Unintended Consequences of CEO-Employee Pay Ratio Disclosure Mandate: Evidence from Shareholder Proposals*

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Abstract

This paper studies the shareholder activism around U.S. public firms' mandated disclosure of the CEO-employee pay ratio. Utilizing the staggered reporting of pay ratios, I find that shareholders selectively submit fewer governance proposals but pass more. This effect is more prominent in firms with higher expected pay ratios and greater media coverage. These proposals are primarily initiated by individual shareholders and aim to augment shareholder powers. Furthermore, the pay ratio reform enhances the implementation of governance proposals. However, the successful passage of these proposals adversely impacts firm performance in the short term.

1. Introduction

Shareholder proposals have gained increasing significance in shaping corporate policies and valuation (e.g., Ertimur, Ferri, and Muslu, 2011; Cuñat, Gine, and Guadalupe, 2012, 2016; Chemmanur and Tian, 2018). According to Security and Exchange Commission (SEC) Rule 14a-8, shareholders of a public firm can submit proposals for voting at the annual meeting. A critical distinction between management-initiated and shareholder-initiated proposals is that resolutions of shareholder-initiated proposals are non-binding, meaning that boards retain the discretion to forego implementation even if they receive majority support. Despite their non-binding nature, these proposals face a considerable challenge in obtaining support from other shareholders; prior studies indicate a pass rate of approximately 20% (e.g., Gantchev and Giannetti, 2021). The question of how shareholders structure proposals and seek support from other shareholders remains underexplored in the literature. Given that processes and circumstances vary across meetings and firms, it is challenging to find causal evidence that shareholders collaborate to pass proposals. In this paper, I use a market-wide exogenous shock to the pay information environment of public firms in the United States (U.S.), i.e., the mandated CEO pay ratio disclosure, to investigate whether shareholders align when firms face expected public criticism.

Since 2018, the SEC has required firms to report the pay ratio in their annual proxy statement, i.e., the ratio of the CEO's compensation to the median employee's compensation. The pay ratio disclosure aims to enhance transparency and is the first mandated disclosure of pay disparity, providing stakeholders with a new and prominent signal to assess the pay gap between the CEO and other workers. Past literature mainly focuses on shareholders' reactions to the stock market. Larger pay ratios are often seen negatively by shareholders as evidence of unfair compensation practices, which can lower employee morale and, as a result, firm performance (Rouen, 2020; LaViers, Sandvik, and Xu, 2022; Chang et al., 2022; Pan et al., 2022). Within the firm, shareholder proposals, functioning as a formal intervention in corporate strategy and performance, can be used to express their dissatisfaction with managers (Song and Szewczyk, 2003). To achieve successful proposal outcomes, shareholders need bargaining powers or the threat of negative publicity (Useem, 1996). Since disclosing the pay ratio will elicit public attention and potential negative responses from stakeholders, shareholders may be more likely to gain support in passing proposals at focal firms. In contrast, it is also possible that new information released in the mandated pay ratio is not sufficiently substantial to align

the interests of different shareholders and facilitate the proactive passage of proposals. Therefore, it remains an empirical question whether the enhanced pay transparency from pay ratio disclosures has led to changes in shareholder proposals.

I hypothesize that shareholders selectively submit fewer governance proposals in response to the pay ratio mandate. While median employee pay is the only new information, previous studies highlight pay ratio disclosures as prominent indicators of pay gaps and potential inequality. For instance, Boone, Starkweather, and White (2023) reveal that employees perceive a high pay ratio as salient information, eliciting adverse reactions. Pan et al. (2022) find negative equity market responses driven by shareholders' aversion to inequality. Moreover, the media's focus on compensation disclosure often incites criticism and regulatory scrutiny of highly paid managers (Jensen and Murphy, 1990), exposing firms to the risks of populist criticism and potential negative cash flow impacts. Motivated by these signals, shareholders concerned about pay inequality or future firm performances advocate for enhancing firm practices by initiating and passing governance-related proposals. Prior literature demonstrates the positive impact of successfully passing proposals on firm value (Renneboog and Szilagyi, 2011; Cuñat, Gine, and Guadalupe, 2012). To maximize the likelihood of obtaining majority votes and capturing shareholder attention, activists strategically reduce the number of proposals submitted before annual meetings.

Further, under the threat of negative publicity, shareholders concerned about negative reactions are more likely to support governance-related proposals to strengthen internal controls. Although shareholder proposals are non-binding, their successful passage still exerts significant pressure on managers to change governance practices (Chemmanur and Tian, 2018). As a result, governance proposals are more likely to be passed in response to the pay ratio disclosure.

In addition, boards are more likely to implement passed proposals. To protect their reputations in the labor market, boards have incentives to limit their exposure to adverse events and avoid public scrutiny and criticism. Given that shareholders could campaign for proposal implementation and attract media attention, the reputational cost of ignoring strongly supported proposals is substantial. Furthermore, shareholders can use their votes to express dissatisfaction, effectively disciplining boards and prompting governance changes (Cai, Garner, and Walkling 2009). Thus, boards under high scrutiny and shareholder pressure are more inclined to enact these proposals.

I employ a Difference-in-Differences (DiD) approach that investigates the staggered reporting of pay ratios across firms with different fiscal year-ends to empirically examine the effect of pay ratio disclosure reform on shareholder proposals (Chang et al., 2022). Because the pay ratio mandate was in effect for firms with a fiscal year ending on or after December 31, 2017, I can compare the differential impact of pay ratio disclosure for firms with a December 31, 2017 fiscal year-end to firms with June 30-December 30, 2017 fiscal year-ends that are not required to report a pay ratio until their 2018 fiscal year-end (i.e., delayed reporting firms). This test focuses on how the pay ratio disclosure affects shareholder proposals at newly disclosing firms. I control firm characteristics and firm- and year-fixed effects for all regressions.

I collect shareholder proposal data from the ISS Shareholder Proposals database. ISS provides data about the status of proposals, sponsors, resolution, and level of support for all proposals received by S&P 1500 and Russell 3000 firms. After excluding firms not required to report pay ratios and merging with firm-level controls, my final sample consists of 853 observations from 2014 to 2017. First, I investigate the effect of pay ratio reform on shareholder proposals in the full sample that includes all submitted proposals. However, I find no significant changes in the number of proposals, omitted rate, and pass rate in the full sample where I consider governance and socially responsible initiative (SRI) proposals. To further explore the heterogeneity impact of pay ratio reform on different types of proposals, I split my sample into governance and SRI samples and run DiD regressions individually. Results of the governance sample show statistically significant decreases in the proposal submissions and increases in the pass rate in initial reporting firms (i.e., treatment firms). These results suggest that shareholders are likelier to pass proposals that discuss governance issues than SRI issues when firms are exposed to the threat of negative publicity. For economic significance, initial reporting firms receive 54.34% fewer governance proposals but pass 11.18% more than delayed reporting firms. These results indicate that shareholders are selectively focused on governance proposals and increase governance intervention in response to the pay ratio disclosure, which is consistent with my expectations. On the other hand, I find no significant changes in the SRI sample, confirming my expectation that shareholders do not focus on irrelevant issues when facing potentially negative stakeholder reactions.

In addition, I partition the governance sample based on sponsor types and proposal topics to investigate which groups of sponsors and proposal topics drive the result. I find positive and significant interaction coefficients in the individual sponsor and shareholder

power-related proposal subsamples. These results suggest that the increase in proposal passing is concentrated on proposals submitted by individual sponsors and with topics related to enhancing shareholder governance powers.

To further explore the distribution of proposals submitted by different sponsors and better control for proposal topics and sponsors, I conduct a more granular analysis using a proposal-level sample that comprises 889 observations. Summary statistics indicate that the top-5 individual sponsors occupy 51.51% of all submitted governance proposals, and John Chevedden contributed 31.10% of submissions. I employ two robustness tests to mitigate the concern that proposals are concentrated on a few individual sponsors. I first run baseline regressions by omitting proposals submitted by John Chevedden. Results are still statistically significant when I exclude John Chevedden's submission. I then add the top-5 individual sponsors fixed effect into baseline regression, and my results are still robust.

Due to the non-binding nature of shareholder proposals, passed proposals may not be implemented by the management team. Thus, I examine whether passed proposals are more likely to be implemented at initial reporting firms. I manually collect implementation data by reading each firm's annual proxy filings. I identify a proposal implemented when the boards mentioned the adoption of passed proposals or amended bylaws/requirements according to the request of passed proposals in the following proxy filings. Appendix D lists examples of implemented and unimplemented proposals. I then use the implementation dummy as the dependent variable in the baseline DiD test. Results indicate that initial reporting firms are more likely to adopt passed proposals. Specifically, passed proposals at initial reporting firms are 10.08% more likely to be implemented than those at delayed reporting firms. Overall, my study shows that shareholders pass more governance proposals at initial reporting firms, and management teams implement more passed proposals.

Further, I test the mechanism through which the pay ratio disclosure mandate affects governance proposals. I expect the impact should be stronger when the external scrutiny is expected to be higher. Specifically, I use the pre-mandate pay ratio and media coverage to proxy for expected scrutiny and split the treatment group into two groups based on these proxies. The pre-mandate pay ratio is calculated as the three-year average of total CEO compensation (i.e., 2014 to 2016) before the mandate, scaled by the initially reported median employee compensation (i.e., 2017 for treatment firms, 2018 for control firms). The media coverage is the average number of articles over 2014-2016. I find that the positive impact of

pay ratio reform is more significant among treatment firms with high pre-mandate pay ratios and high media coverage, suggesting that firms with high expected scrutiny are more likely to pass governance proposals.

Next, I investigate how those passed proposals impact firms' future performance. Since proposal voting and firm performance are highly endogenous, it is challenging to identify the effect of passing proposals on firm outcomes using the linear regression model. Some unobservable firm characteristics might correlate with the probability of passing proposals and affect the firm's future performance. In addition, it is also possible that more profitable firms are more likely to pass and implement shareholder proposals as they have more time and resources to deal with shareholder requests. To alleviate those endogeneity concerns, I employ the Regression Discontinuity Design (RDD) that compares firms with proposals that pass or fail by a small margin of votes in annual meetings. I use 50% of vote shares as the threshold of RDD. The average characteristics of a firm where a proposal receives 50.1% of the vote are similar to those of a firm with 49.9%. Thus, the passage of "close-call" proposals is likely to be random and unrelated to firm characteristics (Cuñat, Gine, and Guadalupe, 2012). Prior literature suggests that passed proposals are more likely to be implemented (e.g., Ertimur, Ferri, and Stubben, 2010). The minor difference around the 50% threshold of vote shares leads to a discrete change in the probability of implementing a proposal.[1]

I first test the validity of RDD to ensure the setting does not violate the following conditions: (1) no discontinuity in vote shares around the threshold and (2) no discontinuity around the threshold in pre-meeting firm characteristics. I then examine the impact of passing proposals on firm outcome variables next year. I find significant decreases in ROE and ROA next year for firms that passed proposals, suggesting that the passage and implementation of proposals are value-destroying. Specifically, firms that pass a proposal lead to a 0.838 decrease in future ROE and a 0.127 decrease in future ROA compared to firms where the proposal fails. I also investigate the long-run effect of passing proposals by evaluating firm outcome variables in the coming two, three, and five years, but I found no significant results. The potential reason is the lack of effectiveness of proposals initiated by a few activist shareholders. Individual shareholders initiate proposals based on their interests and strategically use the threat of negative publicity to gain support and pass proposals. However, due to limited information and

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[1] Although management teams do not implement all passed proposals, prior literature and my study have shown that passed proposals are likely to be implemented by boards due to shareholder pressures and career concerns (Ertimur, Ferri, and Stubben 2010).

less professionality, individual activists can only focus on general governance practices that may not be essential for target firms. Under strong shareholder advocacy, firms have to spend time and resources to deal with generic governance issues that may have a limited effect on performance. Therefore, passed proposals deteriorate the value of targeted firms.

My study shows that shareholders take action in response to increased pay gap transparency brought about by the mandated pay ratio disclosures. Using the staggered DiD approach, I find that shareholders selectively propose less but pass more governance proposals at reporting firms to enhance internal governance, revealing the unintended consequences of the pay ratio reform.

This study contributes to the literature in several ways. First, this paper contributes to the literature on shareholder activism. Activist shareholders have become increasingly influential in shaping corporate policies and affecting corporate valuation (e.g., Renneboog and Szilagyi, 2011; Cuñat, Gine, and Guadalupe, 2012). Previous studies indicate that firms targeted by activists tend to be underperformed or have poor governance structures (Denes, Karpoff, and McWilliams, 2017). Some research also shows that the passage of shareholder proposals is associated with improved valuation effects, long-run performance, innovation, information production, and reduced earnings management (Cuñat, Gine, and Guadalupe, 2012, 2016; Flammer, 2015; Chemmanur and Tian, 2018; Lin, Wei, and Xie, 2020; Ng et al., 2021). While the literature has extensive discussions on the characteristics of target firms or outcomes of passing proposals, we know little about how shareholders with different interests align to support the passage of proposals. This paper provides empirical evidence that shareholders can strategically collaborate in passing governance proposals when firms face anticipated negative publicity. More importantly, the passed proposals lead to lower future value at targeted firms, which may be due to the ineffectiveness of generic and ill-informed governance proposals submitted by individual shareholders.

Second, this paper contributes to the executive compensation literature by showing the relation between CEO compensation disclosure and shareholder proposals. Chang et al. (2021) find robust results in lowering the sensitivity of CEO wealth to equity price surrounding the pay ratio disclosure, while there is no significant evidence on the relation between compensation disclosure and CEO pay. They conclude that expected media coverage of pay disparity plays a significant role in determining CEO pay. LaViers, Sandvik, and Xu (2022) find that managers are more likely to disclose their human capital management practices voluntarily when the pay ratio is high. More related to my research, Pan et al. (2022) show that

firms disclosing higher pay ratios experience lower abnormal announcement returns. Inequality-averse shareholders can "exit" by selling their shares, leading to lower stock prices after the announcement, as Pan et al. (2022) documented. This study demonstrates that remaining shareholders intend to enhance corporate governance by passing more proposals to intervene in corporate decisions. I also complement recent studies on unintended consequences of the mandated pay ratio disclosure by showing increases in shareholder governance power.

Lastly, this study has implications for policymakers to consider. On the one hand, shareholders can use proposals as a low-cost corporate governance mechanism to voice their opinions. On the other hand, firms may spend significant resources and time responding to shareholders' resolutions. Although the SEC changed the threshold for proposal submission in September 2020 to reduce the active submission from a few individual sponsors, it is still debatable whether the cost of individual shareholder proposals is high enough to limit the ability of individual shareholders to submit proposals. My study indicates that governance proposals, largely submitted by individual investors, are more likely to be passed and implemented when firms face the potential risk of negative publicity. Notably, the passed proposals lead to lower firm profitability next year, possibly due to the ill-informed and general proposals submitted by individual shareholders. My study is consistent with current studies showing that the public often views shareholder proposals as value-destroying on average (Matsusaka, Ozbas, and Yi, 2021). Thus, increasing the threshold for submitting proposals and restricting activist investors' ability to submit too many proposals is necessary.

The remainder of this paper is organized as follows. Section 2 introduces the institutional background and literature review. Section 3 describes the hypotheses. Sections 4-5 introduce the data, sample, and methodology. Sections 6-7 present the summary statistics and main results, while Section 8 presents the results of RDD tests. Section 9 concludes this study.

2. Institutional Background and Literature Review

Shareholder activism is often viewed as investors attempting to improve the firm without changing control because they are dissatisfied with its management or operations (Gillan and Starks, 2007). Examples of shareholder activism include shareholder proposals, private negotiations, hedge fund interventions, and proxy contests (Denes, Karpoff, and McWilliams, 2017). Shareholder proposals are a low-cost corporate governance tool for shareholders. Therefore, these proposals have become more prevalent and increasingly important in corporate governance.

Figure 1 demonstrates the process of submitting a shareholder proposal. According to the SEC rule 14a-8, any shareholder holding a company worth at least $2,000 or 1 percent of outstanding shares can submit proposals with a maximum of 500 words. The proposal offers a resolution to be voted on and an argument in its favor. The resolution can be an amendment to the firm's bylaws or a request for the firm to consider taking action. If a firm wishes to omit a proposal from the proxy statement, it can appeal to the SEC by submitting a letter. The SEC has created criteria that allow a firm to exclude proposals from its proxy materials, such as the form of the proposal, duplication of other proposals, or previously implemented proposals, and whether the proposal is a matter of ordinary business operation. If the SEC issues a no-action letter, the proposal will be omitted from the proxy statement. If the SEC declines to give a no-action letter, the proposal does appear in the proxy statement and goes to a vote in the annual meeting. In fact, very few proposals have successfully obtained shareholder support. Gantchev and Giannetti (2021) indicate that only 19.95% of proposals received a majority pass over 2003-2014, and Matsusaka, Ozbas, and Yi (2021) show the average pass rate was 33.6%.

[Insert Figure 1]

Due to the non-binding nature of shareholder proposals, the firm's board can determine whether to adopt all or any part of a shareholder proposal, even if the proposal received majority shareholder support. However, for reputational reasons or to avoid being targeted by shareholder activists, boards tend to implement proposals supported by a majority of shareholder votes (Ertimur, Ferri, and Stubben, 2010; Levit and Malenko, 2011). Gantchev and Giannsetti (2021) indicate that firms implemented 12% of proposals that received a majority vote in favor, while Ertimur, Ferri, and Stubben (2010) find a 31% implementation rate for corporate governance proposals.

Shareholder proposals are often classified into governance (GOV) and social responsible initiative (SRI) proposals. Governance proposal sponsors seek to improve firm performance and corporate governance (Cuñat, Giné, and Guadalupe, 2012). SRI proposals focus on social and environmental issues and may be driven by non-pecuniary benefits, such as ethical considerations, cutting carbon emissions, and improving human rights standards (He, Kahraman, and Lowry, 2021).

Early empirical studies indicate that the shareholder proposal is a relatively weak disciplinary mechanism, and little evidence shows that the market recognizes shareholder proposals as a relevant control device (e.g., Prevost and Rao, 2000; Woidtke, 2002; Karpoff,

Malatesta, and Walkling, 1996; Smith, 1996; Thomas and Cotter, 2007; Wahal, 1996). However, recent studies show that shareholder proposals positively impact firms' performance and governance. For example, Renneboog and Szilagyi (2011) find that firms targeted by activists tend to underperform and generally have poor governance structures, concluding that shareholder proposals are a useful external control device that helps mitigate exacerbated agency concerns.

However, it is challenging to establish the causal relationship between shareholder proposals and shareholder returns since the choice of governance and environmental provisions are endogenous with firm characteristics. Cuñat, Gine, & Guadalupe (2012) propose employing Regression Discontinuity Design (RDD) that uses proposals that pass or fail by a small margin of votes in annual meetings to establish the causal effect of corporate governance. By looking at those "close-call" proposals, firms' governance rules are likely to be randomly adopted, and the market does not foresee the adoption of a governance provision. Cuñat, Gine, and Guadalupe (2012) show that passing a governance proposal is associated with positive abnormal returns, and adopting the proposal increases shareholder value. Then, a large group of studies employs the RDD setting to explore different types of proposals. Flammer (2015) finds that passing corporate social responsibility (CSR) proposals leads to positive announcement returns, and adopting CSR proposals is associated with increased labor productivity and sales growth. Chemmanur and Tian (2018) study the effect of antitakeover provisions (ATPs) on innovation and find a positive relation. ATPs contribute positively to firm value, but only if the firm is involved in intensive innovation activities and has high innovation output. Lin, Wei, and Xie (2020) find that the passage of an entrenchment-related proposal reduces managerial entrenchment, which enhances corporate information production in earnings guidance. Fan, Radhakrishnan, and Zhang (2021) show that shareholder proposals reduce discretionary accruals and the propensity to meet or beat analysts' forecasts by one cent. Wu, Zhai, and Zhao (2021) complement their study by exploring the differential effects of shareholder proposals on accrual-based and real earnings management. While many studies use the RDD setting, Bach and Metzger (2019) indicate that the management team can still take meticulous actions to ensure it does not pass if they strongly oppose a shareholder proposal. This raises the concern of whether the RDD setting is free from management team manipulation.

The value effect of shareholder proposals is still under debate. Gantchev and Giannetti (2021) find that gadfly proposals reduce shareholder value if adopted, whereas shareholder

proposals are value-enhancing on average in firms with more informed shareholders. Matsusaka, Ozbas, and Yi (2021) study no-action-letter decisions and find the market reacted positively when the SEC permitted exclusion, which suggests that investors viewed shareholder proposals as value-reducing on average. They also find that a company's stock price decreases over time while waiting for an SEC decision.

Due to the low cost of initiating a proposal, individual shareholders have the right to voice their opinions and enjoy this low-cost corporate governance mechanism. However, firms may dislike those active individual sponsors as they must spend resources and time responding to their resolution. In September 2020, the SEC amended the ownership threshold to submit a proposal to reduce the active submission from a few individual sponsors. However, the controversies on whether the cost of individual shareholder proposals is indeed high enough to restrict individual shareholders' ability to submit proposals are unclear. This paper tried to study how the pay ratio disclosure reform impacts governance proposals' passage and implementation and how these proposals affect firms' value.

3. Hypotheses

First, shareholders likely focus on submitting proposals addressing concerns about pay gaps revealed through the pay ratio disclosure. This ratio disclosure serves as a crucial signal that provides stakeholders with insights into the pay disparity between CEO and rank-and-file employee compensation. Boone, Starkweather, and White (2023) show that a high pay ratio is so salient for employees that narrative disclosure choices cannot mitigate dissatisfaction with their pay. Additionally, the sensational media scrutiny of compensation tends to provoke criticism and regulatory attention toward highly compensated managers (Jensen and Murphy, 1990).

Given the implications of these disclosures, a high CEO pay ratio may signal potential managerial entrenchment, motivating shareholders to submit and support governance-related proposals that strengthen internal controls. Cuñat, Gine, and Guadalupe (2012) demonstrate a positive impact of passing governance proposals on firm governance and shareholder value. Anticipating higher support for these proposals, shareholders may strategically focus their efforts on fewer, more relevant governance-related proposals to maximize impact during meetings. This strategic emphasis likely increases the chances of successful proposal passage, leading to my hypothesis that shareholders will submit fewer but more targeted proposals,

rather than a broader array of less relevant topics like environmental and social practices. I express this hypothesis as ***Hypothesis 1***:

Hypothesis 1 (H1): Shareholders submit fewer governance proposals in response to the reform.

Further, shareholders may actively vote to change internal corporate governance in response to the costs expected from pay ratio disclosures. These disclosures not only risk populist criticism but also provoke negative stakeholder reactions, such as diminished employee efforts and productivity, increased CEO disapproval, and lower abnormal announcement returns (Baker et al. 2019; Boone, Starkweather, and White, 2023; Pan et al., 2022). Motivated by potential adverse outcomes, shareholders push to pass governance proposals, exerting pressure on managers to improve practices. Although vote results are non-binding, the successful passage of proposals has been shown to positively influence firm value (Renneboog and Szilagyi, 2011; Cuñat, Gine, and Guadalupe, 2012) and place significant pressure on management to adjust governance (Chemmanur and Tian, 2018). Therefore, shareholders are more inclined to support governance proposals, proactively addressing the anticipated costs associated with ratio disclosures. I express this hypothesis as ***Hypothesis 2***:

Hypothesis 2 (H2): Shareholders pass more governance proposals in response to the reform.

In addition, boards are more likely to implement passed proposals. Since higher populist scrutiny increases the chance that boards receive criticism from the public, which affects their reputation in the labor market, they have incentives to avoid scrutiny by reducing exposure to adverse events. The reputation costs of ignoring highly supported proposals are high because shareholders may campaign for its implementation and attract more press coverage. Furthermore, shareholders can use their votes to express dissatisfaction with boards and prompt governance changes (Cai, Garner, and Walkling 2009). Thus, under external scrutiny and shareholder pressure, boards are more likely to implement passed proposals in response to the reform. I express this hypothesis as ***Hypothesis 3***:

Hypothesis 3 (H3): Passed proposals are more likely to be implemented in response to pay ratio reform.

4. Data and Sample

I first collect shareholder proposals from the ISS Shareholder Proposals database. The database covers all proposals received by S&P 1500 and Russell 3000 companies since 2006, including information about the status of proposals, sponsors, resolution, and level of support.[2] ISS classifies a shareholder proposal as related to GOV (governance) or SRI (socially responsible initiative). Based on the Agenda Item ID that ISS uses to classify topics, I classify sponsors as individuals or institutions based on sponsor information (Gantchev and Giannetti, 2021). Institutional sponsors include funds, public pensions, unions, and companies. The remaining sponsors are grouped into "other" categories, including religious organizations, environmental entities, and groups without lead proponents.

Firms' financial statements and stock price data are collected from Compustat and CRSP, respectively. I collect information on institutional ownership from the Thomson/Refinitiv 13F database. Following the prior literature, I apply filters to my sample (Chang et al., 2022). I exclude foreign private issuers, smaller reporting firms (which are not required to report), and firms that do not disclose the pay ratio despite the mandate. After merging with shareholder proposal data and requiring non-missing values for control variables, my final sample consists of 853 firm-level observations from 2014 to 2017. I use firms' reporting period-end date in the 10-K from the SEC Analytics database to obtain the accurate fiscal year-end date. To mitigate the potential outlier effect, I winsorize continuous variables at the 1st and 99th percentiles.

5. Methodology

Since the passage and implementation of shareholder proposals are arguably endogenous with the decision of CEO compensation, regressing one on the other is likely to suffer omitted variable issues and reversal causality concerns. To alleviate the endogeneity concerns and identify the impact of pay ratio disclosure on shareholder proposals, I follow Chang et al. (2022) to employ a Difference-in-Differences (DiD) approach that investigates the staggered implementation of the reform. Figure 2 demonstrates the timeline of pay ratio reform and sample windows for my analysis. On August 5, 2015, the SEC announced the pay ratio mandate that firms must disclose the CEO pay ratio if their fiscal year begins or after January 1, 2017 (i.e., firms with fiscal year ends on or after December 31, 2017). Firms with fiscal years ending between June 30, 2017 and December 30, 2017 are not required to disclose the pay ratio in

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[2] ISS Shareholder Proposals database covers S&P 1500 firms since 1996 and Russell 3000 firms since 2006.

2017 but can wait until the fiscal year ended in 2018. Thus, the DiD exploits the differences between firms with a December 31, 2017 fiscal year-end (*12/31 FYE* firms) and firms with a fiscal year-end between June 30, 2017 and December 30, 2017 (*non-12/31 FYE* firms). I demonstrate the fiscal year beginnings and ends in yellow (blue) for initial reporting firms (delayed reporting firms) in Figure 2. The sample period began in the fiscal year ending in 2014 to avoid the effects of say-on-pay votes. It ended at fiscal year-ends of 2017 to avoid confounding effects from Revenue Code Section 162(m) of the Tax Cuts and Jobs Act (TCJA) that is effective for fiscal year-ends beginning on or after January 1, 2018 (Chang et al., 2022).

[Insert Figure 2]

I use the ordinary least square (OLS) model to explore the impact of the initial reporting pay ratio on shareholder proposals as follows:

$$Proposal_{i,t} = \alpha + \beta_1\, Treat_i \times Post_t + \lambda\, X_{i,t} + Firm\ FE + Year\ FE + \varepsilon_{i,t}, \quad (1)$$

where $Proposal_{i,t}$ denotes a series of proposal characteristics measures, including the number of proposals (*# of proposals*), the *omitted rate* and the *pass rate* for firm i in year t. *# of proposals is* the total number of proposals submitted for a firm each year. *Omitted rate* is the number of proposals that are allowed to be omitted according to the decisions of SEC scaled by the total number of proposals received by a firm each year. *Pass rate* is the number of passed proposals scaled by the total number of proposals received by a firm each year.[3] $Treat_i$ represents the dummy variable that equals one for *12/31 FYE* firms required to report the pay ratio in the initial reporting period and 0 for *non-12/31 FYE* firms with delayed reporting for firm i. $Post_t$ denotes a dummy variable that equals one for fiscal years ending in the calendar year 2017 and 0 otherwise. $X_{i,t}$ represents a series of firm-level control variables, including size, Tobin's q, sales growth, ROA, operating cash flows, annual stock return, book leverage, dividend yield, R&D, institutional ownership percentage, institutional ownership Herfindahl-Hirschman Index, and negative Amihud. Detailed definitions are in Appendix C. All regressions are controlled for the firm- and year-fixed effects to mitigate the impact of the

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[3] When calculating the omitted rate and pass rate, I use the total number of submitted proposals at each firm and year as the denominator. I use the ratio in the baseline regressions to control for the impact of the number of submissions. I confirm the results are held when I use the numerical number of omitted and passed proposals in unreported tables.

unobserved time-invariant firm- and year-specific factors. Standard errors are clustered at the firm level. The coefficient of interest is β_1 on the interaction term of $Treat_i \times Post_t$, which isolates the differential effect of pay ratio disclosure on the probability of passing proposals relative to delayed reporting firms.

6. Descriptive Statistics

Table 1 presents summary statistics for all variables used in my main analysis. According to Panel A, my full sample has 853 firm-level observations from July 2013 to December 2017. On average, sponsors submit 2.22 proposals per year, 17% of submitted proposals were omitted based on the "no-action-letter" issued by the SEC, and 10.1% of proposals were successfully passed with the majority favorable votes in the meeting. At the firm level, 716 observations are in the treatment sample of *12/31 FYE* firms, and 137 observations are in the control sample of *non-12/31 FYE* firms. In addition, 655 observations are in the pre-disclosure period, and 198 observations are in the post-period.[4] Regarding other firm characteristics, an average firm in my sample has a market capitalization of 16187.59 million, Tobin's Q of 2.117, a sales growth rate of 3.1%, ROA of 13.6%, net cash flow ratio of 10.4%, 0.6% annual stock returns, book leverage of 33.3%, 7.8% dividend yield, 0.021 million R&D expenses, 54.2% institutional ownership, 3.9% institutional HHI, and -0.208 negative Amihud (2002) measure.

I further partition the full sample into GOV and SRI samples to investigate the differences in proposal topics and report their descriptive statistics in Panels B and C, respectively. On average, firms in the GOV sample receive 1.57 proposals, with an omitted rate of 22.8% and a pass rate of 13.7%, while the SRI sample has 1.95 proposals, an omitted rate of 11.7% and a pass rate of 1.1%.

[Insert Table 1]

7. Main Results

7.1 Pay Ratio Disclosure and Shareholder Proposals

To investigate the impact of pay ratio disclosure on shareholder proposals, I estimate the OLS regressions of Equation (1) and report results in Table 2. The dependent variables are the number of proposals received by a firm in the year *(# of proposals)*, *omitted rate,* and *pass rate* in Columns 1 to 3, respectively. Full sample results show insignificant differences in the total

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[4] The mean and standard deviation of *Treat* and *Post* in my sample are resemble to Chang et al. (2022).

number of proposal submissions, omitted rate, and pass rate for firms subject to the initial pay ratio reporting relative to delayed reporting firms.

Although I find no evidence of significant changes for all proposals in initial reporting firms, the ratio disclosure may still have differential impacts on different types of proposals. As the summary statistics shown in Table 1, GOV proposals differ significantly from SRI proposals. For instance, GOV proposals are more likely to be appealed to the SEC and omitted than SRI proposals, suggesting managers exhibit greater aversion to GOV proposals. However, SRI proposals are extremely difficult to gain shareholders' voting support compared to GOV proposals. Hence, I investigate the differential effects of pay ratio disclosure by dividing my sample into GOV and SRI samples and reporting results through Columns 4 to 9. Column 4 indicates a statistically significant decrease in the *# of proposals* for GOV proposals at initial reporting firms (*12/31 FYE* firms) relative to delayed reporting firms (*non-12/31 FYE* firms) following the pay ratio disclosure. Conversely, Column 7 shows insignificant differences in total number of SRI proposals submitted to the initial reporting firms than delayed reporting firms. These results suggest that shareholders selectively focus on submitting fewer government proposals that are more likely to be supported around the pay ratio disclosure, consistent with **H1**. In addition, Column 6 indicates increases in the *pass rate* for GOV proposals at first-reporting firms, while it is insignificant for SRI proposals at Column 9. These are consistent with **H2** that shareholders are inclined to pass governance proposals to pressure managers and improve firm practice. Regarding the economic significance, initial reporting firms receive 54.34% ($e^{0.434} - 1$) less GOV proposals but pass 11.18% ($e^{0.106} - 1$) more compared to delayed reporting firms. In sum, results show that shareholders submit fewer government proposals but pass more at initial reporting firms.

[Insert Table 2]

7.2 Cross-sectional Analysis for Governance Proposals

Evidence in Table 2 shows that shareholders submit fewer GOV proposals but pass more in response to pay ratio disclosure. To shed further light on who submits those GOV proposals and what topics are more important, this section examines the cross-sectional variations on different proposal sponsors and categories. I first partition the sample into individual or institutional groups and run baseline regressions for each group. According to estimation results in Panel A of Table 3, the coefficients of *Treat × Post* are positively significant in the individual sample for *# of proposals* and *pass rate*, but are insignificant for the institution

sample. This suggests that the decrease in submitting numbers and increase in pass rate are mainly concentrated on proposals submitted by individual sponsors.

Second, I partition the sample into three groups based on the broad governance topics. I sort governance proposals into four broad categories: board issues, compensation issues, shareholder power issues, and others (Morgan et al., 2011; Dikolli et al., 2022).[5] Appendix A shows the detailed topic classification. Results in Panel B show positive significant interaction terms in the shareholder power subsample, suggesting my finding is concentrated in proposals requiring increasing shareholder power, such as proxy access and confidential voting. These results indicate that shareholders submit proposals to enhance participation in corporate decisions. Collectively, results from the cross-sectional tests suggest that the effects concentrate on proposals submitted by individuals and shareholder power-related topics.

[Insert Table 3]

7.3 Forming Proposal Level Sample: Summary Statistics

To further explore the distribution of proposals submitted by different sponsors and better control for heterogeneity of GOV proposals, I construct a GOV sample at the proposal level. Rather than aggregating proposals at each firm and year in the firm-level sample in Table 2, each proposal represents one observation in the new sample. Thus, I can control the fixed effect of proposal type or sponsors to mitigate the concern that one large sponsor or a type of proposal drove the results. I use the following OLS regression model to explore the impact of the initial reporting pay ratio on shareholder proposals:

$$Pass_{j,t} = \alpha + \beta_1 \, Treat_i \times Post_t + \lambda \, X_{i,t} + Proposal \, Type \, FE + Year \, FE + \varepsilon_{j,t}, \qquad (2)$$

where $Pass_{j,t}$ denotes the dummy variable that equals one for the proposal receiving majority pass and zero otherwise for proposal j in year t. Detailed definitions are in Appendix C. $X_{i,t}$ represents a series of control variables, including size, Tobin's q, sales growth, ROA, operating cash flows, annual stock return, book leverage, dividend yield, R&D, institutional ownership percentage, institutional ownership Herfindahl-Hirschman Index, negative Amihud and

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[5] ISS categorize some SRI proposals as governance proposals, such as increase gender diversity in boards. I identify those environmental and social-related governance proposals as other issues and exclude them in this study to reduce confounding impacts of ES proposals.

number of proposals. Regressions are controlled for proposal type- and year-fixed effects to mitigate the impact of the unobserved time-invariant proposal- and year-specific factors. The proposal type is based on the Agenda Item ID in ISS. Standard errors are two-way clustered at the firm and proposal type levels.[6]

I first report summary statistics for the proposal level sample in Panel A of Table 4. My sample has 889 proposal-year observations (592 firm-year observations) from July 2013 to December 2017. The detailed date filter reports are in Appendix B. On average, 13.2% of proposals passed, and 9.4% were implemented, analogous to the GOV sample in Table 1.

To further investigate proposal distribution among sponsors, I report summary statistics of submitted proposals by sponsor groups and year in Panel B of Table 4. In my sample, an individual sponsor submits more proposals than an institutional sponsor on average for a given year (6.398 vs. 2.660). According to Panel C of Table 4, which shows top-5 sponsors for each group, Top-5 individual sponsors account for 51.51% of all governance proposals, while Top-5 institutional sponsors only occupy 13.50%. The most active individual sponsor, John Chevedden, submitted 288 proposals during the sample period. This is consistent with prior literature stating that proposal submissions are highly concentrated, especially for individual sponsors. To control for the concentration of sponsors, I perform several robustness tests in Section 7.6 and my results are still held.

[Insert Table 4]

"Corporate gadflies" is used to describe a group of individual shareholders who submit many shareholder proposals, including John Chevedden, William and Kenneth Steiner, James McRitchie, Myra Young, and the Rossi family (Kastiel and Nili, 2020). Gadflies often focus on standardized governance proposals about issues on which large institutional investors generally agree and which they are most likely to support to gain their support. In addition, compared to large institutional investors, gadflies submit proposals with less reputational or financial concerns as they own relatively small proportions of firms. Moreover, gadflies can gain public attention by frequently submitting proposals and obtaining private benefits. For example, James McRitchie created his website, "Corporate Governance"

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[6] Past literature use a linear probability model to include high-level fixed effects and avoid sample loss due to perfect prediction in the logit/probit model (for example, Huang, Jennings, and Yu, 2017; Gantchev and Giannetti, 2021). I confirmed that my results still hold when employing the probit or logit model.

(https://www.corpgov.net/), to publish news about activist investors and encourage individual investors to participate in corporate governance.

7.4 Probability of Proposal Passage and Implementation

Table 5 reports the estimation results for OLS regression and entropy-balance-weighted regressions of Equation (2). I use a set of variables that may be associated with the decisions to pass or implement a shareholder proposal to balance the samples, including firm size, Tobin's q, sales growth, ROA, operating cash flows, annual stock return, book leverage, dividend yield, R&D, institutional ownership percentage, institutional ownership Herfindahl-Hirschman Index, negative Amihud and number of proposals. Consistent with previous findings, results across Columns 1 and 2 show a higher probability of passing GOV proposals for firms subject to the initial reporting requirements relative to delayed reporting firms.

[Insert Table 5]

Next, I investigate whether initial-reporting firms are more likely to implement passed GOV proposals. Due to reputational concerns, boards are incentivized to reduce public scrutiny and the likelihood of criticism. The reputational costs of ignoring strongly supported proposals are high since shareholders might run campaigns for proposal implementation and garner more media attention. As a result, boards are more likely to implement passed proposals in firms with high expected scrutiny.

I manually collect proposal implementation data by reading annual proxy filings in the following years. I identify the passed proposals as implemented when I find the management teams amend bylaws/requirements according to passed proposals in the following proxy statements. Appendix D provides examples of implemented and non-implemented proposals. Management teams of some firms require another round of shareholder votes for the passed proposals during the following year's annual meeting. In that case, I read the proxy filing of the year after next year to identify the implementation status. I compute the *Implementation* dummy which equals one if the passed proposal was implemented and zero otherwise. I use implementation as the dependent variable in Equation (2) and report OLS and entropy-balanced regression estimation results in Columns 3-4 of Table 5. Results indicate that coefficients of $Treat \times Post$ are positive and significant at a 1% level across all Columns, suggesting that initial reporting firms are more likely to implement passed proposals. Regarding the economic significance, passed proposals at initial reporting firms are 10.08% ($e^{0.096} - 1$) more likely to

be implemented than delayed reporting firms in Column 5. In sum, governance proposals are more likely to be passed and implemented in response to the pay ratio disclosure mandate.

7.5 Mechanism Analysis

Next, I explore the mechanism through which the pay ratio mandate affects the likelihood of passing proposals. Given that the potential populist criticism may arise around the firm's pay ratio disclosure, shareholders are more inclined to support governance-related proposals to offset expected costs associated with ratio disclosure. The more a firm is subject to populist scrutiny, the more significant the impact of pay ratio disclosure on governance proposals. Thus, this section tests whether the impact is more pronounced when populist scrutiny is expected to be higher.

I employ the pre-mandate pay ratio and news article coverage as proxies of populist scrutiny. Specifically, I expect firms with higher pre-mandate pay ratios and higher media coverage would experience greater scrutiny when they disclose pay ratios. First, I compute the pre-mandate pay ratio based on the three-year average of total CEO compensation reported before the mandate (i.e., from 2014 to 2016) scaled by the median employee pay disclosed in the first pay ratio (i.e., 2017 for initial-reporting firms and 2018 for delayed reporting firms). Information regarding CEO's compensation and median employee pay is manually collected from firms' annual proxy filings. Second, I compute the media coverage by calculating the average number of articles over 2014-2016 from Ravenpack's Web Edition. The variable computation is only based on types of "full-article" and "news-flash."

I then split my treatment sample into two groups by median and create the high and low treatment dummies variables for each scrutiny proxy. The variables of interest are *Treat high pre-ratio × Post* and *Treat high media × Post* in Columns 1 and 2 of Table 6. Results show positive and significant interaction coefficients of the high pre-mandate ratio group in Column 1 and the high media coverage group in Column 2, indicating that the likelihood of passing proposals is more pronounced for firms with high anticipated pay disparity, consistent with my expectation.

I also examine if the effects of the pay ratio mandate differ for firms that subsequently report a high pay ratio through diving treatment by the reported pay ratio in 2017. I create a *Treat high post-ratio* (*Treat low post-ratio*) dummy that equals one if the reported pay ratio is above (below) the sample median and interact it with the post dummy. Results in Column 3

show that both high and low post-pay ratio interactions are positively significant, suggesting no differential impact on high and low pay ratio firms ex-post as they all experience increases in proposal passages.

Collectively, Table 6 shows that the impact of the pay ratio disclosure mandate is stronger for firms with higher expected pay ratios and greater media coverage.

[Insert Table 6]

7.6 Robustness Tests

7.6.1   Parallel Trend Tests

A fundamental assumption of DID is that there is a parallel trend that requires no significant differences between treatment and control groups over time in the absence of treatment. To empirically demonstrate that my estimation meets the parallel trend assumption, I need to confirm no statistical differences between treated and untreated firms before the treatment year. Therefore, I adjust Equation (2) to include extra interaction terms between the *Treat* dummy and each year for pre-mandate windows (i.e., calendar years 2014-2016), excluding 2016 as the baseline.

The estimation results for proposal passage and implementation are reported in Columns 1 and 2 of Table 7, respectively. Results show that coefficients on *Treat × 2014* and *Treat × 2015* are insignificant across all Columns. Conversely, the *Treat × 2017* interactions are positively significant, consistent with my previous findings. Thus, the results confirm that the increased likelihood of passing and implementing governance proposals is confined to the pay ratio reporting period (i.e., post-treatment period).

[Insert Table 7]

7.6.2   Alternative Samples and Fixed Effects

To corroborate my main findings, I examine whether DID estimates are sensitive to individual sponsors. According to the Summary Statistics of Table 4, John Chevedden contributes 31.1% of proposals, and the top-5 individual sponsors occupy 51.51% of proposal submissions in my sample. I run two robust tests to mitigate the concern that proposals are concentrated on a few individual sponsors. First, I test the robustness of the DID estimates by omitting John Chevedden's proposals and report results in Columns 3-4 of Table 7. I find the *Treat × Post* interactions are positively significant across all columns, suggesting the increased probability

of proposal passage and implementation is not driven by one large sponsor. Second, I further add the top-5 sponsors-fixed effect into Equation (2) and report estimation results in Columns 5-6. Results indicate that my findings are still robust when I control large individual sponsors. Collectively, I conclude that my results are held when controlling the impact of sponsors.

8. Testing Impacts on Firm Outcomes: Regression Discontinuity Design

8.1 Research Design

After revealing that initial reporting firms are more likely to pass and implement proposals, I then investigate its impact on the firm future performance. However, studying the effects of passing proposals on firm performance is arguably subject to endogeneity issues. The passage of proposals likely correlates with unobservable firm characteristics. In addition, it is also possible that profitable firms have a higher likelihood of passing proposals as they have more time and resources to deal with shareholders' requests. To alleviate the endogeneity concerns and identify the impact of passing proposals, I adopt an RDD that investigates "close-call" proposals around the 50% threshold. Specifically, I compare the effect of GOV proposals that pass or fail by a small margin of votes in annual meetings. The passage of "close-call" proposals is similar to a random event and is hence unrelated to firm characteristics. The average characteristics of a firm where a proposal receives 50.1% of the vote and successfully passes are akin to those of a firm where the proposal receives only 49.9% of the vote and fails (Cuñat, Gine, and Guadalupe 2012). As previous literature reveals that passed proposals are more likely to be implemented (e.g., Ertimur, Ferri, and Stubben, 2010), the minor difference around the 50% threshold of vote shares leads to a discrete change in the probability of implementing a proposal. Thus, I employ close-call proposals to estimate the causal effect of proposals on firms' future performance.

I aggregate proposal data at the firm-year level for the RDD tests. First, I use the vote share of the passed proposals as the meeting's outcome when only one proposal is passed during an annual meeting. Second, I use the average vote shares of the passed proposals as the meeting's outcome when several proposals are passed in a single meeting. Third, I use the average vote shares of the unsuccessful proposals as the meeting's overall result when no proposals are passed in a meeting. I exclude firms with supermajority vote requirements, i.e., the threshold to pass a proposal is greater than 50%, to focus on proposals with the 50% threshold.

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8.2 Validity Tests

Before conducting the formal RDD analysis, I examine whether the setting satisfies two key conditions: (1) no discontinuity in vote shares around the threshold and (2) no discontinuity around the threshold in pre-meeting firm characteristics. First, I follow McCrary (2008) to test the discontinuity in the density of vote shares. Figure 3 plots the density of the favorable vote percentage, and the solid line represents the fitted density function of the forcing variable (i.e., the number of favorable votes) with a 95% confidence interval around the fitted line. The t-statistics for the McCrary (2008) discontinuity test is -0.09 (i.e., the estimated coefficient is 0.03651 with a standard error of -0.4007), which is statistically insignificant. Therefore, I cannot reject the null hypothesis that the difference in density at the threshold is zero, indicating no precise manipulation by voters or managers around the known 50% threshold. Thus, the first condition of RDD is not violated.

[Insert Figure 3]

Next, I test the second validity condition by running nonparametric local linear regressions on firm performance measures one year before the annual meeting. The nonparametric local linear regression is the most stringent RDD model that does not consider all elections in the sample but only examines the annual meeting near the 50% threshold within a certain bandwidth. I use the optimal bandwidth suggested by Imbens and Kalyanaraman (2012) to minimize the mean squared error. I proxy a firm's performance by Tobin's q, return on equity (ROE), return on asset (ROA), and operating return on assets (OROA). Standard errors are clustered at the firm level to account for within-firm dependence across observations, and year-fixed effects are added to control for unobservable cross-year heterogeneity. I use polynomials of order three for all regressions. Panel A of Table 8 reports the regression results in which the dependent variables are performance measures, and the independent variable is the *Pass* dummy. Columns 1 to 4 show no significant coefficients of *Pass*, indicating no systematic differences in the profitability between firms where proposals are marginally passed or marginally failed. Therefore, the second condition is satisfied.

[Insert Table 8]

8.3 RDD Results

To study the effect of passing proposals on future firm performance, I measure a firm's future performance at year *t+1*. First, I visually check the relation between firm performance variables

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and the percentage of favorable votes around the threshold in Figure 4. I report the regression discontinuity plots for Tobin's q, ROE, ROA, and OROA from Panels A to D. Each dot in the figure represents the average outcome variables in 2% bins of vote share. The solid line represents predicted values of outcome variables using third-order polynomials. As the figure illustrates, I can observe significant increases in Tobin's q and significant decreases in ROE, ROA, and OROA when the percentage of favorable votes moves from the left to the right of the 50% threshold. This pattern suggests that proposals are passed by a small margin of votes leading to an increase in Tobin's q but a decrease in ROE, ROA, and OROA, compared to proposals that failed by a small margin.

[Insert Figure 4]

I then conduct the formal regression analysis using a nonparametric local linear regression model with the optimal bandwidth of Imbens and Kalyanaraman (2012) and the triangular kernel. According to Panel B of Table 8, results show that the coefficient estimates of *Pass* are negative and significant for next year's ROE and ROA. Specifically, firms that pass a proposal lead to a 0.838 decrease in ROE and a 0.127 decrease in ROA compared to firms where the proposal fails. These results suggest that firms who pass the proposal underperformed after the passage than those who fail to pass. I failed to find significant coefficient estimates for Tobin's q and OROA in the regression analysis, which can be due to the limited sample size of my RDD tests. Overall, results suggest that firms with passed proposals, which are also highly likely to be implemented, reduce their ROE and ROA performance next year.

After showing the short-term adverse impact of passing proposals, I investigate whether such an impact will persist in the long run. I compute the future outcome measures by averaging outcome measures at the next 2, 3, and 5 years and report nonparametric regression results in Panels C to E of Table 8. I find no significant coefficient estimates of *Pass* across all Panels, suggesting the negative effect of passing proposals will not last long.

Given that individual shareholders, especially a few large activist shareholders, contribute half of the GOV proposals in my sample, the potential reason for the value-destroying result is the lack of effectiveness of activist-initiated proposals. There are no direct pecuniary benefits for shareholders to submit and pass proposals. They may initiate proposals on their personal interests or focus on general GOV practices that may be unnecessary for target firms. Under the threat of criticism and negative reactions at pay ratio disclosure, those ill-

informed and general GOV proposals gained support and passed in the meeting. As a result, firms need to waste resources and time to implement unnecessary GOV practices, leading to value reduction at targeted firms. This is consistent with current literature that indicates proposals sponsored by active individuals destroy shareholders' value (e.g., Gantchev and Giannetti, 2020). In sum, RDD results show a worsened firm performance next year, possibly due to the lack of effectiveness of GOV proposals submitted by activist shareholders.

9. Conclusion

This study examines the effect of the mandated pay ratio disclosure on shareholder proposals. Using a staggered DiD regression based on implementing pay ratio reform across firms with different fiscal year-ends, I find fewer proposal submissions and higher pass rates at firms subject to the initial pay ratio reporting requirement relative to delayed reporting firms. In cross-sectional variation analysis, I find that the effect of the pay ratio disclosure mandate is concentrated in proposals submitted by individual sponsors and with topics related to enhancing shareholder power. I corroborate my findings in proposal-level samples and find that passed proposals are more likely to be implemented at initial reporting firms than delayed ones. I also show that the effects are more pronounced for firms with higher expected pay ratios and media coverage. To identify the impact of passing proposals on future firm performance, I employ an RDD that investigates close-call proposals around the 50% threshold. Results show that passing proposals lead to a decrease in ROE and ROA next year, suggesting that passed proposals are value-destroying in the short run.

This paper contributes to the shareholder activism literature by revealing that shareholders more actively intervene in corporate governance in response to the pay ratio mandate, but passed proposals destroy value in the short run. I also contribute to the executive compensation literature by showing that shareholders are more likely to pass proposals in response to the CEO compensation disclosure mandate. This paper has significant implications for policymakers. My evidence suggests that it is necessary to increase the submission threshold to limit individual shareholders' ability to submit proposals. Firms not only can save costs in response to proposal resolutions but also reduce the implementation of unnecessary governance policies that are value-destroying in the short run.

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Figure 1: The Process of Shareholder Proposals

This figure illustrates the process of shareholder proposals. Before 2020, shareholders with at least $2,000 or 1 percent of outstanding shares can submit proposals before the annual meeting.
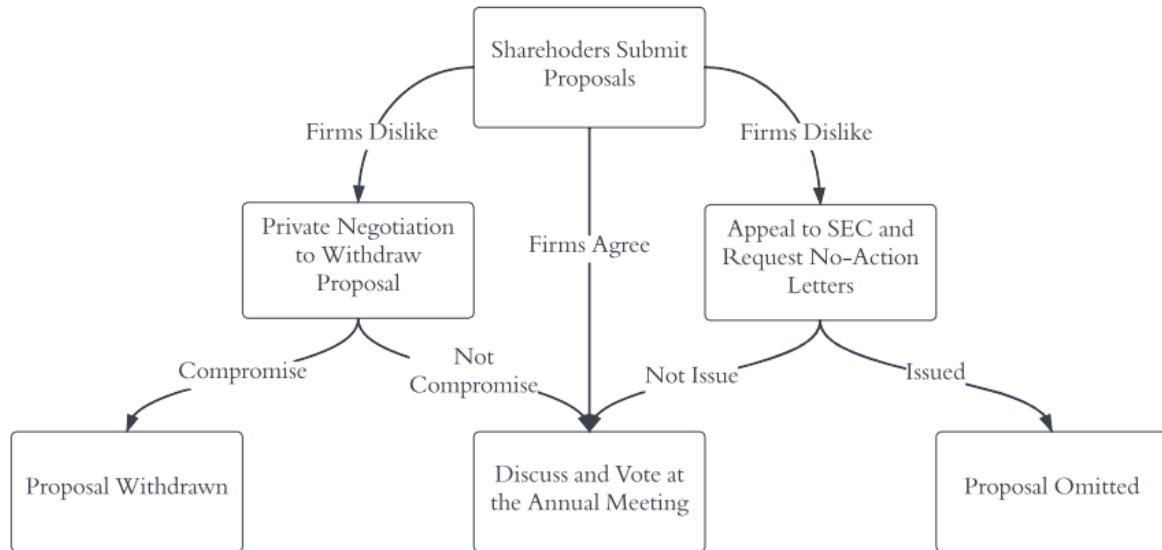
Figure 2: Timeline for Staggered Difference-in-Differences Tests

This table illustrates the timeline for initial and delayed reporting firms and key dates of the CEO pay ratio mandate. The staggered DID tests the effect of the pay ratio mandate on shareholder proposals at December 31 calendar year-end firms (i.e., initial reporting firms) relative to firms with June-December 30 fiscal year-ends that are not required to report a pay ratio until the fiscal year of 2018 (i.e., delayed reporting firms). The reporting periods of initial reporting firms (delayed reporting firms) are highlighted in yellow (blue) in the figure.
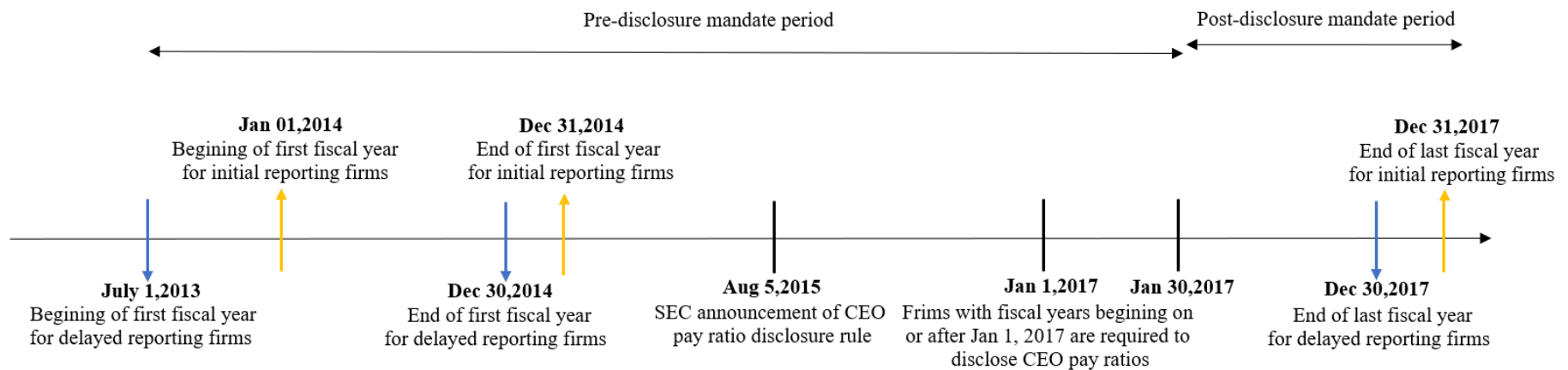
Figure 3: McCrary (2008) Density Test

This figure presents a visualization of the McCrary (2008) test for the continuity of the vote share distribution around the majority threshold. The x-axis indicates the percentage of favorable votes. The y-axis shows the logarithm of the estimated density.
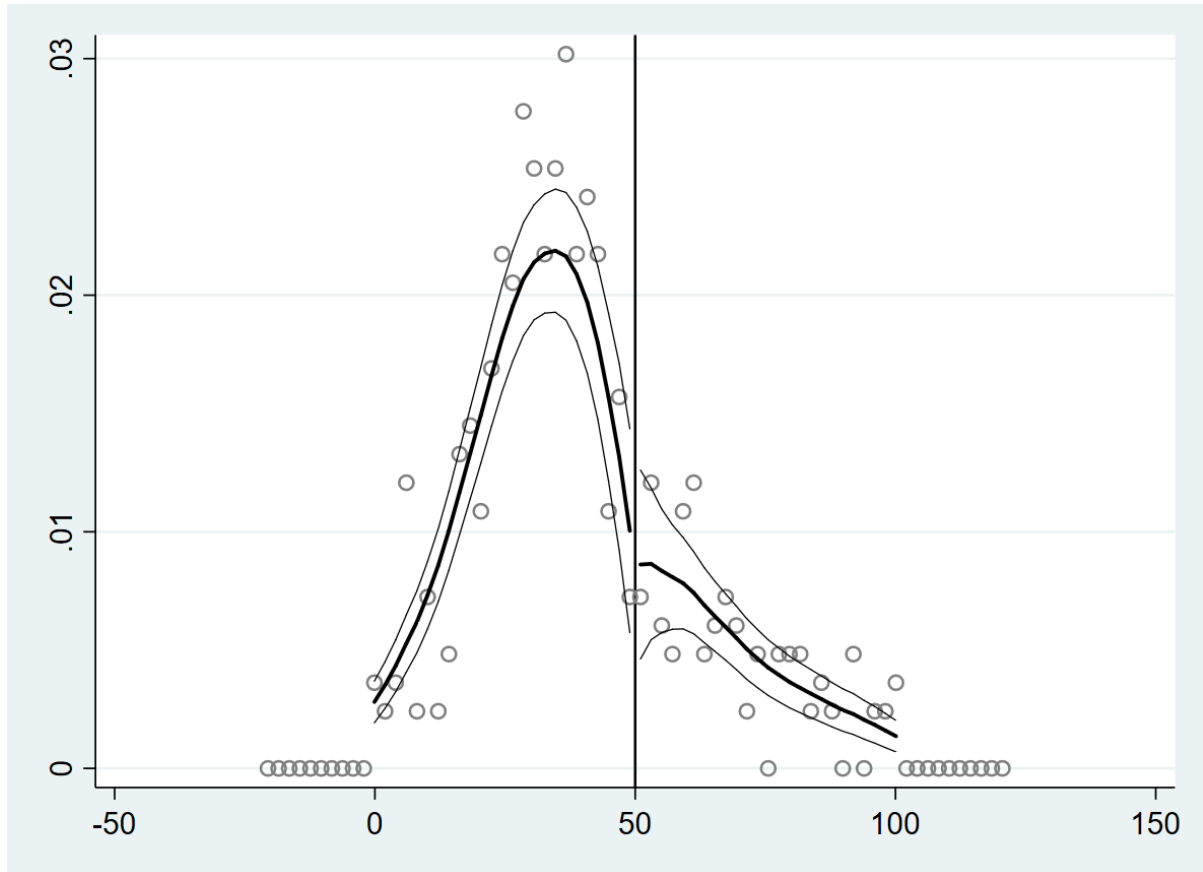
Figure 4: Regression Discontinuity Plots for Future Profitability

This figure shows the regression discontinuity plots using a fitted cubic polynomial estimated with a 90% confidence interval around the fitted value. The x-axis indicates the percentage of favorable votes. The y-axis indicates the profitability measures at year $t+1$. The dots depict the average future profitability measures in 2% bins of victory margin. The solid line plots predicted values of profitability measures from third-order polynomials in victory margin estimated separately to the left and right of the majority threshold.

Graph A: Tobin's q at $t+1$
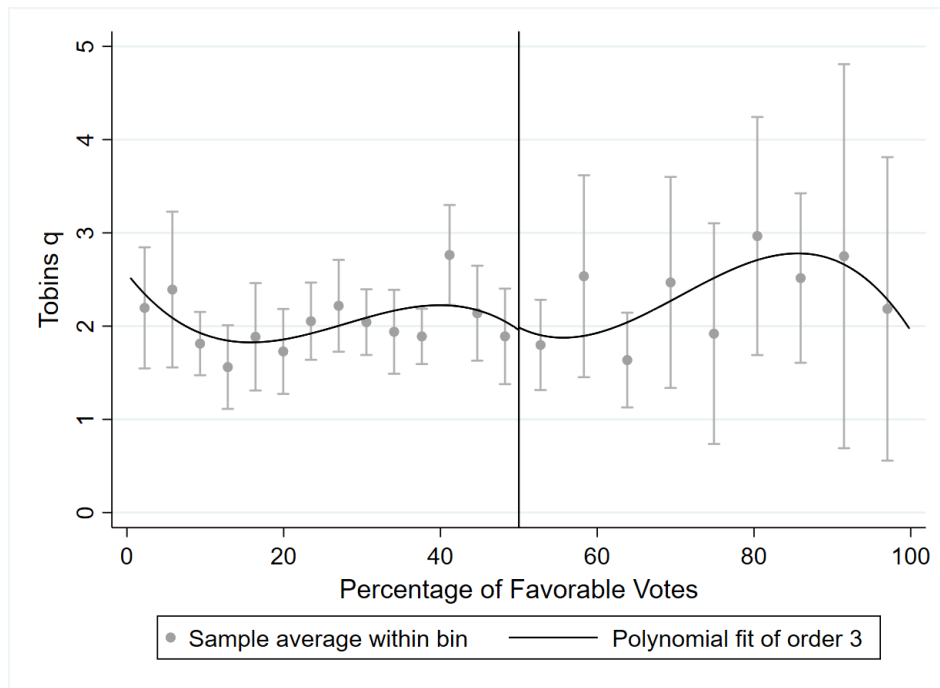
Graph B: ROE at $t+1$

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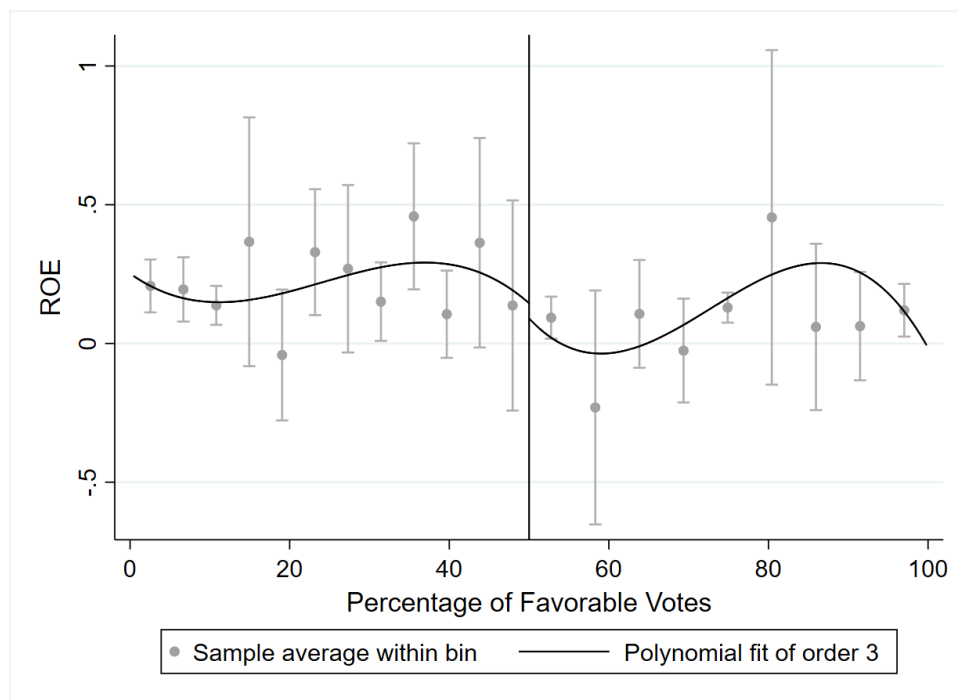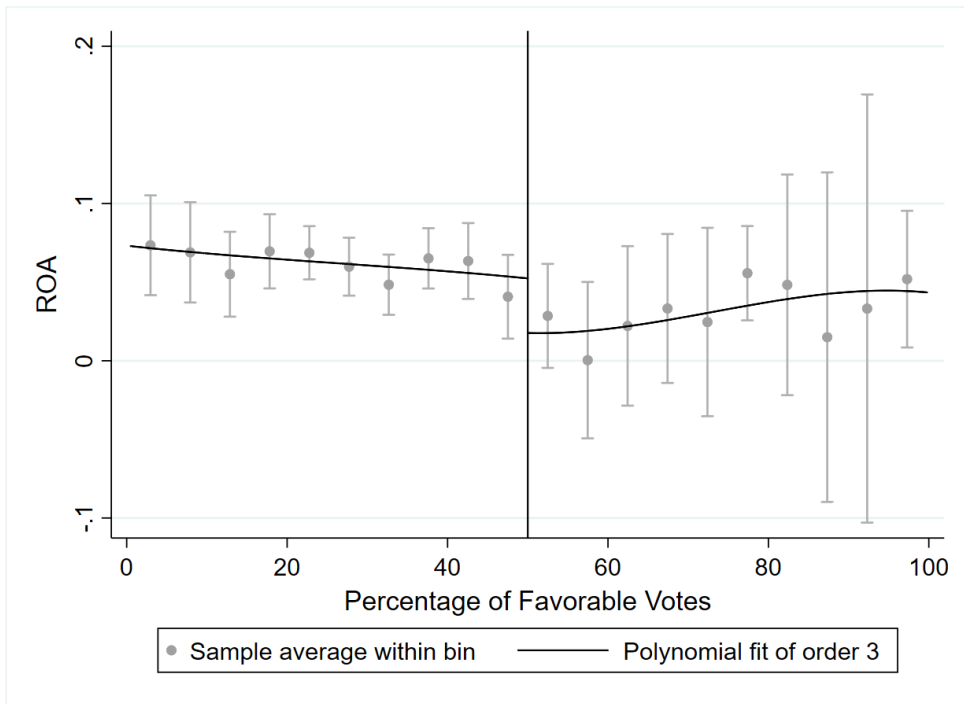
Graph C: ROA at *t+1*

Graph D: OROA at *t+1*
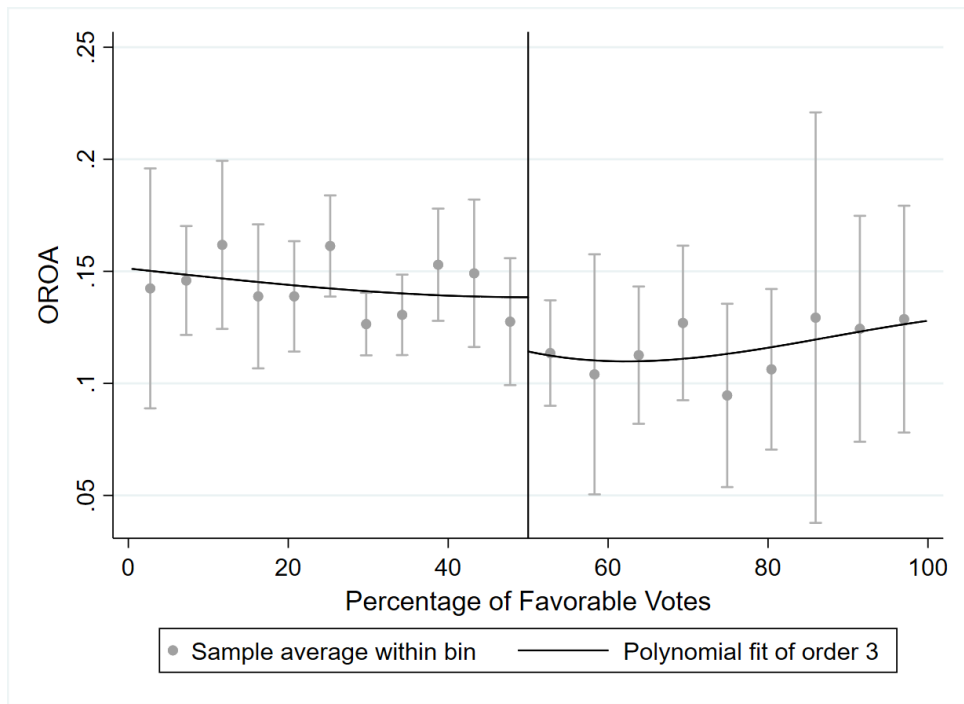
Table 1. Descriptive Statistics

This table reports the descriptive statistics of the variables used in the baseline regression. Panel A reports summary statistics of firm-level variables for all proposals from 2014 to 2017. Panels B and C report summary statistics for governance (GOV) and social responsible initiative (SRI) proposals, respectively. The variable definitions are described in Appendix C.

Panel A. Full Sample (including both GOV and SRI)

	No. of Obs.	Mean	Std. Dev.	Min	25th	Median	75th	Max
Treat	853	0.839	0.367	0.000	1.000	1.000	1.000	1.000
Post	853	0.232	0.422	0.000	0.000	0.000	0.000	1.000
# of proposals	853	2.215	2.013	1.000	1.000	1.000	3.000	14.000
Omitted rate	853	0.172	0.318	0.000	0.000	0.000	0.250	1.000
Pass rate	853	0.101	0.273	0.000	0.000	0.000	0.000	1.000
Size	853	9.692	1.467	3.045	8.747	9.730	10.664	13.580
Tobin's q	853	2.117	1.421	0.566	1.238	1.677	2.405	12.982
Sales growth	853	0.031	0.185	-0.568	-0.038	0.028	0.095	1.374
ROA	853	0.136	0.104	-0.626	0.090	0.131	0.178	0.612
Cash flow	853	0.104	0.067	-0.359	0.068	0.094	0.135	0.392
Ann return	853	0.006	0.021	-0.124	-0.004	0.004	0.016	0.175
Book lev	853	0.333	0.195	0.000	0.221	0.308	0.433	1.846
Div yld	853	0.078	0.146	-0.160	0.003	0.050	0.084	0.758
R&D	853	0.021	0.048	0.000	0.000	0.000	0.023	0.419
Inst own percentage	853	0.542	0.326	0.000	0.353	0.628	0.796	1.137
Inst Herfindahl	853	0.039	0.057	0.000	0.027	0.036	0.045	1.000
Neg Amihud	853	-0.208	2.925	-56.085	-0.011	-0.005	-0.002	-0.001

Panel B. GOV Sample

	No. of Obs.	Mean	Std. Dev.	Min	25th	Median	75th	Max
Treat	625	0.845	0.362	0.000	1.000	1.000	1.000	1.000
Post	625	0.232	0.422	0.000	0.000	0.000	0.000	1.000
# of proposals	625	1.571	1.023	1.000	1.000	1.000	2.000	7.000
Omitted rate	625	0.228	0.380	0.000	0.000	0.000	0.333	1.000
Pass rate	625	0.137	0.326	0.000	0.000	0.000	0.000	1.000
Size	625	9.851	1.520	3.045	8.864	9.947	10.897	13.580
Tobin's q	625	2.180	1.518	0.637	1.282	1.705	2.453	12.982
Sales growth	625	0.030	0.175	-0.568	-0.037	0.027	0.092	1.242
ROA	625	0.135	0.103	-0.626	0.092	0.133	0.175	0.612
Cash flow	625	0.102	0.068	-0.359	0.069	0.095	0.135	0.392
Ann return	625	0.006	0.022	-0.124	-0.004	0.004	0.016	0.175
Book lev	625	0.327	0.179	0.000	0.221	0.310	0.433	1.193
Div yld	625	0.082	0.142	-0.160	0.003	0.054	0.091	0.758
R&D	625	0.024	0.051	0.000	0.000	0.003	0.029	0.419
Inst own percentage	625	0.552	0.315	0.000	0.406	0.626	0.801	1.137
Inst Herfindahl	625	0.038	0.051	0.000	0.027	0.036	0.045	1.000
Neg Amihud	625	-0.051	0.593	-11.502	-0.010	-0.005	-0.002	-0.001

Panel C. SRI Sample

	No. of Obs.	Mean	Std. Dev.	Min	25th	Median	75th	Max
Treat	403	0.836	0.371	0.000	1.000	1.000	1.000	1.000
Post	403	0.238	0.427	0.000	0.000	0.000	0.000	1.000
# of proposals	403	1.953	1.532	1.000	1.000	1.000	2.000	10.000
Omitted rate	403	0.117	0.266	0.000	0.000	0.000	0.000	1.000
Pass rate	403	0.011	0.093	0.000	0.000	0.000	0.000	1.000
Size	403	10.132	1.489	6.565	9.065	10.090	11.313	13.580
Tobin's q	403	1.963	1.319	0.566	1.176	1.524	2.254	12.982
Sales growth	403	0.013	0.191	-0.518	-0.061	0.008	0.090	1.374
ROA	403	0.131	0.097	-0.395	0.087	0.117	0.170	0.562
Cash flow	403	0.105	0.062	-0.146	0.066	0.090	0.135	0.383
Ann return	403	0.006	0.020	-0.076	-0.005	0.004	0.016	0.084
Book lev	403	0.339	0.194	0.000	0.228	0.306	0.432	1.846
Div yld	403	0.096	0.160	-0.160	0.022	0.059	0.104	0.758
R&D	403	0.019	0.047	0.000	0.000	0.000	0.015	0.419
Inst own percentage	403	0.505	0.310	0.000	0.272	0.571	0.742	1.137
Inst Herfindahl	403	0.035	0.031	0.000	0.026	0.035	0.045	0.302
Neg Amihud	403	-0.226	3.205	-56.085	-0.007	-0.003	-0.002	-0.001

Table 2. DiD Tests for All Proposals

This table reports the Difference-in-Differences results for the characteristics of shareholder proposals. The number of proposals (*# of proposals*) is the number of proposals received by a firm in the year. *Omitted rate* is the number of proposals that allow to be omitted from the SEC divided by the total number of proposals received by a firm each year. *Pass rate* is the number of passed proposals divided by the total number of proposals received by a firm each year. The variable definitions are described in Appendix C. Standard errors are clustered by firm. T-statistics are reported in parentheses, and the superscript asterisks ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Sample=	All	All	All	GOV	GOV	GOV	SRI	SRI	SRI
Depn var.=	# of proposals	Omitted rate	Pass rate	# of proposals	Omitted rate	Pass rate	# of proposals	Omitted rate	Pass rate
Treat × Post	-0.334	-0.028	0.058	-0.434***	-0.027	0.106*	0.121	-0.055	-0.106
	(-1.175)	(-0.392)	(0.942)	(-3.379)	(-0.241)	(1.746)	(0.433)	(-0.488)	(-1.172)
Size	0.515***	0.119***	-0.068*	0.106	0.186***	-0.119**	0.364	-0.092	-0.027
	(2.999)	(2.642)	(-1.693)	(0.872)	(2.689)	(-2.100)	(1.300)	(-1.227)	(-1.146)
Tobin's q	-0.233**	0.021	0.035	-0.204**	-0.015	0.056	0.263	0.076	0.039*
	(-2.322)	(0.855)	(1.046)	(-2.178)	(-0.522)	(1.331)	(0.807)	(1.185)	(1.669)
Sales Growth	-0.404	0.028	0.028	0.052	0.123	0.126	-0.359	-0.049	0.009
	(-1.285)	(0.413)	(0.347)	(0.181)	(1.076)	(1.107)	(-1.029)	(-0.755)	(0.352)
ROA	-0.434	-0.514***	-0.398	-0.210	-0.851**	-0.602	-0.610	-0.144	0.011
	(-0.561)	(-2.830)	(-1.433)	(-0.268)	(-2.315)	(-1.524)	(-0.708)	(-0.714)	(0.250)
Cash flow	1.637	0.528	0.074	1.697*	0.589	0.218	2.607*	0.682*	0.252
	(1.440)	(1.542)	(0.271)	(1.775)	(1.345)	(0.488)	(1.916)	(1.884)	(1.389)
Ann return	1.919	-1.032	-0.016	2.118	-1.035	-0.130	-3.693	0.490	-0.420
	(1.024)	(-1.499)	(-0.025)	(1.246)	(-0.986)	(-0.138)	(-1.366)	(0.594)	(-1.262)
Book lev	-0.094	-0.213	-0.222	-0.254	-0.153	-0.448	0.345	-0.376**	-0.101
	(-0.088)	(-1.343)	(-1.316)	(-0.425)	(-0.435)	(-1.620)	(0.268)	(-2.276)	(-1.496)
Div yld	0.106	-0.144	0.037	0.391	-0.354**	0.113	-0.211	0.017	-0.002
	(0.259)	(-1.250)	(0.448)	(0.627)	(-2.012)	(0.877)	(-0.500)	(0.099)	(-0.097)

R&D	10.310	-0.799	-1.334	-3.562	0.909	-2.147	11.851	-2.528	0.342
	(1.562)	(-0.359)	(-0.837)	(-0.740)	(0.400)	(-0.618)	(1.356)	(-1.287)	(0.915)
Inst own percentage	-0.013	0.142	-0.026	-0.579	0.304	-0.052	-0.901	0.187	-0.022
	(-0.025)	(1.118)	(-0.107)	(-1.172)	(1.356)	(-0.144)	(-1.195)	(1.328)	(-0.509)
Inst Herfindahl	0.112	-0.014	0.349	0.313	-0.212	-0.057	0.547	-1.415	-0.243
	(0.243)	(-0.073)	(0.858)	(0.512)	(-0.507)	(-0.113)	(0.407)	(-1.302)	(-0.909)
Neg Amihud	-0.006	-0.002	0.002	-0.072***	-0.031	0.016	-0.003	-0.004*	0.000
	(-0.544)	(-0.711)	(0.877)	(-2.636)	(-1.586)	(1.143)	(-0.274)	(-1.700)	(0.048)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.734	0.215	0.215	0.463	0.133	0.202	0.630	0.367	0.000
N	853	853	853	625	625	625	403	403	403

Table 3. DiD Tests for Governance Proposals

This table reports the Difference-in-Differences results on the characteristics of governance proposals. The number of proposals *(# of proposals)* is the submission number by each firm and year. *Pass rate* is the number of passed proposals divided by the total number of proposals each year. Standard errors are clustered by firm. Panel A (B) partitions the sample based on sponsors (topics). T-statistics are reported in parentheses, and the superscript asterisks ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Subsamples by sponsors				
	[1]	[2]	[3]	[4]
Sample=	GOV,Individual	GOV,Individual	GOV,Institution	GOV,Institution
Depn var.=	# of proposals	Pass rate	# of proposals	Pass rate
Treat × Post	-0.273**	0.153*	0.088	0.013
	(-2.019)	(1.864)	(0.371)	(0.232)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R^2	0.501	0.220	0.157	0.294
N	460	460	241	241

Panel B: Subsamples by topics						
	[1]	[2]	[3]	[4]	[5]	[6]
Sample=	GOV,Power	GOV,Boards	GOV,Compensation	GOV,Power	GOV,Boards	GOV,Compensation
Depn var.=	# of proposals	# of proposals	# of proposals	Pass rate	Pass rate	Pass rate
Treat × Post	-0.276***	-0.111	-0.099	0.183**	-0.010	0.135
	(-3.214)	(-0.814)	(-0.425)	(2.043)	(-0.106)	(1.475)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.302	0.113	0.368	0.238	0.433	0.334
N	425	147	55	425	147	55

Table 4. Descriptive Statistics for Proposal Level Sample

This table reports the descriptive statistics of the proposal-level sample. The sample consists of 889 proposal-level observations from 2014 to 2017. Panel A reports summary statistics of variables in the baseline regression. Panel B reports summary statistics for the number of proposals submitted by sponsor groups and year. Panel C reports the top-5 individual and institutional sponsors. The variable definitions are described in Appendix C.

A. Summary Statistics	No. of Obs.	Mean	Std. Dev.	Min	25th	Median	75th	Max
Treat	889	0.870	0.337	0.000	1.000	1.000	1.000	1.000
Post	889	0.209	0.407	0.000	0.000	0.000	0.000	1.000
Pass	889	0.132	0.338	0.000	0.000	0.000	0.000	1.000
Implementation	889	0.094	0.293	0.000	0.000	0.000	0.000	1.000
Size	889	10.209	1.504	5.781	9.159	10.233	11.387	13.310
Tobin's q	889	2.132	1.268	0.788	1.309	1.707	2.453	7.309
Sales growth	889	0.026	0.163	-0.491	-0.039	0.021	0.086	0.649
ROA	889	0.137	0.089	-0.306	0.091	0.132	0.171	0.431
Cash flow	889	0.104	0.063	-0.094	0.072	0.097	0.135	0.302
Ann return	889	0.006	0.018	-0.048	-0.004	0.004	0.015	0.060
Book lev	889	0.325	0.162	0.000	0.223	0.313	0.429	0.909
Div yld	889	0.096	0.153	-0.160	0.012	0.058	0.104	0.758
R&D	889	0.023	0.038	0.000	0.000	0.003	0.031	0.194
Inst own percentage	889	0.556	0.294	0.000	0.410	0.618	0.791	1.000
Inst Herfindahl	889	0.036	0.019	0.000	0.029	0.036	0.044	0.124
Neg Amihud	889	-0.010	0.034	-0.468	-0.008	-0.003	-0.002	-0.001
# of proposals	889	3.434	2.863	1.000	1.000	2.000	5.000	14.000

B. Proposal by Sponsor Groups and Year	Mean	Median	Std. Dev.	Min	Max
Individual	6.398	1.000	15.226	1.000	83.000
Institution	2.660	1.000	4.286	1.000	37.000
Other	1.824	1.000	1.547	1.000	8.000

C. Most Active Sponsors	# of proposals	% of total
Top-5 Individual Sponsors		
John Chevedden	288	31.10%
Kenneth Steiner	63	6.80%
James McRitchie	59	6.37%
William Steiner	35	3.78%
Myra Young	32	3.46%
Top-5 Institutional Sponsors		
New York City Pension Funds	49	5.29%
Qube Investment Management Inc	23	2.48%
The International Brotherhood of Teamsters General Fund	22	2.38%
AFL-CIO	17	1.84%
United Brotherhood of Carpenters Pension Fund	14	1.51%

Table 5. DiD Tests for Probability of Passing and Implementing Proposal

This table reports the Difference-in-Differences results for the probability of the majority passing or implementing shareholder proposals. *Pass* dummy equals one if a proposal received a majority pass during the meeting and zero otherwise. *Implementation* dummy equals one if the passed proposal was implemented in the following years and zero otherwise. The variable definitions are described in Appendix C. Standard errors are two-way clustered by firm and proposal type. T-statistics are reported in parentheses, and the superscript asterisks ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	[1]	[2]	[3]	[4]
Specification=	OLS	Entropy Balance	OLS	Entropy Balance
Dependent variable=	Pass	Pass	Implementation	Implementation
Treat × Post	0.084**	0.226***	0.096***	0.229***
	(2.386)	(2.718)	(2.739)	(2.625)
Treat	0.001	-0.085	-0.084**	-0.114*
	(0.050)	(-1.198)	(-2.255)	(-1.829)
Size	-0.036***	-0.073***	-0.031***	-0.065***
	(-4.414)	(-4.207)	(-3.483)	(-3.543)
Tobin's q	0.041*	0.024	0.003	0.005
	(1.736)	(0.997)	(0.197)	(0.394)
Sales Growth	-0.115	0.256*	-0.078	0.151
	(-1.147)	(1.887)	(-0.872)	(1.364)
ROA	-0.206	0.103	-0.359*	0.075
	(-1.017)	(0.362)	(-1.837)	(0.309)
Cash flow	-0.481	-1.233*	0.482*	-0.568
	(-1.352)	(-1.838)	(1.841)	(-0.993)
Ann return	0.342	0.697	0.464	0.217
	(0.669)	(0.813)	(0.855)	(0.356)
Book lev	-0.059	0.269	-0.000	0.364
	(-1.457)	(1.051)	(-0.012)	(1.440)
Div yld	0.003	0.060	0.042	0.076
	(0.056)	(0.965)	(1.179)	(1.077)
R&D	-0.186	0.586	0.106	-0.032
	(-0.411)	(1.003)	(0.318)	(-0.068)
Inst own percentage	0.096**	-0.152***	0.038	-0.161***
	(2.385)	(-3.055)	(1.515)	(-3.127)
Inst Herfindahl	-2.198***	1.010	-1.410**	1.852*
	(-3.022)	(0.945)	(-2.139)	(1.861)
Neg Amihud	0.377	1.020**	0.071	0.524**
	(1.422)	(2.569)	(0.546)	(2.442)
Number of proposals	0.011**	0.014**	0.003	0.010
	(2.116)	(2.144)	(0.778)	(1.508)
Proposal type FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R^2	0.220	0.326	0.119	0.342
N	889	889	889	889

Table 6. Mechanism Analysis

This table reports the Difference-in-Differences results for mechanism analysis. The dependent variable is the *Pass* dummy which equals one if a proposal received a majority pass during the meeting and zero otherwise. In the first Model, I partition the treatment group into two groups based on the pre-mandate CEO pay ratio, computed as the average CEO compensation over the three years before the pay ratio mandate (i.e., 2014-2016) scaled by the median employee compensation reported in proxy filings after the mandate (i.e., 2017 for first-reporting firms; 2018 for late reporting firms). In the second Model, I partition the treatment group into two groups based on the average counts of media articles over the three years before the mandate (i.e., 2014-2016). In the third Model, I partition the treatment group into two groups based on the actual first-reported pay ratio in 2017. Standard errors are two-way clustered by firm and proposal type. T-statistics are reported in parentheses, and the superscript asterisks ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	[1]	[2]	[3]
Treat high pre-ratio × Post	0.082**		
	(2.065)		
Treat low pre-ratio × Post	0.083		
	(1.535)		
Treat high pre-ratio	-0.015		
	(-0.598)		
Treat low pre-ratio	-0.016		
	(-0.426)		
Treat high media × Post		0.163*	
		(1.753)	
Treat low media × Post		0.136	
		(1.552)	
Treat high media		-0.067	
		(-1.066)	
Treat low media		0.018	
		(0.341)	
Treat high post-ratio × Post			0.127**
			(1.960)
Treat low post-ratio × Post			0.096**
			(2.408)
Treat high post-ratio			-0.021
			(-0.601)
Treat low post-ratio			0.009
			(0.261)
Control	Yes	Yes	Yes
Proposal type FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adj. R²	0.265	0.184	0.220
N	889	602	889

Table 7. Robustness Tests

This table reports the Difference-in-Differences results of parallel trends and alternative fixed effects. Columns 1-2 include additional interaction terms between the Treat dummy and each year in the pre-pay-ratio-disclosure window (i.e., calendar years 2014-2016), excluding 2016 as the baseline indicator. Columns 3-4 report the sample results that omit John Chevedden's proposals. Columns 5-6 present the results with the fixed effects that control for proposals submitted by the top five individuals. T-statistics are reported in parentheses, and the superscript asterisks ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	[1]	[2]	[3]	[4]	[5]	[6]
Dependent variable=	Pass	Implementation	Pass	Implementation	Pass	Implementation
Treat × 2014	-0.032	0.008				
	(-0.446)	(0.102)				
Treat × 2015	0.038	0.038				
	(0.533)	(0.586)				
Treat × 2017	0.081*	0.108***				
	(1.758)	(2.772)				
Treat	0.010	-0.033	0.028	-0.007	-0.008	(-0.958)
	(0.277)	(-0.912)	(0.670)	(-0.232)	(-0.317)	-0.058
Treat × Post			0.109**	0.096**	0.085**	0.097***
			(2.346)	(2.498)	(2.279)	(2.759)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Proposal type FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Omit John			Yes	Yes		
Top 5 individuals FE					Yes	Yes
Adj. R^2	0.216	0.118	0.236	0.150	0.229	0.125
N	889	889	600	600	889	889

Table 8. RDD Test: Effect of Governance Proposals on Profitability
This table reports the result of nonparametric local linear regressions using the optimal bandwidth following Imbens and Kalyanaraman (2012) and the triangular kernel. *Pass* is a dummy variable that equals one if a proposal receives majority votes in a meeting and zero otherwise. All regressions are controlled for year-fixed effect and standard errors are clustered at the firm level. Z-statistics are reported in parentheses, and the superscript asterisks ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	[1]	[2]	[3]	[4]
Dependent var.=	Tobin's q	ROE	ROA	OROA
Panel A: Effect on t-1				
Pass	0.449	-0.040	0.036	0.055
	(0.506)	(-0.148)	(0.741)	(1.563)
Bandwidth	22.999	10.310	12.610	8.745
Obs.	415	415	415	415
Panel B: Effect on t+1				
Pass	0.489	-0.838***	-0.127*	-0.002
	(0.599)	(-2.618)	(-1.816)	(-0.071)
Bandwidth	5.318	1.870	2.132	16.390
Obs.	415	415	415	415
Panel C: Effect on average of t+1 and t+2				
Pass	-0.014	-0.043	-0.004	-0.004
	(-0.020)	(-0.188)	(-0.153)	(-0.149)
Bandwidth	8.917	16.659	15.310	16.757
Obs.	414	414	414	414
Panel D: Effect on average of t+1, t+2, and t+3				
Pass	-0.112	-0.042	-0.005	-0.004
	(-0.140)	(-0.178)	(-0.181)	(-0.169)
Bandwidth	8.762	13.137	15.877	18.248
Obs.	413	413	413	413
Panel E: Effect on average of t+1, t+2, t+3, t+4, and t+5				
Pass	0.204	0.143	-0.009	-0.010
	(0.242)	(0.516)	(-0.305)	(-0.377)
Bandwidth	9.585	8.480	17.377	18.526
Obs.	409	411	411	410

Appendix A. Classification of Governance Proposals

Proposal Description	Topic Code
Board issues	
Board Topic - Declassify the board of directors	b1
Board Topic - Require a majority vote for the election of directors	b3
Board Topic - Provide for cumulative voting or require more director nominations than open seats	b4
Board Topic - Change board requirement (size, qualification, etc.)	b5
Compensation issues	
Compensation Topic - Submit severance agreement or a retirement plan to a shareholder vote	c1
Compensation Topic - Performance-based compensation	c2
Compensation Topic - Ratify, limit, or change the compensation plan	c3
Compensation Topic - Other issues	c4
Shareholder power issues	
Power Topic - Submit shareholder rights plan to a shareholder vote	g1
Power Topic - Increase shareholder power	g2
Power Topic - Provide for confidential voting	g3
Power Topic - Amend articles/bylaws/charter	g4
Power Topic - Others	g5
Other issues (Excluded)	
Board Topic – ESG-related issues	b7
Compensation Topic - CSR-based compensation	c5
Power Topic - ESG issues	g6

Appendix B. Data Filter for Proposal Level Sample

	Number of proposal level Obs.
ISS shareholder proposal data from 2014 to 2017	3,093
Exclude firms with reporting period between Jan 1 and June 29	-360
Exclude SRI-type proposals	-1,476
Exclude firms with missing information on controls	-322
Exclude firms that do not report CEO pay ratio after the mandate	-38
Exclude singleton observations based on proposal topic and year fixed effects	-8
Baseline sample	889 (889 governance proposals from 194 firms)

Appendix C. Variable Definition

Variable	Definition	Source
# of Proposals	The number of proposals received by a firm in the year.	ISS
Omitted rate	The number of proposals that allowed to be omitted from the "no-action-letter" in SEC divided by the total number of proposals in the year.	ISS
Pass rate	The number of passed proposals divided by the total number of proposals in the year.	ISS
Pass	The dummy variable equals one if the proposal received a majority pass.	ISS
Implementation	The dummy variable equals one if the proposal was implemented.	Proxy statement
Size	The nature logarithm of market capitalization (CSHO*PRCC_F).	Compustat
Tobin's Q	The ratio of the market value of total assets to the book value of total assets (AT). The market value of total assets is computed as the book value of total assets plus the market value of equity (CASHO*PRCC_F) minus the sum of the book value of equity (CEQ) plus deferred taxes and investment tax credit (TXDITC).	Compustat
Sales growth	The ratio of the difference between net sales (SALE) and lagged sales divided by lagged sales.	Compustat
ROA	The ratio of operating income before taxes and depreciation (OIBDP) to lagged total assets.	Compustat
Cash flow	The net cash flow from operating activities (OANCF) divided by total assets.	Compustat
Annual return	Annual averaged stock return above the industry median.	CRSP
Book lev	The ratio of the sum of total long-term debt (DLTT) plus debt in current liabilities (DLC) divided by total assets (AT).	Compustat
Div yld	The ratio of the sum of dividend payouts for ordinary and preferred equities (DVT) to the book value of ordinary equities (CEQ) and preferred equities (PSTK).	Compustat

R&D	The total research and development expense (XRD).	Compustat
Inst own percentage	The institutional ownership percentage is the ratio of total institutional ownership to total shares outstanding.	Thomson/Refinitiv 13F; Compustat
Inst Herfindahl	The institutional Herfindahl-Hirschman Index is the ownership concentration measure calculated as a Herfindahl index across all institutions.	Thomson/Refinitiv 13F
Neg Amihud	The negative Amihud is the average ratio of the absolute daily return to the daily trading volume multiplied by a negative one (i.e., higher value, greater liquidity).	CRSP

Appendix D. Examples of Proposal Implementation

This table lists examples of implemented and not implemented shareholder proposals submitted over the fiscal year ends 2014-2017. I searched SEC proxy filings and directly extracted the firm's decision on implementation in the "Firm Response" section.

A. Implementation

Firm Name	Meeting Date	Proposal Description	Firm Response
CF Industries Inc.	March 31, 2016	Require proxy access	In 2015. the Board amended our Bylaws to implement "proxy access", allowing eligible stockholders to include their own nominees for director in our proxy materials along with the Board-nominated Candidates. Subject to applicable procedural and other requirements under our Bylaws, the proxy access provisions of our Bylaws permit any stockholder or group of up to 20 stockholders who have maintained continuous qualifying ownership of 3% or more of our outstanding common stock for at least the previous three years to nominate and include m our proxy materials director nominees constituting not more than 25% of the number of the directors in office at the time of the nomination.
Alexion Pharmaceutical Inc.	April 8, 2015	Alexion's Rights Plan (Poison Pill)	We regularly analyse shareholder feedback and incorporate such feedback into our assessment of our governance practices. In March 2015, we announced that our Board decided to accelerate the expiration of Alexion's shareholder rights plan, or poison pill. After reviewing Alexion's governance profile and current practices, considering the vote results on a related non-binding shareholder proposal presented at Alexion's 2014 annual meeting of shareholders, and determining that it was in the best interests of Alexion and its shareholders, the Board accelerated the expiration of the rights plan, effective March 23, 2015.

Cognizant Technology Solutions Corp.	June 5, 2018	Eliminate Supermajority Vote Requirement	Given the outcome of the vote on the 2017 Supermajority Stockholder Proposal, the Board has determined that it is in the best interests of the Company to amend the Certificate of Incorporation and Bylaws to eliminate each of the supermajority voting requirements. Stockholder approval is required to amend the Certificate of Incorporation. The Board of Directors has approved an amendment to the Bylaws to eliminate any supermajority voting requirements, as further described in Proposal 5(a) below.
Community Health Systems Inc.	April 6, 2017	Require proxy access	First, as a result of the stockholder vote in favor of "proxy access" at the 2016 Annual Meeting of Stockholders, the Board amended the Company's Bylaws to provide a means for stockholders to nominate directors and have their nominee's names included in the Company's proxy statement. The procedures and applicable dates for "proxy access" nominees are referenced below in "How can I submit a stockholder proposal or nominate a Director for the 2018 Annual Meeting of Stockholders?"
Spectrum Pharmaceuticals	June 19,2019	Require a Majority Vote for the Election of Directors	In response to stockholder votes at our 2016 and 2017 Annual Meetings of Stockholders, on March 23, 2018, the Board unanimously approved the following measures: Amended our bylaws to implement a majority voting standard.
Texas Roadhouse	April 7,2017	Declassify the Board of Directors	After careful consider at ion and review of past votes of our shareholders on Board declassification in prior years, together with prior communications with our investors and shareholders, the Board determined that a shareholder proposal to eliminate the classification of the Board was in the best interest of the Company and its shareholders and elected to recommend that the shareholders of the Company vote to declassify the Board beginning at the 2017 annual meeting.

B. No implementation

Applied Materials, Inc.	February 18, 2015	Amend Bylaws -- Call Special Meetings	The Board took into account the time, resources and expense that would be required to develop a deliberate and measured approach to implementing the Proposal, and the concern about diverting focus from the critical ongoing work on the Business Combination. The Board also considered the outreach to stockholders that the Company would undertake on this issue to ensure that provisions implemented would be supported by, and satisfactory to, Applied stockholders, and determined that, given the pending closing of the Business Combination, engagement on this issue would not be appropriate at this time, as it might cause unwarranted confusion about the Company's intention and expectation to merge. The Board also considered the fact that following the consummation of the Business Combination, the combined company will be governed by Dutch law, which provides that one or more stockholders representing at least 10% of the issued share capital of the combined company may call a special meeting of stockholders. Based on these considerations, the Board determined that it was not appropriate to adopt responsive provisions to the Proposal at this time. However, if the Business Combination does not close, the Board, following consultation with stockholders, intends to determine and implement an appropriate response to the Proposal that would provide stockholders with the right to call a special meeting.

Nabors Industries Ltd.	April 28, 2016	Shareholder proposal to allow proxy access to shareholders who have held 3% of Company's shares continuously for 3 years	Because the Company is now a member of the Russell 3000® index, where the overwhelming majority of companies do not have a proxy access policy, and the majority of the Company's peer group does not have a proxy access policy akin to the proposed policy, no action taken to change its Proxy Access Policy, which allows proxy access to shareholders who have held 5% of Company's shares continuously for 3 years. In addition, 2 of the 7 directors nominated for election this year were initially proposed by our then-largest shareholder. The Company has enhanced its disclosure with respect to those directors in this Proxy Statement.
Omnicom Group Inc.	April 4, 2016	Require Independent Board Chairman	Based on the feedback we received from shareholders, the Board has taken very significant steps to be responsive to their concerns, including adoption of a board retirement policy described in the section entitled "Director Retirement Policy" on page 8 that will result in six of our Board members stepping down over the next two years. We believe that the changes we made sufficiently address shareholder concerns and that the implementation of the independent board Chairman shareholder proposal is not warranted.
FirstEnergy Corp.	May 15, 2018	Adopt Simple Majority Vote and proxy access	Despite a significant effort in an attempt to secure the required shareholder support, it has been unsuccessful and this is the third time in recent years your Board is attempting to secure shareholder support on the subjects of simple majority vote and proxy access, and the second time in recent years for the proposal related to a majority vote in uncontested director elections. Although these proposals were previously not approved by our shareholders, your Board considered the results of the shareholder vote, as well as shareholder feedback on these matters and continues to support their adoption. As noted in each proposal, your Board cannot

unilaterally adopt the proposed amendments because a shareholder vote is necessary under our governing documents.