

Gender, Culture, and Firm Value: Evidence from the Harvey Weinstein Scandal and the #MeToo Movement

Finance Working Paper N° 679/2020

September 2020

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ECGI Working Paper Series in Finance

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We thank Andrew Chamberlain (Chief Economist at Glassdoor) for providing access to their employee review survey data, Paul Coombes, James Dow, Luigi Guiso, Jean-Marie Meier, Charlotte Ostergaard, Vikrant Vig, and seminar participants at the Joint Research Seminar (Universities of Bonn, Cologne, Dortmund, WHU), London Business School, the University of Auckland, University of Bern, University of Edinburgh, University of Mannheim, University of Neuchatel, the 2019 BI Conference on Corporate Governance, and the 2019 Swiss Economists Abroad meeting for helpful comments and discussions, and Beril Unal and Arkodipta Sarkar for excellent research assistance.

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Abstract

During the revelation of the Weinstein scandal and the emergence of the #MeToo movement, firms with a corporate culture that does not discriminate on the basis of sex, proxied by having women among the five highest paid executives, earn excess returns of 1.6%. These returns are followed by positive revisions in analyst earnings forecasts. The returns increase to 3.2% in industries with few women executives, and 2.1% and 2.7% for firms headquartered in states with high levels of sexism and a high gender pay gap, respectively. Firms in industries with more women in executive positions and headquartered in states with low levels of sexism or a low gender pay gap also earn positive abnormal returns during this period. Our evidence attests to the value of having a non-sexist culture.

Keywords: Corporate culture, top executive, gender, societal culture, firm value, #MeToo

JEL Classifications: M14, G30

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Abstract

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Abstract

During the revelation of the Weinstein scandal and the emergence of the #MeToo movement, firms with a corporate culture that does not discriminate on the basis of sex, proxied by having women among the five highest paid executives, earn excess returns of 1.6%. These returns are followed by positive revisions in analyst earnings forecasts. The returns increase to 3.2% in industries with few women executives, and 2.1% and 2.7% for firms headquartered in states with high levels of sexism and a high gender pay gap, respectively. Firms in industries with more women in executive positions and headquartered in states with low levels of sexism or a low gender pay gap also earn positive abnormal returns during this period. Our evidence attests to the value of having a non-sexist culture.

1. Introduction

Does corporate culture create firm value? Practitioners believe so. Ninety-two percent of the executives surveyed by Graham, Grennan, Harvey, and Rajgopal (2019) state that improving culture would increase firm value. Consistent with this finding, 85% of the S&P 500 companies have at least one section dedicated to “corporate culture” in their web pages (Guiso, Sapienza, and Zingales (2015a)). More generally, other constituents, such as financial journalists and consulting companies (e.g., Kaplan, Dollar, and Melian (2016)), also advocate the positive valuation effects of having an effective corporate culture.¹

Notwithstanding this belief, academic evidence on this matter is inconclusive. Some studies show that metrics indicative of a strong workplace culture—such as being named among the best places to work—are associated with higher future excess stock returns (e.g., Edmans (2011)) and higher firm valuations (e.g., Guiso, Sapienza, and Zingales (2015a)). However, as discussed in Guiso, Sapienza, and Zingales (2015a) the relation is not necessarily causal. In fact, Green, Huang, Wen, and Zhou (2019) argue that the positive relation between employee satisfaction levels and future stock market performance reflects an information transmission channel—measures of higher employee satisfaction capture employees’ observations of positive nonpublic value-relevant information. As such, it is not the firm’s culture that drives future returns.

The challenge in attributing valuation effects to corporate culture is exacerbated by the difficulty in defining what culture actually encompasses. Kreps (1990) refers to culture as an intangible asset that can be used to meet unforeseen contingencies, while O’Reilly and Chatman (1996) define culture as “a set of norms and values that are widely shared and strongly held

¹ For specific case studies, see The Wall Street Journal article entitled “After Uber and Wells Fargo, Boards Wake Up to Company Culture,” October 5, 2017.

throughout the organization,” a definition that has also been adopted by Guiso, Sapienza, and Zingales (2015a) and Graham et al. (2019).

In this paper, we assess the valuation effects of one particularly important and timely aspect of corporate culture—the extent to which a firm discriminates on the basis of sex.² The way in which female employees are treated reflects norms and values that can be widely shared and strongly held, consistent with the definition of culture discussed above. More generally, a culture that does not discriminate on the basis of sex (henceforth, a non-sexist culture) could potentially spill over into and/or be a reflection of the firm’s broader overall culture. We argue that this aspect of corporate culture—the extent of sex discrimination—has two elements necessary to investigate its valuation impact empirically: first, it recently experienced an unexpected and unequivocal shock to its importance, allowing for identification and causal inference; and, second, it has a measurable dimension.

With regards to identification, we exploit an unequivocal shock to the importance of having a corporate culture that does not tolerate discrimination against women—the public revelation of the egregious and numerous sexual harassment allegations against Harvey Weinstein and the subsequent resurgence of the #MeToo movement.³ The latter gained prominence in the weeks after the Weinstein scandal emerged and rapidly brought to light the true extent to which sexual harassment and gender discrimination accusations were prevalent in business organizations, while elucidating that such behavior would no longer be condoned. Our premise is that as a result of this shock, shareholders re-evaluated the latent costs associated with owning stocks of firms with a

² <https://www.eeoc.gov/sex-based-discrimination> details the various facets of illegal workplace sex discrimination.

³ Ideally, we would like to observe an exogenous shock that suddenly changes (an aspect of) corporate culture. However, such a shock is difficult to observe because a firm’s culture is slow to form and change. Hence, our focus is on an exogenous shock that changes the *importance of corporate culture*, which should impact stock prices if corporate culture is value relevant.

potential, but unrevealed, culture of sexism and/or misogyny (which condones sexual harassment and gender discrimination in the workplace).

With regards to measurability, we posit that firms with one or more women among the top-five-compensated executives are unlikely to have a culture that tolerates misogyny and sexual harassment. If such a culture were present, it is improbable that a woman would have risen to the top in the first place given the well-documented “glass ceiling” hurdle that women face. In fact, according to survey evidence by the Rockefeller Foundation and GlobalStrategyGroup (2017), one of the main hurdles to women achieving top leadership positions is the culture of the corporation itself, particularly the attitude of men in the workplace and the extent to which there is a so-called “boys club” sentiment. Moreover, having a woman in the firm’s C-suite further increases equality in the organization by reducing the gender pay gap (Tate and Yang (2015) and Kunze and Miller (2017)). Indeed, the pivotal role of female leadership in building a culture of gender equality and inclusion has been highlighted in a study by the World Economic Forum (2017) on attitudes towards women in the workplace. The title of the press release accompanying the study succinctly summarizes its conclusion: “The key to closing the gender gap? Putting more women in charge.”

To study the importance of having a non-sexist corporate culture, we examine the stock price response of all US firms covered by the Execucomp database over various time periods surrounding the Weinstein allegations and subsequent rise of the #MeToo movement. We find that companies with at least one woman among its five highest paid executives earned positive excess returns of 0.3% on October 5 and 6, 2017, when news of the allegations against Harvey Weinstein hit the media, and a further 1.3% over the two weeks from October 16, 2017, right after the #MeToo movement was relaunched.

We also study whether female leadership matters for stock returns when measured by the presence of women on the board. We find no relation between the fraction of female directors and stock returns around the revelation of the Weinstein scandal or the advent of the #MeToo movement. Thus, when the importance of having a non-sexist corporate culture increases, the market values the presence of women in top corporate leadership roles more than their presence on the board of directors. This finding is also consistent with the premise that corporate culture is largely driven by C-suite executives (e.g., Deloitte (2016), World Economic Forum (2017), and Graham et al. (2019)).

While the Execucomp database contains information for the five highest paid executives, we verify that our findings persist when we define female leadership based on women in senior management positions below the top 5 using data from BoardEx. We also investigate whether the shock to the importance of a having a non-sexist culture caused outside investors to reassess the value of a firm's culture more broadly using a measure compiled by Glassdoor that assesses employees' views on a firm's overall corporate culture and values. Our findings hold using this metric as well.

We further examine whether there are interactions and spillovers linking the culture of the firm and the broader culture in which the firm operates, measured at both the industry and state level. At the industry level, we find that a firm with female leadership is particularly valuable in male-dominated industries. Over the Weinstein and #MeToo event windows, these firms exhibit 3.2% higher abnormal returns than firms without female leadership operating in male-dominated industries. In addition, firms in industries with a high fraction of women in executive positions perform well around the Weinstein and #MeToo events, irrespective of whether an individual firm has a highly-paid woman executive, suggesting an industry spillover effect. That is, when industry-

level culture is less sexist such that women achieve leadership positions more frequently, the entire industry benefits when the importance of having a non-sexist corporate culture increases.

At the state level, we assign firms to the state in which they are headquartered and test whether the value of female leadership within a firm is higher when state-level measures of sexism and of the gender pay gap, both of which reflect societal cultural norms regarding gender discrimination, are higher. We find this to be the case: the combined Weinstein and #MeToo event window excess returns for firms with a top-5 female executive are 2.1% and 2.7% higher (compared to firms without top female executives) when the firm is from a state with a high level of sexism and a large gender pay gap, respectively. This, again, indicates that female leadership matters most in settings in which sex discrimination is more likely. We also find that firms headquartered in states with low levels of sexism or a low gender pay gap experienced higher abnormal returns during our event windows relative to other firms, independent of whether they had women in top leadership positions, which attests to the value of culture measured at the regional/societal level (see also Guiso, Sapienza, and Zingales (2006)).

There are two non-mutually exclusive potential explanations for the stock return evidence that we document: (i) a corporate culture that is inclusive and does not discriminate on the basis of sex has always been important for valuation, but it became (more) salient around the Weinstein and #MeToo events because investors gained a greater appreciation of the negative consequences of having a sexist corporate culture; and (ii) the events we study altered the importance that customers, employees, and other stakeholders attached to a non-sexist corporate culture, resulting in increased future cash flows for firms with such a culture. To investigate the relative merits of these explanations, we study revisions in analyst earnings forecasts after the Weinstein and #MeToo events, as well as changes in firms' operating performance. We find that after our event

window analysts revise their earnings forecasts upwards for firms with women in leadership positions relative to other firms by 4% to 9%. That is, analysts deemed their earlier, pre-Weinstein earnings forecasts for firms with female leadership to be too low. We find no evidence of improvements in operating performance in the short run, but we recognize that actual improvements in operating performance may take longer to materialize (see Grennan (2019)). Overall, these findings are consistent with the first explanation: market participants and equity analysts were underestimating the valuation and profitability of firms with a non-sexist culture before the allegations against Harvey Weinstein were announced.

Our work contributes to the literature on the relation between corporate culture and firm performance. Guiso, Sapienza, and Zingales (2015a) and Graham et al. (2019) use survey data to show that measures of cultural norms are related to Tobin's q and profitability. Jeffers and Lee (2019) measure culture using employee connectivity on LinkedIn and find that employee departure rates are higher in less-connected firms. This result is consistent with the notion that culture serves as an implicit contract (Kreps (1990)) in the retention of human capital. Grennan (2019) measures culture via textual analysis of employee reviews and finds that tighter corporate governance can reduce firm value in the long run because of its negative impact on corporate culture. Finally, Guiso, Sapienza, and Zingales (2006, 2015b) measure culture at the societal level and find that it can add to economic prosperity. Our study extends this literature by focusing on a particular aspect of corporate culture, namely sexism, and by documenting the joint effect on valuation of sexism at the corporate and societal levels.

Our work is also closely related to the literature assessing the impact of female leadership in corporations. Tate and Yang (2015) find that female workers displaced after plant closings suffer a smaller wage gap compared to male workers displaced from the same plants if they are

subsequently hired by a firm with female leadership, indicating that women in leadership positions create cultures with greater gender equality. However, they do not test for valuation effects. Faccio, Marchica, and Mura (2016) find that firms with female CEOs have lower leverage, less volatile earnings, and a higher survival probability than male-run firms, but they also do not assess their impact on valuation. Our evidence complements this work by showing that female leadership affects firm value. Huang and Kisgen (2013) find that when a firm has a female CEO or CFO it does fewer acquisitions and issues less debt, but that the announcement returns for both acquisitions and debt issuances are slightly positive. Adhikari, Agrawal, and Malm (2019) find that firms with more female executives among the top management team experience fewer operations-related lawsuits. However, their reduced form equations suggest that the net effect of female leadership on firm value is negative. Our evidence, on the other hand, indicates that female leadership has a positive impact on stock returns when investors reassess the salience of a non-sexist corporate culture.⁴

We also contribute to the literature that assesses the impact of having women on the board (see, e.g., Adams and Ferreira (2009), Adams and Funk (2012), Ahern and Dittmar (2012), Kim and Starks (2016), and Adams (2017)). We find no evidence that having more female directors impacts stock returns around the revelation of the Weinstein scandal or the advent of the #MeToo movement.⁵ This suggests that achieving a non-sexist corporate culture requires a strong internal female executive presence and not just additional female board members.

⁴ Recent evidence also indicates that policies aimed at attracting more women to the workplace in general either through maternity benefits (Liu, Makridis, Ouimet, and Simintzi (2019)) or state-level Paid Family Leave Acts (Bennett, Erel, Stern, and Wang (2019)) can be value enhancing.

⁵ Giannetti and Wang (2020) report that firms attract more female directors after increases in public attention to gender equality, in particular if these firms had a more favorable attitude towards women in the first place. They do not study the valuation effects of these appointments.

The remainder of this paper unfolds as follows. In Section 2 we discuss our data collection procedure. Section 3 presents the main results and Section 4 explores the mechanisms behind these findings. Section 5 concludes.

2. Data

From the Execucomp database, which covers the S&P 1500 firms, we gather information on the firms' highest paid executives for the most recent fiscal year prior to October 1, 2017. Under SEC regulations, companies are required to disclose detailed information regarding the remuneration of the CEO, the CFO, and the three other most highly paid officers. We drop executives for which Execucomp's 'rank' variable is missing. We also drop firms for which Execucomp reports fewer than five top-compensated executives per firm. We compute the fraction of these executives that are women (*Fraction Top-5 Women*) and we also create a dummy variable set equal to one if at least one woman is among the highest paid executives (*Indicator Top-5 Women*), and zero otherwise. We combine these data with daily stock returns from the CRSP database for the three-month period starting in September 2017, more than one month before the first allegations against Harvey Weinstein were made, and we drop firms with missing return data. This sample yields 1,436 firms.

Table 1 contains summary statistics on the firms in our sample. Roughly three quarters of the firms have no women among the highest paid executives, and only 6% of the top-five executives in our sample are women. In firms with at least one female executive, women comprise just 23.4% of the top-five executives, suggesting that most firms with female executives have just one woman among its leaders. Compared to the year-2009 figures reported by Matsa and Miller (2011) in which 22.6% of firms have a woman among the top-five-paid executives, little progress

has been made in promoting women to the executive suite. We also report that only 4.3% of the sample firms have a female CEO.

Table 1 also contains summary statistics on our sample firms' financial characteristics, measured at the end of the most recent fiscal year prior to October 1, 2017. Firms with at least one female executive are broadly similar to those with no female executives in terms of size, cash holdings, Tobin's q , and investment (capital expenditures). However, firms with at least one female executive have lower levels of leverage (consistent with Huang and Kisgen (2013) and Graham, Harvey, and Puri (2013)) and higher profitability.

For our sample firms, we also gather data on board composition from BoardEx, based on the most recent proxy statements filed before October 1, 2017. As we do for the highest paid executives, we compute the fraction of board members that are women (*Fraction Board Women*). Across our sample, 17% of all board members are women and 87% of all firms have at least one woman on the board. Compared to the statistics for top female executives, these figures show that a woman is three times more likely to be on a corporate board than in the top-five executive team. Firms with female executives have a higher fraction of women on the board (22%) than firms without female executives (15.4%); this difference becomes smaller but remains significant when we focus on the fraction of non-executive directors that are female (23.1% versus 18.5%).

3. Results

3.1. Female Leadership: Baseline Results

We start by studying whether firms with female leadership, our proxy for having a non-sexist corporate culture, earned higher stock returns during the two days in which the public announcement of the Harvey Weinstein sexual assaults were first widely reported in the media, on

October 5 and 6, 2017. To this end, we estimate a panel regression of raw daily stock returns over the three-month period from September 1, 2017 through November 30, 2017 as a function of our two female leadership proxies, *Fraction Top-5 Women* and *Indicator Top-5 Women*, interacted with a time dummy set equal to one on October 5 and 6, 2017, and zero otherwise. The model is estimated with both firm and time (daily) fixed effects, and standard errors are double clustered by firm and time. These firm fixed effects control for all time invariant firm characteristics. As such, it is important to keep the estimation period relatively short. By doing so, we alleviate the need to include controls for factor loadings, firm financials, and the female leadership proxies themselves as these are captured by the firm fixed effects. The interaction terms of the female leadership proxies and the Weinstein scandal event dummies are our variables of interest as these measure the change in the stock market's assessment of the importance of having a non-sexist culture.

Using Factiva, we verify that there are no news stories in any of the major media outlets covering the terms “Harvey Weinstein” and either “harassment” or “assault” over the period from September 1, 2017 through October 4, 2017. On October 5, 2017, there were 72 stories and on October 6, 2017, there were 144, indicating that these two trading days are key to identifying the stock price response to the Weinstein announcement.

Models (1) and (2) of Table 2 contain the results of this estimation. Model (1) uses the interaction of the Weinstein event with *Fraction Top-5 Women*, while model (2) uses the interaction with *Indicator Top-5 Women*. Both interactions are positive and highly statistically significant, indicating that firms with female top executives earned excess returns, relative to firms without women among their highest paid executives, when the Weinstein scandal unfolded. The coefficient in model (1) implies that a firm with one additional top-five-compensated female executive earned an excess return of 0.22% on October 5 and 6 (calculated as: coefficient of

0.551 × 20% more female executives × 2 days). The economic importance of the indicator variable in model (2) is similar: having a female executive yields a 0.19% additional excess return over two days.

The second shock to the importance of having a non-sexist corporate culture occurred with the start of the #MeToo movement. While further allegations were made against Harvey Weinstein in the weeks after October 6, the notion that harassment in the workplace could be a more pervasive and systematic problem gained strong momentum on October 15, 2017, when actress Alyssa Milano encouraged spreading the hashtag #MeToo in an attempt to draw attention to the widespread occurrence of sexual assault and harassment.⁶ In the subsequent days, Google searches for the terms “#MeToo” and “sexual harassment in the workplace” hit an all-time high, and several other prominent leaders in business and society were accused of sexual misconduct in the workplace.⁷

To assess whether firms with female leadership also earned excess returns during the onset of the #MeToo movement, we add an additional two-week event window to our earlier tests, starting on October 16 (the first trading day after the #MeToo tweet) and ending on October 27, and interact this event dummy with the female leadership proxies. The results of models (3) and (4) of Table 2 are striking. During the first two weeks of the #MeToo movement, firms with female leadership earned excess returns that are highly significant and economically important. The coefficient estimate in model (3) shows that relative to other firms, a firm with one additional top-five-compensated female executive earned excess returns of 0.95% during the ten trading days starting on October 16 (calculated as: coefficient of 0.477 × 20% more female executives × 10

⁶ The term “Me Too” was originally used by Tarana Burke, a social activist and community organizer in 2006, on the Myspace social network, but was only used sporadically.

⁷ For a website keeping track of these allegations, see <https://www.vox.com/a/sexual-harassment-assault-allegations-list>, last accessed August 14, 2020. Unfortunately, this website has not been updated since early 2019.

days). The results in model (4) confirm this finding: firms with at least one woman among the top-five-paid executives earned excess returns of almost 1% over the 10 days.

To assess whether the female leadership effect on returns persists or is temporary in nature (and reverses in subsequent weeks), we interact the female leadership proxies with a dummy variable for the period in between the Weinstein scandal announcement window and the beginning of the #MeToo movement (October 9 to 13, 2017), and the one-month period after the #MeToo event window (October 30 to November 30, 2017).⁸ Models (5) and (6) of Table 2 display these results. We find no evidence of return reversals for firms with female leadership in the week after the Weinstein announcement. For the month after the #MeToo movement event window, there is no evidence of a reversal either (in fact, for the *Indicator Top-5 Woman* there is some evidence of additional excess returns during the month of November).

The regressions reported in Table 2 employ the firms' raw returns as the dependent variable and include firm and time fixed effects. Thus, we are comparing the firms' returns during the various event windows to the firms' returns outside of the event windows, after adjusting for market movements, thereby implicitly assuming that returns outside of the event window are 'normal.' To ensure that our findings are robust to alternative methods of computing abnormal returns, we employ two variations to the above methodology. First, we replace the raw returns by market-model abnormal returns, where the market model is estimated using daily returns over the period September 1, 2016 through August 31, 2017, with the CRSP value-weighted index as the market proxy. This approach ensures that our findings are not due to an outcome in which firms with (without) female leadership happened to have experienced low (high) returns outside the event windows. Second, in our base-case model, we include an interaction term between the firm

⁸ All event windows are based on trading days.

fixed effect and the market return. This approach accounts for differences across firms' sensitivities to market movements during the estimation period. Both alternative approaches yield results that are economically and statistically very similar to our base-case specifications.⁹ Finally, we also verify that our findings are not due to extreme observations—winsorizing returns at the 1st and 99th percentiles does not impact the magnitude or significance of our findings.

We next investigate whether the benefits of having a woman in a top-5 leadership position are further enhanced when the CEO is a woman. Since the CEO has more power in the firm than other executives, it could be that the impact stems mainly or only from this position. In Table 3, we re-estimate our base case regression models, but include interactions between the relevant event dummies and a dummy set equal to one if the CEO of the firm is a woman, and zero otherwise. The female CEO interaction coefficients are not significant, while the female executive interaction coefficients remain statistically and economically significant. These results suggest that the valuation benefits of having a woman in the top management team are not further enhanced when the chief executive is a woman.¹⁰

Overall, the evidence reported in Tables 2 and 3 provides strong support for our conjecture that a non-sexist corporate culture is valuable—firms with women in top leadership positions earned positive excess returns relative to other firms when the importance of culture increased around the emergence of the Weinstein scandal and #MeToo movement.

⁹ Additionally, we calculate cumulative abnormal returns around the event windows and find similar results (not tabulated for brevity).

¹⁰ We have also estimated these models without the top-5 interaction variables (i.e., using only the female CEO interactions). Returns are positive for female CEO during both the Weinstein and #MeToo windows, and statistically significant during the Weinstein event.

3.2. *Women on the Board*

Much of the literature on gender diversity in corporate leadership has focused on the board of directors, and outside directors in particular, rather than on the executive team (see, e.g., Adams and Ferreira (2009), Adams and Funk (2012), and Ahern and Dittmar (2012)). Prior work documents that female board members enhance a board's skill sets, which may increase board efficiency (see, e.g., Kim and Starks (2016)). Moreover, Matsa and Miller (2001) find that firms with female directors are more likely to recruit female executives, suggesting that the benefits from having a non-sexist culture may originate at the board level. Thus, in our next set of analyses, we investigate whether the stock market also reassesses the value of firms with female directors during our event windows. We re-estimate our baseline models but include additional interactions between the relevant event windows and the fraction of female board members.¹¹ The findings are reported in Table 4. We continue to find that our measures of female executives (*Fraction Top-5 Women* and *Indicator Top-5 Women*) have a positive and significant effect on stock returns during the Weinstein and #MeToo event periods. However, the fraction of female board members has no incremental effect on returns over these periods. These results suggest that when the importance of having a non-sexist corporate culture increases, value creation stems from having women in top executive positions rather than having additional female board members.¹²

Because female leadership is positively related to female board membership (see Table 1), we have also re-estimated these models without the female leadership variables to assess the standalone valuation effect of female board membership during our event windows. We find

¹¹ Since 87% of our sample firms have at least one woman on the board, our tests concentrate solely on the fraction of female board members and not the presence of a woman on the board.

¹² In unreported models, we verify that the lack of any significant results for female representation on the board also obtains when we focus on non-executive board members only, such that there is no overlap between the female director and female executive measures.

positive excess returns during the Weinstein event when we consider both executive and non-executive female directors, but no significant effect when we focus on non-executive directors only (not tabulated for sake of brevity). Thus, having more non-executive female directors on the board does not create additional value in our setting.

3.3. *Robustness: Alternative Measures of Corporate Culture*

In this section, we conduct a series of robustness tests using alternative measures of corporate culture. First, we assess whether the valuation effects of female leadership continue to hold when leadership is measured at the level below the C-suite. To construct this measure, we obtain from the BoardEx database the profiles of the senior management of the organization for the most recent fiscal year prior to October 1, 2017. Compared to the Execucomp database, BoardEx does not rank senior managers in the organization or provide comprehensive salary information. Therefore, to measure who is part of a firm's senior management team, we first identify all senior managers that have 'Vice President' or 'VP' in their job title. Next, because additional job title words such as Executive, Senior, Associate, or Assistant are sometimes also listed, we remove from this senior leadership group Vice Presidents (or VPs) who also have Associate or Assistant in their title.¹³ This allows us to focus on managers that rank below a firm's C-suite but nonetheless are likely to have senior leadership responsibilities. As for our primary female leadership variables, we compute the fraction of women among a firm's senior management (*Fraction Senior Management*) and we construct an indicator variable that equals one if a firm has at least one woman in a senior management position, and zero otherwise (*Indicator Senior Management*).

¹³ Our findings remain unchanged when we do not remove these executives.

We calculate these measures for all firms covered in BoardEx for which stock return data are available on the CRSP database for the three-month period starting on September 1, 2017. This yields a sample of 3,372 firms. On average, 21.5% of the senior managers are women and 75.9% of firms have at least one woman in a senior management position.

Using these measures of female leadership further down in the organization, we re-estimate the base case regression models. Panel A of Table 5 reports the results. The coefficients on both measures are positive and strongly significant during the Weinstein and #MeToo event windows, indicating that when the importance of having a non-discriminatory culture increased, market participants also placed a higher value on firms with greater female leadership in positions below the top-executive level. In terms of economic significance, a one standard deviation increase in the fraction of women in senior leadership positions (19.1%) is associated with excess returns during the Weinstein and #MeToo event windows of 0.7% (based on model (5)). Model (6) assesses the impact of having at least one woman in the second layer of management. Here the economic effect is more substantial, with excess returns of 2.4% for firms that have least one woman in a senior management position compared to firms that have none.

Second, we investigate whether the Weinstein and #MeToo events caused outside investors to reassess the value of corporate culture more broadly. To address this question, we rely on culture ratings provided by Glassdoor, an employer review and recruiting website that contains company reviews from current and former employees for 600,000 companies worldwide. Reviews contain ratings on a scale from one to five for overall employer quality as well as for five distinct areas: career opportunities, compensation and benefits, work/life balance, senior management, and culture and values. Our focus is on the culture and values category, which captures the firm's culture more broadly from the perspective of the company's employees and likely covers more

than just whether a workplace environment is sexist or not. We gather information for this rating for all US companies with stock returns data available on the CRSP database over the three month period starting on September 1, 2017. The culture rating is averaged across all reviews for the years 2015 and 2016, and firms with less than 10 reviews are removed from the analysis, yielding a sample of 1,870 companies. Both the mean and median of the *Glassdoor Culture* variable are equal to 3.16 with a standard deviation of 0.57.

As noted previously, a concern with Glassdoor ratings as a measure of corporate culture is that they may reflect private/insider information about future cash flows of the firm (see Green et al. (2019)). As such, it is difficult to disentangle the effect of culture on valuation. In our setting, however, this is less of a concern, because it is unlikely that this private information is revealed exactly during the events we study.

Panel B of Table 5 shows the results when we replace the female leadership measure with the *Glassdoor Culture* variable. Model (1) shows a positive and significant coefficient on the Glassdoor culture and value measure for the Weinstein event days while model (2) shows that the coefficient on overall culture is positive but not statistically significant in the #MeToo event window. Model (3) includes all event windows. In this more comprehensive model, *Glassdoor Culture* is significantly related to returns during both the Weinstein and #MeToo event windows. Based on the coefficients of this model, a one-standard deviation change in *Glassdoor Culture* is associated with excess returns during the Weinstein and #MeToo event windows of 0.9%. These results are consistent with broader corporate culture also being valued more highly during this quasi-exogenous shock.¹⁴

¹⁴ We have also analyzed individual reviewers' comments made in the Glassdoor 'negative feedback' field, and find that firms with large numbers of comments related to harassment and sexism earned significant negative returns during the Weinstein and #MeToo events relative to other firms. We also find that such firms have a lower overall culture and values rating.

3.4. *Industry-level Evidence*

Our results thus far indicate that having a woman as a top executive was valued positively by investors when the Weinstein scandal and the #MeToo movement brought the importance of having a non-sexist corporate culture to the forefront. In this section, we examine whether this effect depends on the extent to which women have attained top leadership positions in an industry. When women comprise a larger fraction of the executive ranks of an industry, it is possible that the entire industry is less sexist. The Pew Research Center provides survey evidence supporting this conjecture (Parker (2018)). They show that having a woman among the firm's highest paid executives may become less important for any given firm operating in such an industry. In contrast, if the gender composition of executives in an industry is overwhelmingly male, having a female top executive could be particularly valuable when investors reassess the importance of having a non-sexist corporate culture.

To examine this conjecture, we obtain data on the job patterns for minorities and women collected annually from private employers with 100 or more employees or federal contractors with 50 or more employees by the US Equal Employment Opportunity Commission (EEOC).¹⁵ We use the nationally-aggregated data at the 6-digit NAICS code for 2015.¹⁶ For each NAICS code, the EEOC reports the number of female and male employees in executive and senior officer positions, and we use these data to measure the share of women in executive positions (WEP). Because our sample firms are identified by SIC codes, we match the NAICS codes to 4-digit SIC codes and compute the average share of women in executive positions for each SIC code (*Fraction WEP*).

¹⁵ <https://www.eeoc.gov/eeoc/statistics/employment/jobpat-eeo1/>.

¹⁶ We use 2015 data because starting with 2016, the EEOC only offers data aggregated at the 3-digit NAICS code or lower.

Firms for which there is no match are dropped from this analysis.¹⁷ We also construct a dummy variable, using these industry averages, that equals one for industries with an above-median share of women in executive positions (33.5%), and zero otherwise (*Above-Median WEP*).

We estimate a similar regression model as in Table 2, but include both measures of women in executive positions in an industry, and the interaction between these industry measures and each of the two female leadership variables (*Fraction Top-5 Women* and *Indicator Top-5 Women*). For ease of interpretation, we combine the first three event windows into a single period, which runs from October 5 to 27, 2017, and captures the effect of the Weinstein scandal revelation, its aftermath, and the first two weeks of the #MeToo movement. The October 30 to November 30, 2017 window remains unchanged. The results are presented in Table 6.

In models (1) and (2), we study the effect of female leadership (either *Fraction Top-5 Women* or *Indicator Top-5 Women*) for industries with above- and below-median WEP. The standalone coefficient estimates in the first row capture the effect in male-dominated industries (because in male-dominated industries *Above-median WEP* is zero in rows two and three). The results indicate that the valuation effects of female leadership are particularly important in male-dominated industries. The coefficient estimate in model (1) shows that in a male-dominated industry a firm with one additional top-five-compensated female executive earned excess returns of 2.79% over the 17 trading days from October 5 to 27 (calculated as: coefficient of $0.822 \times 20\%$ more female executives $\times 17$ days). In model (2), the effect of having at least one woman among the top-five-paid executives is even larger, yielding an excess return of almost 3.28% over the 17 days (calculated as: 0.193×17). These results support the notion that female executives are

¹⁷ Alternatively, to avoid dropping firms that cannot be matched at the 4-digit SIC code level, we match NAICS codes to 3-digit, 2-digit, and 1-digit SIC codes respectively, and repeat our analysis. Our findings are similar.

particularly valuable in male-dominated industries when the importance of having a non-sexist corporate culture increases.

The coefficients in the second row of models (1) and (2) illustrate the value implications as the Weinstein scandal and #MeToo movement unfolded for industries that have greater female representation in executive positions. The results show that a less sexist culture measured at the industry level itself is also valuable. Firms from industries that have an above-median share of female executives exhibit higher stock returns during the October 5 to 27 period, regardless of whether the firm itself had a female executive. The coefficients of 0.197 and 0.193 in models (1) and (2), respectively, indicate that firms from above-median WEP industries earned returns roughly 3.3% higher (computed as: 0.197 (or 0.193) $\times 17$) than firms from male-dominated industries.

Finally, the third row of models (1) and (2) assesses whether having a female top-5 executive is incrementally beneficial for firms of industries that already have a large proportion of female executives. The interaction term is significantly negative and essentially offsets the positive effect of female leadership found in the first row. Thus, for firms in industries with more women at the top, having one or more top-5 female executives is not valued more highly by stockholders during the Weinstein scandal and #MeToo movement. This is consistent with our conjecture that when a non-sexist culture is perceived to be the norm in an industry, individual firms in the industry do not necessarily need senior female leaders to instill such a culture.

In models (3) and (4) of Table 6, we replace the *Above-median WEP* dummy with the continuous measure of women in executive positions (*Fraction WEP*) and our findings are similar. Overall, these results illustrate that the Weinstein and #MeToo events led to a reassessment of the value of having a non-sexist culture.

Apart from documenting the interaction between industry and firm culture, the results in Table 6 also allow us to mitigate the concern that our findings may be driven by female executives taking less risk, which may have become particularly valuable during our event window. If this were the case, the effect of female leadership at the firm level would not depend on the overall level of female executive representation in the industry. In particular, we should also observe significant female leadership effects in industries with more female executives. These results also allow us to address the (controversial) argument that the lack of woman leadership at the top is not due to sexism, but to the lack of female talent in specific industries. If this were the case, we would not expect our findings to be stronger in male-dominated industries, in which, according to this explanation, female talent is scarce.

3.5. State-level Evidence

In this section, we investigate whether a less sexist culture measured at the state level affects the valuation consequences of the Weinstein and #MeToo events. The argument is similar to the one in the prior section: if the culture of the state in which the firm is headquartered is generally not sexist, then having top female leaders may be less valuable than if this were not the case. In addition, the culture of the state itself could affect the revaluation of firms around the events we study if there are spillover effects from regional/societal to corporate culture.

We employ two relevant state-level measures of culture: state-level sexism and state-level gender pay gap. Data on state-level sexism are obtained from Charles, Guryan, and Pan (2018). They employ questions from the General Social Survey to determine whether an individual is sexist and average survey responses across individuals in a specific state and across surveys to

obtain a state-level measure.¹⁸ To calculate the state-level gender wage gap, we obtain data from the Current Population Survey for the years 2015 and 2016. This survey contains state-by-state data on earnings and a large number of demographic characteristics. We estimate for each state a regression of weekly pay on a female indicator variable, while controlling for various other variables that explain wages (for example, age, occupation, race, industry, location within the state, and time). The coefficient estimate on the female indicator captures the difference in pay after controlling for observables; that is, it serves as an estimate of the gender pay gap.

For both the sexism and gender pay gap measures, we divide states into two groups based on the overall median. We estimate our baseline regression models, but allow the effect of female leadership to depend on whether the state has a high or low level of sexism or gender pay gap. As in Table 6, for ease of interpretation, we combine the Weinstein and #MeToo events into one event window. In these specifications, we double cluster the standard errors by time and state, since we measure sexism at the state level.

The results based on state-level sexism splits are reported in Panel A of Table 7. The first row shows that in states with high levels of sexism, firms with female leadership earned higher returns during our event window compared to other firms. Based on the coefficient estimate in model (2), firms that are headquartered in these states and that have at least one woman among their top 5 executives earned excess returns of 2.1% over the 17 trading days from October 5 to 27 (calculated as: 0.124×17). The coefficients in the second row show that firms headquartered in states with low levels of sexism also earned excess returns during this period, suggesting that the culture of the state where the firm is located is also important. Based on model (2), the magnitude

¹⁸ Charles, Guryan, and Pan (2018) combine responses on eight questions. For example, one of the questions is whether respondents agree with the following statement: “Women should take care of running their home and leave running the country up to men.”

of this effect is similar to that of female leadership itself. Finally, the interaction between the female leadership variable and the low-sexism-state indicator suggests that the effect of female leadership documented in the first row is mostly undone in states with low levels of sexism. While the coefficient on the female \times low sexism interaction is insignificant, the net effect that accrues by adding the female leadership coefficient and the female \times low sexism interaction coefficient is not significantly different from zero.

The results using the state split based on the gender pay gap reported in Panel B of Table 7 echo those of Panel A and again illustrate both a firm-level and a regional-level culture effect: during our event window, female leadership is particularly valuable in states with a high pay gap, while firms in states with a low pay gap earned excess returns relative to other firms regardless of their female leadership.

Overall, these results indicate that there is an important interaction between societal and firm culture and that both can add to firm value. Furthermore, our findings suggest that societal and firm culture can act as substitutes.

4. Mechanism

In this section, we study the potential mechanism(s) behind the revaluation of firms with female leadership during the Weinstein and #MeToo events. As pointed out previously, there are two non-mutually exclusive explanations for these results. First, firms with female leadership were undervalued by the market prior to the events we study. As such, the revaluation is not accompanied by any real effects, but it does lead to a reassessment of how much these firms' non-sexist corporate cultures are worth relative to firms without female leadership whose cultural norms regarding sexism are arguably less clear cut. Second, as a result of the events we study, the

firm's stakeholders attached more importance to corporate culture and increased their subsequent commitment to firms with a non-sexist culture. This could, for example, be in the form of greater loyalty from customers, leading to increased sales and profits, or higher productivity from employees, reducing costs and increasing net cash flows. The direct costs associated with legal action by employees and other stakeholders related to discrimination and sexual harassment also fall into this category.

We start our investigation of these channels by studying revisions of analysts' annual earnings forecasts surrounding our event window. Analysts are an important information intermediary whose forecasts have a significant influence on market participants (see Kothari, So, and Verdi (2016) for a review of the literature). To study analyst forecast revisions, we gather from I/B/E/S the most recent forecast made prior to October 1, 2017 and the first forecast after October 31, 2017 for each analyst covering the firms in our sample. We focus on the closest upcoming annual earnings forecast, specifically the forecast for a firm's first fiscal year-end after October 31, 2017. Forecasts made outside a 100-day window prior to and after our event window are removed, as well as cases where a given analyst does not provide a forecast both before and after the event window. Forecasts are scaled by the firm's stock price at the time the first analyst makes a forecast during the fiscal year and are expressed as a percentage; they are winsorized at the 1st and 99th percentiles. We then estimate a regression of analyst earnings forecasts on a post-event dummy interacted with our measures of female leadership. We also include firm, analyst, and forecast announcement day fixed effects, and cluster standard errors at the firm level.

The results are reported in Table 8. The first three models measure female leadership using the fraction of women among top-5 executives, while models (4) through (6) use an indicator variable. Models (1) and (4) are limited to firms with a December 31, 2017 fiscal year-end, while

the other models also include firms with fiscal year-ends beyond December 31, 2017. All specifications yield the same insight. Firms with a higher fraction of women or at least one woman in the top leadership team experience significant positive revisions in analyst forecasts after our event window. In term of economic significance, based on model (3), adding one woman to the top-5 executive team (i.e., increasing the fraction by 0.20) increases the analyst earnings forecast relative to its average by 3.3% (calculated as: coefficient of 0.812 \times 0.20, divided by the average analyst earnings forecast measure of 4.99). These results suggest that analysts deemed their earlier, pre-Weinstein event earnings forecasts for firms with female leadership to be too low. Since actual improvements in operating performance are less likely to materialize in such a short period, these findings are consistent with the view that analysts were underestimating the profitability of firms with a non-sexist culture before the allegations against Harvey Weinstein were announced.

Next, we study whether these changes in earnings forecasts are accompanied by actual improvements in operating performance. We employ four performance metrics: operating income to sales, gross margin (defined as sales less cost of goods sold divided by sales), growth in sales relative to the same quarter in the previous year, and sales per employee (calculated as quarterly sales divided by the number of employees measured at the end of the fiscal year¹⁹). These measures are computed using quarterly Compustat data over two periods surrounding our event window. The pre-period includes quarters ending between January 2016 and September 2017, and the post-period comprises quarters ending between January 2018 and June 2019.^{20,21} We estimate a regression of each performance metric on the interaction of our measure of female leadership with

¹⁹ We use the number of employees at the end of the fiscal year because data on number of employees are not available on Compustat at the quarterly level.

²⁰ We do not include the quarter ending December 2019 because it will likely take some time for increased stakeholder engagement to translate into better operating performance, but our results are very similar if we do include that quarter's performance.

²¹ Because our pre-period starts in January 2016, we measure female leadership as of the last fiscal year-end before that date for this test.

a post-event dummy, which is zero for quarters before October 2017, and one for quarters starting in January 2018. The model also includes the log of total assets to control for size, firm fixed effects to control for unobservable time-invariant firm characteristics, and time (quarter) \times industry fixed effects to control for any time-varying industry performance. The results are presented in Table 9. Panel A reports results using *Fraction Top-5 Female* and Panel B using *Indicator Top-5 Female*. Both panels yield similar insights: there is no change in the operating performance surrounding the events we study for firms with women in top executive positions relative to other firms.

The combined results of Tables 8 and 9 indicate that the revaluation of firms with female leadership during our event windows is accompanied by increases in *expected* cash flows, but no increases in *actual* cash flows. This evidence supports the view that firms with a non-sexist corporate culture were undervalued by the market before the Weinstein and #MeToo events, and that the revaluation corrects for this prior mispricing. We recognize, however, that the real effects may take longer to materialize (Grennan (2019)). Furthermore, the Weinstein and #MeToo events may have led to changes in firms without female leadership precisely to address potential problems with sexism, such that the post-event operating performance of firms with and without female leadership is similar.

5. Conclusion

The culture of a corporation often starts with a firm's leadership, but it is difficult to identify whether culture matters for shareholder value. Our analyses take advantage of a shock during which the media and the public at large reassess the value of having a non-sexist corporate culture. During the revelation of the Harvey Weinstein scandal and the ensuing #MeToo

movement, we show that firms that have women in their top leadership team—in which a corporate culture that tolerates misogyny and sexual harassment is unlikely to be present—earn substantial excess returns relative to other firms. This increase in value does not reverse in subsequent weeks, suggesting that outside investors place a permanent valuation premium on firms with a non-sexist culture.

The increase in the value of firms with highly paid women executives is particularly pronounced in industries with few women in executive positions, and in states with high levels of sexism and a large gender pay gap. Thus, having a non-sexist culture at the firm level is particularly important when the firm's industry or state are more prone to sex discrimination. Additionally, firms in industries with a relatively high share of women in executive positions, and firms headquartered in states with low levels of sexism and a low gender pay gap also experience an increase in value, regardless of whether they have women in top positions. These results suggest that corporate culture and industry/societal culture may serve as substitutes.

Much of the extant research on gender diversity at the corporate level tends to focus on the board of directors. However, we do not find that an increased female presence on the board affects value during the shock to the importance of having a non-sexist culture. Instead, the effects we uncover stem mainly from female leadership inside the firm. This suggests that, for investors, regulators, and others who seek to improve the culture of corporations, additional focus should be placed on factors that facilitate women obtaining top executive positions and not just positions at the board level.

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Table 1
Summary Statistics

Fraction Top-5 Women is the fraction of female executives among the five highest paid executives of the company. *Indicator Top-5 Women* is a dummy variable that equals one if a firm has at least one female executive among the five highest paid executives, and zero otherwise. *Female CEO* is a dummy variable that equals one if the CEO is a woman, and zero otherwise. These data are from Execucomp. We drop executives for which Execucomp's 'rank' variable is missing. We also drop firms for which Execucomp reports fewer than five top executives per firm. *Fraction Board Women* is the fraction of female directors on the firm's board. *Fraction Non-exec Board Women* is the number of non-executive female directors divided by the total number of non-executive directors on the firm's board. The data are from BoardEx. *Log (Total Assets)* is the logarithm of total assets. *Cash* is cash and cash equivalent divided by total assets. *Leverage* is the sum of short and long-term debt divided by total assets. *Tobin's q* is calculated as (total assets – book value of equity + market value of equity) / total assets. *Investment* is capital expenditures divided by total assets. *Profitability* is profit from operations divided by total assets. These data are from Compustat and the variables are measured at the end of the most recent fiscal year prior to October 1, 2017. The last two columns show *p*-values of mean comparison tests (using a *t*-test) and median comparison tests (using a Wilcoxon rank-sum test) between the two subsamples.

	Full Sample (N=1,436)			At Least One Female Executive (N=376)			No Female Executives (N=1,060)			Test of Differences (<i>p</i> -values)	
	Mean (1)	Median (2)	SD (3)	Mean (4)	Median (5)	SD (6)	Mean (7)	Median (8)	SD (9)	Mean (10)	Median (11)
Fraction Top-5 Women	0.061	0.000	0.112	0.234	0.200	0.086	0.000	0.000	0.000		
Indicator Top-5 Women	0.262	0.000	0.440	1.000	1.000	0.000	0.000	0.000	0.000		
Female CEO	0.043	0.000	0.203	0.165	0.000	0.372	0.000	0.000	0.000		
Fraction Board Women	0.172	0.167	0.110	0.220	0.200	0.127	0.154	0.142	0.098	(0.00)	(0.00)
Fraction Non-exec Board Women	0.197	0.200	0.121	0.231	0.222	0.128	0.185	0.182	0.115	(0.00)	(0.00)
Log (Total Assets)	8.402	8.310	1.705	8.438	8.311	1.744	8.389	8.309	1.691	(0.63)	(0.88)
Cash	0.127	0.076	0.144	0.133	0.079	0.144	0.125	0.075	0.144	(0.33)	(0.33)
Leverage	0.291	0.271	0.236	0.263	0.252	0.195	0.302	0.278	0.249	(0.01)	(0.02)
Tobin's <i>q</i>	1.972	1.599	1.271	1.958	1.602	1.232	1.977	1.598	1.286	(0.80)	(0.98)
Investment	0.036	0.025	0.044	0.037	0.028	0.033	0.036	0.023	0.047	(0.69)	(0.01)
Profitability	0.116	0.110	0.113	0.128	0.113	0.087	0.111	0.109	0.121	(0.01)	(0.04)

Table 2
Shareholder Value and Female Leadership

This table shows regression estimates of daily stock returns on interaction terms of female \times event and firm and time fixed effects. The female variables are: *Fraction Top-5 Women*, which is the fraction of female executives among the five highest paid executives of the company; and *Indicator Top-5 Women*, which is a dummy variable that equals one if a firm has at least one female executive among the five highest paid executives, and zero otherwise. The event variables (e.g., Oct 5-6) are dummy variables that equal one for all trading days during a specific event window, and zero otherwise. The female variables are measured at the end of the most recent fiscal year prior to October 1, 2017. The sample period is September 1, 2017 to November 30, 2017. The data are from CRSP and Execucomp. Firms with missing returns during the sample period are dropped. Standard errors are double clustered by firm and time (trading day) and *p*-values are reported in parentheses.

Female Variable =	Daily Stock Returns					
	Fraction	Indicator	Fraction	Indicator	Fraction	Indicator
	Top-5 Women	Top-5 Women	Top-5 Women	Top-5 Women	Top-5 Women	Top-5 Women
	(1)	(2)	(3)	(4)	(5)	(6)
Female Variable \times						
Oct 5-6	0.551 (0.00)	0.094 (0.00)	0.629 (0.00)	0.110 (0.00)	0.717 (0.00)	0.146 (0.00)
Oct 9-13					-0.297 (0.36)	-0.011 (0.87)
Oct 16-27			0.477 (0.00)	0.099 (0.01)	0.565 (0.00)	0.135 (0.00)
Oct 30-Nov 30					0.260 (0.19)	0.082 (0.08)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	90,468	90,468	90,468	90,468	90,468	90,468
Adjusted R^2	0.052	0.052	0.052	0.052	0.052	0.052

Table 3
Shareholder Value and Female CEOs

This table shows regression estimates of daily stock returns on interaction terms of *Female CEO* × event, female × event, and firm and time fixed effects. *Female CEO* is a dummy variable that equals one if the CEO is a woman, and zero otherwise. The female variables are: *Fraction Top-5 Women*, which is the fraction of female executives among the five highest paid executives of the company; and *Indicator Top-5 Women*, which is a dummy variable that equals one if a firm has at least one female executive among the five highest paid executives, and zero otherwise. The event variables (e.g., Oct 5-6) are dummy variables that equal one for all trading days during a specific event window, and zero otherwise. The female variables are measured at the end of the most recent fiscal year prior to October 1, 2017. The sample period is September 1, 2017 to November 30, 2017. The data are from CRSP and Execucomp. Firms with missing returns during the sample period are dropped. Standard errors are double clustered by firm and time (trading day) and *p*-values are reported in parentheses.

Female Variable =	Daily Stock Returns					
	Fraction	Indicator	Fraction	Indicator	Fraction	Indicator
	Top-5 Women	Top-5 Women	Top-5 Women	Top-5 Women	Top-5 Women	Top-5 Women
	(1)	(2)	(3)	(4)	(5)	(6)
Female CEO ×						
Oct 5-6	0.099 (0.34)	0.151 (0.17)	0.081 (0.43)	0.138 (0.21)	0.096 (0.35)	0.143 (0.19)
Oct 9-13					-0.050 (0.65)	-0.113 (0.37)
Oct 16-27			-0.111 (0.07)	-0.075 (0.28)	-0.096 (0.17)	-0.070 (0.35)
Oct 30-Nov 30					0.043 (0.55)	0.034 (0.68)
Female Variable ×						
Oct 5-6	0.479 (0.00)	0.069 (0.03)	0.571 (0.00)	0.088 (0.01)	0.648 (0.00)	0.123 (0.01)
Oct 9-13					-0.261 (0.40)	0.008 (0.90)
Oct 16-27			0.557 (0.00)	0.111 (0.01)	0.635 (0.00)	0.146 (0.00)
Oct 30-Nov 30					0.228 (0.24)	0.077 (0.11)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	90,468	90,468	90,468	90,468	90,468	90,468
Adjusted R ²	0.052	0.052	0.052	0.052	0.052	0.052

Table 4
Shareholder Value and Female Directors

This table shows regression estimates of daily stock returns on interaction terms of *Fraction Board Female* × event, female × event and firm and time fixed effects. *Fraction Board Female* is calculated as the fraction of female directors on the firms' board of directors. The female variables are: *Fraction Top-5 Women*, which is the fraction of female executives among the five highest paid executives of the company; and *Indicator Top-5 Women*, which is a dummy variable that equals one if a firm has at least one female executive among the five highest paid executives, and zero otherwise. The event variables (e.g., Oct 5-6) are dummy variables that equal one for all trading days during a specific event window, and zero otherwise. The female variables are measured at the end of the most recent fiscal year prior to October 1, 2017. The sample period is September 1, 2017 to November 30, 2017. The data are from CRSP, Execucomp, and BoardEx. Firms with missing returns during the sample period are dropped. Standard errors are double clustered by firm and time (trading day) and *p*-values are reported in parentheses.

Female Variable =	Daily Stock Returns					
	Fraction	Indicator	Fraction	Indicator	Fraction	Indicator
	Top-5 Women	Top-5 Women	Top-5 Women	Top-5 Women	Top-5 Women	Top-5 Women
	(1)	(2)	(3)	(4)	(5)	(6)
Fraction Board Female ×						
Oct 5-6	-0.080 (0.46)	-0.022 (0.84)	-0.077 (0.54)	-0.016 (0.90)	0.129 (0.40)	0.174 (0.27)
Oct 9-13					0.207 (0.53)	0.124 (0.72)
Oct 16-27			0.013 (0.97)	0.042 (0.91)	0.220 (0.55)	0.231 (0.54)
Oct 30-Nov 30					0.414 (0.14)	0.393 (0.17)
Female Variable ×						
Oct 5-6	0.588 (0.00)	0.098 (0.00)	0.672 (0.00)	0.115 (0.00)	0.725 (0.00)	0.146 (0.00)
Oct 9-13					-0.311 (0.27)	-0.001 (0.99)
Oct 16-27			0.508 (0.00)	0.105 (0.04)	0.562 (0.00)	0.135 (0.01)
Oct 30-Nov 30					0.186 (0.24)	0.068 (0.09)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	85,743	85,743	85,743	85,743	85,743	85,743
Adjusted R ²	0.053	0.053	0.053	0.053	0.054	0.053

Table 5
Shareholder Value and Alternative Measures of Female Leadership and Corporate Culture

This table shows regression estimates of daily stock returns on interaction terms of alternative measure \times event and firm and time fixed effects. In Panel A, the measures of female leadership are *Fraction Senior Management*, which is the fraction of women among a company's senior management; and *Indicator Senior Management*, which is a dummy variable that equals one if a firm has at least one woman in a senior management position, and zero otherwise. We use data from the BoardEx database on senior management profiles and measure a company's senior management team with managers that have 'Vice President' or 'VP' in their job title (removing Vice Presidents (or VPs) who also have 'Associate' or 'Assistant' in their title). Panel B uses a broader measure of corporate culture obtained from Glassdoor. *Glassdoor Culture* measures a firm's corporate culture and values and is calculated as the average of all culture and values ratings submitted for a given firm on the Glassdoor.com website for the years 2015 and 2016. The event variables (e.g., Oct 5-6) are dummy variables that equal one for all trading days during a specific event window, and zero otherwise. The female variables are measured at the end of the most recent fiscal year prior to October 1, 2017. The sample period is September 1, 2017 to November 30, 2017. The data are from CRSP, Execucomp, BoardEx, and Glassdoor. Firms with missing returns during the sample period are dropped. Standard errors are double clustered by firm and time (trading day) and *p*-values are reported in parentheses.

Panel A: Senior Management

Female Variable =	Daily Stock Returns					
	Fraction Senior Management	Indicator Senior Management	Fraction Senior Management	Indicator Senior Management	Fraction Senior Management	Indicator Senior Management
	(1)	(2)	(3)	(4)	(5)	(6)
Female Variable \times						
Oct 5-6	0.619 (0.00)	0.200 (0.00)	0.655 (0.00)	0.227 (0.00)	0.688 (0.00)	0.250 (0.00)
Oct 9-13					-0.163 (0.18)	0.030 (0.79)
Oct 16-27			0.218 (0.07)	0.167 (0.01)	0.251 (0.05)	0.190 (0.01)
Oct 30-Nov 30					0.110 (0.51)	0.044 (0.56)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	212,436	212,436	212,436	212,436	212,436	212,436
Adjusted R^2	0.021	0.021	0.021	0.021	0.021	0.021

Panel B: Glassdoor Culture

	Daily Stock Returns		
	(1)	(2)	(3)
Glassdoor Culture \times			
Oct 5-6		0.093 (0.08)	0.150 (0.01)
Oct 9-13			0.131 (0.02)
Oct 16-27		0.078 (0.14)	0.122 (0.03)
Oct 30-Nov 30			0.069 (0.13)
Firm Fixed Effects		Yes	Yes
Time Fixed Effects		Yes	Yes
N		117,810	117,810
Adjusted R^2		0.04	0.04

Table 6

Shareholder Value and Female Leadership: Splits Based on Industry-Level Women in Executive Positions

This table shows regression estimates of daily stock returns on various interaction terms (and firm and time fixed effects) estimating the effect of female leadership for firms in industries with different shares of women in executive positions. The female variables are: *Fraction Top-5 Women*, which is the fraction of female executives among the five highest paid executives of the company; and *Indicator Top-5 Women*, which is a dummy variable that equals one if a firm has at least one female executive among the five highest paid executives, and zero otherwise. The industry-level measures of women in executive positions (WEP) are calculated using data from the US Equal Employment Opportunity Commission for all private employers with more than 100 employees at the 4-digit SIC industry level. Fraction of women in executive positions (*Fraction WEP*) is the fraction of women that hold executive positions for a given SIC code industry. Above-median share of women in executive positions (*Above-median WEP*) is a dummy variable that equals one for industries with an above-median fraction of women that hold executive positions in a given SIC code industry. The event variables (e.g., Oct 5-27) are dummy variables that equal one for all trading days during a specific event window, and zero otherwise. The female variables are measured at the end of the most recent fiscal year prior to October 1, 2017. The sample period is September 1, 2017 to November 30, 2017. The data are from CRSP, Execucomp, and the Bureau of Labor Statistics. Firms with missing returns during the sample period are dropped. Standard errors are double clustered by firm and time (trading day) and *p*-values are reported in parentheses.

Female variable = Industry-level measures of women = in executive positions (WEP)	Daily stock returns			
	Fraction Top-5 Women	Indicator Top-5 Women	Fraction Top-5 Women	Indicator Top-5 Women
	Above-median WEP	Above-median WEP	Fraction WEP	Fraction WEP
	(1)	(2)	(3)	(4)
Female variable × Oct 5-27	0.822 (0.00)	0.193 (0.01)	1.477 (0.00)	0.314 (0.01)
WEP × Oct 5-27	0.197 (0.03)	0.193 (0.04)	0.754 (0.05)	0.727 (0.05)
Female variable × WEP × Oct 5-27	-0.855 (0.05)	-0.180 (0.08)	-2.911 (0.02)	-0.589 (0.05)
Female variable × Oct 30-Nov 30	0.400 (0.12)	0.109 (0.09)	0.409 (0.36)	0.086 (0.44)
WEP × Oct 30-Nov 30	0.171 (0.14)	0.171 (0.14)	0.543 (0.23)	0.522 (0.25)
Female variable × WEP × Oct 30-Nov 30	-0.272 (0.41)	-0.060 (0.47)	-0.494 (0.66)	-0.044 (0.88)
Firm Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes
N	74,151	74,151	74,151	74,151
Adjusted R ²	0.047	0.047	0.047	0.047

Table 7
Shareholder Value and Female Leadership: Splits Based on State-level Sexism and Gender Pay Gap

This table shows regression estimates of daily stock returns on various interaction terms (and firm and time fixed effects) estimating the effect of female leadership for firms headquartered in state states with high and low levels of sexism and gender pay gap. The female variables are: *Fraction Top-5 Women*, which is the fraction of female executives among the five highest paid executives of the company; and *Indicator Top-5 Women*, which is a dummy variable that equals one if a firm has at least one female executive among the five highest paid executives, and zero otherwise. State level sexism (Panel A) is obtained from Charles, Guryan, and Pan (2018) based on questions from the General Social Survey. The state-level gender pay gap (Panel B) is computed using data from the Current Population Survey, based on regressions of weekly pay on a female indicator variable (capturing the gender pay gap) while controlling for race, occupation, manager, age, industry, education, location within state, and time. States are divided into two groups based on the median state-level sexism and pay gap measures. The event variables (e.g., Oct 5-27) are dummy variables that equal one for all trading days during a specific event window, and zero otherwise. The female variables are measured at the end of the most recent fiscal year prior to October 1, 2017. The sample period is September 1, 2017 to November 30, 2017. The data are from CRSP, Execucomp, and the Bureau of Labor Statistics. Firms with missing returns during the sample period are dropped. Standard errors are double clustered by state and time (trading day) and *p*-values are reported in parentheses.

Panel A: Splits Based on State-level Sexism

Female variable =	Daily Stock Returns	
	Fraction Top-5 Women	Indicator Top-5 Women
	(1)	(2)
Female Variable × Oct 5-27	0.432 (0.10)	0.124 (0.04)
Low Sexism State × Oct 5-27	0.129 (0.03)	0.136 (0.02)
Female Variable × Low Sexism State × Oct 5-27	-0.316 (0.31)	-0.099 (0.19)
Female Variable × Oct 30-Nov 30	0.255 (0.34)	0.069 (0.26)
Low Sexism State × Oct 30-Nov 30	-0.012 (0.89)	-0.019 (0.82)
Female Variable × Low Sexism State × Oct 30-Nov 30	-0.035 (0.90)	0.021 (0.75)
Firm Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
N	85,176	85,176
Adjusted <i>R</i> ²	0.053	0.053

Table 7 (continued)

Panel B: Splits Based on State-level Gender Pay Gap

Female variable =	Daily Stock Returns	
	Fraction	Indicator
	Top-5 Women	Top-5 Women
	(1)	(2)
Female Variable × Oct 5-27	0.677 (0.01)	0.161 (0.01)
Low Gender Pay Gap State × Oct 5-27	0.194 (0.00)	0.191 (0.00)
Female Variable × Low Gender Pay Gap State × Oct 5-27	-0.799 (0.03)	-0.177 (0.03)
Female Variable × Oct 30-Nov 30	0.195 (0.45)	0.052 (0.41)
Low Gender Pay Gap State × Oct 30-Nov 30	0.079 (0.26)	0.069 (0.33)
Female Variable × Low Gender Pay Gap State × Oct 30-Nov 30	0.067 (0.80)	0.052 (0.44)
Firm Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
N	87,444	87,444
Adjusted R^2	0.053	0.053

Table 8
Analyst Earnings Forecasts Surrounding the Weinstein and #MeToo Event Windows

This table shows regression results of analyst earnings forecasts on interaction terms of female \times *Post* and firm, analyst, and forecast announcement day fixed effects. *Analyst Earnings Forecast* is the analyst forecast for a firm's annual earnings. Forecasts are scaled by the firm's stock price at the time the first analyst makes a forecast during the fiscal year and are expressed as a percentage. Forecasts made outside a 100-day window prior to October 1, 2017 and after October 31, 2017 are removed, as well as cases where a given analyst does not provide a forecast both before and after the event window. Models (1) and (4) include firms that have December 31, 2017 fiscal year-end only; models (2) and (5) include firms with fiscal year-end up to June 30, 2018; and models (3) and (6) include the full sample. The female variables are: *Fraction Top-5 Women*, which is the fraction of female executives among the five highest paid executives of the company; and *Indicator Top-5 Women*, which is a dummy variable that equals one if a firm has at least one female executive among the five highest paid executives, and zero otherwise. *Post* is a dummy variable equal to one for days after October 31, 2017, and zero for days before October 1, 2017. The data are from Execucomp, I/B/E/S, and CRSP. *Analyst Earnings Forecast* is winsorized at the 1st and 99th percentiles. Standard errors are clustered by firm and *p*-values are reported in parentheses.

Female Variable = Earnings Forecast Fiscal Year End =	Analyst Earnings Forecast					
	Fraction Top-5 Women			Indicator Top-5 Women		
	Dec 31, 2017	Dec 31, 2017 to Jun 30, 2018	Dec 31, 2017 to Nov 30, 2018	Dec 31, 2017	Dec 31, 2017 to Jun 30, 2018	Dec 31, 2017 to Nov 30, 2018
	(1)	(2)	(3)	(4)	(5)	(6)
Female Variable \times Post	1.671 (0.03)	1.039 (0.03)	0.812 (0.06)	0.442 (0.02)	0.302 (0.03)	0.235 (0.05)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Analyst Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Announcement Day FE	Yes	Yes	Yes	Yes	Yes	Yes
N	14,406	18,766	21,514	14,406	18,766	21,514
Adjusted R^2	0.930	0.925	0.927	0.930	0.925	0.927

Table 9
Operating Performance Surrounding the Weinstein and #MeToo Events

This table presents regressions of quarterly operating performance measures on interaction terms of female \times *Post* and control variables. The female variables are: *Fraction Top-5 Women*, which is the fraction of female executives among the five highest paid executives of the company (in Panel A); and *Indicator Top-5 Women*, which is a dummy variable that equals one if a firm has at least one female executive among the five highest paid executives, and zero otherwise (in Panel B). *Post* is a dummy variable equal to zero for quarters ending between January 2016 and September 2017, and equal to one for quarters ending between January 2018 and June 2019. All operating performance measures are computed using quarterly Compustat data. *Operating Income to Sales* is quarterly operating income before depreciation divided by quarterly sales; *Gross Margin* is quarterly sales less cost of goods sold divided by quarterly sales; *Sales Growth* is growth in quarterly sales compared to the same quarter (q) of the prior year (y-1) calculated as $(sales_{q,y} / sales_{q,y-1}) - 1$; and *Sales per Employee* is quarterly sales divided by number of employees measured at the end of the fiscal year. The female variables are measured at the end of the most recent fiscal year prior to January 1, 2016. The model also includes *Log(Total Assets)* to control for size, firm fixed effects to control for unobservable time-invariant firm characteristics, and time (quarter) by industry fixed effects to control for any time varying industry performance. The data are from Execucomp and Compustat. All continuous variables are winsorized at the 1st and 99th percentiles (except for *Fraction Top-5 Women*). Standard errors are double clustered by firm and time (fiscal-year-quarter) and *p*-values are reported in parentheses.

Panel A: Fraction Top-5 Women

	Operating Income to Sales	Gross Margin	Sales Growth	Sales per Employee
	(1)	(2)	(3)	(4)
Fraction Top-5 Women \times Post	-0.016 (0.21)	-0.008 (0.51)	0.028 (0.47)	0.003 (0.81)
Log (Total Assets)	0.031 (0.01)	0.017 (0.09)	0.230 (0.00)	0.049 (0.00)
Firm Fixed Effects	Yes	Yes	Yes	Yes
Time \times Industry Fixed Effects	Yes	Yes	Yes	Yes
N	17,912	19,160	19,163	15,610
Adjusted R^2	0.805	0.916	0.326	0.955

Panel B: Indicator Top-5 Women

	Operating Income to Sales	Gross Margin	Sales Growth	Sales per Employee
	(1)	(2)	(3)	(4)
Indicator Top-5 Women \times Post	-0.005 (0.20)	-0.002 (0.52)	0.010 (0.34)	-0.001 (0.88)
Log (Total Assets)	0.031 (0.01)	0.017 (0.09)	0.230 (0.00)	0.049 (0.00)
Firm Fixed Effects	Yes	Yes	Yes	Yes
Time \times Industry Fixed Effects	Yes	Yes	Yes	Yes
N	17,912	19,160	19,163	15,610
Adjusted R^2	0.805	0.916	0.327	0.955

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