

Proxy Advisory Firms and Corporate Shareholder Engagement

Finance Working Paper N° 819/2022

March 2022

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We thank Holger Mueller (editor), two anonymous referees, Nadya Malenko (discussant), Brandon Gipper (discussant), Wendi Du (discussant), Hari Sankaran (discussant), Suman Banerjee (discussant), Felipe Cabezon (discussant), Yonca Ertimur, Stu Gillan, Peter Haslag, Charles Lee, Kosmas Papadopoulos, Sugata Roychowdhury, Matthew Serfling, Matt Souther?

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Abstract

We study how Institutional Shareholder Services (ISS) affects firms' engagement with shareholders. Our analyses exploit a quasi-natural experiment using Say-On-Pay voting outcomes near a threshold that triggers a review of engagement activities by ISS. Firms receiving ISS treatment exhibit swift and substantive increases in extensive and intensive margins of engagement, especially when their boards have higher agency conflicts and directors are more likely to lose voting support from ISS. Increases in engagement persist over time, which shareholders appear to value. Collectively, we shed light on an unexplored channel through which ISS positively influences firms' governance and information environments.

Keywords: Proxy advisors; ISS; shareholder engagement; executive compensation; Say-On-Pay.

JEL Classification: D72, D82, G34, G38, M12

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We study how Institutional Shareholder Services (ISS) affects firms' engagement with shareholders. Our analyses exploit a quasi-natural experiment using Say-On-Pay voting outcomes near a threshold that triggers a review of engagement activities by ISS. Firms receiving ISS treatment exhibit swift and substantive increases in extensive and intensive margins of engagement, especially when their boards have higher agency conflicts and directors are more likely to lose voting support from ISS. Increases in engagement persist over time, which shareholders appear to value. Collectively, we shed light on an unexplored channel through which ISS positively influences firms' governance and information environments.

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1. Introduction

Proxy advisors (PAs) conduct research and provide recommendations to investors that have a significant impact on voting outcomes (Malenko and Shen, 2016). Despite their pivotal role in shaping the information flows that facilitate shareholder voting decisions, the impact of PAs on firm governance and information quality is a topic of debate. Some research suggests that higher-quality PA recommendations can be valuable (Malenko and Malenko, 2019; Albuquerque et al., 2020), while others point to their biased nature, role in standardization of pay plans, reductions in independent information acquisition, and decreases in overall firm value (Larcker et al., 2015; Cabezon, 2022; Malenko et al., 2023). In line with these concerns, market participants, legislators, and regulators have recently scrutinized the influence of ISS—the largest PA firm—on firms’ governance policies and voting outcomes (Li, 2018; SEC, 2020; U.S. Congress, 2023).

In this paper, we propose an unexplored channel by which ISS likely influences firms’ governance and information environments: *shareholder engagement*. ISS describes engagement as direct discussions between firms and investors on issues such as executive compensation and corporate governance.¹ If firms receive what ISS deems to be a low Say-on-Pay (SOP) vote, it advises managers to meet with shareholders to better understand their concerns. If managers do not demonstrate a “robust engagement response,” ISS will recommend voting against the firm’s next SOP vote and potentially members of the board.

We posit that ISS can impact corporate governance by encouraging firms to engage with their investors. Such engagement can promote a two-way flow of information, enabling managers and directors to better understand investors’ nuanced views than they would through the coarse one-way signal of voting outcomes. If true, then rather than simply imposing its own standardized guidelines, ISS facilitates richer information exchanges between firms and shareholders and elevates shareholders’ influence on corporate governance and firm policies.

Because public companies are not legally obligated to follow the policies of PAs, it is unclear whether we will find evidence of ISS-induced engagement. However, institutional theory argues that private decentralized organizations like PAs can influence managerial behavior through “economic sanctions,” such as influential voting recommendations (Ingram and Silverman, 2002; Delmas and Toffel, 2008). Moreover, surveys of corporate directors and institutional investors suggest that PAs play an important role in facilitating firm and investor interactions (McCahery et al., 2016; Hayne and Vance, 2019).

To study shareholder engagement, we develop novel metrics based on firms’ voluntary disclosures in proxy statements, where ISS encourages firms to describe their response to a low vote. These metrics

¹ See ISS, Shareholder Engagement: Maximizing the Shareholder Relationship, 2013, https://www.issgovernance.com/file/publications/MaximizingTheShareholderRelationshipVol_13.3.pdf.

reflect the presence (i.e., extensive margins) and intensity (i.e., intensive margins) of discussions using a count of engagement keywords, and whether shareholder discussions reference the previous SOP vote. Additionally, we gauge whether firms summarize shareholder concerns and the board's response in tables, and the proportion of shareholders contacted or spoken with. These measures provide a wide assessment of the breadth and depth of a firm's engagement practices.

We begin our analysis by studying the time trends and determinants of engagement across more than 4,000 firms and over 20,000 SOP votes in the ISS database from 2011 to 2019. In addition to understanding whether PAs, including ISS, play a role in influencing engagement over time, this exploration begins to address the literature gap on the drivers of engagement, which likely stems from the difficulty of observing private conversations. While just 5.5% of firms report shareholder engagement in 2011, it rises to 36.3% by 2019, with an average of 24% during our sample period. This trend coincides with increasing calls for engagement from PAs, shareholders, and regulators.²

In our regressions of the determinants of engagement, we find that firm size, leverage, institutional ownership, analyst coverage, and CEO pay positively correlate with the extensive and intensive margins of engagement. Profitability, market-to-book values, and also certain governance characteristics (classified boards, dual class shares, and compensation committee tenure) are negatively related to engagement. Importantly, we find that SOP voting dissent as well as ISS issuing an "against" recommendation for an SOP proposal both precede higher levels of engagement. Given the effect of ISS voting recommendations, these findings suggest that ISS could strongly influence firms' shareholder engagement policies.

To determine if ISS's influence on engagement is causal, we exploit ISS's policy mandating a specific response from firms receiving less than 70% SOP voting support, using this threshold as a discontinuity for identification purposes. Should a firm's SOP vote fall below 70%, ISS formally scrutinizes its disclosed shareholder engagement to decide on its voting guidance before the next annual meeting. ISS's policies specify what disclosures are needed for firms to show a robust engagement response to a low vote, which dictates ISS's voting recommendations and its enhanced scrutiny. Failure to show sufficient response could lead ISS to advise against the SOP vote, compensation committee members, or even the entire board.

Our identifying assumption is that firms cannot precisely manipulate the SOP votes around the 70% threshold. This assumption is supported by a smooth distribution at the ISS cutoff, confirmed through graphical analyses of SOP plots and a formal robust marginal density test (McCrary, 2008). We also

² See Fairfax (2013) for discussions on a rising demand for engagement. The SEC has also called for greater engagement. For example, SEC Chair Mary Schapiro implored directors to have, "clear conversations with investors with how a company is governed." See <http://www.sec.gov/news/speech/2010/spch101910mls.htm>. Similarly, SEC Chair Jay Clayton noted, "Shareholder engagement is a hallmark of our public capital markets." See <https://www.sec.gov/news/public-statement/statement-announcing-sec-staff-roundtable-proxy-process>.

examine prior engagement, SOP voting, firm characteristics, CEO pay, and governance before treatment and find sparse statistical differences in these properties between firms just below 70% SOP support (treatment) and those just above (control). These results suggest treatment around this threshold is as good as random, enabling us to attribute subsequent changes in engagement to ISS's influence.

Utilizing linear regression, difference-in-differences (d-i-d), and regression discontinuity (RD) methodologies, we find that ISS treatment leads to a significant increase in the extensive and intensive margins of shareholder engagement in the year after a low SOP vote. The linear regression tests reveal ISS-treated firms are 31% more likely to disclose engagement than control firms. Additionally, treated firms show greater breadth of engagement by contacting and speaking with investors owning a larger number of shares. They also elaborate more on their engagement efforts by offering more comprehensive details in their proxy statements.

These results support the theory that private organizations like ISS can motivate firms to strengthen shareholder engagement using the threat of negative voting recommendations. To further substantiate the causal impact of ISS on engagement, we conduct several cross-sectional analyses. If ISS plays an important role in enhancing engagement and provides what market participants view as a credible threat, we anticipate a noticeably larger engagement response by directors that are at greater risk of economic sanctions. Consistent with this notion, we observe larger engagement increases among treated firms with lower prior voting support for directors as a whole and compensation committee members in particular.

To further test the credibility of ISS's threat, we designate firms as more- or less-responsive to the SOP vote based on whether they disclose engagement efforts in their subsequent proxy. We find that less-responsive treated firms have a greater likelihood of receiving an "against" recommendation by ISS for the entire board, and especially members of the compensation committee. These findings help validate ISS's threat against directors who do not demonstrate a robust response, thereby supporting the mechanism of ISS shaping firms' engagement decisions through economic sanctions, which increases the confidence in our causal inferences.

A natural question arises regarding the sustainability of engagement efforts after treatment. On the one hand, firms could reduce their engagement activities after satisfying ISS's requirements. This finding would be intuitive as elevated ISS oversight ends after demonstrating a robust engagement response, and failure to engage does not result in SEC penalties since SOP votes are non-binding. On the other hand, treated firms might demonstrate a commitment to engagement to avoid further negative attention from ISS. Moreover, engagement likely involves a one-time cost for establishing engagement protocols and identifying shareholders to engage with. Firms could reap the benefits of sustained engagement with low marginal costs beyond the first year, potentially leading to greater goodwill among shareholders, improved efficiency of future engagement efforts, and a convergence of beliefs between management and

shareholders (Kakhbod et al., 2023). Consistent with the latter thesis, we find that ISS-treated firms show enduring increases in shareholder engagement in the years after, but not before, the low SOP vote.

Next, using an event study around the SOP vote disclosure, we investigate whether ISS-facilitated engagement benefits shareholders. Our findings reveal a positive stock price response when firms both fall just below the 70% treatment threshold and for which ISS had issued an ‘against’ SOP vote recommendation. This stock price response is economically meaningful, with positive abnormal returns between 2% and 3%. These findings suggest that shareholders anticipate that the benefits of strengthened engagement will accrue to investors when the threat of ISS monitoring and economic sanctions is strongest.

Given that markets respond favorably to anticipated engagement, and firms encouraged by ISS to start engaging continue to do so, our final set of tests explore why treated firms did not engage before ISS intervention. In particular, we examine whether the presence of agency conflicts on the board of directors plays a role in engagement policies. We anticipate and find that boards with properties that are typically associated with higher agency conflicts, such as long-tenured compensation committee members and classified boards, increase engagement more after ISS treatment. This finding suggests that ISS can play a substitute governance role for such firms.

Our study faces some limitations. A primary concern relates to our reliance on voluntary disclosures for measuring shareholder engagement, which may not reflect the actual level of engagement. It is comforting, however, that the legal liability of firms for their proxy disclosures to the SEC reduces the likelihood of false or misleading reports.³ Moreover, while not mandated by the SEC, firms have incentives to disclose engagement activities that are perceived by shareholders and PAs as a gauge of board responsiveness. Another important caveat is that while increased engagement facilitated by ISS appears to be beneficial for firms based on the market response, our study is not designed to determine the optimal level of engagement for the firm and its investors.

Our study contributes to several strands of research. Our primary contribution is to the literature on the economic role of PAs (e.g., Alexander et al., 2010; Ertimur et al., 2013; Malenko and Shen, 2016; Shu, 2024), particularly ISS, in shaping corporate engagement policies. We show that ISS’s policies promote two-way communication between firms and shareholders after low SOP votes. This greater and sustained engagement likely allows for a more effective exchange of shareholder concerns and managerial strategies beyond simple one-way coarse communication through voting. Our event study results suggest that shareholders value ISS’s role in encouraging this dialogue.

Our results on ISS’s economic sanctions on directors, and their engagement policies in response,

³ Directors have a legal obligation to ensure proxy statements are truthful and comprehensive, as mandated by Section 14(a) of the Securities Exchange Act of 1934 and Rule 14a-9. This rule prohibits false or misleading information in proxy statements or omitting material information needed for informed shareholder decisions. See, e.g., Kidd (2023).

adds to the literature on labor market consequences for directors (e.g., Fama and Jensen, 1983; Srinivasan, 2005; Fich and Shivdasani, 2007; Del Guercio et al., 2008). We show that ISS can incentivize directors to promote engagement policies to preserve their board position and reputation as effective monitors.

Our findings also offer novel insights into ISS's impact on capital markets, challenging the view that PAs simply impose one-size-fits-all pay policies on firms (Larker et al., 2015; Jochem et al., 2021; Cabezon, 2022). In our setting, ISS encourages firms to engage with investors and consider their perspectives based on the unique circumstances of each firm and its investor base. Thus, our results expand on our understanding of how ISS can serve an important governance role (Malenko and Malenko, 2019; Albuquerque et al., 2020) and complement survey evidence that PAs can improve shareholder engagement activities (McCahery et al., 2016; Hayne and Vance, 2019).

These results could also inform policy debates, potentially alleviating concerns among regulators and lawmakers about ISS's significant market power and its effects on corporate governance quality (Financial Economists Roundtable, 2022; U.S. Congress, 2023). Although our findings cannot answer whether ISS creates or destroys value on net, we show that by encouraging engagement, ISS enables investor preferences to be heard and potentially incorporated in firm policies—which could potentially lead to better governance decisions for individual firms. Thus, our research could provide valuable insights for contemporaneous discussions on regulating the scope of ISS's voting advisory services (e.g., Li, 2018).

Finally, our paper provides an important contribution to the nascent strand of literature examining engagement between firms and their investors. We introduce a novel disclosure-based approach to provide the first measures of different dimensions of shareholder engagement by firms and document various factors that determine engagement decisions. We complement the findings by Kakhbod et al. (2023), who provide a theory of engagement that, when shareholders and management have different beliefs about corporate policies, the efficacy of shareholder engagement increases when other shareholders also engage. We extend this literature by showing that firms under elevated ISS scrutiny engage more with their investors by strengthening the breadth and depth of engagement.

2. Institutional Background and Hypotheses

2.1 Background Information and Conceptual Framework

PAs play a pivotal role in corporate governance by providing institutional investors with paid guidance on proxy voting matters, based on comprehensive research, analysis, and investor consultations (GAO, 2016). They synthesize a large amount of information to make informed recommendations, which can help institutional investors make efficient voting decisions across their diverse portfolios (Ertimur et al., 2013; Malenko and Malenko, 2019).

The demand for PA services has increased in recent years due to shareholders' needs for informed voting decisions, increased institutional ownership, and regulatory mandates like SOP. The PA advisory market is dominated by ISS and Glass Lewis (GL), which together control more than 90% of the U.S. market (Copland et al., 2018; Shu, 2024). Research confirms their sizeable influence on voting outcomes (Choi et al., 2009; Ertimur et al., 2013; Larcker et al., 2015; Malenko and Shen, 2016). Specifically, an ISS “against” recommendation for a firm’s SOP can decrease shareholder support by 25% (Malenko and Shen, 2016), while a negative GL recommendation can lead to a 13% decline (Ertimur et al., 2013).⁴

The influence of PAs, however, has drawn regulatory scrutiny and sparked debate over their role in governance, information flows, and firm value (Alexander et al., 2010; Ertimur et al., 2013; Malenko and Shen, 2016; Larcker et al. 2013; 2015; Shu, 2024). While some studies highlight the negative effects, including biased advice, generic policies, crowding out information acquisition, and diminished shareholder wealth (e.g., Iliev and Lowry 2015; Larcker et al., 2015; Li, 2018; Malenko and Malenko, 2019; Levit and Tsoy, 2022; Cabezon, 2022; Malenko et al., 2023), others suggest high-quality PA recommendations can be beneficial (Malenko and Malenko, 2019), particularly during less busy times when more resources are available (Albuquerque et al., 2020).

Panel A of Fig. 1 depicts the assumed traditional information flow under PA voting guidance. The conventional framework for PA influence on firm policies is by selling voting recommendations and advice to institutional investors, helping them make informed voting decisions on proxy ballot items. However, this model suggests a simplistic and potentially incomplete information exchange between shareholders and firms. Additionally, challenges in aggregating information and preferences could curtail the effectiveness of this exchange (Levit et al., 2024).

[Insert Figure 1 here]

We propose shareholder engagement as an alternative mechanism through which PAs can affect the flow of information between firms and investors. Such engagement could promote continuous, two-way communication, enabling firms to better understand shareholder preferences for corporate strategies, beyond simple one-way voting signals. Proactive engagement with shareholders before voting could allow firms to incorporate feedback into decision-making and potentially modify the subsequent voting proposal to sway voting outcomes (e.g., adjust executive compensation for SOP votes).⁵

Our conceptual model suggests that PAs could enhance the integration of detailed shareholder feedback into corporate policies, especially following a low SOP vote. This perspective predicts that PAs

⁴ Some argue that PA influence may be due to “robovoting” or the automatic following of recommendations (Malenko and Shen, 2016; Shu, 2024). Others note that investors may consider PA advice, but do not always follow their recommendations (e.g., Iliev and Lowry, 2015; McCahery et al., 2016).

⁵ See Gerling et al. (2005) and Malenko (2014) for discussions of pre-vote communication by boards or committees.

have a significant impact on governance and the dynamics of information flows in capital markets, thereby challenging traditional views. Panel B of Fig. 1 illustrates our conceptual approach to understanding engagement-driven information exchange under PA guidance.⁶ We explore this theory by examining the engagement policies of ISS, the largest PA firm.

2.2 ISS Policy on Shareholder Engagement

ISS's policies state that, if support for its SOP proposal falls below 70% of votes cast, it will evaluate a firm's responsiveness through engagement. Though ISS does not directly facilitate discussions between firms and shareholders, it requires managers and/or directors to proactively reach out to shareholders and then clearly disclose both quantitative and qualitative aspects about this engagement and subsequent actions taken in response to these concerns in the next annual proxy statement.⁷

ISS also expects firms to disclose the number and share percentage of shareholders they engage with, specific shareholder concerns that led to SOP dissent, concrete actions taken to address these concerns, or explain any reasons for not acting. Additionally, the firm should disclose its plans to prevent similar issues from occurring in the future.

ISS stipulates that if a firm demonstrates a "sufficiently robust response" to shareholder concerns in its proxy statement following a low vote, it will not require future engagement disclosures, provided that future SOP votes achieve at least 70% support. Failure to adequately respond to a low vote will lead ISS to advise against the next SOP proposal and the incumbent compensation committee members. A "moderate" response will result in ISS recommending against only the next SOP proposal, sparing compensation committee members from economic sanctions. Repeated instances of inadequate responses will prompt ISS to recommend voting against the entire board due to systemic issues with board stewardship and oversight.⁸

2.3 Hypotheses Development: Level and Persistence of Shareholder Engagement

Although ISS lacks legal authority to mandate firms' engagement practices, our study on its influence over corporate behavior draws from the tenets of institutional theory within organizational studies. This theory examines how institutions, including private decentralized entities like ISS, can shape the actions of organizations (Ingram and Clay, 2000; Ingram and Silverman, 2002; Delmas and Toffel, 2008). Despite lacking formal enforcement capabilities, entities like ISS can still impact managerial

⁶ We thank Nadya Malenko for the insightful depiction and visual representation of our thesis in Fig. 1.

⁷ See ISS, U.S. Compensation Policies, Dec. 20, 2018, <https://www.issgovernance.com/file/policy/2019/americas/US-Compensation-Policies-FAQ.pdf>. In conversations with ISS, they note that their engagement policy was established in 2011 after surveying public firms and institutional investors about the level of SOP opposition that should require an explicit response. The survey results are summarized in Fig. 3. We provide additional information in Tables IA-1 and IA-2 of the Internet Appendix.

⁸ We verify our interpretation of this policy with ISS and conduct cross-sectional analyses to test the credibility of ISS's policy in our sample (see H2b in Section 2.3).

practices through the potential for economic penalties for failing to comply with its guidelines (Ellickson, 1991; Ingram and Silverman, 2002; Terlaak, 2007).

ISS offers advisory services to institutional investors by informing their votes on shareholder proxy matters in publicly traded companies. While these firms have no legal obligation to follow ISS policies or alter engagement or disclosure practices after receiving less than 70% support in SOP votes, ISS can exert pressure by threatening to recommend against future SOP or director votes for firms that do not demonstrate a robust engagement response in their next proxy filing. Considering ISS's substantial influence on voting outcomes (Malenko and Shen, 2016), we expect the prospect of a negative recommendation will motivate firms to increase shareholder engagement and disclose the related information in the subsequent proxy statement following a low SOP vote. This leads to our first hypothesis:

***H1:** Firms with SOP voting support slightly below 70% will follow ISS requirements by increasing shareholder engagement in the following year.*

ISS's guidelines recommend voting against future SOP proposals as well as against the re-election of compensation committee members and the entire board if firms fail to adequately address poor outcomes in SOP votes. Prior research suggests that labor market incentives can motivate directors to perform well in their roles. Underperforming directors are more likely to face career consequences, including losing current directorships and not obtaining new ones (e.g., Fama and Jensen, 1983; Srinivasan, 2005; Fich and Shivdasani, 2007; Del Guercio et al., 2008; Cai et al., 2009). Given the potential career impact of ISS's economic sanctions, it is plausible that boards at greater risk of such penalties would be more proactive in engaging with shareholders and ensuring these efforts are disclosed in their subsequent proxy statements. To examine these arguments, we propose the following hypotheses.

First, we predict that firms with compensation committee and board members who have already experienced low votes will be more motivated to enhance their engagement efforts due to concerns over ISS's economic repercussions. Formally, we state following hypothesis:

***H2a:** Firms with directors on the compensation committee or the board with low prior SOP voting support will have higher shareholder engagement after ISS intervention.*

Second, should the threat by ISS to impose economic sanctions on unresponsive firms be credible, we expect directors of firms that do not demonstrate a satisfactory engagement response following a low SOP vote will be more likely to receive "against" recommendations from ISS for their re-election. This anticipation of an adverse recommendation on their future candidacy could motivate boards to proactively adhere to ISS's guidelines. As a result, we predict an increase in negative recommendations for firms that fail to meet ISS's policy expectations. Thus, we articulate the next hypothesis as follows:

***H2b:** Directors, especially those serving on the compensation committee, of firms subjected to ISS intervention and displaying lower levels of engagement are more likely to face 'against' recommendations from ISS for their re-election in the following year.*

If a firm demonstrates robust shareholder engagement following a low vote and achieves a vote above 70% in the next year, ISS will no longer subject it to increased scrutiny. However, firms that are relieved of intense scrutiny may choose to continue their shareholder engagement activities in the longer term. Prior to receiving a low SOP vote, firms may have been reluctant to engage with shareholders, believing the costs of engagement to exceed the benefits. These costs could include the initial fixed setup expenses for creating an engagement infrastructure, such as defining engagement protocols for which firm personnel will engage, identifying the shareholders to interact with, developing the necessary technology for communication, and organizing legal guidelines.

After the initial year of ISS-induced engagement, and once the engagement infrastructure is in place, the marginal benefits—such as improved information flow quality, and the development of goodwill and supportive shareholder relationships (Kakhbod et al., 2023)—may outweigh the marginal costs of maintaining this engagement infrastructure. Further, the initial interactions might more closely align the perspectives of management and shareholders (Crawford and Sobel, 1982), improving the effectiveness of future engagements, which are more likely to be initiated by management on a voluntary basis. Other factors for sustaining engagement could be that firms might also aim to maintain their shareholder support above the 70% threshold to avoid negative scrutiny from ISS or shareholders in the future. Additionally, directors may want to maintain their reputation as effective monitors and could be motivated to show their commitment to engagement and transparency to bolster their re-election prospects. With these factors in mind, we propose the following hypothesis:

H3: ISS-induced increases in shareholder engagement following SOP voting support just below 70% will not be short-lived.

If the evidence supports H3, it would be consistent with findings from surveys conducted by Hayne and Vance (2019). Their research finds that both directors and compensation committees believe that PAs can enhance firm communication by “*providing an impetus for firms to engage with institutional investors.*”

Several forces, however, could obscure our ability to find evidence supporting H1, H2, or H3. First, since advisory votes on executive compensation are non-binding, firms do not face SEC penalties for low approval rates of their executive pay policies. Second, firms with just over 70% approval may react in a similar manner to those with slightly less than 70% approval, as both are within the lowest quintile for support of their compensation practices.⁹ Third, firms slightly above the 70% threshold might anticipate falling below the threshold in future SOP votes and could thus increase engagement with shareholders to avoid negative attention from ISS. Fourth, receiving slightly less than 70% approval still has the majority

⁹ During the 2011-2019 period, firms received an average of 91% support for SOP and fewer than 2% of these votes failed to receive a majority support. Therefore, even without ISS’s policy, firms on both sides of the 70% SOP support threshold may try to increase shareholder engagement and show that they are responsive to investor concerns.

of shareholders backing its executive pay practices, potentially leading firms to not increase their engagement efforts unless SOP support falls below 50%. Lastly, the perceived costs of increasing engagement might deter managers and/or directors from increasing their engagement levels.

It is also possible that evidence might support H1 and H2, but not H3. This scenario could take place if firms increase their interactions with shareholders following a poor SOP vote outcome merely to align with ISS guidelines. After meeting ISS's guidelines for a robust engagement response, the firm might consider the compensation issue resolved and return to its previous level of shareholder engagement.

2.4 Hypotheses Development: Shareholder Reactions to ISS Treatment

We explore whether ISS-induced engagement is beneficial through an event study centered on the announcement of SOP results. Forced intervention by ISS may result in wasteful use of managerial time and resources, along with potentially value-diminishing policy adjustments (Larcker et al., 2015). Such a scenario could result in negative announcement returns for treated firms. It is also possible that firms meet with shareholders, but investors expect any changes to compensation or governance policies to be immaterial. In this scenario, we might not observe an announcement return that is significantly different from zero. Another possible outcome is that shareholders expect ISS's policies will foster greater communication between managers and shareholders that generate value for the firm. In this case, we might observe positive and significant returns for treated firms. Given the competing forces, we state the following hypothesis in the null form:

H4a: *Treated firms will not experience significant returns around the SOP vote announcement.*

It is possible that a significant shareholder reaction might only occur when the looming threat of ISS enforcement is the strongest. In this scenario, we could observe positive stock returns when a firm is both treated *and* previously received an “against” SOP recommendation from ISS, indicating a heightened risk of economic sanctions against board members. Thus, as an extension, we test this hypothesis:

H4b: *Treated firms will experience positive returns when they have already received ‘against’ recommendations from ISS.*

Evidence supporting H1 through H4 would strengthen our argument that ISS plays a crucial role in capital markets by promoting better shareholder engagement, enabling ongoing and bidirectional information exchange between firms and investors. Such findings could also attenuate concerns that ISS's policies lead to a one-size-fits-all approach to governance and compensation. Instead, evidence in support of H1 to H4 would be consistent with the notion that ISS motivates managers and directors to interact with shareholders and address diverse issues unique to each firm.

3. Sample and Engagement Measures

3.1 Sample Selection

We construct our sample by downloading all SOP voting outcomes from the ISS Voting Analytics database over calendar years 2011 to 2019. From this sample, 20,610 firm-years for 4,075 unique firms are matched with proxy statement information on the SEC's website. We use this sample for two types of analysis. For the first analysis, aimed at identifying engagement determinants, we include all 20,610 firm years in which a firm discloses SOP voting results.

For the second analysis, we focus on a subsample of 426 firms that, for the first time during our sample period, disclose an SOP vote within the narrow $\pm 2.5\%$ range around the 70% support level.¹⁰ We define *SOP voting support* following the ISS definition of votes for the SOP proposal divided by the votes for and against SOP. Abstention votes are not included in the ISS definition; thus, we do not include them in our definition of voting support. The selection criteria for the second analysis allows for clean testing of our hypotheses. To ensure the completeness of our sample, we cross-verify our dataset against a file provided directly by ISS that lists all firms with SOP votes under 70%.

We merge these data with the Center for Research in Security Prices (CRSP) and Compustat databases and exclude observations with missing stock price or accounting information used as controls. Our sample for this second analysis contains 209 firms with votes just below the 70% threshold (treated firms) and 217 firms just above (control firms). The sample is approximately equally distributed across our sample period. We define *ISS treatment* as an indicator variable which equals 1 for firms with SOP voting support between 67.50% and 69.99%, and 0 for those with support between 70.00% and 72.50%. Appendix A provides a timeline of ISS treatment and subsequent changes in shareholder engagement, pay disclosure, and the event study, all of which we define below.

3.2 Measures of Shareholder Engagement

3.2.1 Extensive and Intensive Margins of Engagement

Our shareholder engagement analysis relies primarily on textual analysis of proxy statements, where ISS encourages firms to voluntarily disclose engagement activities so they can monitor the response. We provide examples of engagement disclosure in Appendix B. To construct these measures, we develop a Python script to extract text from the proxy statement. Our script then flags engagement keywords (*engage, feedback, conversation*) and their variants within a 100-character range of shareholder keywords (*shareholder, stockholder*) and their variants. For the subsample of firms in the $\pm 2.5\%$ range around the

¹⁰ In our RD analyses, we verify our results are robust to wider bandwidths around the 70% threshold.

70% SOP voting support, we hand check the proxy statements for accuracy, but our inferences are unchanged if we rely solely on the script.¹¹

From this keyword identification process, we generate two variables to capture the extensive and intensive margins of shareholder engagement during our nine-year sample period. For our extensive measure, *engagement indicator* equals 1 if the firm mentions any engagement keyword near a shareholder keyword in the proxy statement, and else 0. This measure captures the presence of engagement following the prior shareholder meeting. For our intensive measure, *engagement count* is the number of engagement keywords near shareholder keywords within the proxy statement. We assume that more engagement discussions in the proxy reflects greater engagement intensity.

[Insert Table 1 and Figure 2 here]

Table 1 and Fig. 2 display time trends in shareholder engagement for the full sample. We find that at least one mention of shareholder engagement was disclosed for 5.7% of firms in 2011, rising to 16.0% in 2012, and monotonically increasing to 37.0% in 2019. The intensity of engagement also grows over time, starting at an average of 0.18 engagement words per firm in 2011 and increasing to 1.26 by 2019. During the sample period, 23.4% of firms in the ISS database disclose the presence of shareholder engagement, averaging 0.66 engagement words. When engagement occurs, firms provide an average of 2.62 engagement words in their annual proxy during the sample period (untabulated).

3.2.2 Depth and Breadth of Engagement

To capture engagement depth, we hand collect two points of information from the proxy statement in the year after the low SOP vote (year $t+1$). Some firms note that their engagement efforts are a direct response to a low SOP vote in the prior year. Thus, we create the variable, *engagement references SOP*, which equals 1 if the proxy statement links the firm's engagement efforts to the prior SOP vote, and else 0. As shown in Appendix B, firms sometimes provide tables that follow the format of "what we heard" and "our response" to investor concerns that led to voting dissent. A table highlighting shareholder concerns and the firm's responses could demonstrate that the firm takes engagement seriously, potentially boost investor confidence and reduce information processing costs.¹² Thus, we create a variable, *engagement table*, which equals 1 if the firm includes a summary table of its engagement activity, and otherwise 0.

Some firms highlight the extent of shareholder engagement based on the holdings of investors they contact or speak with. Thus, to assess engagement breadth, we measure 1) the percentage of shares owned

¹¹ Firms sometimes provide engagement measures in images that cannot be scraped via a Python code. To ensure a greater level of accuracy, we hand check engagement discussions for the sample of 426 firms near the 70% threshold. Results using only the Python scrape are reported in Table IA-3 of the Internet Appendix.

¹² Dong et al. (2016) find the SEC's adoption of XBRL, which organizes financial statement information, lowers the cost of acquiring and processing information for investors. Anecdotal, we observe that shareholder feedback and firm actions were clearer when provided in summary tables rather than in narrative text within the proxy statement.

by investors contacted after a low SOP vote (*shareholders contacted*); and 2) the percentage of shares held by investors who agreed to speak with the firm (*shareholders spoken with*). Both variables offer precise insight into the firm’s outreach efforts and enhance the credibility of our textual-based engagement proxies. Not all firms disclose these data. For those that do not and have an *engagement indicator* of 0, we set both *shareholders contacted* and *shareholders spoken with* to 0. If a firm has an *engagement indicator* of 1 but lacks disclosure of *shareholders contacted* or *shareholders spoken with*, we classify these values as missing. Table IA-4 in the Internet Appendix reveals that our engagement measures are highly, but not perfectly, correlated. Thus, measuring various aspects of shareholder engagement helps us capture firms’ actions more comprehensively.

Since the measures of the depth and breadth of engagement must be hand collected, we randomly select 900 proxy statements uniformly across the sample period. Table 1 shows an increase in firms referencing the prior year’s SOP vote, increasing from 1% in 2011 to 22% in 2019. However, there was little change in the percentage of *shareholders contacted* or *shareholders spoken with* during this period. Engaging firms contact and converse with holders of approximately 52% and 45% of shares outstanding, respectively, when these metrics are reported. Engagement tables are rare in the overall sample, with only 1.4% presenting these details. However, as shown in Table 5 below, 19% of the firms just below the 70% SOP threshold provide engagement tables, indicating this practice is more common after lower SOP voting support.

4. Determinants of Engagement

4.1 Potential Determinants

This section explores factors that might influence shareholder engagement using the full sample of 20,610 firm years. Given that our study introduces novel engagement measures, the goal of this exercise is to lay the groundwork for understanding the dynamics of shareholder engagement and its association with firm attributes. Although our empirical framework cannot exogenously identify all determinants, this analysis offers valuable insights that can help validate our engagement measures and bolster our analysis of proxy advisors’ impact on shareholder engagement. Additionally, it provides novel descriptive evidence on a trend that has grown significantly in capital markets, as highlighted in Table 1 and Fig. 2.

In choosing the determinants to analyze, we first look to factors identified in prior studies of SOP voting (e.g., Malenko and Shen, 2016). For example, we examine how engagement relates to the firm’s SOP voting outcomes and recommendations from PAs. Using ISS Voting Analytics data, we generate the variable, *ISS ‘against’ SOP*, which equals 1 if ISS recommends voting against SOP, and else 0. We follow Shu (2024) in obtaining GL data for a subsample of 20% of firm years using a Freedom of Information Act request from the North Carolina Retirement System. We generate a variable, *GL ‘against’ SOP*, which

equals 1 if GL recommends voting against SOP and else 0. We anticipate that firms with negative PA recommendations and higher SOP voting dissent will engage more with investors in the subsequent year.

We expect that firms with more institutional ownership and analyst following will have stronger incentives to engage with shareholders due to higher demand for firm information (Boone and White, 2015). We use IBES Academic data and define $Ln(analysts)$ as the log transformed value of one plus the number of analysts providing earnings per share forecasts during the four quarters prior to the annual meeting. Data on institutional ownership are from SEC 13-F filings in the Thomson Reuters Institutional Holdings database. We define *total institutional ownership (IO)* as the total shares held by these institutions divided by shares outstanding from CRSP. The type of institutional investors (i.e., passive versus active) might impact engagement (Kakhbod et al., 2023). Therefore, we separate the proportion of IO into different types of institutional investors (*dedicated*, *transient*, or *quasi-indexer*) based on portfolio turnover, diversification, and investment horizons as described in Bushee (1998).

Our determinants analysis also includes other factors that might influence shareholder engagement tendencies. We expect that firm characteristics such as *size*, *market-to-book*, *return on assets*, *leverage*, *sales growth*, *abnormal returns*, *stock return volatility*, and *operating loss* might affect a firm's propensity to engage with shareholders about components of executive compensation. We merge these measures using data from CRSP and Compustat and define all variables in Appendix C.

The SEC requires most firms to provide a section in their annual proxy statement called the Compensation Disclosure & Analysis (CD&A), that details information about executive pay, including the goals, design, and reasoning behind the pay program, and the use of peer benchmarking. The SEC allows small firms that meet the definition of a Smaller Reporting Company (SRC) to forego detailed disclosures about executive pay, but they must still hold an SOP vote. We label these firms as *CD&A exempt* using an indicator variable if it had a public float less than \$75 million before September 10, 2018, or less than \$250 million after that date (SEC, 2018). We manually check annual SEC Form 10-Ks and identify 33 sample firms as SRCs. The expected impact of not providing a CD&A on engagement is unclear. While the absence of a CD&A could increase engagement efforts to clarify compensation policies—as Balsam et al. (2016) link CD&A prominence to SOP voting results—it might also result in reduced engagement due to the exemption from CD&A requirements.

Firms with higher CEO pay might engage more with shareholders to explain the components of executive pay. We partition pay levels into *CEO equity pay* and *CEO non-equity pay* because shareholders might be more concerned about how CEOs are compensated, rather than the overall level of pay.

Firms with stronger board oversight and governance of executive pay may engage more with shareholders. To proxy for oversight and governance, we follow studies (e.g., Knyazeva et al., 2013) in measuring *board independence*, *classified boards*, and *dual class shares* for firms in the ISS Governance

database. Since US exchanges require almost all firms to have a fully independent compensation committee, we measure pay governance using the average *compensation committee tenure*, which prior work links to higher pay (Vafeas, 2003). Finally, we assess whether *CEO turnover*—which is known to influence pay changes (Denis et al., 2020)—in the prior year alters a firm’s engagement policies.

4.2 Determinants Results

We examine the determinants of shareholder engagement via two types of analyses. The first is a univariate analysis of the relation between the extensive margins of engagement and each individual firm or board characteristic. The purpose of this exercise is to see how each factor relates to engagement in isolation. In our second analysis, we examine both the extensive and intensive margins of engagement in a multivariate setting to identify the potential overall drivers of engagement.

4.2.1 Univariate Analysis of Engagement

We examine correlations between the *engagement indicator* and characteristics of 20,610 firm years during 2011 to 2019. We sort the sample into quintiles based on yearly firm-level characteristics in fiscal year t . We then compute the proportion of firms engaging with shareholders within each quintile in year $t+1$, which we present in Columns 1 to 5 of Table 2. For each variable, we compare the highest and lowest quintile (Q5 minus Q1) in Column 6 and test whether this difference is statistically significant using two-tailed t -tests, with the associated p -value reported in Column 7. Since we do not have full data on all measures for all sample years, we report the percent coverage of each variable in Column 8.

[Insert Table 2 here]

The results show that engagement varies substantially within the quintiles of each firm characteristic. For example, 21.5% of firms in the lowest quintile of SOP voting dissent engaged with investors while 48.5% of those in the highest quintile engaged with shareholders. The difference of 27 percentage points is significantly different from zero at the 1% level.

Firms with recommendations to vote against SOP by ISS or GL have a significantly higher propensity to engage. For these firms, the extent of engagement is 23.8 and 21.1 percentage points higher, respectively. These tests provide initial evidence that PA recommendations could influence engagement.¹³

The rest of Panel A shows that engagement varies across firm characteristics. Firms that are larger (*size*), more profitable (*return-on-assets*), have less *stock return volatility*, more analyst coverage, and greater *leverage* tend to engage more and this relation is mostly monotonic across the quintiles. Firms with higher growth opportunities (*market-to-book*) and *abnormal returns* engage more, but the relation is not

¹³ The remainder of our paper focuses on the causal effect of ISS on shareholder engagement. We do not further study the influence of GL on shareholder engagement due to data limitations on GL recommendations, and because GL has evolving SOP engagement thresholds, less market power than ISS, and weaker threats for enforcing the failure to meet GL’s engagement expectations. We discuss GL policies in Section 1.1 of the Internet Appendix.

increasing across all quintiles. Firms with *CEO turnover*, an *operating loss*, and those that are not *CD&A exempt* have higher engagement, however there is no difference among the highest and lowest quintiles of *sales growth*.

Firms with more overall *institutional ownership* tend to have a higher propensity to engage. This relation appears to be monotonic across the quintiles. Because we observe similar variation in engagement among the different types of institutional ownership (i.e., dedicated, transient, and quasi-indexer), we include overall institutional ownership as a control in our multivariate analysis.

Firms with higher CEO pay (equity and non-equity) also tend to engage more with investors. The difference in the engagement propensity between the highest and lowest quintile for CEO equity pay and CEO non-equity pay is 20.1 and 13.8 percentage points, respectively. Engagement is lower for firms with a lower proportion of independent directors, dual class shares, classified boards, and where members of the compensation committee have longer tenure.

4.2.2 Multivariate analysis of engagement

We next explore the determinants of shareholder engagement using multivariate regressions. For these tests we estimate the following equations:

$$y_{it+1} = \alpha + \beta \text{SOP voting dissent}_{it} + X_{it} + \varphi_j + \mu_t + \varepsilon_{it}, \quad (1a)$$

$$y_{it+1} = \alpha + \beta \text{ISS 'against' SOP}_{it} + X_{it} + \varphi_j + \mu_t + \varepsilon_{it}, \quad (1b)$$

where the dependent variable y_{it+1} includes the two primary measures of engagement (*engagement indicator* and *engagement count*). The coefficients of interest are β , which captures how engagement relates to SOP voting (Eq. 1a) and the SOP voting recommendation of ISS (Eq. 1b) in the prior year. To avoid multicollinearity, we do not include both *SOP voting dissent* and *ISS 'against' SOP* in the same regression since ISS 'against' recommendations are strongly correlated with the SOP voting dissent (69%) and are causally linked to SOP voting outcomes (Malenko and Shen, 2016).

Both equations include fixed effects (FEs) for the firm's industry (φ_j) using one-digit Standard Industrial Classification (SIC) codes, which controls for time-invariant unobserved heterogeneity across industries, and fiscal year FEs (μ_t) to control for time trends that affect all firms. We also estimate Eqs. (1a) and (1b) by replacing industry FEs with firm FEs. Standard errors are double clustered at the year and industry levels for regressions with industry FEs, and at the year and firm levels for those with firm FEs.

X_{it} is a vector of firm-level covariates. These include the natural log of *CEO equity* and *non-equity pay*, *board independence*, *compensation committee tenure*, *classified board*, *size*, *market-to-book*, *return-on-assets*, *leverage*, *sales growth*, *abnormal returns*, *stock return volatility*, *operating loss*, *CD&A exempt*, *Ln(analysts)*, *institutional ownership*, and *CEO turnover*. We measure accounting variables in the same fiscal year as reported CEO pay.

Table 3 reports the results. Columns 1 through 4 show the tests of the *engagement indicator*, which is estimated using Ordinary Least Squares (OLS) regressions. We use a linear probability model rather than a probit or logit to avoid bias from FEs (Greene, 2004). Columns 5 through 8 report the determinants of *engagement count*, which is estimated using a Poisson regression (Cohn et al., 2022).

[Insert Table 3 here]

The variables of interest, *SOP voting dissent* and *ISS 'against' SOP*, both have a strong and positive correlation with the *engagement indicator*. Column 1 shows that after controlling for other firm characteristics, the coefficient on *SOP voting dissent* is 0.955, meaning that an increase of 10 percentage points against SOP is associated with a 9.6 percentage point higher probability of firms engaging with shareholders. Similarly, the coefficient of 0.316 on *ISS 'against' SOP* in Column 2 indicates that a firm is 32 percentage points more likely to engage with shareholders in the following year if ISS recommends against its SOP vote. Both coefficients are statistically significant at the 1% level and are economically meaningful.

We also find significant relations between the variables of interest and *engagement count*. In Column 5, the coefficient on *SOP voting dissent* is 2.776, meaning that an increase of 10 percentage points in *SOP voting dissent* is associated with an increase in *engagement count* of 1.51 instances.¹⁴ In Column 6, the coefficient of 1.040 on *ISS 'against' SOP* shows this recommendation is associated with an increase in *engagement count* of 1.81 instances. These relations are similar when industry FEs are replaced with firm FEs in Columns 3 and 4 for the *engagement indicator* and Columns 7 and 8 for *engagement count*.¹⁵

Across many specifications, *size*, *leverage*, and CEO pay tend to be positively related to engagement. Similarly, there is evidence that *analyst following*, *institutional ownership*, and *abnormal returns* are positively related to engagement at the 5% level in some regressions. Conversely, firms with *classified boards*, *dual class shares*, higher *market-to-book*, and higher profit (*return-on-assets*) tend to disclose less engagement. *Compensation committee tenure* is negatively related to engagement with industry FEs, but positively related to engagement count with firm FEs. Thus, in the cross section, higher compensation committee tenure appears to weaken monitoring. But, within a firm, once a compensation committee begins engaging, it likely continues to do so. *Board independence*, *stock return volatility*, *sales growth*, *operating losses*, *CD&A exemption*, and *CEO turnover* lack or have significance below the 5%

¹⁴ A 10% change in engagement count is calculated as $10\% \times (e^{2.776} - 1)$.

¹⁵ In Table IA-5 of the Internet Appendix, we report a similar relation between *GL 'against' SOP* and shareholder engagement. We do not include GL recommendations in Eq. (1b) as do not have coverage for 80% of sample firm years. The correlation between *GL 'against' SOP* and *ISS 'against' SOP* is 34%, which could bias results due to multicollinearity. However, we find similar results after including both *ISS 'against' SOP* and *GL 'against' SOP* in Eq. (1b) and replacing *ISS 'against' SOP* with *GL 'against' SOP* in Eq. (1b).

level in all regressions. We exclude them as controls in our regressions of engagement in Section 5 to avoid overspecification issues (Whited et al., 2022). The results are not sensitive to this choice.

5. ISS and Shareholder Engagement

The results in Tables 2 and 3 suggest that there is a strong relation between ISS recommendations, SOP voting, and shareholder engagement. In this section, we use an identification strategy to determine if ISS's policies *cause* increases in engagement. We first explain and validate the identification strategy before using regression techniques to show the causal link between ISS and engagement.

5.1 Identification Strategy

ISS considers firms with less than 70% SOP support as problematic and reviews their responsiveness to shareholder concerns. Firms with SOP voting support just below 70% receive ISS treatment, while those above do not. Thus, our identifying assumption is that whether a firm receives ISS treatment is locally random around this threshold.

We consider whether the 70% threshold is specific to ISS or is also a significant threshold for other key constituents. GL, the second-largest proxy advisory firm in the US, considers SOP results below 75% support from 2011 to 2017 and below 80% from 2018 onward as a trigger in its policies for encouraging shareholder engagement.¹⁶ Thus, GL's treatment encompasses our treated and control firms near ISS's 70% cutoff and should not drive our results.

Large institutional shareholders might also deem 70% to be an important threshold. To shed light on this question, we take two approaches. First, we examine survey results from ISS from 2011 when they established their shareholder engagement policy. In the survey, which we graph in Fig. 3, ISS asked both investors and firms at what level of SOP should there be an explicit response from the board on pay practices. The possible choices were 50%, 60%, 70%, 80%, and 90%.

[Insert Figure 3 here]

As the graph in Fig. 3 depicts, the most common response from investors was 80%, while firms most frequently selected 50%. Thus, the figure depicts the divergence in investors' and firms' views and clarifies that the 70% threshold selected by ISS lacked unanimous support between market participants.

Second, previous research shows that large investors (e.g., BlackRock) engage with portfolio firms on governance issues (Pawliczek et al., 2021). To help rule out that these investors' engagement policies drive our results, we show in Table IA-6 of the Internet Appendix that our engagement results are not driven by ownership of the "Big 3" asset managers (i.e., BlackRock, State Street, and Vanguard). We also examine

¹⁶ See Section 1.1 of the Internet Appendix for additional discussion and tests of Glass Lewis's policies.

the stated policies of Blackrock, State Street, and Vanguard and find no language requiring portfolio firms to engage after a certain level of SOP dissent.

Next, we examine SOP voting outcomes for the full sample of 20,610 firm years to test if receiving ISS treatment is random near the 70% threshold. Fig. 4 plots the distribution of *SOP voting support* for firms with support between 50% and 90% (Panel A) and 67.5% to 72.5% (Panel B). The distribution shows no visual clustering around the 70% threshold in either panel, providing initial evidence that treatment is locally random.

[Insert Figure 4 here]

We then conduct a formal test to check if there is manipulation of the assignment variable around the 70% cutoff (McCrary, 2008). Specifically, we use the local polynomial density estimation of Cattaneo et al. (2020) (hereinafter “CJM”), who develop a robust nonparametric density estimator to test for manipulation in the assignment variable in an RD setting. These tests are based on the key underpinnings of a valid RD design in that treated firms should not be able to precisely control the assignment variable around the deterministic cutoff. Thus, the results should show that the marginal density in *SOP voting support* is continuous for our sample around the 70% cutoff.

In Panel A of Table 4, we test for discontinuities in *SOP voting support* around the 70% threshold for different bandwidths ($\pm 2.5\%$, $\pm 5.0\%$, $\pm 10\%$) over the full sample period. We also examine the data-driven bandwidths developed by CJM for the full sample period and for the first year of SOP voting in 2011. We report the robust bias-corrected manipulation test statistic, *p*-value, and the number of treated and control firms in each range. A statistically significant manipulation test statistic would suggest that managers can successfully influence the assignment variable (*SOP voting support*) around the 70% threshold, while a non-significant statistic would indicate no detected manipulation. These results are used to determine if the assignment of ISS treatment is random.

[Insert Table 4 here]

Using local linear regressions, we find no evidence of a discontinuity in *SOP voting support* around the 70% threshold. The robust bias-corrected manipulation test statistic is not statistically different from zero in any of the bandwidths, thereby supporting the visual inferences in Fig. 4. Therefore, we find no evidence that firms cluster just above the 70% threshold to avoid ISS scrutiny.¹⁷

¹⁷ Using a sample period that ends in 2016, Bach and Metzger (2019) find evidence of voting manipulation around the 50% threshold. Importantly, they test ISS’s 70% threshold for SOP voting support and find no evidence of manipulation. Specifically, they state that SOP “*vote manipulation only takes place at the official threshold of 50%.*” In Table IA-7 of the Internet Appendix, we replicate their findings after extending the sample through 2019. We confirm that evidence of manipulation exists around the 50% SOP voting support threshold, but not the 70% threshold.

Our third validation exercise tests for differences in many pre-assignment characteristics between ISS-treated and control firms before the SOP vote. Table 4 shows the average values for these characteristics for firms within a range of 2.5% above or below the 70% SOP voting support threshold. Columns 1 and 2 show the mean values for ISS-treated and control firms, respectively. Column 3 reports the difference between the means, and Column 4 shows the p -value for the difference being statistically different from zero. Column 5 presents the number of treated and control firm observations for each test.

The variables in this validation exercise can be grouped into 7 categories: SOP voting support, shareholder engagement, firm characteristics, CEO pay, director voting, governance, and board characteristics. All variables are described in Appendix C. We compare certain director characteristics, such as the presence of a classified board and how many directors are voted on for the year $t+1$, as they are known in advance and could potentially influence engagement. We compare most other variables in year t just before the low SOP vote. For many variables, we also examine the year $t-1$ values (e.g., SOP voting support, engagement, and director voting) to ensure there are no trends that span for more than one year.

While most of the pre-assignment variables are commonly used in the governance literature, we also consider whether unexpectedly high CEO pay might impact engagement. *Expected CEO pay* is the estimate of the CEO's total compensation using the regression methodology in Rouen (2020). *Unexpected CEO pay* is calculated as actual CEO total compensation less *expected CEO pay*. The results in Panel B of Table 4 indicate that there are no significant univariate differences between firms just below or above the 70% threshold, except for the assignment variable (*SOP voting support*).

We also use local linear RD estimates to test for differences in pre-assignment variables, following the robust bias-corrected method proposed by Calonico et al. (2017), which we describe further in the next subsection. The RD estimates and p -value, shown in Columns 5 and 6, indicate that there are practically no significant differences between firms just below and just above the 70% threshold for most dimensions. The RD estimate for *stock return volatility* is slightly negative and marginally significant at the 10% level, suggesting that ISS-treated firms have lower return volatility. But earlier analysis in Table 3 shows that return volatility is not related to engagement in the overall universe of firms in the ISS database, so this difference is not expected to bias the results. We find that differences in pre-assignment *CC tenure* are marginally significant at the 10% level in the RD test. However, further examination reported in Fig. IA-1 of the Internet Appendix shows that this result is driven by outliers on each side of the 70% threshold.

Taken together, the results in Table 4 and Fig. 4 support the notion that the distribution of firms around the 70% threshold for ISS treatment is largely random. We find no evidence that firms manipulate their SOP voting support to avoid treatment and the attributes of firms around the threshold are similar, which allows us to link changes in shareholder engagement to the effect of ISS's policy.

5.2 Research Design

To test the effect of ISS treatment on engagement, we consider the SOP vote by shareholders of firm i at time t , the annual meeting date. The percentage of votes approving SOP is the vote share v_{it} . If v_{it} is below the 70% vote threshold, v^* , then it receives ISS treatment, and we code the indicator for treatment as $ISS\ treatment_{it} = 1$. When $v_{it} \geq v^*$, $ISS\ treatment_{it}$ takes the value of 0.

We estimate the effect of ISS treatment on the outcome variables using both an average treatment effect (ATE) estimation and an RD approach. The ATE estimation tests use this equation:

$$y_{it+1} = \kappa + \theta ISS\ treatment_{it} + X_{it} + \varphi_j + \mu_t + \varepsilon_{it}, \quad (2)$$

where the coefficient of interest θ is the effect of ISS on the outcome variable y_{it+1} (e.g., *engagement indicator*) after a low SOP vote. We include industry FEs (φ_j) using one-digit SIC codes, which controls for time-invariant unobserved heterogeneity across industries, and fiscal year FEs (μ_t) to control for time trends that affect all firms. X_{it} is a vector of firm-level control variables identified as determinants of engagement in Table 3, including *size*, *market-to-book*, *return-on-assets*, *leverage*, *abnormal returns*, *ISS 'against' SOP*, *Ln(analysts)*, *institutional ownership*, *classified boards*, *dual class shares*, *compensation committee tenure*, and *director voting support*.

These tests are based on two key assumptions. The first is that, without the influence of ISS, the engagement of treated and control firms would have followed similar patterns (i.e., the parallel trends assumption). We examine this assumption in Subsection 5.5.

The second assumption is the stable unit treatment value assumption (SUTVA). SUTVA holds that for an estimation to provide unbiased estimates of the average treatment effect, the impact on treated firms should not influence the outcomes of control firms (e.g., Berg et al., 2021). In our setting, control firms might learn from the response of ISS-treated firms, potentially reducing the cost of initiating their own engagement activities. These firms might also share similar compensation consultants or board members, which could lead to knowledge spillovers on how to respond to a low SOP vote. Both situations, however, would lead us to *underestimate* the average treatment effect of ISS's policy on engagement by increasing the level of engagement of the control firms.

We also use an RD analysis to study the effect of ISS on the primary engagement measures: *engagement indicator* and *engagement count*. We use a Sharp RD estimate that does not control for covariates or FEs because Table 4 shows almost no significant differences in just under 50 pre-assignment covariates in treatment and control firms, and Fig. 4 and Table 4 show no discontinuities in the assignment variable around the 70% threshold. We employ the robust RD method of Calonico et al. (2017) that adjusts the confidence intervals and variance estimator to improve the accuracy of the coefficient estimates and statistical significance. For all tests, we report robust bias-corrected RD estimates.

To ensure the robustness of our RD specification, we test ISS treatment using different bandwidths around the 70% threshold (2.5%, 5.0%, and 10.0%) and the data-driven bandwidth selection method of Calonico et al. (2020) (“CCF”). We primarily use a local linear RD estimate, as higher order polynomials can introduce bias (Gelman and Imbens, 2019), but also report a local quadratic result for robustness. We use a triangular kernel to construct all local-polynomial estimators.

5.3 Engagement in the Year After ISS Treatment

This subsection examines how ISS affects shareholder engagement in the year following treatment. We first provide summary statistics and then conduct the regression analysis to test H1 using a subset of firms whose SOP votes fall within $\pm 2.5\%$ of 70% support. We also use varying bandwidths around the 70% threshold for the RD analysis.

Panel A of Table 5 shows the average, median, and standard deviation of engagement measures for ISS treated and control firms that had SOP votes within $\pm 2.5\%$ of the 70% support threshold. In the year after receiving a low SOP vote, 58.5% of the sample firms report shareholder engagement, on average using 2.1 engagement words. ISS treated firms are 14.9 percentage points more likely to report shareholder engagement and use 0.74 more engagement words than control firms, both of which are significant at the 1% level or better using two-tailed *t*-tests. These differences are economically large and reflect a 25% and 36% increase, respectively, versus the mean values for treated and control firms.

[Insert Table 5 here]

Approximately 52% of the sample firms report engaging with investors in response to the previous year’s low SOP vote. About 14% provide a table detailing shareholders’ concerns and the board’s response. On average, sample firms contact shareholders owning 17% of shares and report speaking with owners of 12% of outstanding shares. When only considering firms that disclose engagement, they contact shareholders holding an average of 58% of shares and spoke with holders of 42% of shares. ISS treated firms engage with shareholders holding an average of 13.4% more shares (23.7% vs. 10.3%) and spoke with investors holding 9.4% more shares (17.2% vs. 7.8%) compared to control firms. Both differences are significant at the 1% level and reflect an 81% and 76% increase versus the sample mean, respectively.

In Panel B, we study the relation between ISS treatment and engagement. We estimate Eq. (2) using OLS regressions for most of the dependent variables and a Poisson regression for the *engagement count*. The results show that *ISS treatment* is positively related to the presence and intensity of shareholder engagement in the following year. In all six regressions, the coefficient for *ISS treatment* is statistically significant at the 1% level and the size of the engagement differences is substantial. For example, treated firms are 16.0 percentage points more likely to report engagement (Column 1), which is a 27% increase from the sample mean of 58.5%. The coefficient for *ISS treatment* in Column 2 is 0.407, indicating that the

engagement count for treated firms is 50% higher.¹⁸ In Columns 3 to 6, we find similar results showing a positive and significant relation between ISS treatment and various measures of the depth of shareholder engagement.

Table 6 reports the RD analysis of engagement. It includes the RD estimate, *p*-values, number of firms in the ISS treated and control sample for each bandwidth, and polynomial type. Panel A presents the results for the *engagement indicator* as the dependent variable, showing that ISS treatment leads to a significantly higher probability of engagement in all five RD specifications.

[Insert Table 6 here]

Our RD estimates show that treatment significantly increases the probability of engagement by 19.7 to 33.4 percentage points. These increases are larger than the ATE estimations using OLS in Table 5, possibly because our RD approach uses a triangular kernel, which gives more weight to observations near the 70% threshold (Cattaneo and Titiunik, 2022). For example, the narrow bandwidth of 2.5% in Column 1 estimates a 33.4 percentage point increase in engagement for ISS-treated firms, while the broader bandwidth of 10% in Column 3 results in a 19.7 percentage point increase for treated firms. The data-driven bandwidth in Columns 4 and 5 estimates a 16.5 to 21.7 percentage point increase in engagement for ISS-treated firms. All these results are statistically significant and directionally consistent with the ATE analysis in Table 5.

Table 6 Panel B shows the results of using the same RD specifications with *engagement count* as the dependent variable. To account for the skewed distribution due to zero engagement, we used a log-transformed value of 1 plus the *engagement count* as the dependent variable. The five specifications all suggest that ISS treatment increases the intensive margins of engagement.

Fig. 5 shows the discontinuity in engagement with ISS treatment through RD plots of the *engagement indicator* (Panel A) and *engagement count* (Panel B). Each circle in the plot represents an evenly spaced bin of observations with a bandwidth of $\pm 2.5\%$ around the 70% threshold. The gray shaded region shows the 95% confidence interval, and the solid line fits a first order polynomial to the relation between SOP voting support and shareholder engagement.

[Insert Figure 5 here]

The graphs in Fig. 5 illustrate that firms receiving ISS treatment just below the 70% threshold have a noticeable increase in engagement compared to control firms just above it. The control firms, on the other hand, have a noticeable decline in engagement when they just miss treatment and are in the bins closest to 70% SOP voting support. There is slightly more variation in engagement among the control firm bins, with a greater number of bins plotted closer to zero engagement.

¹⁸ This difference is calculated by exponentiating the *ISS treatment* coefficient: $e^{(0.407)} - 1 = 0.502$.

In Table IA-8 of the Internet Appendix, we also examine whether ISS-treated firms are more inclined to reference ISS recommendations or their SOP policies in firms' SEC filings in the year after falling below the 70% threshold. Using the SEC's EDGAR Full Text search tool, we find that ISS-treated firms are 54% more likely to reference ISS in its filings than control firms. This evidence bolsters the conclusion that ISS plays an important role in firms' engagement decisions.

Overall, the results in Tables 5 and 6, and Fig. 5 strongly support the idea that ISS treatment prompts firms to engage more with their shareholders when SOP voting support falls just below the 70% threshold. We interpret this collective evidence as providing strong causal support for H1.

5.4 Shareholder Engagement and ISS Sanctions

5.4.1 Ex-Ante Director Voting Support

In this subsection, we test if firms whose board members have greater incentives to avoid a negative recommendation from ISS are more responsive to ISS treatment. H2a posits that boards with a greater threat of ISS sanctions, such as those with directors who had previously received lower shareholder voting support, will demonstrate a stronger engagement response to avoid ISS opposition to their re-election.

To test this, we modify Eq. (2) to include controls for ex-ante *compensation committee (CC) member voting support* and *director voting support*, which reflect the previous year's voting support levels. We also include the interactions between these two voting support metrics and *ISS treatment*. The dependent variables are *engagement indicator* and *engagement count*. The variable of interest in each regression is *ISS treatment* $\times$ *voting support*. If firms facing a greater risk of sanctions under ISS treatment intensify engagement efforts more, we expect to see a negative coefficient for this interaction term.

[Insert Table 7 here]

In Table 7, the coefficient on *voting support* is positive and significant at either the 5% or 10% level in all regressions, indicating a relation between ex-ante voting support and engagement. For tests of the interaction term, *ISS treatment* $\times$ *voting support*, we find no evidence that ISS treatment influences the extensive margin of engagement (Columns 1 and 2). However, in testing for the intensive margin of engagement in Columns 3 and 4, we find significant negative coefficients on the interaction terms for both director-voting based measures. This evidence suggests that while directors who are more susceptible to ISS sanctions (i.e., lower prior voting support) are not significantly more likely to engage, they do so more intensively, likely to demonstrate a sufficiently robust response in accordance with ISS's policies. Thus, our finding offer support for H2a, indicating that the threat of ISS opposing their re-election prompts directors to adhere to ISS's engagement policies in response to a low SOP vote.

5.4.2 Ex-Post ISS Recommendations

Our hypotheses and inferences above rely on 1) the credibility of ISS's threat of recommending against the directors of non-responsive treated firms, and 2) directors being responsive to avoid the negative recommendations. In this subsection, we formally test H2b—that ISS will follow through with the threat to recommend voting against the directors of less responsive firms.

Because we do not have access to ISS's proprietary evaluation of firm responsiveness, we classify firms as more- or less-responsive based on whether they disclose engagement in their subsequent proxy statements. Our dependent variable in these analyses is whether ISS recommends voting against compensation committee members and separately members of the full board after a low SOP vote. We again compare ISS-treated and control firms, categorized by whether they engage with shareholders. If the ISS threat is credible, we would expect less-responsive treated firms to be more likely to receive 'against' recommendations for their directors than more-responsive treated firms. We also posit that ISS's increased scrutiny will result in more negative voting recommendations for treated than control firms within the same category of responsiveness.

In our test, we designate firms as *more responsive* if they disclose engagement in year $t+1$ and *less responsive* if not. We then evaluate the likelihood that ISS recommends voting against board members in year $t+1$. If ISS's threat is credible, we anticipate ISS would be more likely to recommend voting 'against' directors of less responsive firms, especially those on the compensation committee. Additionally, due to increased scrutiny on treated firms, we expect that ISS would be more likely to recommend voting 'against' directors of treated firms than directors of control firms with the same responsiveness.

[Insert Table 8 here]

Panel A of Table 8 reveals that while ISS recommends voting against 23.9% of treated directors on the compensation committee, this increases to 42.9% for less responsive firms, compared to 13.3% of more responsive firms. This 29.5 percentage point difference (significant at the 1% level) is consistent with the threat of a negative ISS voting recommendation being credible for firms whose votes fall below the 70% threshold. In contrast, compensation committee members for less-responsive control firms see an insignificant change in ISS recommendations. Further, Column 2 shows that ISS more heavily penalizes treated firms that are less responsive, with a 31.4 percentage point greater chance of an 'against' recommendation for their compensation committee members compared to control firms.

The results are similar for the full board, though with smaller magnitudes. Directors of less responsive treated firms have a 16.9 percentage point greater likelihood of receiving an 'against' recommendation from ISS. This is consistent with ISS's policy of opposing re-election of compensation committee members after an insufficient response to a low SOP vote before opposing the entire board.

In Panel B of Table 8, we conduct OLS regression where the outcome variable equals 1 for an ‘against’ director vote recommendation by ISS, and 0 otherwise. We separately evaluate the compensation committee members and the full board. The independent variables include the *ISS treatment* and *less responsive* measures. The variable of interest is their interaction, $ISS\ treatment \times less\ responsive$. A positive interaction coefficient would be consistent with ISS placing greater scrutiny on the responsiveness of treated versus control firms. We hold constant the same factors as in Eq. (2) and include the same FEs.

The results in Columns 1 and 3 show that ISS treatment increases the chance of an ‘against’ vote recommendation for the members of the compensation committee and the entire board, highlighting ISS’s elevated scrutiny of treated firms. Less responsive firms are similarly more likely to receive ‘against’ recommendations from ISS. Importantly, Columns 2 and 4 show that firms that are both ISS-treated and less responsive have a 26.4 and 15.3 percentage point increase in the likelihood of an ‘against’ recommendation for the compensation committee members and all directors, respectively. The coefficients on both interaction terms are significant at the 5% level or better.

We interpret the above as compelling evidence that ISS’s potential sanctions are a credible threat for directors that do not strengthen shareholder outreach efforts following a low vote. Collectively, the evidence in support of H2a and H2b is consistent with our assumption regarding ISS’s credibility as well as strengthens the causal attribution of firms’ engagement responses to ISS in tests of H1.

5.5 Engagement Over Time After ISS treatment

We next examine the impact of ISS treatment on engagement over time. These tests have two goals. First, we want to assess the parallel trends assumption. Second, we wish to determine if the initial increase in engagement after ISS treatment persists (H3). To do this, we measure engagement over a nine-year period centered on the low SOP vote and use indicator variables in an event-time d-i-d design to estimate dynamic treatment effects.

To formally test the impact of ISS on shareholder engagement over time, we first use a panel regression to estimate this equation:

$$Engagement_{it+1} = \kappa + \theta ISS\ treatment_{it} + X_{it} + \omega_i + \mu_t + \varepsilon_{it} , \quad (3)$$

where the coefficient of interest θ is the effect of ISS on shareholder engagement. We test the presence (*engagement indicator*) and intensity (*engagement count*) of engagement separately using a FE OLS and Poisson estimation, respectively. We include firm FEs (ω_i) and fiscal year FEs (μ_t) to control for time trends affecting all firms. The vector of firm controls, X_{it} , is identical to Eq. (2) but varies over time.

Second, to determine if the pre- and post-ISS treatment results in engagement variation, we also estimate Eq. (3) after replacing the ISS indicator with six indicator variables (ISS^{-1} , ISS^0 , ISS^{+1} , ISS^{+2} , ISS^{+3} , and ISS^{+4}) that indicate the year relative to the ISS treatment with a low SOP vote. The values for years -4 ,

−3, and −2 are included in the intercept to serve as the baseline comparison. The coefficients on ISS^{-1} and ISS^0 are important because they reveal any differences in engagement between treatment and control groups before the low SOP vote, which formally attempts to falsify the parallel trends assumption.¹⁹

The coefficient on ISS^{+1} is important because it shows how quickly firms change their shareholder engagement activities in response to ISS treatment. ISS considers the timing of shareholder engagement in its evaluation of a sufficiently robust response. The coefficients on ISS^{+2} , ISS^{+3} , and ISS^{+4} are also important because they capture longer-term differences in engagement. If firms continue to engage at a higher rate in future years, some of these coefficients should be positive and statistically significant. These coefficients test H3, which posits that engagement after ISS treatment will persist over time for the reasons detailed in Subsection 2.3.

[Insert Table 9 here]

We first estimate the effect of ISS treatment on shareholder engagement with only FEs. Column 1 of Table 9 shows that ISS treatment significantly increases shareholder engagement, as indicated by a coefficient of 0.214 and a t -statistic of 6.24 ($p < 0.001$) in tests of *engagement indicator*. The effect is also economically significant, with a 47% increase in shareholder engagement compared to the full-panel average (0.36). The results are similar using *engagement count* as the dependent variable.

When the ISS treatment indicator is replaced with six timing indicators in Columns 2, 3, 5, and 6, the coefficients for ISS^{-1} and ISS^0 are not significantly different from zero. This suggests that the parallel trends assumption is not falsified.

However, the coefficient for ISS^{+1} is significantly positive at the 1% level in all four tests, indicating that the impact of ISS treatment on engagement is immediate in the first year after a low SOP vote. In Column 3, the ISS treatment coefficient represents a 28.8 percentage point increase in engagement, which is a 62% increase from the sample mean. This suggests that the effect of ISS on engagement following a low SOP vote is substantial.

The coefficients for ISS^{+2} and ISS^{+3} are positive and statistically significant for the presence of engagement, while the coefficient for ISS^{+2} is significant for *engagement intensity*. These results support H3, demonstrating that the strong treatment effect in ISS^{+1} is still observed over time before it gradually decays.

Recent work expresses concern that d-i-d estimations with staggered treatment and two-way FEs may be biased. In our panel setting, treatment occurs in different years such that firms might serve as control firms in earlier periods and treated firms later in the sample. Thus, as a robustness test, we employ the

¹⁹ Fig. IA-2 of the Internet Appendix plots mean values of engagement over time. Both treatment and control firms show similar patterns prior to the SOP vote near 70%, further supporting the parallel trends assumption.

staggered d-i-d methodology of Borusyak et al. (2024). We estimate staggered treatment coefficients over time for tests of the *engagement indicator* and *engagement count* with firm and year fixed effects. We plot the coefficients from these tests along with 95% confidence intervals in Fig. 6 and report the underlying results in Table IA-9 of the Internet Appendix.

[Insert Figure 6 here]

Fig. 6 shows an increased engagement response following treatment in year $t+1$ across both extensive and intensive margins, which gradually diminishes over time. These results align with the results in Table 9 using the standard panel approach. While the staggered d-i-d approach reveals minor pre-treatment trends, these are not consistently significant, are smaller than post-treatment estimates, and more importantly indicate *lower* engagement for treated firms—contrary to the observed rise in engagement post-ISS treatment.

Notably, the magnitudes of ISS treatment on engagement are highly similar to the standard method. Specifically, the ISS treatment effect on the *engagement indicator* during the first year is 22 percentage points higher using the staggered d-i-d methodology versus 27 percentage points in the panel regression tests in Column 2 of Table 9. The *engagement count* rises by 1.35 with ISS treatment using staggered d-i-d, compared to 0.99 in the standard panel approach in Column 5 of Table 9. Taken together, the results in Section 5.5 confirm the positive influence of ISS on shareholder engagement is swift, substantial, and—importantly—long-lasting, which supports H3.

5.6 Event Study

Next, we use an event study to analyze the shareholder response to ISS treatment. While we recognize possible arguments for why there might be a positive, neutral, or negative shareholder response (H4a), we hypothesize the market response to ISS treatment will be positive for firms that have already received an ‘against’ recommendation from ISS (H4b).

To test H4a and H4b, we analyze abnormal stock returns using the following framework. First, we calculate 3-day and 5-day firm-level compounded returns for the period centered on the date the firm first released the 8-K filing containing its SOP voting results.²⁰ *Abnormal returns* are calculated as the difference between the firm and CRSP value-weighted index returns during the same period.²¹ Using *abnormal returns*, we estimate OLS regressions to test the relation between ISS treatment, ISS recommendations, and shareholder returns using the following equation for H4a:

$$Abnormal\ returns_{it} = \alpha + \beta_1 ISS\ treatment_{it} + \beta_2 ISS\ 'against'\ SOP_{it} + \beta_3 SOP\ voting\ support_{it}$$

²⁰ Firms must submit the results of the SOP vote within four business days of the meeting, typically in 8-K Item 5.07. See <https://www.sec.gov/files/form8-k.pdf>. We download 8-K dates from WRDS SEC Analytics Suite and hand-check them for accuracy.

²¹ To omit potentially distressed firms, we drop those with a stock price below \$1 per share.

$$+\varphi_j + \mu_t + \varepsilon_{it} , \quad (5)$$

and the following equation for H4b:

$$\begin{aligned} Abnormal\ returns_{it} = & \alpha + \beta_1 ISS\ treatment_{it} \times ISS\ 'against'\ SOP_{it} + \beta_2 ISS\ treatment_{it} \\ & + \beta_3 ISS\ 'against'\ SOP_{it} + \beta_4 SOP\ voting\ support_{it} + \varphi_j + \mu_t + \varepsilon_{it} , \end{aligned} \quad (6)$$

where *ISS treatment* is set to 1 for firms that received between 67.50% and 69.99% SOP voting support and 0 for firms that received 70.00% to 72.50%. The variable *ISS 'against' SOP* is set to 1 if ISS recommended voting against the SOP proposal. *SOP voting support* is the disclosed percentage of shareholder votes that supported the SOP proposal. By examining a narrow bandwidth around 70% and controlling for SOP voting support as well as the ISS treatment effect, this specification is functionally similar to a regression discontinuity design. We include industry FEs (φ_j) using one-digit SIC codes to control for time-invariant unobserved heterogeneity across industries, and fiscal year FEs (μ_t) to control for time trends that affect all firms. We present the results of this regression in Table 10.

[Insert Table 10 here]

For H4a, the variable of interest is *ISS treatment*, and results are provided in Columns 1 and 2. The coefficients on *ISS treatment* for both the three-day and five-day regressions are insignificant, failing to reject the null hypothesis in H4a that there is no shareholder response for treated firms. This could be due to the smaller sample size, or perhaps it is simply the case that investors do not anticipate treated firms, on average, to subsequently take engagement actions that will influence shareholder value.

We next test H4b, which is that treated firms that had already received an against recommendation from ISS will see a positive stock return due to the threat being more credible. The variable of interest in this analysis is the interaction term *ISS treatment* $\times$ *ISS 'against' SOP*, which is set to 1 for firms that are both treated with a vote below 70% and receive an ISS recommendation to vote against SOP before the meeting, and else 0. Results testing this hypothesis are reported in Columns 3 and 4 of Table 10.

In each of these columns, the coefficients on the interaction term *ISS treatment* $\times$ *ISS 'against' SOP* is positive and statistically significant at the 10% level or higher for both the three- and five-day windows. This suggests that shareholders view strengthened engagement as beneficial when coupled with a clear threat of economic sanctions by ISS. The effect is also economically meaningful, as the results equate to positive abnormal returns between about 2% and 3%.

In Columns 5 and 6, we check the robustness of these findings by excluding 28 observations from our sample with potentially contaminated information that could influence the abnormal returns. Specifically, we drop observations in which the 8-K also includes material agreements or financial results (8-K Items 1.01 and 2.02). The regressions yield similar results to those reported in Columns 3 and 4. In Table IA-10 of the Internet Appendix, we find similar results using an RD estimation. In aggregate, the

results show that the market perceives ISS-induced engagement to be value-adding when coupled with a greater threat of future sanctions.

6. Additional Tests

6.1 Role of Agency Conflicts in Engagement

Our evidence that shareholder engagement increases following ISS intervention, and that shareholders appear to value it when ISS's threat is strongest, raises the question of why these firms did not proactively communicate or invest in necessary engagement infrastructure before ISS's involvement. The answer could simply be that once firms started engaging, the marginal benefits of continued engagement exceeded the marginal costs, as outlined in H3. However, it might also be related to deficiencies in firm governance, which would imply that ISS plays a broader governance role for these firms.

In this section, we conduct preliminary analyses to examine whether director agency costs associated with engagement (i.e., directors may prefer a “quiet life”) might be an explanation for why some firms engaged less prior to ISS treatment. By not engaging with shareholders, entrenched boards could avoid the discomfort of addressing shareholder concerns about executive compensation. We test this possibility by examining if boards with properties of higher agency conflicts are likely to increase their engagement more following ISS intervention.

We use two measures as proxies for board-level agency conflicts. Prior work shows that long-serving directors on the compensation committee tend to be more management-friendly, which correlates with higher CEO pay (Vafeas, 2003). Thus, for our first measure, we use *CC tenure*, which is the average board service length in years for compensation committee members. Our second measure is the presence of *classified boards*. Several studies link board classification to managerial entrenchment (e.g., Faleye, 2007; Bebchuk et al., 2009), which suggests that the entire management team in such firms would prefer lesser interactions with investors.²²

Next, we adjust Eq. (2) to include *CC tenure* and *classified boards* and their interactions with ISS treatment, with the dependent variables being *engagement indicator* and *engagement count*. If firms whose directors have higher agency costs intensify their engagement efforts at a greater rate, then we would expect a positive coefficient for the interaction of *ISS treatment* $\times$ *CC tenure* and *ISS treatment* $\times$ *classified boards*.

[Insert Table 11 here]

Table 11 shows that the effect of ISS treatment on the extensive and intensive margins of engagement is indeed higher for boards with greater *CC tenure*. Specifically, the coefficient for *ISS*

²² ISS considers classified boards as a “problematic governance structure” in its proxy voting guidelines. In a takeover context, some studies find that classified boards do not destroy value (e.g., Bates et al., 2008; Dey and White, 2021).

$treatment \times CC\ tenure$ is positive and significant at the 5% level or better in Columns 1 and 3. For firms with classified boards, we find that the intensive margins of engagement increase at a significantly greater rate following ISS intervention. While the coefficient for the extensive margin is positive, it falls short of significance. Collectively, the results in Table 11 suggest that firms with weaker ex-ante board oversight tend to engage more with shareholders after receiving ISS treatment, pointing to a channel through which ISS plays a positive governance role in capital markets.

6.2 Placebo Tests

Our engagement analyses rely on the 70% SOP voting support threshold as being an important threshold based on ISS's policies. In our final analysis, we conduct placebo tests to assess if firms simply increase engagement whenever they fall below a salient threshold. For these tests, we rerun our univariate and RD analyses of the extensive margins of engagement for a bandwidth of $\pm 2.5\%$ around nine thresholds from 50% to 90%, in 5% increments, and report the results in Table 12. We conduct additional RD placebo analyses in Table IA-11 and Fig. IA-3 of the Internet Appendix.

[Insert Table 12 here]

The univariate tests in Column 1 of Table 12 show no statistically significant differences in the extensive margin of engagement except at the 70% threshold. None of the other thresholds from 50% to 90% are significantly different from zero in univariate tests. Using the RD approach, we find marginally significant differences at the 75% threshold. However, the sign of the coefficient for falling just below 75% is negative, suggesting that engagement is actually lower just below that threshold, the opposite of what we would expect if this threshold was important. None of the other thresholds except ISS's 70% threshold exhibit significant differences in engagement using the RD approach. These findings reinforce our conclusion that ISS encourages shareholder engagement following a low SOP vote (in support of H1), and that the engagement outcomes are not simply a reflection of a salient threshold.

7. Conclusion

Our study presents novel evidence on how ISS shapes firms' information and governance environments through their influence on shareholder engagement. We exploit a quasi-natural experiment by studying firms that receive a level of SOP voting dissent above which ISS threatens to impose economic sanctions if managers and directors do not engage with shareholders and address concerns. SOP voting outcomes are smoothly distributed across ISS's policy threshold, with firms near the threshold showing similar ex-ante characteristics. This suggests locally random exposure to ISS treatment.

Utilizing average treatment effect and regression discontinuity methodologies, we find that ISS treatment leads to a significant increase in the extensive and intensive margins of shareholder engagement in the year after a low SOP vote. This increase is higher when the threat of ISS sanctions against directors'

board reelections is greater. Difference-in-differences tests show the increased engagement persists after ISS stops enhanced monitoring of the firm, implying that the initial ISS scrutiny has a lasting impact on the firm's engagement policies with shareholders. Event study analyses indicate that these interactions with shareholders appear to be value-enhancing, especially when combined with greater ISS scrutiny.

Our study enhances the literature on the role of ISS in capital markets, specifically its effect on information flows between firms and investors (e.g., Ertimur et al., 2013; McCahery et al., 2016; Hayne and Vance, 2019). We establish that ISS facilitates ongoing, multifaceted communication, which can enable firms to better incorporate shareholder preferences for corporate strategies. Such proactive, bidirectional engagement likely improves the quality of information exchange beyond traditional one-directional voting outcomes (e.g., Kakhbod et al., 2023).

A better understanding of the role and influence of proxy advisors, especially that of ISS, is crucial to guiding policy debates on the scope and influence of ISS on corporate governance and shareholder voting. Our results provide causal evidence on ISS's influence on firms' shareholder engagement behaviors and allow for more informed deliberations on the regulatory concern that ISS promotes a one-size-fits-all approach to governance. Our study provides a more nuanced understanding of the governance role of proxy advisors in capital markets and raises interesting questions for future research, such as exploring optimal levels of shareholder engagement in firms.

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Appendix A: Timeline of Events

Table A-1. Shareholder Engagement Timeline

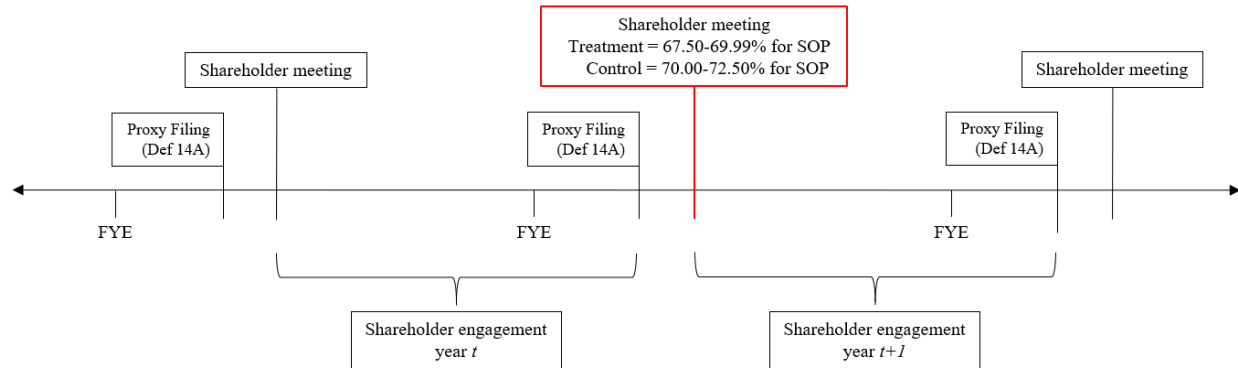


Table A-2. CEO Pay Disclosure Timeline

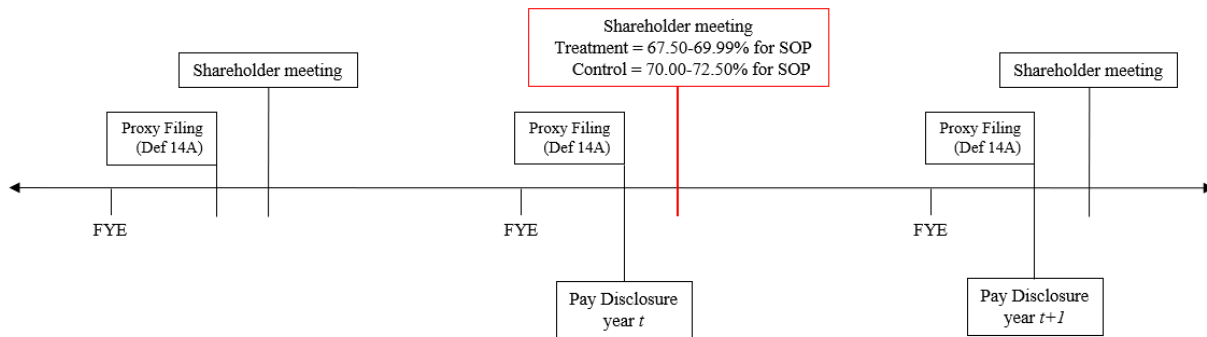
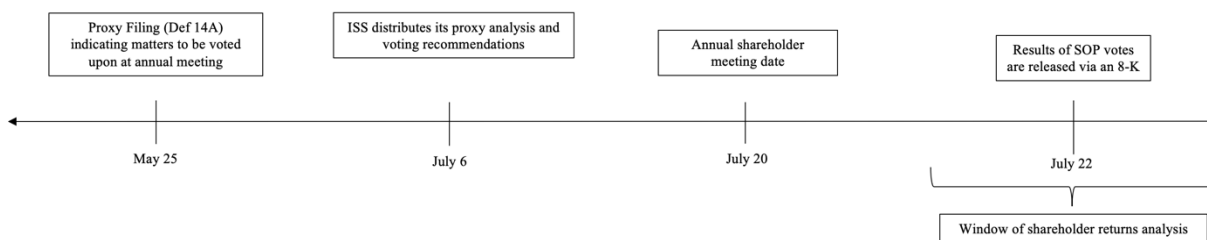


Table A-3. Example of Shareholder Vote Timeline for Event Study



Appendix B: Examples of Shareholder Engagement Disclosure

Table B-1: Seacoast Banking Corporation of Florida's 2017 Proxy Statement

Shareholder Engagement and Board Responsiveness

The company engages with our shareholders to ensure that the Board and management are aware of and address issues of importance to our investors. We regularly meet with various institutional shareholders and welcome feedback from other shareholders, which is considered by the Board or appropriate Board committee.

The company communicates with shareholders in a number of ways:

- Discussing important business developments and answering shareholder questions at annual meetings;
- Holding conference calls regarding quarterly earnings and significant corporate developments;
- Through this proxy statement, chairman's letters, news releases, website, participation in industry conferences, and other periodic events.

The Company's Corporate Governance Guidelines provide for a process by which shareholders may communicate with the Board, a Board committee or the non-management directors as a group, or other individual directors. Shareholders who wish to communicate with the Board of Directors, a Board committee, the Lead Independent Director, other directors or an individual director may do so by sending written communications addressed to the Board of Directors, a Board committee or such group of directors or individual director, c/o Corporate Secretary, Seacoast Banking Corporation of Florida, 815 Colorado Avenue, P.O. Box, 9012, Stuart, Florida 34995. All communications will be compiled by the Company's Secretary and submitted to the Board of Directors, a committee of the Board of Directors or the appropriate group of directors or individual director, as appropriate, at the next regular meeting of the Board.

Since 2009 the Company has annually included in its proxy statement a separate advisory vote on the compensation paid to its executives, as disclosed in the Compensation Discussion and Analysis, the compensation tables and related proxy disclosure, commonly known as a "say-on-pay" proposal. Independent surveys have shown that an annual vote is the preferred frequency of most institutional investors. Our Board also endorses an annual vote as we believe it gives shareholders an opportunity to voice their concerns with respect to executive compensation. Shareholder support of our say-on-pay proposal at our 2016 annual meeting declined compared to prior years. (See "Outcome of our 2016 Say-On-Pay vote" in the table below.) Shareholder support of directors standing for re-election at the 2016 annual meeting also dropped compared to prior year. To better understand shareholder interests and concerns, we expanded our shareholder outreach in 2016, taking the following actions:

- Members of our Board and executive management team met in-person and by phone with shareholders representing a significant portion of Seacoast's outstanding unaffiliated shares.
- In March 2016, the Company entered into an Observer Rights Agreement with one of our largest shareholder, Basswood Capital Management, L.L.C. ("Basswood") and Matthew Lindenbaum, a principal of Basswood, pursuant to which we gave Mr. Lindenbaum the right to attend all meetings of our Board of Directors in a non-voting observer capacity, and to receive materials provided to board members, subject to certain exceptions. The agreement can be terminated by either party at any time, but remains in effect. Mr. Lindenbaum's viewpoint on matters impacting institutional investors has been very insightful and beneficial to the Company.
- We have hosted visits with a number of large investors at our facilities in Stuart to provide them with a better understanding of the depth and talent of our management team, the execution of our balanced strategy and our progress in creating shareholder value.
- We hosted an Investor Day and webcast on February 22, 2017, where Seacoast's management team provided a detailed update of the Company's strategy and long-term vision.

In these meetings, our shareholders expressed a wide range of viewpoints relating to our performance, compensation, governance and other matters. This engagement process was very informative and constructive.

Below are highlights of the feedback we have received from shareholders and our Board's response:

What We Heard	Our Board's Response
Improve financial performance to deliver results expected from acquisitions	<i>Delivered Promised Results.</i> Achieved our 2016 earnings target of \$1.00 fully diluted adjusted earnings per share ¹ ("EPS") despite economic headwinds. Improved adjusted efficiency ratio ¹ by 12% year over year, and from 74.9% in fourth quarter of 2014 to 60.8% in the fourth quarter of 2016.
Higher stock ownership by management and directors	<i>Replacing Cash Bonuses with Equity.</i> Replaced 2016 cash bonuses paid to executive officers for achievement of performance objectives with performance based and performance-contingent stock awards. All of our directors are paid a stock retainer; several participated in our recent capital raise.
Reduce Board tenure and the risk of entrenchment	<i>Three New Directors.</i> In 2016, our Board appointed two new directors, Timothy S. Huval and Herbert Lurie, further enforcing its commitment to a balanced mix of new directors with fresh perspectives and, for continuity, seasoned, experienced directors with deep knowledge of the Company and its markets. In 2017, our Board has nominated another new Board member, Alvaro Monserrat, to replace a longer-tenured director. In addition, two long-tenured directors rotated off the CGC in 2016 and one short-tenured director was added, resulting in the majority of the CGC now comprised of short-tenured directors.

¹ Non-GAAP measure; refer to Appendix A - Information Regarding Non-GAAP Financial Measures.

What We Heard	Our Board's Response
Concerns regarding our severance payments under Change-in-Control agreements and award agreements	<i>Modifications to Existing Named Executive Officer ("NEO") Change-in-Control ("CIC") Agreements.</i> In September 2016, we entered into new CIC agreements with our NEOs which: i) eliminate excise tax gross-up payments, and ii) do not provide benefits that are paid before a CIC closes or if the acquirer retains the executive. Since 2015, our equity award agreements require a CIC and job loss or failure of the acquirer to convert awards into new issuer awards before vesting occurs.
Outcome of our 2016 Say-On-Pay vote	At our 2016 annual meeting of shareholders, our say-on-pay proposal received the support of 67.6% of the votes cast. In contrast, since 2009, our previous annual say-on-pay proposals received support of over 94% of the votes cast. Our CGC considered the vote in relation to: 1) the alignment of our compensation program with the long-term interests of our shareholders, 2) the evolution of our business strategy with emerging opportunities and in fulfilling customer demand for innovative products and services, and 3) the relationship between risk-taking and the incentive compensation provided to our executives. The CGC will continue to evaluate and refine our executive compensation plan to place greater emphasis on creating shareholder value, long-term performance and profitability based on emerging opportunities.
Suggestion to better articulate our business strategy	We have redoubled our efforts in our quarterly communications with shareholders and investors, and our enhanced our investor outreach, to convey our balanced business strategy of: 1) organic growth, 2) accretive and thoughtful M&A, and 3) innovation and digitally-engaged distribution. We formed the S&I Committee to provide oversight of these efforts.

The Board and the CGC will continue to monitor best practices, future advisory votes on executive compensation and other shareholder feedback to guide it in addressing issues of importance to our investors.

Source: https://www.sec.gov/Archives/edgar/data/730708/000114420417019335/v463271_def14a.htm

Appendix B (Continued)

Table B-2: Ventas, Inc.'s 2017 Proxy Statement

Responsive Redesign Following 2016 Advisory Vote on Executive Compensation and Stockholder Outreach

We submit an advisory vote to our stockholders on an annual basis to approve our executive compensation. At our 2016 Annual Meeting of Stockholders, holders of 68% of the shares represented at the meeting voted to approve, on an advisory basis, our executive compensation. Although a significant majority continued to support our executive compensation program, the result of the 2016 vote was in contrast to the strong support we received in prior years, specifically 95% in 2015 and 90% in 2014. The level of support declined despite (a) the absence of material changes to our general executive compensation program between the 2015 and 2016 Annual Meetings, (b) in the view of our Board, the consistent strong alignment between our executive pay and performance (see "Strong Pay-for-Performance Alignment" chart above) and (c) the significant reduction in long-term equity incentive awards granted to our Named Executive Officers in early 2016 resulting from our bottom quartile TSR performance as measured against our peer group for the one- and three-year measurement periods ending December 31, 2015, despite our outstanding long-term TSR outperformance.

We have continued to gain valuable insight from engaging with our stockholders on a consistent basis. We have conducted broad investor outreach programs on three separate occasions. In late 2015 and early 2016, the Chair of our Compensation Committee, our independent compensation consultant to the Compensation Committee and members of our Legal team reached out to 27 of our largest stockholders (holding more than 60% of our outstanding shares of common stock) to discuss our executive compensation program and invited such stockholders to provide us with feedback on our executive compensation program and corporate governance practices.

After filing our 2016 Proxy Statement, the Chair of our Compensation Committee, our independent compensation consultant to the Compensation Committee and members of our Legal team again reached out to our 30 largest stockholders (holding more than 60% of our outstanding shares of common stock) during April 2016 to discuss, and solicit feedback regarding potential changes to, our executive compensation program. We invited such stockholders to provide us with constructive comments regarding our executive compensation program and corporate governance practices.

In early 2017, a combination of the Chair of our Compensation Committee and members of our Legal team again reached out to our 32 largest stockholders (holding 60% of our outstanding shares of common stock) to discuss, and solicit feedback regarding our executive compensation program. We invited such stockholders to provide us with constructive comments regarding our executive compensation program and corporate governance practices.

Based on these discussions, we learned that our stockholders:

- ✓ generally approve of the overall structure of our executive compensation program and diversity of goals, particularly our use of balanced metrics of growth, risk management and capital structure to mitigate risk and promote responsible, sustained long-term growth;
- ✓ generally approve of our implementation of the executive compensation program, the factors considered and the decisions made under the program;
- ✓ generally approve of our proxy disclosures regarding our executive compensation program and corporate governance best practices;
- ✓ generally support our pay-for-performance alignment; and
- ✓ generally endorse our corporate governance practices.

We also received constructive feedback from our investors. After careful consideration of this feedback, we have decided to make significant and responsive modifications to our executive compensation program, beginning with the 2017 compensation cycle.

What We Heard From Investors	Changes We Made
Move to a forward-looking equity incentive plan	Performance-based awards are now based on future performance rather than on retrospective basis for satisfying specified performance goals
Reduce the percentage of discretion in long-term equity incentive plan	Eliminated qualitative or discretionary goals, previously comprising 50% of award opportunity Increased performance-based component aggregate target award value will be 60% performance-based restricted stock units (pRSUs) 40% time-based restricted stock units (RSUs)
Extend the measurement period in the long-term equity incentive plan and enhance vesting period	More balanced mix of performance metrics for overall award opportunity 25% TSR relative to the MSCI REIT Index 17.5% TSR relative to the FTSE NAREIT Equity Health Care Index 17.5% Balance sheet strength: ratio of Net Debt to EBITDA
Eliminate single-trigger Change in Control vesting	Moved performance periods from 1-year to 3-year for all performance-based awards
Consider proxy access	Eliminated immediate vesting and moved equity vesting period from 2-year to 3-year
	Moved to double-trigger change in control vesting for all awards granted under the new compensation program
	Proxy access voluntarily implemented in January 2017

The key features of the new program are consistent with the feedback we have received from our largest stockholders and are described in detail below in the section entitled, "Going Forward: Responsive Redesign of Long-Term Incentive Compensation."

We believe this redesigned program enhances alignment of pay and performance, is responsive to investor feedback and provides simpler, clear objectives, while achieving our goals of attracting, retaining and motivating talented executives and rewarding superior performance in the context of our business risk environment.

Source: https://www.sec.gov/Archives/edgar/data/740260/000110465917021407/a17-2391_1def14a.htm#ResponsiveRedesignFollowing2016A_120349

Appendix C: Variable Definitions

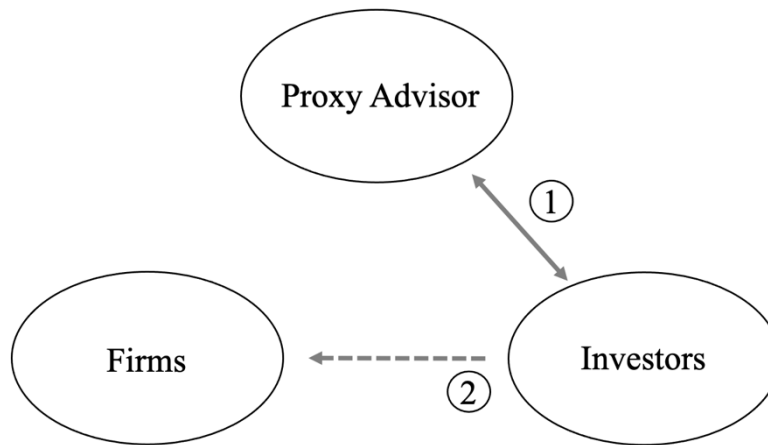
Variable	Definition
Engagement	
<i>Engagement indicator</i>	Equals 1 if the proxy statement mentions any of the engagement keywords engage*, feedback* and conversation* within 100 characters on either side of the shareholder keywords shareholder* or stockholder*
<i>Engagement count</i>	A count of the number of engagement keywords near shareholder keywords in the proxy statement
<i>Engagement references SOP</i>	Equals 1 if the shareholder engagement discussion in the proxy statement references the SOP vote from the prior year, and else 0
<i>Engagement table</i>	Equals 1 if the firm provides a tabular summary of investor concerns and the board response following engagement in the proxy statement, and else 0
<i>Shareholders contacted</i>	Percent of shares outstanding held by investors that were contacted during engagement, from the proxy statement
<i>Shareholders spoken with</i>	Percent of shares held by investors spoken with during engagement, from the proxy statement
Firm characteristics	
<i>SOP voting support</i>	Votes for the Say-On-Pay (SOP) proposal divided by the sum of the votes for and against SOP; Abstention votes are not included based on ISS's definition
<i>SOP voting dissent</i>	Votes against the SOP proposal divided by the sum of the votes for and against SOP
<i>ISS 'against' SOP</i>	Equals 1 if ISS recommends voting against SOP and else 0
<i>GL 'against' SOP</i>	Equals 1 if Glass Lewis recommends voting against SOP and else 0
<i>Size</i>	Natural log of total assets
<i>Market-to-book</i>	Market value of equity plus debt divided by total assets
<i>Return-on-assets</i>	Earnings before interest, taxes, depreciation, & amortization divided by assets
<i>Leverage</i>	Long-term debt plus long-term debt in current liabilities divided by total assets
<i>Sales growth</i>	Year-over-year growth in total revenue
<i>Abnormal returns</i>	Annual common stock return less the return of the value weighted CRSP index during the fiscal year
<i>Stock return volatility</i>	Standard deviation of the monthly stock returns during the fiscal year
<i>Operating loss</i>	Equals 1 if the firm has a non-missing value of tax loss carry-forward in Compustat during the fiscal year, and else 0
<i>CD&A exempt</i>	Equals 1 if the firm meets the SEC's definition of a Smaller Reporting Company and is exempt from the CD&A disclosure, and else 0
<i>Ln(analysts)</i>	Log transformation of one plus the number of analysts providing earnings per share forecasts during the four quarters prior to the annual meeting, from IBES
<i>Institutional ownership (IO)</i>	Percent of shares held by institutions with more than \$100 million in assets under management as reported on SEC Form 13-F, from Thomson
<i>Quasi-indexer IO</i>	Percent of shares held by institutions with a long-term horizon, low portfolio turnover, and greater diversification based on Bushee (1998)
<i>Transient IO</i>	Percent of shares held by institutions with a short-term horizon, high portfolio turnover, and greater diversification based on Bushee (1998)
<i>Dedicated IO</i>	Percent of shares held by institutions with a long-term horizon, low portfolio turnover, and less diversification based on Bushee (1998)
<i>CEO turnover</i>	Equals 1 for firms with any change in CEO based on hand-collected proxy filing information, and else 0
<i>Adjusted stock returns</i>	The firm's 12-month stock return minus its 2-digit SIC industry's market-cap-weighted average return
<i>Adjusted ROA</i>	The firm's income before extraordinary items as a percentage of assets minus the 2-digit SIC industry median for the same measure
<i>Net income</i>	Income or loss post-expenses, including extraordinary items and discontinued operations using Compustat item "NI"

Appendix C (Continued)

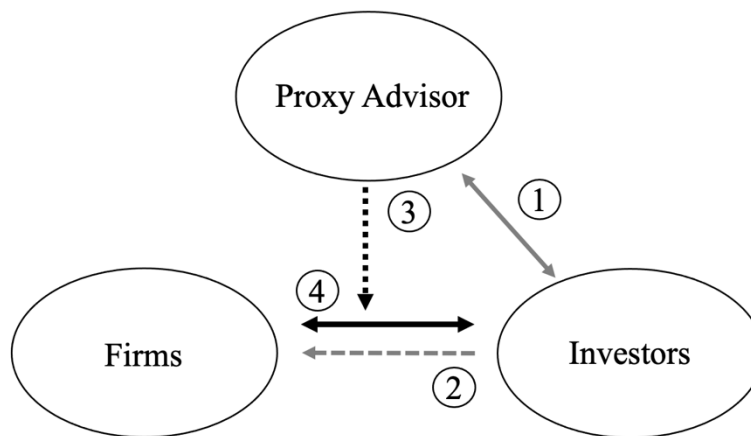
Variable	Definition
CEO pay	
<i>Equity pay</i>	Sum of CEO stock and option awards from the Summary Compensation Table (SCT)
<i>Non-equity pay</i>	Sum of CEO salary, bonus, non-equity incentives, change in pension value, and other compensation from the SCT
<i>Expected pay</i>	Estimated CEO total compensation using OLS regression based on Rouen (2020), as well as prior stock returns, stock return volatility, book-to-market ratio, book leverage, and indicator for firms with inside hires as well as negative net income.
<i>Unexpected pay</i>	The reported CEO compensation in the SCT less expected pay.
Governance or Directors	
<i>CC tenure</i>	Average board service length (in years) for compensation committee (CC) members
<i>Classified boards</i>	Equals 1 if the firm's board is divided into separate classes with each class being elected to overlapping terms (also known as staggered boards), else 0
<i>Board independence</i>	The ratio of the number of independent directors to the total number of directors
<i>Dual class shares</i>	Equals 1 if the firm has a structure where more than one class of shares are outstanding, with each offering different voting rights, else 0
<i>CC member voting support</i>	Average percent of votes for directors on the compensation committee divided by the sum of the votes for and against members of the compensation committee
<i>CC chair voting support</i>	Percent of votes for the chair of the compensation committee divided by the sum of the votes for and against the chair of the compensation committee
<i>Director voting support</i>	Average percent of votes for all directors divided by the sum of the votes for and against members of the board
<i>Directors voted on</i>	The total count of directors subject to shareholder voting at the next annual meeting
<i>CC members voted on</i>	The total count of compensation committee members subject to shareholder voting at the next annual meeting
<i>CC chair voted on</i>	Equals 1 if the chair of the compensation committee is subject to shareholder voting at the next annual meeting, and else 0
<i>Less responsive</i>	Equals 1 if the firm does not disclose shareholder engagement (i.e., <i>engagement indicator</i> is equal to 0), and else 0
<i>More responsive</i>	Equals 1 if the firm discloses shareholder engagement (i.e., <i>engagement indicator</i> is equal to 1), and else 0

Figure 1. Proxy Advisors and Information Flows

Panel A. Traditional view of information flows

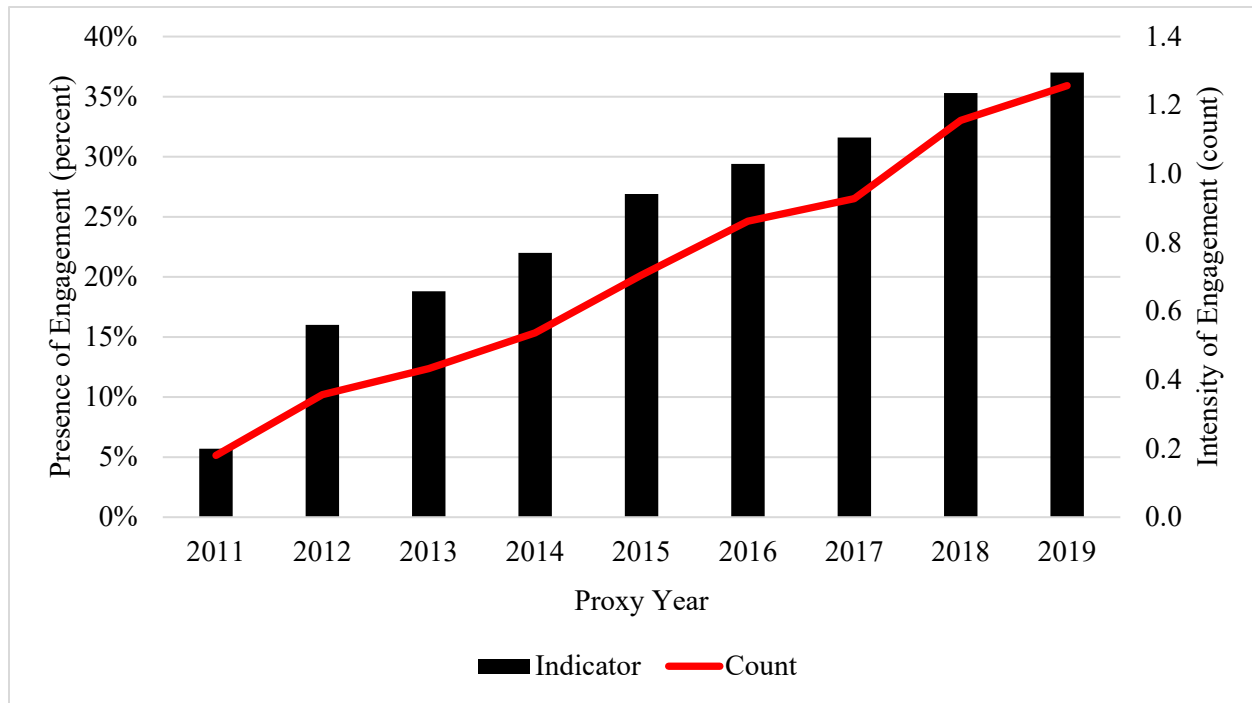


Panel B. ISS-facilitated information flows



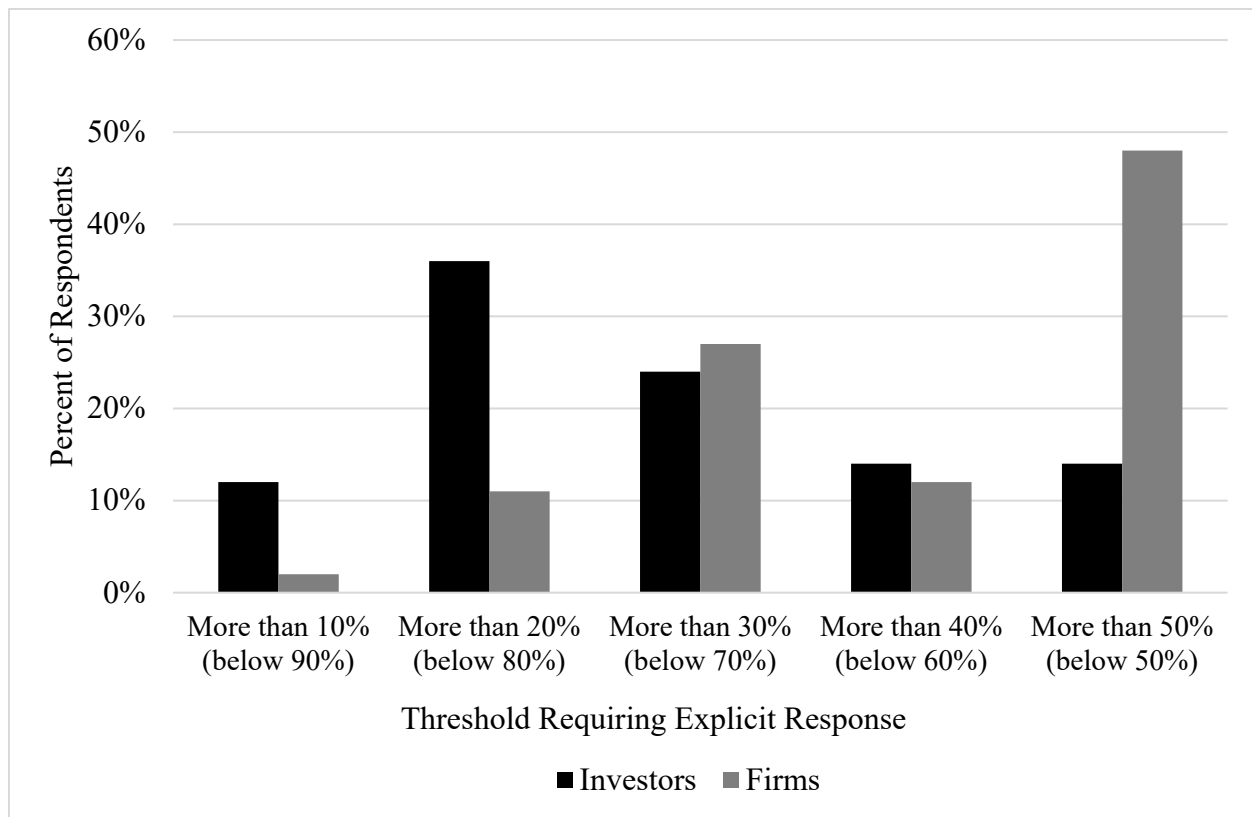
This figure shows how proxy advisory firms help with communication and voting between shareholders and firms. Panel A shows how proxy advisors talk to investors and make recommendations for voting. In Step 1, proxy advisors have two-way communication with investors, which helps inform their recommendations. In Step 2, shareholders vote on Say-On-Pay (SOP), but the information content of this vote is coarse as investors can only vote yes, no, or abstain. Panel B shows how, if a firm gets an SOP vote less than 70%, the proxy advisor (ISS) encourages the firm to talk to investors and disclose information about how it addressed shareholder concerns (Step 3). We test whether firms respond to pressure by ISS to engage more in direct communication with investors (Step 4).

Figure 2. Time Trends in Shareholder Engagement



This figure graphs our primary measures of shareholder engagement for the full universe of firms in the ISS Voting Analytics database with Say-On-Pay votes over proxy years 2011 to 2019. The yearly sample average for the *engagement indicator* is represented by bars and corresponds to the left y-axis. The line depicts the yearly average of the *engagement count*, which corresponds to the right y-axis. We define variables in Appendix C.

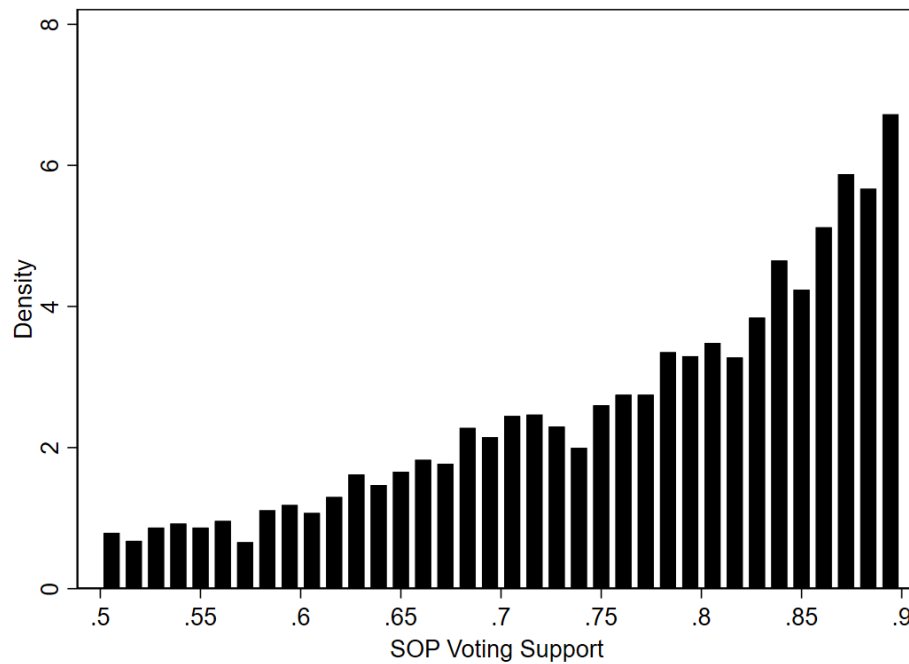
Figure 3. ISS Survey on Shareholder Engagement



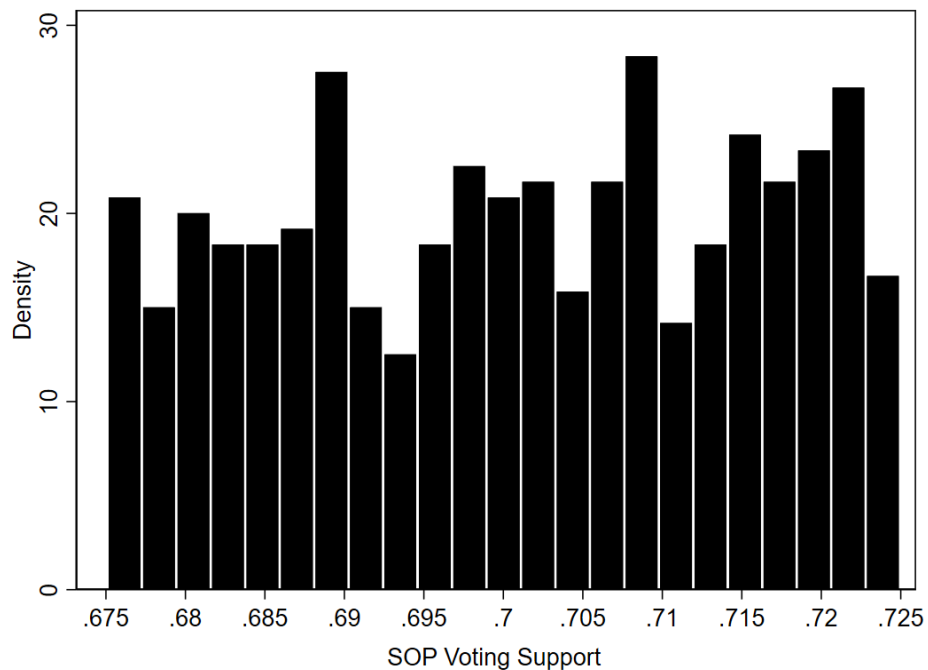
This figure charts responses by investors and firms to a Say-On-Pay (SOP) survey conducted by Institutional Shareholder Services (ISS) in 2011. The survey asked investors and firms, “*At what level of opposition on a say-on-pay proposal should there be an explicit response from the board regarding improvements on pay practices?*” We tabulate responses across five thresholds on the x-axis and graph the percent of investors and firms responding with support for each SOP voting threshold on the y-axis. See ISS, “2011-2012 Policy Survey Summary of Results,” September 2011, available at <https://www.issgovernance.com/file/files/PolicySurveyResults2011.pdf>.

Figure 4. Distribution of Say-On-Pay Voting Support

Panel A. SOP voting support between 50% and 90% for annual meetings over 2011 to 2019



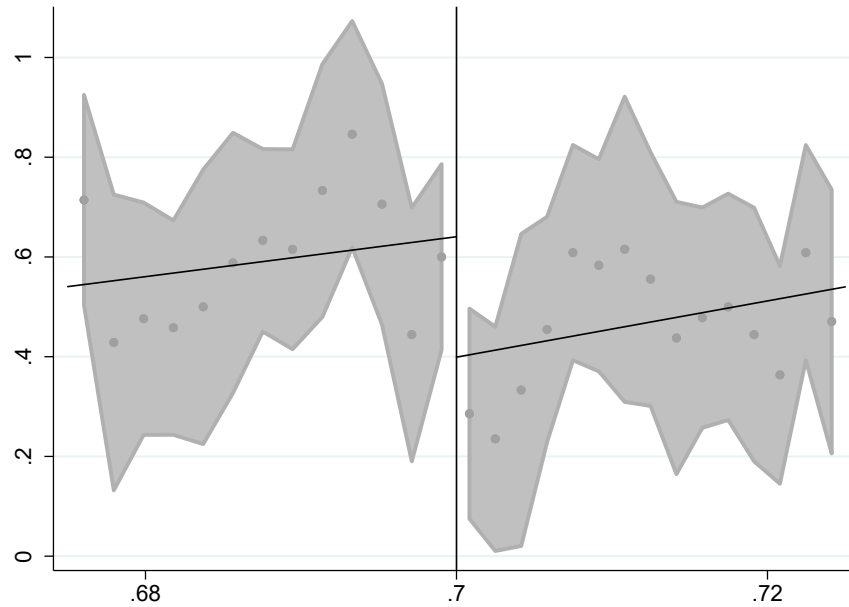
Panel B. SOP voting support between 67.5% and 72.5% for annual meetings over 2011 to 2019



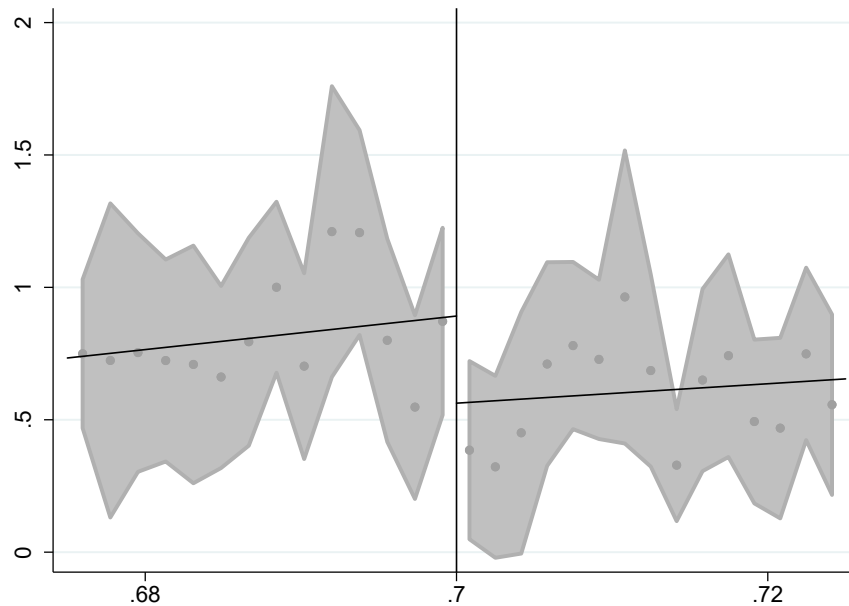
This figure presents a histogram of the percentage of shareholders approving Say-On-Pay (SOP) using the ISS definition of *SOP voting support*. Panel A presents the density of firms with voting support between 50% and 90%, while Panel B shows the density of firms with voting support between 67.5% and 72.5%.

Figure 5. Regression Discontinuity Plots of Shareholder Engagement

Panel A. Shareholder engagement indicator



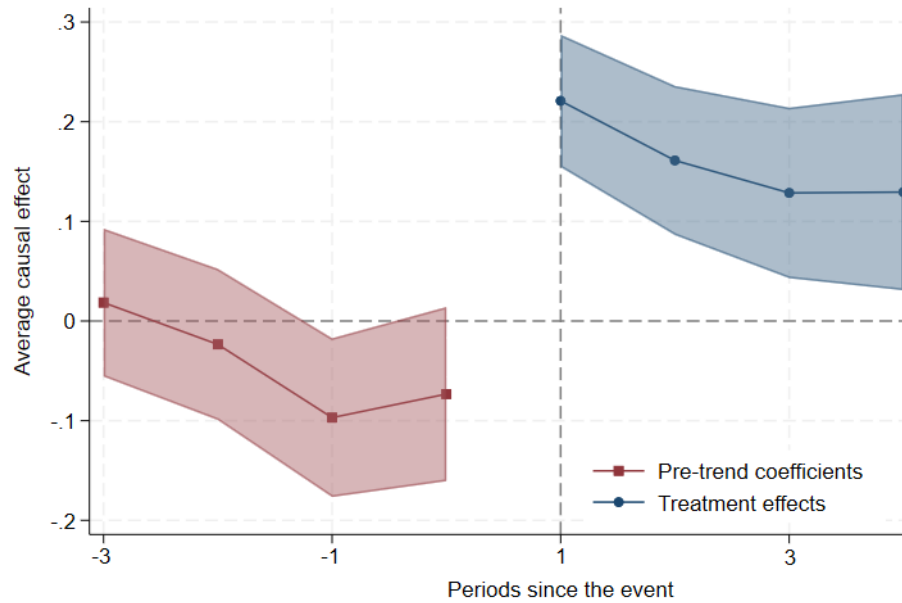
Panel B. Shareholder engagement count



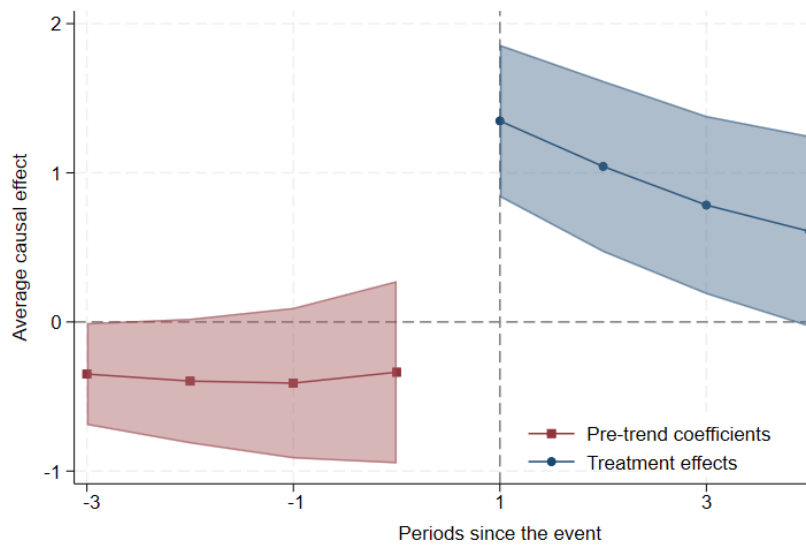
This figure presents the regression discontinuity plots of the *engagement indicator* (Panel A) and *engagement count* (Panel B) in year $t+1$. Each circle depicts an evenly spaced bin with a bandwidth of $\pm 2.5\%$ around the 70% Say-On-Pay (SOP) voting support threshold. ISS-treated firms have SOP voting support between 67.50% and 69.99%, while control firms have SOP voting support between 70.00% and 72.50%. The gray shaded region depicts the 95% confidence interval. The solid line fits a first order polynomial to estimate the relation between SOP voting support and shareholder engagement. We define variables in Appendix C.

Figure 6. ISS Treatment Effect and Shareholder Engagement Over Time

Panel A. Shareholder engagement indicator



Panel B. Shareholder engagement count



This figure displays the staggered difference-in-difference estimates for the ISS treatment effect over time, following the methodology of Borusyak et al. (2024). ISS treated firms have SOP voting support between 67.50% and 69.99%, while control firms have SOP voting support between 70.00% and 72.50%. Squares denote the pre-assignment differences for ISS treated firms during the four years before the low SOP vote. Circles represent the estimated treatment effects for the four years after treatment. The shaded region depicts the 95% confidence interval for each yearly coefficient. Panel A examines the *engagement indicator*, and Panel B focuses on *engagement count*. Detailed results are provided in Table IA-9 of the Internet Appendix.

Table 1. Shareholder Engagement Measures Over Time

	(1)	(2)	(3)	(4)	(5)	(6)
	Engagement Indicator	Engagement Count	Engagement References SOP	Engagement Table %	Contacted % (nonzero)	Spoken With % (nonzero)
2011	0.057	0.180	0.010	0.000	--	--
2012	0.160	0.357	0.030	0.000	0.700	0.250
2013	0.188	0.433	0.100	0.000	0.557	0.495
2014	0.220	0.537	0.100	0.010	0.407	0.498
2015	0.269	0.705	0.100	0.000	0.552	0.565
2016	0.294	0.862	0.120	0.020	0.517	0.402
2017	0.316	0.928	0.100	0.030	0.510	0.473
2018	0.353	1.156	0.110	0.030	0.543	0.486
2019	0.370	1.257	0.220	0.040	0.507	0.336
2011-2019	0.234	0.657	0.099	0.014	0.521	0.446

This table presents measures of shareholder engagement reported in annual proxy statements between 2011 to 2019. *Engagement indicator* equals 1 if the proxy statement mentions any of the engagement keywords engage*, feedback* and conversation* within 100 characters on either side of the shareholder keywords shareholder* or stockholder*, and otherwise 0. *Engagement count* represents the number of instances in which engagement keywords appear near shareholder keywords in the proxy statement. *Engagement references SOP* equals 1 if the shareholder engagement discussion in the proxy statement references the SOP vote from the prior year, and otherwise 0. *Engagement table* equals 1 if the firm provides a tabular summary of investor concerns and the board response following engagement in the proxy statement, and otherwise 0. *Contacted* is the percent of shares outstanding held by investors that were contacted during engagement, from the proxy statement. *Spoken with* is the percent of shares held by investors spoken during engagement, from the proxy statement. *Engagement indicator* and *engagement count* were collected via a python scrape of proxy statements for firms in the ISS Voting Analytics database over 2011 to 2019. *Engagement references SOP*, *engagement table*, *contacted*, and *spoken with* are hand-collected from 900 randomly selected proxy statements distributed uniformly across the sample period.

Table 2. Determinants of Shareholder Engagement

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Lowest	Q2	Q3	Q4	Highest	Q5–Q1	<i>p</i> -value	Coverage
SOP voting dissent	0.215	0.276	0.299	0.327	0.485	0.270***	0.000	1.000
ISS ‘against’ SOP	0.293				0.531	0.238***	0.000	1.000
GL ‘against’ SOP	0.431				0.642	0.211***	0.000	0.199
Size	0.039	0.156	0.250	0.324	0.456	0.417***	0.000	1.000
Market-to-book	0.244	0.348	0.357	0.343	0.304	0.060***	0.000	0.989
Return-on-assets	0.200	0.296	0.295	0.371	0.343	0.144***	0.000	0.994
Leverage	0.234	0.247	0.288	0.383	0.390	0.156***	0.000	0.991
Sales growth	0.309	0.318	0.326	0.346	0.314	0.005	0.661	0.979
Abnormal returns	0.303	0.336	0.341	0.333	0.327	0.024**	0.033	0.965
Stock return volatility	0.378	0.370	0.316	0.299	0.247	-0.131***	0.000	0.963
Operating loss	0.285				0.352	0.067***	0.000	0.996
CD&A exempt	0.360				0.084	-0.276***	0.000	0.994
Analysts	0.228	0.283	0.331	0.405	0.505	0.277***	0.000	0.757
Inst. ownership (IO)	0.095	0.115	0.274	0.393	0.418	0.323***	0.000	0.860
Quasi-indexer IO	0.108	0.129	0.273	0.390	0.414	0.306***	0.000	0.848
Transient IO	0.094	0.195	0.355	0.369	0.395	0.301***	0.000	0.848
Dedicated IO	0.221	0.146	0.315	0.463	0.396	0.174***	0.000	0.848
CEO turnover	0.315				0.439	0.124***	0.000	1.000
CEO equity pay	0.283	0.284	0.381	0.506	0.485	0.201***	0.000	0.680
CEO non-equity pay	0.284	0.331	0.396	0.516	0.422	0.138***	0.000	0.680
Board independence	0.377	0.380	0.417	0.435	0.488	0.111***	0.000	0.497
CC tenure	0.440	0.444	0.419	0.423	0.349	-0.091***	0.000	0.496
Classified board	0.446				0.344	-0.102***	0.000	0.536
Dual class shares	0.415				0.270	-0.146***	0.000	0.536

This table examines the univariate determinants of shareholder engagement. We sort the sample into quintiles based on yearly firm-level characteristics in fiscal year t for 20,610 firm years during the sample period of Say-On-Pay (SOP) votes over 2011 to 2019. We then compute the percent of firms where the *engagement indicator* equals 1 within each quintile in year $t+1$. We compute the difference in the highest and lowest quintile (Q5 minus Q1) for each variable. ***, **, and * indicate this difference is statistically different from zero at the 1%, 5%, and 10% level using two-tailed t -tests. We report the associated p -value and percent of the sample with coverage (i.e., non-missing values) for each firm characteristic. We define variables in Appendix C.

Table 3. Regression Analysis of Shareholder Engagement Determinants

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Engagement Indicator				Engagement Count			
SOP voting dissent	0.955*** (14.73)		0.541*** (11.17)		2.776*** (35.72)		1.740*** (13.10)	
ISS 'against' SOP		0.316*** (10.97)		0.174*** (8.92)		1.040*** (27.83)		0.583*** (11.64)
Size	0.021* (2.17)	0.020* (1.94)	0.016 (0.81)	0.022 (1.15)	0.111*** (3.77)	0.114*** (3.73)	0.060 (0.96)	0.094 (1.41)
Market-to-book	-0.000 (-0.10)	-0.003 (-0.73)	-0.020** (-3.12)	-0.020** (-3.20)	-0.011 (-0.34)	-0.024 (-0.67)	-0.016 (-0.62)	-0.017 (-0.67)
Return-on-assets	-0.217* (-1.95)	-0.255* (-2.15)	-0.067 (-1.12)	-0.085 (-1.37)	-0.434** (-2.25)	-0.447** (-2.13)	-0.063 (-0.57)	-0.077 (-0.74)
Leverage	0.080** (2.42)	0.080** (2.35)	-0.070 (-1.04)	-0.063 (-0.92)	0.322* (1.77)	0.306 (1.53)	-0.021 (-0.08)	0.058 (0.20)
Sales growth	0.026 (0.74)	0.029 (0.90)	0.016 (1.28)	0.017 (1.40)	0.153 (1.57)	0.184* (1.67)	0.029 (0.50)	0.070 (1.12)
Abnormal returns	0.016 (0.68)	0.004 (0.17)	0.012 (0.91)	0.007 (0.48)	0.027 (0.34)	-0.008 (-0.10)	0.095** (2.38)	0.053 (1.29)
Stock ret. volatility	0.283 (1.82)	0.307* (1.93)	0.120 (0.16)	0.153 (0.20)	0.299 (0.40)	0.288 (0.39)	2.746 (0.94)	3.050 (1.03)
Operating loss	0.009 (0.51)	0.011 (0.61)	0.010 (0.52)	0.011 (0.56)	0.076 (1.47)	0.085* (1.74)	0.066 (0.66)	0.051 (0.52)
CD&A exempt	0.047 (0.39)	0.095 (0.79)	-0.046 (-0.45)	-0.019 (-0.19)	-0.030 (-0.14)	0.137 (0.58)	-0.456 (-1.46)	-0.361 (-1.21)
Ln(analysts)	0.024 (1.48)	0.021 (1.22)	0.016 (1.36)	0.015 (1.27)	0.076 (1.63)	0.052 (1.08)	0.092** (2.17)	0.077* (1.76)
Inst. ownership	0.031 (0.57)	0.039 (0.71)	-0.007 (-0.25)	-0.007 (-0.23)	0.296** (2.21)	0.377*** (2.88)	-0.177 (-1.60)	-0.135 (-1.13)
CEO turnover	0.008 (0.34)	0.011 (0.50)	0.007 (0.92)	0.009 (1.11)	-0.010 (-0.19)	-0.016 (-0.29)	0.028 (0.94)	0.029 (0.93)
Ln(CEO equity pay)	0.036* (2.30)	0.047*** (3.42)	0.000 (0.04)	0.007 (0.87)	0.141*** (3.66)	0.167*** (4.99)	0.001 (0.05)	0.032 (1.20)
Ln(CEO non-eq. pay)	0.039** (3.31)	0.041*** (3.49)	0.003 (0.32)	0.000 (0.04)	0.054* (1.83)	0.049* (1.78)	-0.021 (-0.53)	-0.043 (-1.01)
Board independence	0.067 (0.97)	0.066 (1.00)	-0.003 (-0.04)	-0.000 (-0.01)	0.620 (1.48)	0.547 (1.41)	0.025 (0.07)	-0.036 (-0.10)
CC tenure	-0.006*** (-4.74)	-0.006*** (-4.35)	0.003 (1.54)	0.003 (1.64)	-0.018*** (-2.74)	-0.015** (-2.01)	0.023*** (2.96)	0.025*** (3.27)
Classified board	-0.049** (-3.10)	-0.048** (-3.00)	-0.008 (-0.32)	-0.010 (-0.40)	-0.140** (-2.47)	-0.155*** (-2.74)	0.032 (0.29)	-0.003 (-0.03)
Dual class shares	-0.061 (-1.61)	-0.108** (-2.55)	0.013 (0.22)	0.018 (0.31)	-0.374*** (-3.47)	-0.584*** (-5.33)	0.097 (0.57)	0.139 (0.68)
Regression	OLS	OLS	OLS	OLS	Poisson	Poisson	Poisson	Poisson
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	No	No	Yes	Yes	No	No
Firm FE	No	No	Yes	Yes	No	No	Yes	Yes
Firm years	8,985	8,981	8,803	8,799	8,985	8,981	5,705	5,701
Adjusted (Pseudo) R ²	0.160	0.145	0.668	0.665	0.183	0.172	0.420	0.415

This table presents regression analyses of the determinants of shareholder engagement. We estimate regressions of *engagement indicator* (Columns 1-4) and *engagement count* (Columns 5-8) using Eq. (1) for observations with non-missing values for all determinants. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All regressions include fiscal year fixed effects (FEs). Columns 1, 2, 5, and 6 use industry FEs based on one-digit Standard Industrial Classification codes and have standard errors double clustered by industry and year. Columns 3, 4, 7, and 8 use firm FEs with standard errors double clustered by firm and year. We define variables in Appendix C.

Table 4. Validity of Research Design*Panel A. No Manipulation of Forcing Variable*

	(1)	(2)	(3)	(4)	(5)
Bandwidth:	±2.5%	±5.0%	±10.0%	CJM	CJM
<i>Manipulation test statistic</i>	0.537 (0.592)	0.634 (0.526)	-0.514 (0.608)	0.765 (0.444)	-0.262 (0.794)
Sample period	2011-19	2011-19	2011-19	2011-19	2011
Treated firms (below)	262	479	804	777	48
Control firms (above)	291	563	1273	1096	26

Panel B. Similarity of Treatment and Control Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Treated	Control	Diff.	p-value	RD Treated	RD p-value	N [T:C]
Say-On-Pay (SOP) voting							
SOP voting support _{t-1}	0.837	0.844	-0.007	0.702	0.057	0.301	155:162
SOP voting support _t	0.688	0.713	-0.025***	0.000	na	na	209:217
Shareholder engagement_t							
Engagement indicator	0.273	0.263	0.010	0.815	-0.097	0.520	209:217
Engagement count	0.986	1.097	-0.111	0.630	-0.119	0.638	209:217
Engagement ref. SOP	0.234	0.249	-0.014	0.729	-0.119	0.403	209:217
Engagement table	0.100	0.074	0.027	0.328	-0.060	0.533	209:217
Shareholders contacted	0.034	0.027	0.007	0.607	-0.060	0.304	159:169
Shareholders spoken with	0.051	0.053	-0.002	0.892	-0.034	0.575	169:181
Shareholder engagement_{t-1}							
Engagement indicator	0.146	0.162	-0.016	0.662	-0.142	0.178	205:210
Engagement count	0.429	0.529	-0.099	0.448	-0.189	0.184	205:210
Engagement ref. SOP	0.127	0.133	-0.007	0.844	-0.052	0.661	205:210
Engagement table	0.049	0.062	-0.013	0.560	-0.063	0.362	205:210
Shareholders contacted	0.037	0.016	0.021	0.116	-0.062	0.163	186:182
Shareholders spoken with	0.025	0.028	-0.003	0.801	-0.019	0.614	186:188
Firm characteristics_t							
ISS 'against' SOP	0.689	0.650	0.039	0.391	-0.066	0.676	209:217
Size	7.303	7.220	0.083	0.676	0.063	0.918	209:217
Market-to-book	1.478	1.519	-0.040	0.839	0.254	0.663	209:217
Return-on-assets	0.005	0.000	0.005	0.830	0.038	0.401	209:217
Leverage	0.221	0.224	-0.003	0.884	-0.079	0.295	209:217
Sales growth	0.067	0.079	-0.012	0.842	-0.185	0.219	209:217
Abnormal returns	-0.068	-0.072	0.004	0.911	0.152	0.123	209:217
Stock return volatility	0.124	0.135	-0.011	0.157	-0.039	0.060*	209:217
Operating loss	0.641	0.677	-0.036	0.431	-0.144	0.336	209:217
CD&A exempt	0.072	0.083	-0.011	0.667	-0.124	0.178	209:217
Ln(analysts)	1.619	1.572	0.047	0.658	0.006	0.985	209:217
Inst. ownership	0.615	0.617	-0.002	0.947	-0.124	0.250	209:217
CEO turnover	0.134	0.161	-0.027	0.428	0.072	0.392	209:217
Adjusted stock returns	-0.119	-0.126	0.007	0.826	0.098	0.297	209:217
Adjusted ROA	-0.012	0.004	-0.017	0.441	0.033	0.614	209:217
Net income (\$B)	0.285	0.246	0.039	0.613	0.117	0.740	209:217

Table 4 (Continued)

Panel B. Continued							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Treated	Control	Diff.	<i>p</i> -value	RD Treated	RD <i>p</i> -value	N [T:C]
CEO pay t							
Ln(CEO equity pay)	12.887	13.331	-0.444	0.303	1.764	0.219	209:217
Ln(CEO non-eq. pay)	13.948	14.209	-0.262	0.172	0.174	0.603	209:217
Expected CEO pay	14.887	15.036	-0.149	0.198	0.396	0.213	209:217
Unexpected CEO pay	-0.058	0.058	-0.116	0.406	-0.021	0.948	209:217
Director voting							
CC member support t	0.892	0.895	-0.003	0.778	0.010	0.761	183:197
CC member support $t-1$	0.909	0.909	0.000	0.980	-0.017	0.576	176:181
CC chair support t	0.892	0.905	-0.014	0.244	0.008	0.856	142:143
CC chair support $t-1$	0.916	0.901	0.015	0.268	-0.018	0.607	126:136
Director support t	0.909	0.911	-0.002	0.821	-0.001	0.964	209:217
Director support $t-1$	0.921	0.921	0.000	0.959	-0.030	0.316	204:214
Governance t							
CC tenure	8.527	8.896	-0.369	0.404	-2.400	0.080*	209:217
Classified board	0.421	0.433	-0.012	0.801	0.036	0.809	209:217
Board independence	0.793	0.783	0.010	0.364	0.039	0.239	209:217
Dual class shares	0.043	0.046	-0.003	0.880	-0.004	0.963	209:217
Board characteristics $t+1$							
Classified board	0.402	0.419	-0.017	0.715	0.039	0.793	209:217
Board size	8.440	8.585	-0.145	0.546	-0.647	0.324	209:217
Directors voted on	6.230	6.346	-0.116	0.737	-0.540	0.582	209:217
CC members voted on	2.474	2.548	-0.075	0.604	-0.371	0.413	209:217
CC chair voted on	0.675	0.654	0.020	0.659	0.070	0.581	209:217

Panel A reports tests of whether firms manipulate the forcing variable, *SOP voting support*, around the 70% threshold to avoid ISS treatment. We report the *manipulation test statistic* and corresponding *p*-values using the robust bias-corrected density estimator of Cattaneo et al. (2020) (“CJM”) to test for discontinuities for various bandwidths and sample periods around the 70% cutoff. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. Panel B compares differences in SOP voting, shareholder engagement, firm characteristics, CEO pay, director voting, governance, and board characteristics during the pre-assignment period (i.e., prior to receiving 67.5% to 72.5% SOP voting support in year t) or the treatment period (i.e., year $t+1$). *Treated* includes firms with 67.50% to 69.99% SOP voting support. *Control* includes firms with 70.00% to 72.50% SOP voting support. ***, **, * denote the difference in Column 3 is significant at the 1%, 5%, and 10% level, respectively, using two-tailed *t*-tests and the reported *p*-value in Column 4. In Column 5, we present the robust bias-corrected coefficient on *Treated* using a local linear regression discontinuity estimation from Cattaneo et al. (2018). The *p*-value from the RD estimation is reported in Column 6. The number of treat (T) and control (C) observations are in Column 7. We define variables in Appendix C.

Table 5. ISS Treatment and Shareholder Engagement

Panel A. Summary statistics and univariate tests										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Treated			Control			Difference			T+C
Shareholder engagement _{t+1}	Mean	Median	SD	Mean	Median	SD	Mean	p-value	N [T:C]	Mean
Engagement indicator	0.660	1	0.475	0.512	1	0.501	0.149***	0.002	209:217	0.585
Engagement count	2.464	1	3.200	1.724	1	2.624	0.741***	0.009	209:217	2.087
Engagement references SOP	0.598	1	0.491	0.442	0	0.498	0.156***	0.001	209:217	0.519
Engagement table	0.191	0	0.394	0.092	0	0.290	0.099***	0.003	209:217	0.141
Shareholders contacted	0.237	0	0.316	0.103	0	0.213	0.134***	0.000	115:132	0.166
Shareholders contacted (nonzero)	0.619	0.645	0.149	0.505	0.500	0.137	0.115***	0.002	44:27	0.576
Shareholders spoken with	0.172	0	0.235	0.078	0	0.172	0.094***	0.000	118:130	0.123
Shareholders spoken with (nonzero)	0.431	0.454	0.159	0.405	0.430	0.148	0.026	0.492	47:25	0.422

Panel B. ISS treatment and shareholder engagement _{t+1}						
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable:	Engagement Indicator	Engagement Count	Engagement References SOP	Engagement Table	Shareholders Contacted	Shareholders Spoken With
ISS treatment	0.160*** (3.78)	0.407*** (3.57)	0.165*** (3.88)	0.100*** (3.09)	0.126*** (4.40)	0.081*** (3.59)
Regression	OLS	Poisson	OLS	OLS	OLS	OLS
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year, Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Firms	426	426	426	426	247	248
Adjusted (Pseudo) R ²	0.251	0.226	0.267	0.120	0.368	0.337

This table reports tests of the relation between ISS treatment and subsequent shareholder engagement in year $t+1$. *ISS treatment* equals 1 if the firm has Say-On-Pay (SOP) voting support in between 67.50% and 69.99%, and 0 if SOP voting support is between 70.00% and 72.50%. Panel A reports the mean, median, and standard deviation of engagement values for treated firms in Columns 1-3 and control firms in Columns 4-6. We tabulate the mean difference in each variable and the corresponding p -value from a two-tailed t -test in Columns 7 and 8. Column 9 shows the count of treated (T) and control (C) firms. As a point of reference, Column 10 displays the combined averages for treated and control firms (T+C). Panel B presents regressions of the average treatment effect of ISS on shareholder engagement using estimates of Eq. (2). Columns 5 and 6 exclude firms that report engagement but do not provide the percent of shareholders contacted or spoken with. The number of observations differs as some firms only report one of these two metrics. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All regressions include fiscal year and industry fixed effects. We define variables in Appendix C.

Table 6. Regression Discontinuity Tests of ISS Treatment and Shareholder Engagement

<i>Panel A. Regression discontinuity tests of shareholder engagement indicator $t+1$</i>					
	(1)	(2)	(3)	(4)	(5)
Bandwidth:	$\pm 2.5\%$	$\pm 5.0\%$	$\pm 10.0\%$	CCF	CCF
<i>ISS treatment</i>	0.334*** (0.010)	0.290*** (0.002)	0.197*** (0.003)	0.165*** (0.007)	0.217*** (0.002)
Polynomial	Linear	Linear	Linear	Linear	Quadratic
Kernel	Triangular	Triangular	Triangular	Triangular	Triangular
Treated firms (below)	262	479	804	639	814
Control firms (above)	291	563	1273	849	1299
<i>Panel B. Regression discontinuity tests of shareholder engagement count $t+1$</i>					
	(1)	(2)	(3)	(4)	(5)
Bandwidth:	$\pm 2.5\%$	$\pm 5.0\%$	$\pm 10.0\%$	CCF	CCF
<i>ISS treatment</i>	0.446** (0.029)	0.345** (0.019)	0.298*** (0.005)	0.269*** (0.006)	0.323*** (0.004)
Polynomial	Linear	Linear	Linear	Linear	Quadratic
Kernel	Triangular	Triangular	Triangular	Triangular	Triangular
Treated firms (below)	262	479	804	628	849
Control firms (above)	291	563	1273	833	1378

This table presents local polynomial regression discontinuity (RD) estimates of shareholder engagement using the “rdrobust” package in Stata from Cattaneo et al. (2018). We use a triangular kernel to construct all local-polynomial estimators. Panel A tests the *engagement indicator*. Panel B tests the natural log of one plus *engagement count*. We present local linear robust bias-corrected RD estimates for the 2.5%, 5.0%, and 10.0% bandwidth around the *ISS treatment* threshold of 70% Say-On-Pay (SOP) voting support in Columns 1, 2, and 3 respectively. Columns 4 and 5 utilize the bandwidth selection procedure in Calonico et al. (2020) (“CCF”). We present these results for both a local linear (Column 4) and local quadratic (Column 5) polynomial. We report the number of treated and control firms for each estimation, which are those just below and above the 70% SOP voting support threshold, respectively. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level based on the corresponding z -statistic and reported p -value.

Table 7. Shareholder Engagement and Prior Voting Support

	(1)	(2)	(3)	(4)
	<i>Engagement indicator</i>		<i>Engagement Count</i>	
<i>Voting support:</i>	CC Members	All Directors	CC Members	All Directors
<i>ISS treatment</i>	0.480 (1.13)	0.254 (0.58)	3.188** (2.50)	3.593** (2.29)
<i>Voting support</i>	0.611* (1.90)	0.735** (2.22)	2.763** (2.57)	3.007** (2.46)
<i>ISS treatment</i> × <i>voting support</i>	-0.365 (-0.77)	-0.103 (-0.21)	-3.060** (-2.23)	-3.415** (-2.05)
Regression	OLS	OLS	Poisson	Poisson
Controls	Yes	Yes	Yes	Yes
Year, Industry FE	Yes	Yes	Yes	Yes
Observations	380	426	380	426
Adjusted (Pseudo) R ²	0.237	0.249	0.235	0.231

This table examines whether directors facing a higher risk of ISS voting opposition engage more actively following ISS treatment. We estimate regressions of *engagement indicator* (Columns 1 and 2) and *engagement count* (Columns 3 and 4) after modifying Eq. (2) to include proxies for ISS sanction risk. For these, we use two ex-ante voting support variables: *compensation committee (CC) member voting support*, and *all directors voting support*. In this table, *ISS treatment* equals 1 if the firm has Say-On-Pay (SOP) voting support in between 67.50% and 69.99%, and 0 if SOP voting support is between 70.00% and 72.50%. The variable of interest in each test is the ISS treatment interacted with the two voting support variables (*ISS treatment* × *voting support*), which indicates whether the engagement response to ISS treatment differs for firms with higher baseline values of each measure. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All regressions include year and industry fixed effects. We define variables in Appendix C.

Table 8. Credibility of the ISS Threat

<i>Panel A: Likelihood of ISS Recommending 'Against' Directors in Year After Low Vote</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
	All	Less Responsive	More Responsive	Diff.	p-value	N [LR:MR]
CC member						
Treated	0.239	0.429	0.133	0.295***	0.000	75:42
Control	0.081	0.115	0.052	0.063	0.174	67:58
Difference	0.158***	0.314***	0.081*			
p-value	0.001	0.000	0.091			
Director						
Treated	0.162	0.269	0.100	0.169***	0.002	80:46
Control	0.077	0.099	0.057	0.042	0.264	71:63
Difference	0.085***	0.170***	0.043			
p-value	0.009	0.003	0.250			
<i>Panel B: Regressions of the Likelihood of ISS Recommending 'Against' Directors in Year After Low Vote</i>						
	(1)	(2)	(3)	(4)		
	CC Members		All Directors			
<i>ISS treatment</i>	0.169***	0.063	0.086***	0.024		
	(3.69)	(1.08)	(2.66)	(0.57)		
<i>Less responsive</i>	0.101*	-0.028	0.053	-0.021		
	(1.90)	(-0.40)	(1.43)	(-0.43)		
<i>ISS treatment × less responsive</i>		0.264***		0.153**		
		(2.90)		(2.39)		
Regression	OLS	OLS	OLS	OLS		
Controls	Yes	Yes	Yes	Yes		
Firm, Industry FE	Yes	Yes	Yes	Yes		
Observations	240	240	258	258		
Adjusted R ²	0.131	0.161	0.159	0.176		

This table presents results of tests to determine whether directors with lower engagement levels after ISS treatment are more likely to receive an “against” recommendation from ISS for their re-election in the following year. In this table, *ISS treatment* equals 1 if the firm has Say-On-Pay (SOP) voting support in between 67.50% and 69.99%, and 0 if SOP voting support is between 70.00% and 72.50%. We designate firms as *more responsive* if they disclose engagement in year $t+1$ and *less responsive* if they do not. Panel A presents the univariate likelihood of ISS recommending against compensation committee (CC) members and all directors in in year $t+1$ based on the responsiveness of treated and control firms. Panel B presents regression results in tests that modify Eq. (2) to include controls for the less responsive indicator and the interaction of treatment with responsiveness (*ISS treatment × less responsive*), which indicates whether the ISS’s voting recommendations differ for firms based on their engagement response to a low SOP vote. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All regressions include year and industry fixed effects. We define variables in Appendix C.

Table 9. ISS Treatment and Shareholder Engagement Over Time

Dependent variable:	Engagement Indicator			Engagement Count		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>ISS treatment</i>	0.214*** (6.24)			0.719*** (4.26)		
<i>ISS treatment</i> ⁻¹		-0.038 (-1.33)	-0.033 (-1.11)		0.025 (0.19)	-0.047 (-0.26)
<i>ISS treatment</i> ⁰		-0.023 (-0.60)	-0.022 (-0.67)		0.263 (1.00)	0.250 (1.06)
<i>ISS treatment</i> ⁺¹		0.270*** (5.79)	0.288*** (5.22)		0.985*** (4.13)	0.918*** (3.44)
<i>ISS treatment</i> ⁺²		0.151** (2.90)	0.174** (3.10)		0.598** (1.98)	0.551* (1.76)
<i>ISS treatment</i> ⁺³		0.113* (2.19)	0.124** (2.30)		0.426 (1.30)	0.316 (0.91)
<i>ISS treatment</i> ⁺⁴		0.075 (1.05)	0.092 (1.30)		0.101 (0.30)	-0.064 (-0.19)
Regression	OLS	OLS	OLS	Poisson	Poisson	Poisson
Controls	No	No	Yes	No	No	Yes
Firm, Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm Years	2,746	2,746	2,102	1,906	1,906	1,566
Adjusted (Pseudo) R ²	0.522	0.526	0.529	0.414	0.424	0.448

This table presents panel regressions of the relation between ISS treatment and shareholder engagement over time. Columns 1 to 3 present tests of *engagement indicator*. Columns 4 to 6 test *engagement count*. The *ISS treatment* coefficient in Columns 1 and 4 represent ISS treatment times a post-treatment period indicator. In Columns 2, 3, 5, and 6, the *ISS Treatment*^{+/-n} indicator is the event-time *ISS treatment* indicator from Eq. (3). ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All regressions include firm and year fixed effects. We cluster standard errors at the firm level in Columns 1 and 4, and at the firm and year level in all other columns. Variables are defined in Appendix C.

Table 10. Abnormal Stock Returns around SOP Vote Disclosure

	(1)	(2)	(3)	(4)	(5)	(6)
	All SOP Vote Results				Removing Contaminated Disclosures	
Abnormal returns period:	3-day [-1,+1]	5-day [-2,+2]	3-day [-1,+1]	5-day [-2,+2]	3-day [-1,+1]	5-day [-2,+2]
<i>ISS treatment</i>	0.004 (0.38)	-0.000 (-0.00)	-0.008 (-0.63)	-0.017 (-1.17)	-0.009 (-0.74)	-0.015 (-1.09)
<i>ISS 'against' SOP</i>	0.010* (1.80)	0.008 (1.32)	0.002 (0.20)	-0.004 (-0.41)	-0.001 (-0.10)	-0.002 (-0.26)
<i>SOP voting support</i>	0.266 (0.73)	0.143 (0.35)	0.279 (0.77)	0.161 (0.39)	0.428 (1.18)	0.292 (0.73)
<i>ISS treatment</i> × <i>ISS 'against' SOP</i>			0.019* (1.72)	0.026** (2.11)	0.021* (1.95)	0.023* (1.89)
Regression	OLS	OLS	OLS	OLS	OLS	OLS
Year, Industry FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	399	399	399	399	371	371
Adjusted R ²	-0.016	-0.016	-0.010	-0.007	-0.005	-0.004

This table reports tests of abnormal returns around the disclosure of Say-On-Pay (SOP) voting results for the sample. We compute firm-level stock returns by calculating the compound daily returns during the 3-day and 5-day period centered on the date the firm first releases the SOP voting results, typically in an SEC 8-K filing (Item 5.07). We then estimate *abnormal returns* by subtracting the compound returns on the CRSP value-weighted index return with distributions during the same period. Using ordinary least squares (OLS) regressions, Columns 1 through 4 include tests of abnormal returns for the full sample of ISS treatment and control firms with available return information and a stock price greater than \$1.00 on the date before voting disclosure. Columns 5 and 6 remove “contaminated” 8-K filings that contain other information items, such as material contracts or earnings information. *ISS treatment* equals 1 for firms that receive between 67.50% and 69.99% SOP voting support, and 0 for firms that receive 70.00% to 72.50%. *ISS 'against' SOP* equals 1 if ISS recommends voting against SOP, and otherwise 0. The variable of interest is the interaction term, *ISS treatment* × *ISS 'against' SOP*, which equals 1 for firms that are both treated with a below 70% vote and receive an ISS recommendation to vote against SOP prior to the meeting, and else 0. *SOP voting support* is the disclosed percentage of shareholder votes that support the SOP proposal divided by the number of votes for and against SOP. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All regressions include year and industry fixed effects.

Table 11. Shareholder Engagement and Agency Conflicts

	(1)	(2)	(3)	(4)
	<i>Engagement Indicator</i>		<i>Engagement Count</i>	
	CC Tenure	Classified Boards	CC Tenure	Classified Boards
<i>ISS treatment</i>	-0.059 (-0.64)	0.107* (1.89)	-0.025 (-0.09)	0.223 (1.58)
<i>Agency variable</i>	-0.011* (-1.87)	-0.101 (-1.63)	-0.042** (-2.28)	-0.344* (-1.68)
<i>ISS treatment</i> × <i>agency variable</i>	0.025*** (2.68)	0.123 (1.42)	0.050** (2.02)	0.507* (1.94)
Regression	OLS	OLS	Poisson	Poisson
Controls	Yes	Yes	Yes	Yes
Year, Industry FE	Yes	Yes	Yes	Yes
Observations	426	426	426	426
Adjusted R ²	0.262	0.253	0.230	0.231

This table presents regressions of the heterogeneous effect of ISS treatment on shareholder engagement in year $t+1$ based on measures of board agency conflicts. The dependent variables are *engagement indicator*, which we test using OLS regressions, and *engagement count*, which we test using Poisson regressions. We assess heterogeneous responses to ISS treatment across firms using two ex-ante board agency variables: *CC tenure* and *classified boards*. The focal variable in each analysis is *ISS treatment* interacted with these board agency variables to determine if the ISS treatment effect differs for firms with higher baseline measures of agency conflicts. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All regressions include year and industry fixed effects. We define variables in Appendix C.

Table 12. Threshold Analysis

	(1)	(2)	(3)	(4)	(5)
	Univariate		RD		N
Threshold	Placebo Treated Difference	<i>p</i> -value	Placebo Treated Difference	<i>p</i> -value	[T:C]
50%	-0.034	0.686	0.112	0.743	50:89
55%	0.003	0.968	0.210	0.388	110:101
60%	-0.032	0.573	-0.228	0.156	127:150
65%	-0.040	0.425	-0.044	0.774	175:217
70% (ISS)	0.149***	0.002	0.334***	0.010	209:217
75%	0.066	0.107	-0.233*	0.066	272:312
80%	-0.017	0.621	-0.106	0.349	398:412
85%	0.005	0.864	0.133	0.179	515:617
90%	0.035	0.114	-0.032	0.642	732:1168

This table conducts placebo tests to evaluate the probability of engagement in year $t+1$ for firms within $\pm 2.5\%$ around each Say-On-Pay (SOP) voting support threshold between 50% and 90%. Column 1 presents the placebo treated difference in the *engagement indicator* between firms just below (placebo treated) each threshold versus those just above it (control). We test that this difference is significantly different from zero using two-tailed t -tests and report the corresponding p -value in Column 2. Columns 3 and 4 present information from regression discontinuity (RD) tests of the placebo treated difference in the *engagement indicator* for firms just below each threshold versus those just above it. We report the robust bias-corrected coefficient for placebo treatment in Column 3 using local linear regression discontinuity estimations from Cattaneo et al. (2018). The corresponding p -value is reported in Column 4. Column 5 presents the number of placebo treated firms (T) and control firms (PC). ***, **, and * indicate significance at the 1%, 5%, and 10% level. For comparison, we report the ISS treated values with the gray shaded line for the 70% threshold, which correspond to values in Tables 5 and 6 for ISS treated versus control firms.

Internet Appendix for

Proxy Advisory Firms and Corporate Shareholder Engagement

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Forthcoming, Review of Financial Studies

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1. Additional Information on Proxy Advisor Engagement Policies

1.1 Glass Lewis Policies

Although Glass Lewis also asks issuers to engage with shareholders when Say-On-Pay (SOP) voting falls below a threshold, we do not study the impact of Glass Lewis (GL) on shareholder engagement for several reasons. First, we only have access to GL recommendations for 15.2% of the sample universe (see Panel A of Table 2 in the manuscript). Second, GL has changing thresholds for engagement (75% through the 2017 proxy year and 80% beginning in 2018), which makes it more challenging to empirically assess its influence on engagement.¹

Third, GL likely has less influence on companies to respond to low SOP vote because it has less than half the market share of Institutional Shareholder Services (ISS). Per Shu (2024), ISS controls 63% of the proxy service market for mutual funds (\$13.4 trillion in assets from 132 fund families) in the US, while GL controls 28% (\$6.0 trillion in assets from 26 fund families). Fourth, GL has less severe economic sanctions for companies that fail to engage with shareholders. Rather than threatening to recommend against the entire board, GL only threatens to recommend voting against members of the compensation committee if the board fails to demonstrate company responsiveness to shareholder concerns when an SOP vote falls below its voting thresholds.²

1.2 ISS Policies

Figure 3 in the manuscript shows the responses by investors and firms to a SOP survey conducted by ISS in 2011. ISS ultimately chose SOP voting support below 70% as the threshold for triggering shareholder engagement. In November 2011, it updated its governance policies to expect companies with less than 70% voting support to engage with investors and disclose their engagement efforts. ISS would consider the engagement response in determining whether to recommend voting against the subsequent SOP vote, compensation committee members, or the full board. **Table IA-1** includes the relevant language

¹ In its 2017 guidelines, GL notes, “At companies that received a significant level of shareholder opposition (25% or greater) to their SOP proposal at the previous annual meeting, we believe the board should demonstrate some level of engagement and responsiveness to the shareholder concerns behind the discontent, particularly in response to shareholder engagement.” See https://www.glasslewis.com/wp-content/uploads/2016/11/2017_Guideline_US.pdf. In its 2018 guidelines, GL states, “At companies that received a significant level of shareholder opposition (20% or greater) to their SOP proposal at the previous annual meeting, we believe the board should demonstrate some level of engagement and responsiveness to the shareholder concerns behind the discontent, particularly in response to shareholder engagement.” See https://www.glasslewis.com/wp-content/uploads/2017/11/US_Guidelines_2018.pdf. GL uses similar language in its 2019 voting guidelines. See https://www.glasslewis.com/wp-content/uploads/2018/10/2019_GUIDELINES_UnitedStates.pdf.

² In its 2017 voting guidelines, GL states that firms falling below 75% must demonstrate company responsiveness and that, “In the absence of any evidence that the board is actively engaging shareholders on these issues and responding accordingly, we may recommend holding compensation committee members accountable for failing to adequately respond to shareholder opposition, giving careful consideration to the level of shareholder protest and the severity and history of compensation problems.”

from the 2011 policy update, which remained largely unchanged through the end of the sample period. **Table IA-2** includes an excerpt of the 2019 ISS policy on engagement after a low SOP vote, which is the last year in our sample period.

2. Additional Tests

2.1 Engagement Results with Python Script

In our manuscript, we describe how we develop a Python script to analyze proxy statement discussions of engagement in over 20,000 firm-years. For tests of ISS treatment, we focus on a subsample of 426 firms. Since the size of this subsample made it feasible to hand-check our results, we used our initial Python scrape to identify the *engagement indicator* and *engagement count*. We then manually verified engagement discussions in proxy statements for years surrounding low SOP votes.

To assess the accuracy of our engagement measurement, we analyze its sensitivity to hand collection in **Table IA-3**. Panel A compares the univariate statistics of the “Python-only” method with the “Python + Hand Check” approach. We find that manually checking disclosures tends to uncover more engagement discussions. Panel B employs average treatment effect tests to evaluate the Python-only data against the hand-collected augmented sample. The regressions indicate that the estimated impact of ISS treatment on the *engagement indicator* is 16.0% for the hand-checked method and 14.8% for the Python-only method, both of which are significant at the 1% level. ISS treatment effects on *engagement count* are 0.407 for the hand-checked and 0.349 for the Python-only sample, both of which are significant at the 1% level. Together, the results indicate that inferences are similar with or without hand-checking the data.

2.2 Correlation of Engagement Measures

Table IA-4 shows that different engagement measures provide unique information and can be used collectively to gain a better understanding of shareholder engagement. For example, the *engagement indicator* in Column (1) is highly correlated with most of the other measures, but not perfectly correlated.

2.3 Determinants of Engagement with Glass Lewis Recommendation

As mentioned in Footnote 15 of the manuscript, the GL measure is not included in the primary estimates of Equation (1b) due to low coverage (20% of sample firm years) and high correlation with ISS recommendations (34%). **Table IA-5** examines the relation between GL recommendations and engagement determinants. When both ISS and GL ‘against’ SOP recommendations are included in Equation (1b) in Panel A, both PA recommendations are significantly related to engagement. The results are also similar in Panel B when ISS ‘against’ recommendations are replaced with GL ‘against’ SOP recommendations.

2.4 Robustness Tests of Engagement after ISS Treatment

Table IA-6 examines the impact of the “Big 3” asset managers—BlackRock, Vanguard, and State Street—on shareholder engagement. Panel A shows that there are no differences in Big 3 ownership between treated and control firms before assignment to ISS treatment. Panel B shows that, after controlling for Big 3 ownership, the effect of ISS on engagement is similar.

2.5 Threshold Manipulation

In the manuscript, we test for manipulation in SOP voting around ISS’s 70% cutoff using the robust nonparametric density estimator of Cattaneo et al. (2020). Using various bandwidths, the results in Panel A of Table 4 show no discontinuities in SOP voting support around 70%. Since the robust manipulation test statistics are not significant, we interpret this as no evidence of firms clustering just above the 70% threshold to avoid ISS scrutiny.

A related paper by Bach and Metzger (2019) shows that, during a sample period that ends in 2016, close votes on shareholder proposals, director elections, and SOP are disproportionately more likely to be won by management around a 50% threshold. Importantly, Bach and Metzger note that:

“In particular, we consider thresholds that previous research has suggested to be important (e.g., the 30% threshold of ISS for SOP votes, 15% of withhold votes for directors, and the 25% (now 20%) threshold proposed by Glass Lewis). The corresponding tests, however, reveal that vote manipulation only takes place at the official threshold of 50%.”

We extend Bach and Metzger’s findings to our sample period ending in 2019 and analyze the 50% threshold in **Table IA-7**. Consistent with their findings, we observe significant manipulation test statistics across four bandwidths around the 50% SOP voting support threshold. When combined with our results in Table 4, this evidence indicates that managers take actions to maintain majority support for SOP votes, and thus likely perceive the benefits of influencing SOP outcomes outweigh the costs at 50%. However, no manipulation evidence is found around the 70% threshold that triggers ISS’s engagement requirements.

2.6 Pre-Assignment Difference in Compensation Committee Tenure

Table 5 of the manuscript reports no significant difference in *compensation committee (CC) tenure* difference between treated (8.5 years) and control (8.9 years) groups in univariate *t*-tests. However, the RD estimate of -2.400 is marginally significant at the 10% level (*p*-value = 0.080). However, the RD plots in **Figure IA-1** show the estimate is influenced by large outlier bins on both sides of the 70% threshold. Specifically, the second bin to the left of the 70% threshold has an average tenure of 6.5 years, which is lower than all other bins in the treated sample, including the bin closest to the cutoff, which has an average of 8.3 years. The latter is much closer to the treated subsample mean of 8.5 years.

Similarly, the first bin right of the 70% cutoff has a subsample average tenure of 10.8 years, the highest among control firm bins. The next bin is closer to the control firm subsample average of 8.9 years.

Thus, the marginal significance of the RD estimate for compensation committee tenure is likely attributed to large, inconsistent variation in bins near the 70% cutoff, which is heavily weighted by the RD estimation.

2.7 Referencing ISS in SEC Filings

In **Table IA-8**, we investigate whether ISS-treated firms are more inclined to mention ISS's recommendations or SOP policies in their filings in the year after falling below the 70% threshold. We utilize the SEC's "EDGAR Full Text Search" tool to identify these references, which occur for approximately 9.4% of the sample. We analyze differences between treated and control firms and find that ISS-treated firms are 5% more likely to reference ISS in their filings (12.0% for treated firms (N=25) compared to 6.9% for controls (N=15)). This difference is statistically significant at the 10% level according to univariate *t*-tests. However, there are no statistically significant differences using the robust RD approach.

2.8 Time Trends in Engagement

Figure IA-2 shows the time trends in our engagement for firms receiving ISS treatment and control firms within a bandwidth of $\pm 2.5\%$ around the 70% threshold. Panel A shows that treatment firms have an immediate and significantly larger increase in disclosing the presence of shareholder engagement that persists over time. Panel B shows that the intensity of shareholder engagement also increases after a low SOP vote, with a larger increase for ISS-treated firms. Both treatment and control firms show similar patterns and levels of engagement prior to the SOP vote near 70% in proxy year 0, further supporting the parallel trends assumption

2.9 Staggered Difference-in-Differences Test

Using the methodology in Borusyak et al. (2024), we conduct a staggered difference-in-differences test in **Table IA-9**. In Panel A, the treatment effect ranges between 12.9% to 22.1% for tests of the engagement indicator. In Panel B, tests of the engagement count show that ISS treatment results in 0.78 to 1.35 more engagement words in the first three years after treatment, all of which are significant at the 1% level. These represent a 30.5% to 56.4% increase versus the sample mean during each event year, which is economically large. This table shows slight pre-treatment trends, but they lack significance in most regression and are less pronounced than post-treatment effects. Moreover, the sign on the pre-trends tends to be negative, which works against our findings that engagement increases following ISS treatment.

2.10 Abnormal Announcement Returns

As a robustness check on the event study results, we also implement a regression discontinuity following Cuñat et al (2012). But whereas their regression discontinuity merely focuses on abnormal returns whether a vote passes without any type of interaction, the variable of interest in our design is the interaction of *ISS treatment* $\times$ *ISS 'against' SOP*. Therefore, we partition our sample by whether ISS recommends 'for'

or ‘against’ the SOP vote, which allows us to examine ISS treatment in the different subsamples. We present the three-day robustness tests in **Table IA-10**. Panel A (Panel B) presents the RD tests for treated and control firms where ISS recommends ‘against’ (‘for’) SOP. For robustness, we narrow the bandwidth to $\pm 1.5\%$ and 2.0% , as well as examine the linear and quadratic polynomial for the main bandwidth of $\pm 2.5\%$ and present the bandwidth selection procedure in Calonico et al. (2020).

Notably, we find that the abnormal returns for *ISS treatment* when ISS recommends ‘against’ vary between 2.8% and 3.3% in the five specifications, whereas the returns when ISS recommends ‘for’ are all close to 0%. These results reinforce the notion from our OLS regressions that the positive returns for the treatment effect are primarily driven by the subsample where ISS recommends ‘against’ the SOP vote, and thus has a credible threat of recommending ‘against’ members of the board if the firm does not demonstrate a robust engagement response to the low vote.

2.11 Placebo Tests of Engagement

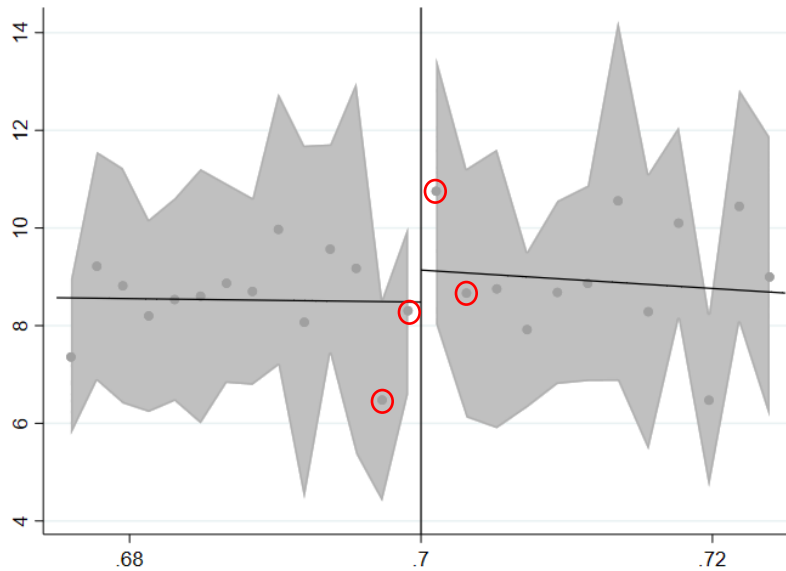
Table 12 of the manuscript presents placebo tests using threshold analyses between 50% and 90%. In **Table IA-11**, we test the extensive and intensive margins of engagement in the year following the SOP vote using the RD methodology discussed in Subsection 5.3 of the manuscript. These tests use local linear estimates with three different bandwidths around the 50% and 90% thresholds: $\pm 2.5\%$, $\pm 5.0\%$, and a data-driven bandwidth selection method from Calonico et al. (2020).

Based on all the specifications, we find no statistical evidence that firms with an SOP voting outcome just below the 50% or 90% thresholds are more likely to increase their engagement compared to those just above those two cutoffs. The RD plots for these tests are presented in **Figure IA-3**.

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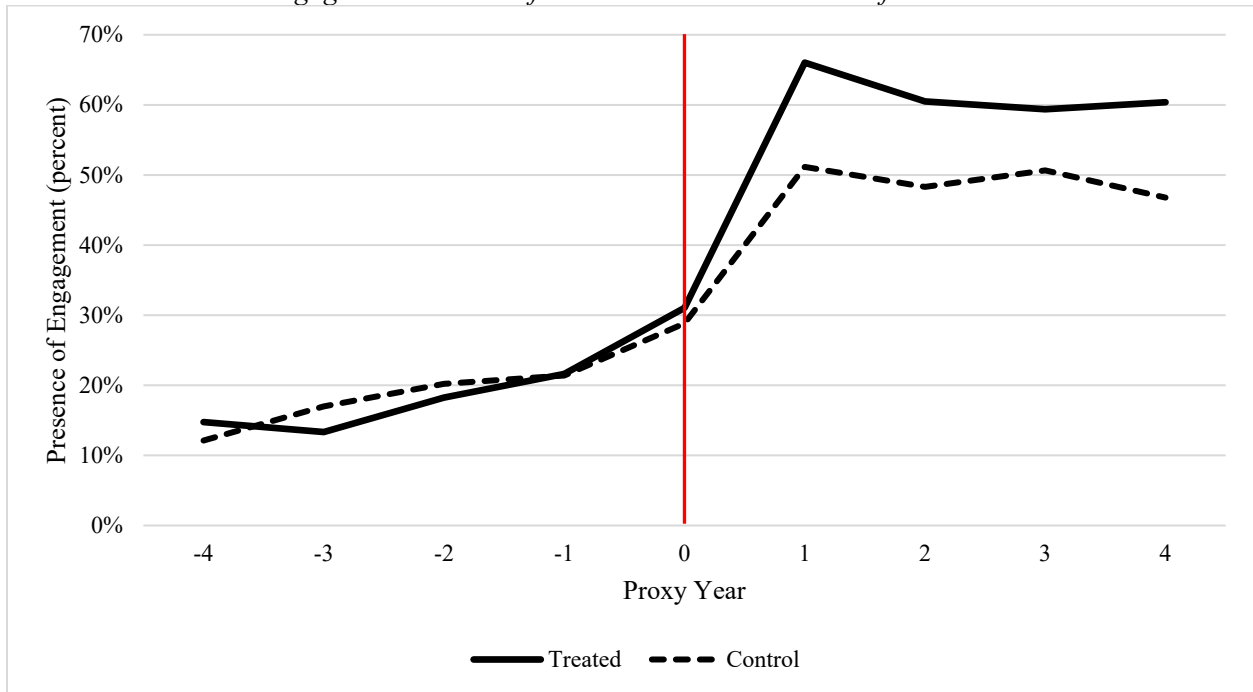
Figure IA-1. Regression Discontinuity Plot of Compensation Committee Tenure



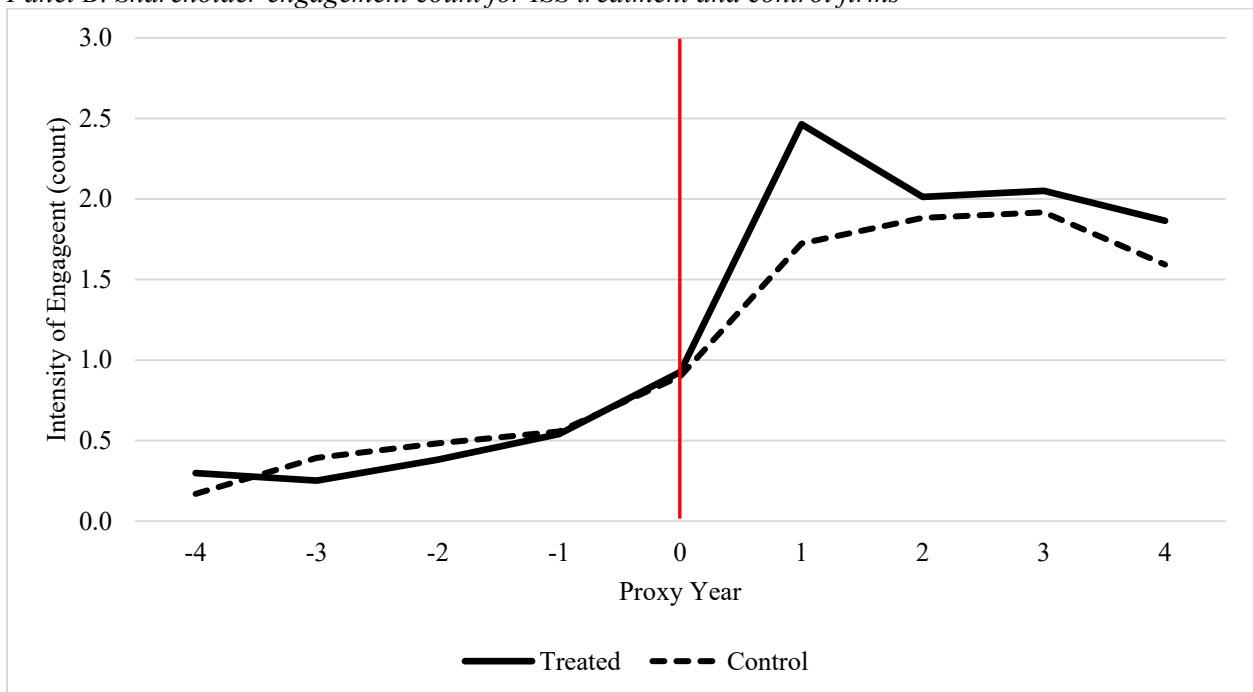
This figure presents the regression discontinuity plots of the *compensation committee (CC) tenure* in year t . Each dark gray circle depicts an evenly spaced bin with a bandwidth of $\pm 2.5\%$ around the 70% Say-On-Pay (SOP) voting support threshold. ISS Treated (Control) firms have an SOP voting support between 67.50% and 69.99% (70.00% and 72.50%). The gray shaded region depicts the 95% confidence interval. The solid line fits a first order polynomial to estimate the relation of SOP voting support with CC tenure. We define variables in Appendix C of the manuscript.

Figure IA-2. Trends of Shareholder Engagement Over Time

Panel A. Shareholder engagement indicator for ISS treatment and control firms



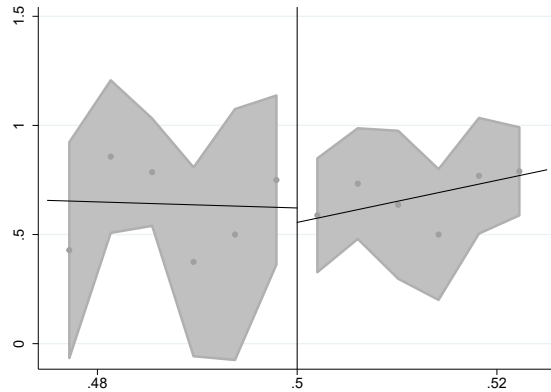
Panel B. Shareholder engagement count for ISS treatment and control firms



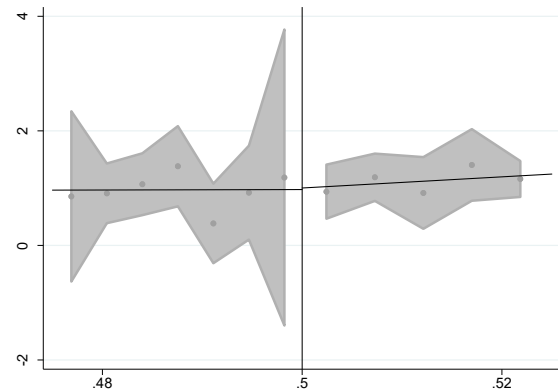
These figures graph the *engagement indicator* (Panel A) and *engagement count* (Panel B) for the ISS treated and control firms relative to the year of the low SOP vote (between 67.5% and 72.5%). All variables are defined in Appendix C of the manuscript.

Figure IA-3. Regression Discontinuity Plots for Placebo Treatment

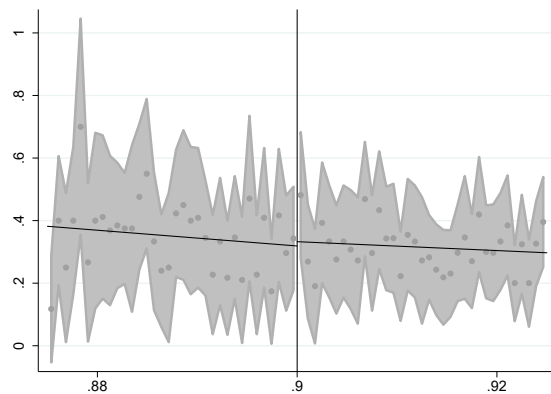
Panel A. Engagement indicator with 50% placebo treatment



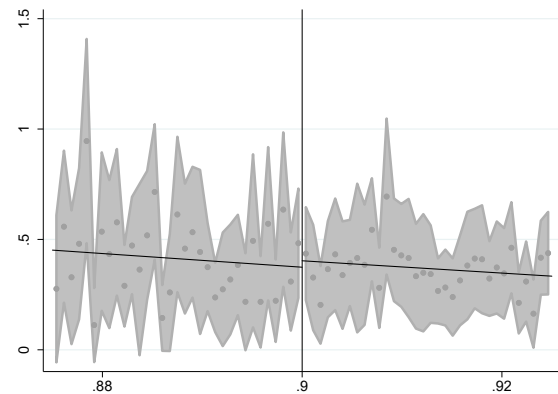
Panel B. Engagement count with 50% placebo treatment



Panel C. Engagement indicator with 90% placebo treatment



Panel D. Engagement count with 90% placebo treatment



This figure presents the regression discontinuity plots of the *engagement indicator* (Panels A and C) and *engagement count* (Panels B and D) in year $t+1$. Each circle depicts an evenly spaced bin with a bandwidth of $\pm 2.5\%$ around the 50% and 90% Say-On-Pay (SOP) voting support threshold, respectively. Placebo Treated (Control) firms have an SOP voting support between 47.50% and 49.99% (50.00% and 52.50%) in Panels A and B, and 87.50% and 89.99% (90.00% and 92.50%) in Panels C and D. The gray shaded region depicts the 95% confidence interval. The solid line fits a first order polynomial to estimate the relation of SOP voting support with shareholder engagement. We define variables in Appendix C of the manuscript.

Table IA-1. ISS 2011 Policy Change on Engagement after SOP Opposition

Corporate Governance Issues: Voting on Director Nominees in Uncontested Elections and Executive Pay Evaluation Board Response to High Levels of MSOP Opposition Current Recommendations: Under Election of Directors: Vote AGAINST/WITHHOLD on compensation committee members (or in rare cases where the full board is deemed responsible, all directors including the CEO) in egregious situations or when no MSOP item is on the ballot or when the board has failed to respond to concerns raised in prior MSOP evaluations Under Compensation: MSOP Evaluation– Board Communications and Responsiveness: Vote CASE-BY-CASE on board's responsiveness to investors' input and engagement on compensation issues, for example: • Failure to respond to majority supported shareholder proposals on executive pay topics; or • Failure to respond to concerns raised in connection with significant opposition to prior year's MSOP. Key Changes: Highlighting the types of disclosure that shareholders will examine in determining whether a company has sufficiently addressed shareholders' concerns with respect to the compensation issues raised in the prior year. New Recommendation: Vote CASE-BY-CASE on Compensation Committee members (or, in exceptional cases, the full board) and the Management Say-on-Pay proposal if the company's previous say-on-pay proposal received the support of less than 70 percent of votes cast, taking into account: • The company's response, including: ◦ Disclosure of engagement efforts with major institutional investors regarding the issues that contributed to the low level of support; ◦ Specific actions taken to address the issues that contributed to the low level of support; ◦ Other recent compensation actions taken by the company; • Whether the issues raised are recurring or isolated; • The company's ownership structure; and • Whether the support level was less than 50 percent, which would warrant the highest degree of responsiveness. Rationale for Update: The Dodd-Frank Act requires issuers to address, in the CD&A, whether and how their compensation policies and decisions have taken into account the results of the most recent say-on-pay vote. Based on ISS' 2011-2012 Policy Survey results, 72 percent of investor respondents indicate that an explicit response from the board regarding improvement to pay practices should be made at opposition levels of "more than 30 percent." Investors' feedback during ISS' 2011-2012 comment period indicated general support for the proposed thresholds for closer scrutiny. At companies that fail to receive a meaningful level of support on their say-on-pay proposals, shareholders will seek substantive and meaningful disclosure in determining whether the company has taken sufficient actions to address the compensation issues that contributed to the low level of support. Companies should discuss their outreach efforts to major institutional investors and provide the specific actions that they have taken to address the compensation issues that resulted in a significant opposition votes. These specific actions should ideally be new rather than a reiteration of existing practices. Companies should refrain from providing boilerplate disclosure, as it does not enable shareholders to gauge the level of effort taken by the company. Placement of such information should be readily identifiable.

This table presents an excerpt from Institutional Shareholder Services (ISS) summarizing the changes to its engagement policy in November 2011. See ISS, U.S. Corporate Governance Policy (2012 Updates), November 17, 2011, available at https://www.issgovernance.com/file/files/ISS_2012US_Updates20111117.pdf.

Table IA-2. ISS 2019 Policy on Engagement after SOP Opposition

16. If a company receives low support for its say-on-pay proposal, how does ISS assess the board's actions taken in response? When a say-on-pay proposal receives less than 70% support of votes cast (for and against), ISS will conduct a qualitative review of the compensation committee's responsiveness to shareholder opposition at the next annual meeting. This review of a company's responsiveness will take into consideration the following: › The disclosure of details on the breadth of engagement, including information on the frequency and timing of engagements, the number of institutional investors, and the company participants (including whether independent directors participated); › The disclosure of specific feedback received from investors on concerns that led them to vote against the proposal; › Specific and meaningful actions taken to address the issues that contributed to the low level of support; › Other recent compensation actions taken by the company and/or the persistence of problematic issues; › Whether the issues raised are recurring or isolated; › The company's ownership structure; and › Whether the proposal's support level was less than 50 percent, which would warrant the highest degree of responsiveness.
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ISS  FAQ: U.S. Executive Compensation Policies In the case of low support in connection with an unusual situation (such as a proxy contest or bankruptcy), ISS will still review how the board considered investor dissent and took actions to meaningfully respond. If the company has not demonstrated adequate responsiveness, ISS will generally recommend a vote against the say-on-pay proposal and incumbent compensation committee members. ISS may limit the adverse recommendation to the say-on-pay proposal if the board has demonstrated a moderate degree of responsiveness, but which falls short of a sufficiently robust response. In cases of multiple years of insufficient responsiveness indicating a systemic problem around board stewardship and oversight, ISS may recommend against the full board.

This table presents an excerpt from Institutional Shareholder Services (ISS) summarizing its engagement policy for Proxy Year 2019. See ISS, U.S. Compensation Policies: Frequently Asked Questions, December 20, 2018, available at <https://www.issgovernance.com/file/policy/2019/americas/US-Compensation-Policies-FAQ.pdf>.

Table IA-3. ISS Treatment and Shareholder Engagement with Python Script

<i>Panel A. Summary statistics and univariate tests</i>										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Treated			Control			Difference			T+C
Shareholder engagement _{t+1}	Mean	Median	SD	Mean	Median	SD	Mean	<i>p</i> -value	N [T:C]	Mean
Engagement indicator										
Python + Hand Check	0.660	1	0.475	0.512	1	0.501	0.149***	0.002	209:217	0.585
Python Only	0.598	1	0.491	0.475	0	0.501	0.123**	0.011	209:217	0.535
Engagement count										
Python + Hand Check	2.464	1	3.200	1.724	1	2.624	0.741***	0.009	209:217	2.087
Python Only	2.833	1	4.107	2.106	0	3.235	0.727**	0.043	209:217	2.462
<i>Panel B. ISS treatment and shareholder engagement_{t+1}</i>										
	(1)	(2)	(3)	(4)						
Dependent variable:	Engagement Indicator		Engagement Count							
<i>ISS treatment</i>	0.160*** (3.78)	0.148*** (3.37)	0.407*** (3.57)	0.349*** (2.88)						
Python	Yes	Yes	Yes	Yes						
Hand checked	Yes	No	Yes	No						
Regression	OLS	OLS	Poisson	Poisson						
Controls	Yes	Yes	Yes	Yes						
Year, Industry FE	Yes	Yes	Yes	Yes						
Firms	426	426	426	426						
Adjusted (Pseudo) R ²	0.251	0.220	0.226	0.262						

This table reports tests of the relation between ISS treatment and subsequent shareholder engagement in year $t+1$ using the Python script. To identify engagement discussions, we develop a Python script to extract text from the proxy statement. Our script flags engagement keywords (engage, feedback, conversation) and their variants within a 100-character range of shareholder keywords (shareholder, stockholder) and their variants. For the subsample of firms in the $\pm 2.5\%$ range around the 70% SOP voting support, we hand check observations for accuracy. This table compares the results for firms with and without hand checking the data. *ISS treatment* equals 1 if the firm has Say-On-Pay (SOP) voting support in between 67.50% and 69.99%, and 0 if SOP voting support is between 70.00% and 72.50%. Panel A reports the mean, median, and standard deviation of engagement values for treated firms in Columns 1-3 and control firms in Columns 4-6. We tabulate the mean difference in each variable and the corresponding *p*-value from a two-tailed *t*-test in Columns 7 and 8. Column 9 shows the count of treated (T) and control (C) firms. As a point of reference, Column 10 displays the combined averages for treated and control firms (T+C). Panel B presents regressions of the average treatment effect of ISS on shareholder engagement using estimates of Eq. (2). Columns 5 and 6 exclude firms that report engagement but do not provide the percent of shareholders contacted or spoken with. The number of observations differs as some firms only report one of these two metrics. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All regressions include fiscal year and industry fixed effects. We define variables in Appendix C of the manuscript.

Table IA-4. Shareholder Engagement Correlation Matrix

Shareholder engagement _{t+1}	(1)	(2)	(3)	(4)	(5)	(6)
(1) Engagement indicator	1.000					
(2) Engagement count	0.599*	1.000				
(3) Engagement references SOP	0.856*	0.604*	1.000			
(4) Engagement table	0.341*	0.429*	0.390*	1.000		
(5) Shareholders contacted	0.954*	0.763*	0.945*	0.619*	1.000	
(6) Shareholders spoken with	0.918*	0.693*	0.909*	0.578*	0.952*	1.000

This table presents pairwise correlations of shareholder engagement measures for the ISS treated and control firm sample (N=426) within $\pm 2.5\%$ of the 70% SOP voting support threshold. * denotes 1% level significance. *Engagement indicator* equals 1 if the proxy statement mentions any of the engagement keywords engage*, feedback* and conversation* within 100 characters on either side of the shareholder keywords shareholder* or stockholder*. *Engagement count* is a count of the number of engagement keywords near shareholder keywords in the proxy statement. *Engagement references SOP* equals 1 if the shareholder engagement discussion in the proxy statement references the SOP vote from the prior year, and else 0. *Engagement table* equals 1 if the firm provides a tabular summary of investor concerns and the board response following engagement in the proxy statement, and else 0. *Shareholders contacted* is the percent of shares outstanding held by investors that were contacted during engagement, from the proxy statement. *Shareholders spoken with* is the percent of shares held by investors spoken with during engagement, from the proxy statement.

Table IA-5. Determinants of Shareholder Engagement with Glass Lewis Recommendation

<i>Panel A. ISS and GL recommendations</i>				
	(1)	(2)	(3)	(4)
	Engagement Indicator		Engagement Count	
GL ‘against’ SOP	0.128*** (5.09)	0.100*** (4.77)	0.413*** (6.41)	0.342*** (6.17)
ISS ‘against’ SOP	0.286*** (9.39)	0.176*** (7.43)	0.842*** (12.24)	0.543*** (9.60)
Regression	OLS	OLS	Poisson	Poisson
Other controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	No	Yes	No
Firm FE	No	Yes	No	Yes
N	2,973	2,748	2,968	1,811
Adjusted (Pseudo) R ²	0.183	0.702	0.189	0.411

<i>Panel B. GL Recommendation</i>				
	(1)	(2)	(3)	(4)
	Engagement Indicator		Engagement Count	
GL ‘against’ SOP	0.188*** (7.60)	0.128*** (6.12)	0.642*** (9.48)	0.473*** (7.28)
Regression	OLS	OLS	Poisson	Poisson
Other controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	No	Yes	No
Firm FE	No	Yes	No	Yes
N	2,973	2,748	2,968	1,811
Adjusted (Pseudo) R ²	0.159	0.694	0.157	0.399

In this table, we examine the determinants of shareholder engagement using regressions of *engagement indicator* and *engagement count* and the proxy advisory firm recommendation. *Engagement indicator* equals 1 if the proxy statement mentions any of the engagement keywords engage*, feedback* and conversation* within 100 characters on either side of the shareholder keywords shareholder* or stockholder*, and otherwise 0. *Engagement count* represents the number of instances in which engagement keywords appear near shareholder keywords in the proxy statement. Panel A includes both the ISS and Glass Lewis (GL) recommendation against SOP. Panel B does not include the ISS recommendation. We do not include *SOP voting dissent* in any of these regressions. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All regressions include fiscal year fixed effects (FEs). Columns 1 and 3 employ industry FEs using one-digit Standard Industrial Classification (SIC) codes. Columns 2 and 4 use firm FEs. We define variables in Appendix C of the manuscript.

Table IA-6. Big 3 Asset Managers and Shareholder Engagement

<i>Panel A. Pre-Treatment Similarity of Treatment and Control Sample</i>							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Treated	Control	Diff.	<i>p</i> -value	RD Treated	RD <i>p</i> -value	N [T:C]
Firm characteristics _{<i>t</i>}							
Institutional ownership	0.615	0.617	-0.002	0.947	-0.124	0.250	209:217
Big 3 ownership	0.109	0.117	-0.008	0.395	-0.043	0.132	209:217
<i>Panel B. Controlling for Big 3 Ownership</i>							
Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)	
	Engagement Indicator	Engagement Count	Engagement References SOP	Engagement Table	Shareholders Contacted	Shareholders Spoken With	
<i>ISS treatment</i>	0.158*** (3.74)	0.407*** (3.53)	0.164*** (3.89)	0.100*** (3.11)	0.122*** (4.32)	0.078*** (3.47)	
<i>Big 3 ownership</i>	1.147*** (3.40)	2.704*** (3.28)	1.201*** (3.57)	0.459* (1.78)	0.691*** (3.13)	0.325* (1.84)	
Regression	OLS	Poisson	OLS	OLS	OLS	OLS	
Other Controls	Yes	Yes	Yes	Yes	Yes	Yes	
Year, Ind. FE	Yes	Yes	Yes	Yes	Yes	Yes	
Firms	426	426	426	426	247	248	
Adj. (Pseudo) R ²	0.255	0.218	0.281	0.127	0.387	0.337	

This table conducts robustness tests to consider the influence of the Big 3 asset manager's ownership on shareholder engagement. *Big 3 ownership* is the percent of shares held by all funds associated with BlackRock, Vanguard, and State Street using SEC Form 13-F data from Thomson. *Institutional ownership* is the percent of shares held by institutions with more than \$100 million in assets under management as reported on SEC Form 13-F from Thomson. Panel A compares differences in total *institutional ownership* and the subset of *Big 3 ownership* during the pre-assignment period prior to receiving 67.50% to 72.50% SOP voting support in year *t*. *Treated* includes firms with 67.50% to 69.99% SOP voting approval. *Control* includes firms with 70.00% to 72.50% SOP voting approval. ***, **, * denote the difference in Column 3 is significant at the 1%, 5%, and 10% level, respectively, using two-tailed *t*-tests and the reported *p*-value in Column 4. In Column 5, we present the coefficient on *Treated* using a local linear regression discontinuity estimation. The *p*-value from the RD estimation is reported in Column 6. Panel B presents regressions of shareholder engagement in year *t+1* using estimates of Eq. (2). *Engagement indicator* equals 1 if the proxy statement mentions any of the engagement keywords engage*, feedback* and conversation* within 100 characters on either side of the shareholder keywords shareholder* or stockholder*, and otherwise 0. *Engagement count* represents the number of instances in which engagement keywords appear near shareholder keywords in the proxy statement. *Engagement references SOP* equals 1 if the shareholder engagement discussion in the proxy statement references the SOP vote from the prior year, and otherwise 0. *Engagement table* equals 1 if the firm provides a tabular summary of investor concerns and the board response following engagement in the proxy statement, and otherwise 0. *Contacted* is the percent of shares outstanding held by investors that were contacted during engagement, from the proxy statement. *Spoken with* is the percent of shares held by investors spoken with during engagement, from the proxy statement. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. All regressions include controls from Eq. (2) of the manuscript and fiscal year and industry fixed effects. We define variables in Appendix C of the manuscript.

Table IA-7. Manipulation Tests Around the 50% Say-On-Pay Threshold

	(1)	(2)	(3)	(4)
Bandwidth around 50%:	±2.5%	±5.0%	±10.0%	CJM
<i>Manipulation test statistic</i>	1.836* (0.066)	2.068** (0.039)	1.992** (0.046)	1.831* (0.067)
Sample period	2011-19	2011-19	2011-19	2011-19
Treated firms (below)	72	154	283	219
Control firms (above)	130	271	601	401

This table presents Regression Discontinuity (RD) tests of Say-On-Pay (SOP) voting support manipulation around the 50% threshold. We download all SOP voting results from ISS Voting Analytics. We then test for manipulation around the cutoff of 50% *SOP voting support* using ISS's definition of votes for divided by votes for and against, which does not include abstentions. We retain votes during calendar years 2011 to 2019. Manipulation tests use the Stata command "rddensity." We report the robust bias-corrected RD manipulation test statistic along with the *p*-value. ***, **, and * indicate significance at the 1%, 5%, and 10% level, indicating statistically significant evidence of manipulation around the bandwidth.

Table IA-8. References to ISS in SEC Filings

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Treated	Control	Diff.	<i>p</i> -value	RD Treated	RD <i>p</i> -value	N [T:C]
ISS referenced _{t+1}	0.120	0.069	0.050*	0.074	-0.020	0.805	209:217

This table compares differences in referencing ISS in SEC filings in the year after a low Say-On-Pay (SOP) vote. *ISS referenced* equals 1 if the firm mentions ISS's recommendations or SOP policies in their filings in the year after falling below the 70% threshold. We utilize the SEC's "EDGAR Full Text Search" tool to identify these references. *ISS treated* includes firms with 67.50% to 69.99% SOP voting approval. *Control* includes firms with 70.00% to 72.50% SOP voting approval. ***, **, * denote the difference in Column 3 is significant at the 1%, 5%, and 10% level, respectively, using two-tailed *t*-tests and the reported *p*-value in Column 4. In Column 5, we present the robust bias-corrected coefficient on *ISS treated* using a local linear regression discontinuity estimation from Cattaneo et al. (2018). The *p*-value from the RD estimation is reported in Column 6.

Table IA-9. Staggered Difference-in-Differences Test

<i>Panel A. Engagement indicator</i>				
	(1)	(2)	(3)	(4)
Year	Treatment	Standard Error	z-stat	p-value
t-3	0.019	0.038	0.49	0.625
t-2	-0.023	0.039	-0.61	0.545
t-1	-0.097**	0.041	-2.39	0.017
t=0	-0.073	0.045	-1.64	0.100
t+1	0.221***	0.034	6.52	0.000
t+2	0.161***	0.038	4.22	0.000
t+3	0.129***	0.044	2.95	0.003
t+4	0.129***	0.050	2.57	0.010

<i>Panel B. Engagement count</i>				
	(1)	(2)	(3)	(4)
Year	Treatment	Standard Error	z-stat	p-value
t-3	-0.349**	0.175	-2.00	0.046
t-2	-0.396*	0.214	-1.86	0.063
t-1	-0.410	0.258	-1.59	0.112
t=0	-0.337	0.312	-1.08	0.281
t+1	1.348***	0.261	5.17	0.000
t+2	1.043***	0.293	3.56	0.000
t+3	0.784***	0.305	2.57	0.010
t+4	0.607*	0.327	1.86	0.063

This table tests the relation between ISS treatment and subsequent shareholder engagement in year t+1 using the methodology of Borusyak et al. (2024). In this table, treatment equals 1 if the firm has Say-On-Pay (SOP) voting support in between 67.50% and 69.99%, and 0 if SOP voting support is between 70.00% and 72.50%. Panel A presents tests of the engagement indicator. Panel B presents tests of the engagement count. We include firm and year fixed effects in the regression and report the treatment coefficient in Column 1, standard error in Column 2, z-statistic in Column 3, and p-value in Column 4. ***, **, and * indicate significance at the 1%, 5%, and 10% level using two-tailed tests. We define variables in Appendix C of the manuscript.

Table IA-10. Regression Discontinuity Estimates of Announcement Returns

<i>Panel A. Regression discontinuity tests of announcement returns</i>					
	(1)	(2)	(3)	(4)	(5)
Bandwidth:	±1.5%	±2.0%	±2.5%	±2.5%	CCF
<i>ISS treatment</i>	0.033*	0.029*	0.028*	0.032*	0.032*
	(0.057)	(0.070)	(0.067)	(0.074)	(0.084)
ISS ‘against’ SOP	Yes	Yes	Yes	Yes	Yes
Polynomial	Linear	Linear	Linear	Quadratic	Linear
Kernel	Triangular	Triangular	Triangular	Triangular	Triangular
Treated firms (below)	85	106	137	137	46
Control firms (above)	81	107	134	134	49
<i>Panel B. Regression discontinuity tests of announcement returns</i>					
	(1)	(2)	(3)	(4)	(5)
Bandwidth:	±1.5%	±2.0%	±2.5%	±2.5%	CCF
<i>ISS treatment</i>	0.003	0.001	-0.003	0.011	0.042
	(0.936)	(0.971)	(0.920)	(0.779)	(0.430)
ISS ‘against’ SOP	No	No	No	No	No
Polynomial	Linear	Linear	Linear	Quadratic	Linear
Kernel	Triangular	Triangular	Triangular	Triangular	Triangular
Treated firms (below)	41	56	62	62	16
Control firms (above)	43	62	76	76	11

This table presents local polynomial regression discontinuity (RD) estimates of abnormal announcement returns around the Say-On-Pay (SOP) voting result disclosure using the “rdrobust” package in Stata from Cattaneo et al. (2018). We use a triangular kernel to construct all local-polynomial estimators. Panel A tests the subsample of firms where ISS recommends ‘against’ SOP. Panel B the subsample of firms where ISS recommends ‘for’ SOP. We present local linear robust bias-corrected RD estimates for the 1.5%, 2.0%, and 2.5% bandwidth around the *ISS treatment* threshold of 70% SOP voting support in Columns 1, 2, and 3, respectively. Column 4 presents a local quadratic robust bias-corrected RD estimate. Column 5 utilizes the bandwidth selection procedure in Calonico et al. (2020) (“CCF”) using a local linear polynomial. We report the number of treated and control for each estimation, which are those just below and above the 70% SOP voting support threshold. ***, **, and * indicate significance at the 1%, 5%, and 10% level based on the corresponding robust bias-corrected *z*-statistic and reported *p*-value.

Table IA-11. Additional Placebo Tests

<i>Panel A. Regression discontinuity tests of shareholder engagement indicator_{t+1}</i>						
	50% Threshold			90% Threshold		
	(1)	(2)	(3)	(4)	(5)	(6)
Bandwidth:	±2.5%	±5.0%	CCF	±2.5%	±5.0%	CCF
<i>Placebo treatment</i>	0.112 (0.743)	0.109 (0.626)	-0.062 (0.549)	-0.032 (0.642)	-0.032 (0.518)	-0.043 (0.399)
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear
Kernel	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular
Placebo treated firms (below)	50	101	212	732	1,349	863
Control firms	89	199	531	1,168	3,481	1,437

<i>Panel B. Regression discontinuity tests of shareholder engagement count_{t+1}</i>						
	50% Threshold			90% Threshold		
	(1)	(2)	(3)	(4)	(5)	(6)
Bandwidth:	±2.5%	±5.0%	CCF	±2.5%	±5.0%	CCF
<i>Placebo treatment</i>	0.290 (0.644)	0.148 (0.724)	-0.183 (0.380)	0.072 (0.437)	-0.006 (0.927)	-0.004 (0.945)
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear
Kernel	Triangular	Triangular	Triangular	Triangular	Triangular	Triangular
Placebo treated firms (below)	50	101	193	732	1,349	1,052
Control firms (above)	89	199	449	1,168	3,481	2,022

This table presents placebo tests using just below 50% and 90% as a placebo treatment. Panels A and B use a local polynomial regression discontinuity (RD) estimates of shareholder engagement. Panel A tests the *engagement indicator*. Panel B tests the natural log of one plus *engagement count*. We present local linear robust bias-corrected RD estimates for the 2.5% and 5.0% bandwidth around the ISS treatment threshold of 70% Say-On-Pay (SOP) voting support in Columns 1, 2, 4, and 5, respectively. Columns 3 and 6 utilize the bandwidth selection procedure in Calonico et al. (2020) (“CCF”). We report the number of treated and control for each estimation, which are those just below and above the 70% SOP voting support threshold. ***, **, and * indicate significance at the 1%, 5%, and 10% level based on the corresponding *z*-statistic and reported *p*-value. We define variables in Appendix C of the manuscript.

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