level. Column (3) repeats Column (2), but changes the measure of political preferences to be the four-year moving average measure. The estimate on ExecFemale is -0.038, implying that women under CEOs who contribute all of their contributions to Democrats earn about $4 \%$ less than their male colleagues. However, this estimate is statistically significant at only the $15 \%$ level. The estimate on the interaction between FracRep and ExecFemale is -0.084 , and is statistically significant at the $1 \%$ level. Columns (4) and (5) repeat Columns (1) and (2), but switches the measure of political preferences to be the previous four year measure. Again, no substantial differences from Columns (1) and (2) are detected. Columns (6) and (7) also repeat Columns (1) and (2), respectively, but change the measure of political preferences to be the sample average measure. These estimates are repeated here for comparison, but are as reported in the main paper. Our findings thus confirm what is reported in the main paper: most, if not all, of the gender wage gap can be accounted for by the political preferences of CEOs.

Table A4 repeats Table A3, but uses the cash ratio as the dependent variable. Using the four year mov-

[^27]ing average measure and the previous four years measure, we get qualitatively similar estimates to the sample average measure used in the main analysis. However, the estimate on the interaction between FracRep and ExecFemale is somewhat smaller, and thus less significant statistically. Using the election cycle metric yields a bit more nuanced of a story. As before, once we add FracRep and its interaction with ExecFemale, there is no longer a statistically significant gender gap in the cash ratio when looking at executives who contribute only to Democrats. However, the interaction term is not statistically significant. That said, these estimates imply that the probability of the gender wage gap being 0 under a CEO who contributes only to Republicans is less than $1 \%$.

Table A5 again repeats this pattern, but switches the dependent variable to be the log of delta and, as before, adds as a control the sum of the executive's salary and bonus. Again, with the exception of perhaps the election cycle measure, all of our estimates are qualitatively and quantitatively similar to our benchmark exercise using the sample average. With the election cycle measure, the interaction between FracRep and ExecFemale is slightly smaller and significant only at the $10 \%$ level, while we cannot reject the possibility that a CEO who contributes only to Democrats pays women a lower delta at the $15 \%$ level (though we can reject such a possibility at more stringent levels).

Table A6 yet again repeats this pattern, but changes the dependent variable to be the log of vega. The estimates are qualitatively and quantitatively similar to those reported in the main exercise.

Table A1: Event Study - Firm Performance

| Dep. Variable | Cutoff 50\% |  | Cutoff 67\% |  | Cutoff 75\% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Tobin's Q <br> (1) | ROE <br> (2) | Tobin's Q <br> (3) | ROE <br> (4) | Tobin's Q <br> (5) | ROE <br> (6) |
| $\widehat{\text { Switch }}$ R,D $\times(t=-3)$ | $\begin{gathered} \hline-0.077 \\ (0.070) \end{gathered}$ | $\begin{gathered} 0.667 \\ (0.596) \end{gathered}$ | $\begin{gathered} \hline-0.147 \\ (0.153) \end{gathered}$ | $\begin{aligned} & \hline 2.284^{*} \\ & (1.201) \end{aligned}$ | $\begin{aligned} & \hline-0.260 \\ & (0.202) \end{aligned}$ | $\begin{gathered} \hline 3.904^{* *} \\ (1.717) \end{gathered}$ |
| Switch $_{R, D} \times(t=-2)$ | $\begin{gathered} -0.117 \\ (0.082) \end{gathered}$ | $\begin{gathered} 0.031 \\ (0.675) \end{gathered}$ | $\begin{gathered} -0.019 \\ (0.187) \end{gathered}$ | $\begin{gathered} 1.838 \\ (1.523) \end{gathered}$ | $\begin{gathered} 0.006 \\ (0.309) \end{gathered}$ | $\begin{gathered} 3.144 \\ (2.491) \end{gathered}$ |
| Switch $_{R, D} \times(t=-1)$ | $\begin{aligned} & -0.005 \\ & (0.050) \end{aligned}$ | $\begin{gathered} -0.287 \\ (0.642) \end{gathered}$ | $\begin{gathered} 0.092 \\ (0.102) \end{gathered}$ | $\begin{gathered} 0.810 \\ (1.428) \end{gathered}$ | $\begin{gathered} 0.148 \\ (0.160) \end{gathered}$ | $\begin{gathered} 2.565 \\ (2.157) \end{gathered}$ |
| Switch $_{R, D} \times(t=1)$ | $\begin{gathered} 0.072 \\ (0.053) \end{gathered}$ | $\begin{aligned} & -2.609 \\ & (2.459) \end{aligned}$ | $\begin{gathered} 0.052 \\ (0.152) \end{gathered}$ | $\begin{gathered} 1.164 \\ (1.291) \end{gathered}$ | $\begin{gathered} 0.095 \\ (0.029) \end{gathered}$ | $\begin{gathered} 2.600 \\ (0.089) \end{gathered}$ |
| Switch $_{R, D} \times(t=2)$ | $\begin{aligned} & 0.117^{*} \\ & (0.065) \end{aligned}$ | $\begin{aligned} & -2.228 \\ & (2.840) \end{aligned}$ | $\begin{gathered} 0.021 \\ (0.141) \end{gathered}$ | $\begin{gathered} 1.805 \\ (1.301) \end{gathered}$ | $\begin{gathered} 0.029 \\ (0.256) \end{gathered}$ | $\begin{aligned} & 3.320^{*} \\ & (1.895) \end{aligned}$ |
| Switch $_{R, D} \times(t=3)$ | $\begin{aligned} & 0.144^{*} \\ & (0.081) \end{aligned}$ | $\begin{aligned} & -3.118 \\ & (3.567) \end{aligned}$ | $\begin{gathered} 0.205 \\ (0.199) \end{gathered}$ | $\begin{gathered} 1.332 \\ (1.232) \end{gathered}$ | $\begin{gathered} 0.412 \\ (0.319) \end{gathered}$ | $\begin{aligned} & 2.873^{*} \\ & (1.623) \end{aligned}$ |
| Switch $_{\text {R,D }}$ | $\begin{gathered} -0.162^{* *} \\ (0.069) \end{gathered}$ | $\begin{gathered} -0.334 \\ (0.460) \end{gathered}$ | $\begin{gathered} -0.277 \\ (0.193) \end{gathered}$ | $\begin{gathered} -1.525 \\ (1.025) \end{gathered}$ | $\begin{gathered} -0.332 \\ (0.288) \end{gathered}$ | $\begin{gathered} -2.894^{*} \\ (1.585) \end{gathered}$ |
| $t=-3$ | $\begin{aligned} & -0.011 \\ & (0.032) \end{aligned}$ | $\begin{gathered} 0.292 \\ (0.286) \end{gathered}$ | $\begin{gathered} 0.035 \\ (0.042) \end{gathered}$ | $\begin{gathered} 0.451 \\ (0.289) \end{gathered}$ | $\begin{gathered} 0.013 \\ (0.046) \end{gathered}$ | $\begin{gathered} 0.351 \\ (0.335) \end{gathered}$ |
| $t=-2$ | $\begin{gathered} 0.058 \\ (0.048) \end{gathered}$ | $\begin{gathered} 0.311 \\ (0.285) \end{gathered}$ | $\begin{gathered} 0.021 \\ (0.038) \end{gathered}$ | $\begin{gathered} 0.038 \\ (0.254) \end{gathered}$ | $\begin{gathered} 0.050 \\ (0.044) \end{gathered}$ | $\begin{gathered} 0.130 \\ (0.287) \end{gathered}$ |
| $t=-1$ | $\begin{aligned} & -0.002 \\ & (0.029) \end{aligned}$ | $\begin{gathered} 0.404 \\ (0.293) \end{gathered}$ | $\begin{gathered} -0.027 \\ (0.027) \end{gathered}$ | $\begin{gathered} 0.213 \\ (0.284) \end{gathered}$ | $\begin{gathered} -0.044 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.417 \\ (0.317) \end{gathered}$ |
| $t=1$ | $\begin{gathered} 0.015 \\ (0.020) \end{gathered}$ | $\begin{gathered} 0.172 \\ (0.299) \end{gathered}$ | $\begin{gathered} 0.023 \\ (0.022) \end{gathered}$ | $\begin{aligned} & -0.101 \\ & (0.316) \end{aligned}$ | $\begin{gathered} 0.007 \\ (0.027) \end{gathered}$ | $\begin{gathered} -0.035 \\ (0.332) \end{gathered}$ |
| $t=2$ | $\begin{gathered} 0.029 \\ (0.025) \end{gathered}$ | $\begin{aligned} & -0.675^{*} \\ & (0.368) \end{aligned}$ | $\begin{aligned} & 0.051^{*} \\ & (0.029) \end{aligned}$ | $\begin{gathered} -1.038^{* *} \\ (0.450) \end{gathered}$ | $\begin{gathered} 0.036 \\ (0.035) \end{gathered}$ | $\begin{gathered} -1.153^{* *} \\ (0.550) \end{gathered}$ |
| $t=3$ | $\begin{gathered} 0.029 \\ (0.028) \\ \hline \end{gathered}$ | $\begin{aligned} & -0.455 \\ & (0.303) \end{aligned}$ | $\begin{gathered} 0.035 \\ (0.030) \\ \hline \end{gathered}$ | $\begin{gathered} -0.543 \\ (0.289) \\ \hline \end{gathered}$ | $\begin{gathered} 0.018 \\ (0.038) \end{gathered}$ | $\begin{gathered} -0.676^{* *} \\ (0.288) \\ \hline \end{gathered}$ |
| N | 5,571 | 5,571 | 3,214 | 3,214 | 2,300 | 2,300 |
| Adj. $R^{2}$ | 0.0078 | 0.0084 | 0.0113 | 0.0096 | 0.0125 | 0.0139 |

Notes: ${ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$. Standard errors (in parentheses) are clustered at the firm level. All specifications include firm fixed effects, and year fixed effects interacted with state fixed effects.

Table A2: Fraction of Women Executives

| Political Preference | Election Cycle |  | 4 Yr. Moving Ave. |  | Prev 4 Yr. |  | Sample Ave. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample | F4 <br> (1) | ExC <br> (2) | F4 <br> (3) | ExC <br> (4) | F4 <br> (5) | ExC <br> (6) | F4 <br> (7) | ExC <br> (8) |
| Frac Republican | $\begin{aligned} & \hline-0.009^{*} \\ & (0.005) \end{aligned}$ | $\begin{gathered} \hline-0.014^{* *} \\ (0.006) \end{gathered}$ | $\begin{gathered} \hline-0.009^{+} \\ (0.006) \end{gathered}$ | $\begin{gathered} \hline-0.014^{* *} \\ (0.006) \end{gathered}$ | $\begin{gathered} \hline-0.012^{* *} \\ (0.005) \end{gathered}$ | $\begin{gathered} \hline-0.016^{* *} \\ (0.006) \end{gathered}$ | $\begin{gathered} \hline-0.019^{* *} \\ (0.009) \end{gathered}$ | $\begin{gathered} \hline-0.023^{* *} \\ (0.011) \end{gathered}$ |
| CEO Female | $\begin{aligned} & -0.020 \\ & (0.034) \end{aligned}$ | $\begin{gathered} -0.055^{+} \\ (0.035) \end{gathered}$ | $\begin{aligned} & -0.020 \\ & (0.034) \end{aligned}$ | $\begin{gathered} -0.054^{+} \\ (0.035) \end{gathered}$ | $\begin{aligned} & -0.019 \\ & (0.033) \end{aligned}$ | $\begin{gathered} -0.052^{+} \\ (0.035) \end{gathered}$ | $\begin{aligned} & -0.040 \\ & (0.039) \end{aligned}$ | $\begin{aligned} & -0.066^{*} \\ & (0.039) \end{aligned}$ |
| CEO Age | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{aligned} & -0.003 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{aligned} & -0.003 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{aligned} & -0.003 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{gathered} -0.004^{+} \\ (0.003) \end{gathered}$ |
| CEO Age ${ }^{2}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ |
| $\log$ CEO Tenure | $\begin{gathered} 0.001 \\ (0.002) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{gathered} 0.001 \\ (0.002) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{gathered} 0.001 \\ (0.002) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{gathered} 0.000 \\ (0.002) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ |
| Chair | $\begin{gathered} 0.003 \\ (0.004) \end{gathered}$ | $\begin{aligned} & -0.002 \\ & (0.004) \end{aligned}$ | $\begin{gathered} 0.003 \\ (0.004) \end{gathered}$ | $\begin{aligned} & -0.002 \\ & (0.004) \end{aligned}$ | $\begin{gathered} 0.003 \\ (0.004) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.004) \end{aligned}$ | $\begin{gathered} 0.003 \\ (0.003) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.004) \end{aligned}$ |
| CEO Insider | $\begin{aligned} & 0.013^{* *} \\ & (0.006) \end{aligned}$ | $\begin{aligned} & 0.014^{*} \\ & (0.007) \end{aligned}$ | $\begin{aligned} & 0.013^{* *} \\ & (0.006) \end{aligned}$ | $\begin{aligned} & 0.013^{*} \\ & (0.007) \end{aligned}$ | $\begin{aligned} & 0.011^{*} \\ & (0.006) \end{aligned}$ | $\begin{aligned} & 0.012^{*} \\ & (0.007) \end{aligned}$ | $\begin{gathered} 0.011^{* *} \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.013^{* *} \\ (0.006) \end{gathered}$ |
| CEO Insider $\times$ Female | $\begin{aligned} & -0.043 \\ & (0.032) \end{aligned}$ | $\begin{aligned} & -0.042 \\ & (0.034) \end{aligned}$ | $\begin{aligned} & -0.044 \\ & (0.032) \end{aligned}$ | $\begin{aligned} & -0.043 \\ & (0.033) \end{aligned}$ | $\begin{aligned} & -0.044 \\ & (0.032) \end{aligned}$ | $\begin{aligned} & -0.044 \\ & (0.033) \end{aligned}$ | $\begin{aligned} & -0.021 \\ & (0.037) \end{aligned}$ | $\begin{aligned} & -0.027 \\ & (0.038) \end{aligned}$ |
| log Assets | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{gathered} -0.004 \\ (0.003) \end{gathered}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.003) \end{aligned}$ |
| N | 22,357 | 22,355 | 22,357 | 22,355 | 22,233 | 22,231 | 25,521 | 25,519 |
| Adj. $R^{2}$ | 0.6548 | 0.6159 | 0.6548 | 0.6158 | 0.6557 | 0.6163 | 0.6480 | 0.6072 |
| Mean Dep. Variable | 0.1220 | 0.0916 | 0.1220 | 0.0916 | 0.1220 | 0.0916 | 0.1220 | 0.0916 |

Notes: ${ }^{+} p<0.15,{ }^{*} p<0.10,^{* *} p<0.05,{ }^{* * *} p<0.01$. Standard errors (in parentheses) are clustered at the firm level. All specifications include firm and year fixed effects. "Election Cycle," "4 Yr. Moving Ave.," "Prev 4 Yr.," and "Sample Ave." represent different measures of CEOs' political preferences, as defined in the main text.

Table A3: Executive Log Compensation (non-CEO)

| Political Preference | (1) | Election Cycle | 4 Yr. Mov. Ave. | Prev 4 Yr . |  | Sample Ave. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (2) | (3) | (4) | (5) | (6) | (7) |
| Exec Female | -0.089*** | -0.050** | $-0.038^{+}$ | -0.087*** | -0.050** | -0.089*** | -0.031 |
|  | (0.011) | (0.024) | (0.024) | (0.011) | (0.024) | (0.011) | (0.024) |
| Frac Republican |  | 0.001 | 0.005 |  | 0.025 |  | 0.032 |
|  |  | (0.025) | (0.026) |  | (0.024) |  | (0.038) |
| Frac Republican $\times$ Exec Female |  | -0.064** | $-0.084^{* * *}$ |  | -0.060* |  | -0.093*** |
|  |  | (0.032) | (0.032) |  | (0.032) |  | (0.033) |
| CEO Female | -0.003 | -0.005 | -0.005 | 0.008 | 0.007 | -0.124 | -0.121 |
|  | (0.157) | (0.156) | (0.156) | (0.156) | (0.157) | (0.155) | (0.156) |
| Exec Female $\times$ CEO Female | 0.070 | 0.062 | 0.060 | 0.068 | 0.061 | $0.069^{+}$ | 0.060 |
|  | (0.050) | (0.049) | (0.049) | (0.050) | (0.049) | (0.046) | (0.045) |
| State $\times$ Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 87,050 | 87,050 | 87,050 | 86,449 | 86,449 | 98,479 | 98,479 |
| Adj. $R^{2}$ | 0.6169 | 0.6169 | 0.6169 | 0.6180 | 0.6181 | 0.6111 | 0.6111 |

Notes: ${ }^{+} p<0.15,{ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$. Standard errors (in parentheses) are clustered at the firm level. All specifications include controls for whether the executive is an insider, title fixed effects (defined in the main text), a quadratic in the executive's age, indicators for whether the CEO is female, chair of the board, an insider (also interacted with the CEO being female), a quadratic in CEO's age, the log of the CEO's tenure, the log of total firm assets, return on assets, book-to-market value, cash, dividends, total debt, firm fixed effects, and state fixed effects interacted with year fixed effects. "Election Cycle," " 4 Yr. Moving Ave.," "Prev 4 Yr.," and "Sample Ave." represent different measures of CEOs' political preferences, as defined in the main text.

Table A4: Compensation Structure - Ratio

| Political Preference | (1) | Election Cycle | 4 Yr. Mov. Ave. | Prev 4 Yr . |  | Sample Ave. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (2) | (3) | (4) | (5) | (6) | (7) |
| Exec Female | 0.012*** | 0.007 | 0.003 | 0.011*** | 0.003 | $0.010^{* * *}$ | -0.005 |
|  | (0.003) | (0.006) | (0.006) | (0.003) | (0.006) | (0.003) | (0.006) |
| Frac Republican |  | -0.002 | -0.002 |  | -0.009 |  | -0.014 |
|  |  | (0.008) | (0.008) |  | (0.008) |  | (0.011) |
| Frac Republican $\times$ Exec Female |  | 0.007 | 0.015* |  | 0.013* |  | $0.024^{* * *}$ |
|  |  | (0.008) | (0.008) |  | (0.008) |  | (0.008) |
| CEO Female | -0.029 | -0.029 | -0.029 | -0.029 | -0.029 | 0.008 | 0.007 |
|  | (0.056) | (0.056) | (0.056) | (0.056) | (0.056) | (0.037) | (0.037) |
| Exec Female $\times$ CEO Female | -0.006 | -0.005 | -0.004 | -0.006 | -0.004 | 0.001 | 0.003 |
|  | (0.011) | (0.011) | (0.011) | (0.011) | (0.011) | (0.012) | (0.011) |
| State $\times$ Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 87,053 | 87,053 | 87,053 | 86,452 | 86,452 | 98,482 | 98,482 |
| Adj. $R^{2}$ | 0.4865 | 0.4865 | 0.4865 | 0.4866 | 0.4867 | 0.4805 | 0.4806 |

Notes: ${ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$. Standard errors (in parentheses) are clustered at the firm level. All specifications include controls for whether the executive is an insider, title fixed effects (defined in the main text), a quadratic in the executive's age, indicators for whether the CEO is female, chair of the board, an insider (also interacted with the CEO being female), a quadratic in the CEO's age, the log of the CEO's tenure, the log of total firm assets, return on assets, book-to-market value, cash, dividends, total debt, firm fixed effects, and state-year fixed effects. "Election Cycle," "4 Yr. Moving Ave.," "Prev 4 Yr.," and "Sample Ave." represent different measures of CEOs' political preferences, as defined in the main text.

Table A5: Compensation Structure - Delta

| Political Preference | (1) | Election Cycle | 4 Yr. Mov. Ave. | Prev 4 Yr . |  | Sample Ave. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (2) | (3) | (4) | (5) | (6) | (7) |
| Exec Female | -0.347*** | -0.182 ${ }^{+}$ | -0.132 | -0.347*** | -0.140 | -0.295*** | -0.021 |
|  | (0.057) | (0.116) | (0.112) | (0.057) | (0.112) | (0.052) | (0.109) |
| Frac Republican |  | 0.003 | -0.008 |  | -0.024 |  | 0.048 |
|  |  | (0.100) | (0.101) |  | (0.099) |  | (0.133) |
| Frac Republican $\times$ Exec Female |  | -0.269* | -0.350** |  | -0.341** |  | -0.439*** |
|  |  | (0.161) | (0.158) |  | (0.159) |  | (0.156) |
| CEO Female | -0.221 | -0.228 | -0.232 | -0.238 | -0.221 | -0.560* | $-0.549^{+}$ |
|  | (0.432) | (0.430) | (0.430) | (0.432) | (0.436) | (0.340) | (0.341) |
| Exec Female $\times$ CEO Female | 0.626** | 0.590** | 0.584** | $0.627^{* *}$ | 0.586** | 0.553** | 0.501** |
|  | (0.263) | (0.261) | (0.262) | (0.263) | (0.261) | (0.233) | (0.231) |
| State $\times$ Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 93,009 | 93,009 | 93,009 | 92,364 | 92,364 | 105,321 | 105,321 |
| Adj. $R^{2}$ | 0.2380 | 0.2381 | 0.2381 | 0.2383 | 0.2383 | 0.2342 | 0.2343 |

Notes: ${ }^{+} p<0.15,{ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$. Standard errors (in parentheses) are clustered at the firm level. All specifications include controls for whether the executive is an insider, title fixed effects (defined in the main text), total compensation, a quadratic in the executive's age, indicators for whether the CEO is female, chair of the board, an insider (also interacted with the CEO being female), a quadratic in the CEO's age, the log of the CEO's tenure, the log of total firm assets, return on assets, book-to-market value, cash, dividends, total debt, firm fixed effects, and state-year fixed effects. "Election Cycle," "4 Yr. Moving Ave.," "Prev 4 Yr.," and "Sample Ave." represent different measures of CEOs' political preferences, as defined in the main text.

Table A6: Compensation Structure - Vega

| Political Preference | (1) | $\frac{\text { Election Cycle }}{(2)}$ | 4 Yr. Mov. Ave. <br> (3) | Prev 4 Yr . |  | Sample Ave. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | (4) | (5) | (6) | (7) |
| Exec Female | -0.316*** | ${ }^{-0.205}{ }^{+}$ | -0.172 | -0.318*** | -0.150 | -0.282*** | -0.146 |
|  | (0.063) | (0.126) | (0.125) | (0.063) | (0.126) | (0.059) | (0.127) |
| Frac Republican |  | -0.025 | -0.007 |  | -0.038 |  | 0.094 |
|  |  | (0.149) | (0.156) |  | (0.147) |  | (0.226) |
| Frac Republican $\times$ Exec Female |  | -0.182 | -0.235 |  | -0.276 ${ }^{+}$ |  | -0.217 |
|  |  | (0.173) | (0.172) |  | (0.175) |  | (0.174) |
| CEO Female | -1.434* | -1.444** | -1.442** | -1.430* | -1.414* | -1.580** | -1.572** |
|  | (0.732) | (0.729) | (0.728) | (0.731) | (0.732) | (0.647) | (0.644) |
| Exec Female $\times$ CEO Female | 0.668*** | 0.644** | 0.640** | 0.670*** | 0.636** | 0.512** | 0.489** |
|  | (0.258) | (0.260) | (0.259) | (0.258) | (0.260) | (0.243) | (0.243) |
| State $\times$ Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 93,009 | 93,009 | 93,009 | 92,364 | 92,364 | 105,321 | 105,321 |
| Adj. $R^{2}$ | 0.3980 | 0.3980 | 0.3981 | 0.3987 | 0.3987 | 0.3932 | 0.3932 |

Notes: ${ }^{+} p<0.15,{ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$. Standard errors (in parentheses) are clustered at the firm level. All specifications include controls for whether the executive is an insider, title fixed effects (defined in the main text), total compensation, a quadratic in the executive's age, indicators for whether the CEO is female, chair of the board, an insider (also interacted with the CEO being female), a quadratic in the CEO's age, the log of the CEO's tenure, the log of total firm assets, return on assets, book-to-market value, cash, dividends, total debt, firm fixed effects, and state-year fixed effects. "Election Cycle," "4 Yr. Moving Ave.," "Prev 4 Yr.," and "Sample Ave." represent different measures of CEOs' political preferences, as defined in the main text.

Table A7: Event Study - The Outgoing CEO is Democratic

| Dep. Variable | Fraction of Women Executives |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Cutoff 50\% |  | Cutoff 67\% |  | Cutoff 75\% |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| $\widehat{\text { Switch }}$ R,D $\times(t=-3)$ | -0.006 | -0.012 | 0.008 | -0.018 | 0.018 | -0.012 |
|  | [-0.027,0.017] | [-0.027,0.019] | [-0.021,0.046] | [-0.046,0.025] | [-0.016,0.059] | [-0.041,0.034] |
| Switch $_{R, D} \times(t=-2)$ | -0.003 | -0.006 | -0.002 | -0.009 | 0.019 | 0.012 |
|  | [-0.024,0.015] | [-0.022,0.019] | [-0.033,0.033] | [-0.038,0.030] | [-0.019,0.061] | [-0.025,0.057] |
| Switch $_{R, D} \times(t=-1)$ | -0.015* | -0.022** | -0.006 | -0.021 | 0.013 | -0.008 |
|  | [-0.030,0.001] | [-0.035,-0.002] | [-0.034,0.023] | [-0.051,0.012] | [-0.027,0.005] | [-0.042,0.036] |
| Switch $_{R, D} \times(t=1)$ | -0.004 | -0.006 | -0.005 | -0.009 | -0.002 | -0.007 |
|  | [-0.021,0.011] | [-0.026,0.012] | [-0.026,0.021] | [-0.034,0.023] | [-0.038,0.020] | [-0.051,0.022] |
| Switch $_{R, D} \times(t=2)$ | 0.004 | 0.004 | 0.005 | -0.001 | 0.006 | -0.003 |
|  | [-0.016,0.025] | [-0.018,0.026] | [-0.042,0.029] | [-0.041,0.026] | [-0.057,0.032] | [-0.062,0.028] |
| Switch $_{R, D} \times(t=3)$ | -0.010 | -0.010 | -0.026 | -0.035 | -0.011 | -0.025 |
|  | [-0.037,0.010] | [-0.035,0.014] | [-0.068,0.017] | [-0.072,0.016] | [-0.067,0.040] | [-0.080,0.039] |
| $t=-3$ | 0.001 | 0.010 | -0.012 | 0.012 | $-0.032^{* *}$ | -0.007 |
|  | [-0.018,0.020] | [-0.020,0.020] | [-0.041,0.018] | [-0.021,0.027] | [-0.059,0.003] | [-0.032,0.010] |
| $t=-2$ | 0.001 | 0.005 | -0.012 | 0.002 | -0.027** | ${ }^{-0.015}{ }^{+}$ |
|  | [-0.015,0.018] | [-0.091,0.014] | [-0.036,0.012] | [-0.030,0.017] | [-0.049,0.001] | [-0.039,0.005] |
| $t=-1$ | $0.010^{+}$ | $0.017^{+}$ | -0.002 | 0.010 | -0.015 | 0.001 |
|  | [-0.002,0.022] | [-0.003,0.024] | [-0.025,0.016] | [-0.014,0.021] | [-0.036,0.007] | [-0.021,0.016] |
| $t=1$ | 0.008 | $0.011^{+}$ | 0.005 | 0.011 | 0.013* | 0.024* |
|  | [-0.004,0.022] | [-0.003,0.027] | [-0.009,0.020] | [-0.010,0.030] | [-0.001,0.034] | [-0.001,0.051] |
| $t=2$ | 0.003 | 0.006 | 0.000 | 0.006 | 0.008 | 0.016 |
|  | [-0.017,0.019] | [-0.014,0.022] | [-0.031,0.021] | [-0.028,0.025] | [-0.030,0.032] | [-0.025,0.41] |
| $t=3$ | 0.012 | 0.015 | 0.015 | 0.022 | 0.017 | 0.027 |
|  | [-0.006,0.033] | (0.010) | [-0.016,0.045] | [-0.012,0.051] | [-0.018,0.052] | [-0.015,0.067] |
| Switch $_{R, D}$ | -0.003 | $0.003^{+}$ | 0.002 | 0.017 | 0.002 | 0.021 |
|  | [-0.019,0.010] | [-0.005,0.034] | [-0.025,0.024] | [-0.015,0.037] | [-0.030,0.032] | [-0.017,0.047] |
| Firm Controls | No | Yes | No | Yes | No | Yes |
| N | 1,696 | 1,633 | 588 | 552 | 401 | 379 |
| Mean Dep. Variable | 0.152 | 0.152 | 0.150 | 0.151 | 0.151 | 0.153 |

Notes: ${ }^{+} p<0.15,{ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$. Bootstrapped confidence intervals (in brackets) are clustered at the firm level. Firm controls include the log of firm assets, indicators for whether the CEO is female, chair of the board, an insider (also interacted with the CEO being female), and a quadratic in the CEO's age. All specifications include firm fixed effects and state-year fixed effects. Estimations are made using the two-step process described in the main text.


[^0]:    *We thank Lucian Bebchuk, Nittai Bergman, Rosa Ferrer, Louis Kaplow, David Matsa, Itay Saporta, Analia Schlosser, Kathy Spier, and Dan Zeltzer for invaluable comments, as well as participants at the Harvard Law School, AXA Research Lab on Gender Equality at Bocconi University, Tel Aviv University, the 2021 American Law and Economics Association conference, and the 2021 COSME Gender Economics workshop. We would also like to thank the editor, Raffaella Sadun, and two anonymous referees for comments that greatly improved this paper. Finally, we thank Shay Achrich, Alon Bebchuk, and Matan Gibson for excellent research assistance. Alma Cohen acknowledges financial support from the Israel Science Foundation (grant no. 1935/18), the Harvard Law School, and the Pinhas Sapir Center for Development. This paper is part of the research work of the Project on Corporate Political Spending of the Harvard Law School Program on Corporate Governance.
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[^1]:    ${ }^{1}$ Examples range from increased institutional pressure on corporate boards (Gormley et al., 2021) to State Street launching in 2017 an exchange-traded fund (ETF) that invests in corporations with greater female representation (ticker: SHE).

[^2]:    ${ }^{2}$ Xuan (2009) also exploits changes of CEOs to understand how CEOs allocate capital within firms.

[^3]:    ${ }^{3}$ This phenomenon is as documented in previous studies such as Albanesi et al. (2015) and Carter et al. (2017), as discussed below.
    ${ }^{4}$ Fos et al. (2021) study political polarization and its effects on diversity in the executive suite. However, they focus on political diversity, that is, the share of executives who are Republican, rather than gender diversity.
    ${ }^{5}$ A potential issue is that changes in firm characteristics that are associated with changes in CEOs' political preferences may be driving the results. If this is true, then it is not enough to include year and firm fixed effects as we do, as the firm characteristics change over time.

[^4]:    ${ }^{6}$ Though we are unaware of other papers on how CEOs' political preferences influence gender issues in corporate America, Cohen and Yang (2019) examine how judges appointed by Republicans and by Democrats treat female defendants. The authors find that Republican-appointed judges give shorter sentences to female defendants. Relatedly, Carnahan and Greenwood (2018) show that law firms with more politically liberal partners, as measured by their political contributions, are more likely to hire female associates.
    ${ }^{7}$ In Appendix B we employ the event-study estimator to examine whether replacing a Republican with a Democratic CEO affects firm performance, as measured by either Tobin's $Q$ or return on equity. We find no evidence to suggest such an impact. Kuzmina and Melentyeva (2021) use European data to find a positive impact of women on corporate boards as measured by Tobin's $Q$ and buy and hold returns, and explain why their results differ from previous papers finding the opposite effects.

[^5]:    ${ }^{8}$ The definition of a corporate officer is less clear-cut than it seems. Although state statutes and corporate by-laws typically define the role clearly with regard to the day-to-day operations of a firm, the term is not well defined in the Securities and Exchange Act of 1934 with reference to the responsibility to report transactions. It is not clear whether the failure to define the term was a legislative mistake or reflected an assumption that the term would be defined in keeping with contemporaneous usage in the corporate world. Thus the term has been the subject of multiple SEC rules and court cases over the years. It is the general counsel's role to decide who does and does not meet the definition of an officer, in keeping with the general counsel's understanding of the law. Guidelines exist for designating the role of "officer" in a firm. For example, Hurley (1975) discusses the history of the definition of an officer under the 1934 Act and recommends three criteria: likelihood of obtaining confidential information, responsibility for corporate policy, and participation in the executive council.
    ${ }^{9}$ We merge the two datasets in two phases. First, within each company we merge exact matches of last names with the same first and middle initial. Second, we match names using the Stata algorithm "matchit," which assigns a score to the relative similarity of the strings. Any match with a similarity score of less than 0.67 is manually checked; this cutoff was chosen after examining samples at various cutoffs and determining 0.67 to be an excellent measure of match quality. An example of a match performed in this way is Anthony Fadell of Apple Computers. In ExecuComp he is listed as Tony Fadell; in Form 4 he is listed as Anthony Fadell. The lack of matching first initials means that we merge successfully only in the second phase. Because the score of the match between the strings "Anthony Fadell" and "Tony Fadell" is only 0.59 , we manually confirm that this is indeed the same person (given that Tony is a common nickname for Anthony).

[^6]:    ${ }^{10}$ We discuss below how we infer an executive's gender from his or her name.
    ${ }^{11}$ We do so using the procedure outlined in Core and Guay (2002), and using code developed by Kai Chen and graciously made available on his website. His code is in turn based on that published on Lalitha Naveen's website, used for her paper (Coles et al., 2006).
    ${ }^{12}$ To be clear, we ignore contributions to independent/third-party candidates, or contributions for which we could not identify the party to whom they belong.

[^7]:    ${ }^{13}$ Cooper et al. (2010) show that the number of candidates a corporate PAC supports is correlated with subsequent abnormal stock-market returns, suggesting that these PACs are indeed focused on firm profits.

[^8]:    ${ }^{14}$ In particular, this variable is the fraction of total votes for the two currently sitting senators that went to Republicans. For example, consider a state that elected senators in 2008 and 2010. In 2011, this variable is the total vote for the Republican candidate in 2008 plus the vote for the Republican in 2010 divided by total votes for Democrats and Republicans in 2008 and 2010. We drop from this analysis truly independent candidates (such as Libertarians). However, senators who consistently caucus with one side, such as Bernie Sanders caucusing with the Democrats, are included.
    ${ }^{15}$ For more on the breakdown in contributions from CEOs between Democrats and Republicans, see Cohen et al. (2019).
    ${ }^{16}$ That is, all changes in the sample average measure reflect changes in the sample of CEOs.

[^9]:    ${ }^{17}$ In untabulated regressions, we confirm that this is the case, with the exception of dividends. Companies run by CEOs who give more to Republicans tend to pay higher dividends, even after conditioning for industry and company size.

[^10]:    ${ }^{18}$ The insider variable interacted with the CEO being female controls for a mechanical issue: that promotion of a female executive to CEO status is likely to change the gender composition of the remaining non-CEO executive suite because a promoted female executive is likely to be replaced by a man, given that the vast majority of executives are male. Thus, such an internal promotion will create a negative relationship between a female CEO and the fraction of non-CEO executives who are female. Controlling for the CEO's insider status, interacted with being female, solves this issue.

[^11]:    ${ }^{19}$ It is tempting to examine whether CEOs' political affiliations are associated with whether women are in "weak" positions. However, these positions account for relatively few observations in our dataset. For example, 7\% of our observations are general counsels and $1.5 \%$ are in charge of human resources. Perhaps this is not surprising, as it is less likely that "weak" executives would be among the highest paid, and thus would not show up in the ExecuComp dataset.

[^12]:    ${ }^{20}$ This event-study design leaves us with a small sample. Using the sample average measure of political preferences allows us to maximize the sample size for a given cutoff. Thus, we do not have to reperform these exercises with other measures as robustness in the Appendix.
    ${ }^{21}$ We note that the last time period is shorter than previous time periods, and therefore has fewer observations.

[^13]:    ${ }^{22}$ As discussed in Section 2.6, in particular regarding Table 2.
    ${ }^{23}$ We choose six years as it is the median tenure of outgoing CEOs that are managers (rather than owners) (Coates and Kraakman, 2010). Thus, it seems reasonable that major reforms that a CEO may implement would happen in this time frame.

[^14]:    ${ }^{24}$ There is an issue regarding the exact timing of when a CEO began working. Some CEOs are reported to have a tenure of 1 when they begin, while others are a tenure of 0 . The difference comes down to the calendar year- if a CEO began her job in December 2013, then in January 2014 she will have a tenure of 1 . However, we are not sure which year the CEO actually began to work, and thus how to center the event study. Accordingly, we set the fraction of executives who are women in the first year of a CEO's tenure to be the average of the fraction of executives who are women in the first and second years of the CEO's tenure, since we are not entirely sure when the CEO actually began. As a result, the observations we refer to as being two years after the switch might actually be three years after the switch.
    ${ }^{25}$ This event-study approach naturally results in a greatly restricted sample size, as we are limited to observations where we identify the political preferences of both the incoming and outgoing CEOs.

[^15]:    ${ }^{26}$ For example, consider the event study of the sample of outgoing Republicans who are replaced by either Democrats or Republicans. Switch $p_{p,-p}$ takes a value of 1 if a company replaces a Republican with a Democrat. It thus measures difference in the gender composition of the executive suite between companies that replace a Republican with a Democrat and companies that replace a Republican with another Republican.

[^16]:    ${ }^{27}$ Due to the two-step estimator process, we do these tests on the odd columns. Alternatively, we also perform the event-study as a one-step process (akin the the classic estimator with two-way fixed effects). Using that approach, we get slightly lower deltas, but still greater than 1 .
    ${ }^{28}$ To examine this, we look at the raw data, as opposed to net of year fixed effects, as described above.
    ${ }^{29}$ While it looks like companies that replace a Republican with another Republican may see a decline in the number of executives, the decline is quantitatively not large.

[^17]:    ${ }^{30}$ Additionally, in our dataset, we find that approximately 1 new executive is added to a given firm in a given year. If there's a new CEO, this number increases to 1.5-2 new executives. Thus, change can be enacted over the course of a few years, such as our estimates suggest. Indeed, our raw data analyses (Figures 3, 4, and 5) suggest that replacing a Republican CEO with a Democrat would yield about 1 new female executive over the course of 4 years. This is certainly reasonable given the pace of executive replacements we see in the data.
    ${ }^{31}$ Technically, we take the $\log$ of delta $+\$ 1$ or the log of vega $+\$ 1$ in order not to take the $\log$ of 0 in cases of no stock-option compensation.

[^18]:    ${ }^{32}$ Title groups include chief officers, an executive who is also a chairman, general counsel, human resources, vice president, titles that include the word senior, and other.
    ${ }^{33}$ This finding is consistent across all specifications in the table.

[^19]:    ${ }^{34}$ We find no differences in the total compensation of executives under female CEOs either for either male or female executives in either of the specifications discussed here.
    ${ }^{35}$ As with the total compensation, we find no differences in the cash ratio under female CEOs for either male or female executives in either of the specifications discussed here.

[^20]:    ${ }^{36}$ In contrast to our findings on total compensation and the cash ratio, it seems that delta may be lower for all executives when the CEO is a female. While this finding is significant at the $10 \%$ level in Column (5), it is not significant in Column (6). We also find that female CEOs tend to pay female executives more delta.
    ${ }^{37}$ As with delta, it seems that vega may be lower for all executives when the CEO is a female. This finding is significant at the $5 \%$ level in both specifications. Again, we find that female CEOs tend to pay female executives more vega.

[^21]:    ${ }^{38}$ For a further discussion on the role of the CEO in executive compensation, see Chin and Semadeni (2017) and the references contained therein.

[^22]:    ${ }^{39}$ The experts from whom we received input on these questions are from the advisory firms of FW Cook, Spencer Stuart, Russell Reynolds, and Meridian. Among other things, the experts observed that:

    - "CEOs normally recommend selection of their senior office teams for approval by board nominating \& governance committees, and pay by compensation committees ...In my experience, [the] general approach is to support the CEO unless [there is an] issue over rationale."
    - "Generally the CEO puts forth pay recommendations for the executive team and the Compensation Committee reviews, adjusts as needed, and approves. ...The CEO is ... in the best position to judge individual performance, which definitely plays into pay recommendation ...[t]he management team (including the CEO) drives the recruiting and interview process for executive team members ... and brings a final candidate to the board for approval."
    - "[T]he C-suite reports exclusively to the CEO ...[T]he CEO has the final say on hiring her/his team. The CEO has a lot of influence on individual executive compensation."

[^23]:    ${ }^{40}$ In principle, this mechanism could be a preference one. However, we think of it as being mostly about the endogenous matching processes.

[^24]:    ${ }^{41}$ We use two datasets to match names to nicknames. The first is the name to nickname dataset, accessible at GitHub, under "name to nick", and the second is the reverse mapping, accessible at GitHub, under "nick to name."
    ${ }^{42}$ We use data on contributions from 1996 onwards, as some of our measures, such as the last four years measure, require information from before a CEO-year observation.
    ${ }^{43}$ As part of this process, we clean both datasets of titles, such as "Mr" and "Mrs", or "esq" and "MBA", containing information that we do not use in our matching algorithm. We include relevant information such as "Jr." or "Sr.," which we use to differentiate people with seemingly identical names (such as fathers and sons). Additionally, this algorithm removes prefixes such as "van" and "de" that could obfuscate our matching process. To do so, we employ the nameparser package, which is part of the "whoswho" library.

[^25]:    ${ }^{44}$ To do so, we must create a consistently named set of unique company names to merge between the datasets. To do so, we clean company names of acronyms and abbreviations such as "LLC," "Ltd.," and "Co," using a Python package called "cleanco." We also remove stop words such as "or," "the," and "of" using the Python package "NLTK". Additionally, we spell out common abbreviations to allow for accurate matching, such as replacing "intl" by "international" and "rlty" by "realty."
    ${ }^{45}$ Specifically, the occupation must include either "board," "chair," (or "chairman," "chairwoman") "chief," "dir.," "founder," "pres," "trustee," "CEO," or "VP."
    ${ }^{46}$ Here, we define a "lenient match" to be cases where a name is contained in another name. For instance, if the company in the FEC is "New York Bank", and the company listed in ExecuComp is "New York Bank Mellon," then the former is contained in the later, and a lenient match has been found.'
    ${ }^{47}$ Some committees or candidates change political party affiliation over time. In such cases, we identify a candidate as being associated with the party they are most often identified with by the FEC.

[^26]:    ${ }^{48}$ One consideration is how to treat " 24 a " expenditures. These are expenditures by political committees against candidates, rather than in their favor. We assume that an expenditure against a Democrat is an expenditure in favor of a Republican, and vice versa. Since we do not know how to interpret an expenditure against an independent candidate, we treat these expenditures as unknown.
    ${ }^{49}$ For instance, "DNC-NON-FEDERAL MIXED" is clearly a Democratic committee, while "RNC REPUBLICAN NATIONAL STATE ELECTIONS COMMITTEE" is clearly a Republican committee. It is unclear why their party affiliation is left blank by the FEC.

[^27]:    ${ }^{50}$ We use the sample for which we have the election cycle measure in order to make the estimates comparable with the those in Column (2), which includes these preferences. Notice that this sample happens to be the same as with the four-year moving averages and the previous four years average. As a result, we do not repeat this analysis again when using the fouryear moving averages and the previous four years average. However, we redo this exercise when using the sample average measure as discussed below.

