

Internet Appendix for

## Proxy Advisory Firms and Corporate Shareholder Engagement

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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.<sup>1</sup>

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.<sup>2</sup>

### 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

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<sup>1</sup> 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](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](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](https://www.glasslewis.com/wp-content/uploads/2018/10/2019_GUIDELINES_UnitedStates.pdf).

<sup>2</sup> 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***

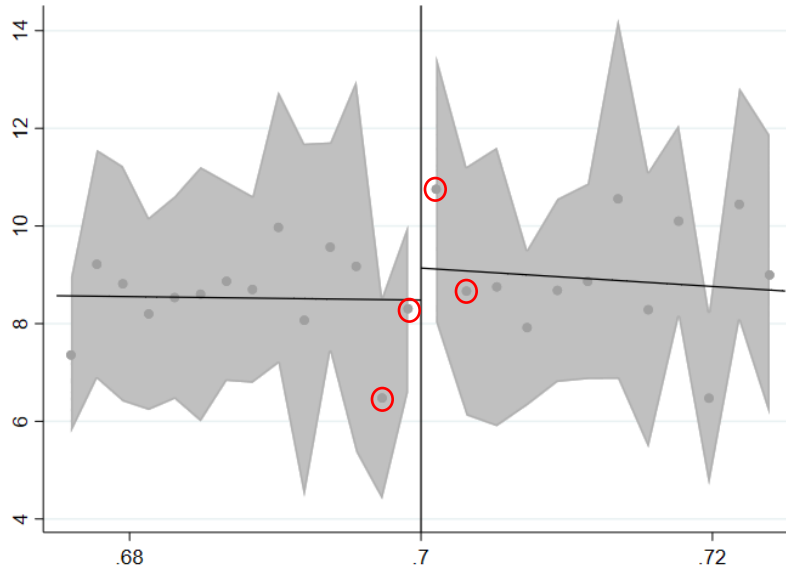
Table 12 of the manuscript presents placebo tests using threshold analyses between 50% and 90%. In **Table IA-11**, we test the extensive and intensive margins of engagement in the year following the SOP vote using the RD methodology discussed in Subsection 5.3 of the manuscript. These tests use local 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**.

### **References**

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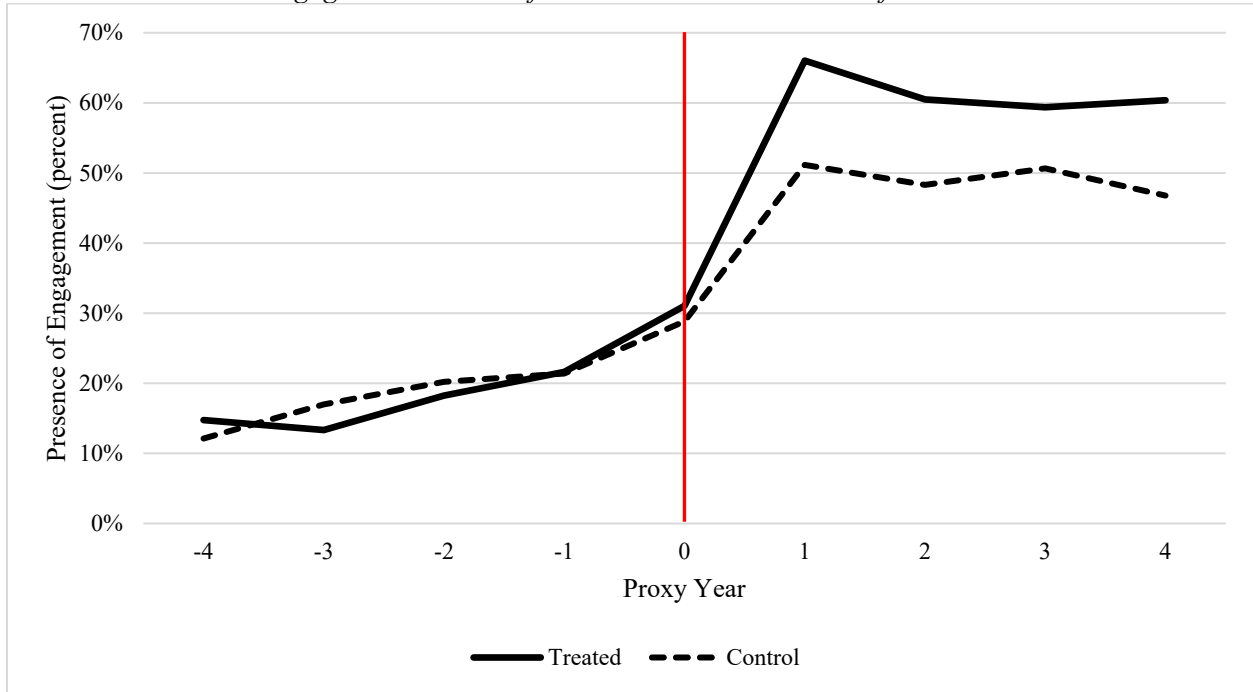
**Figure IA-1. Regression Discontinuity Plot of Compensation Committee Tenure**



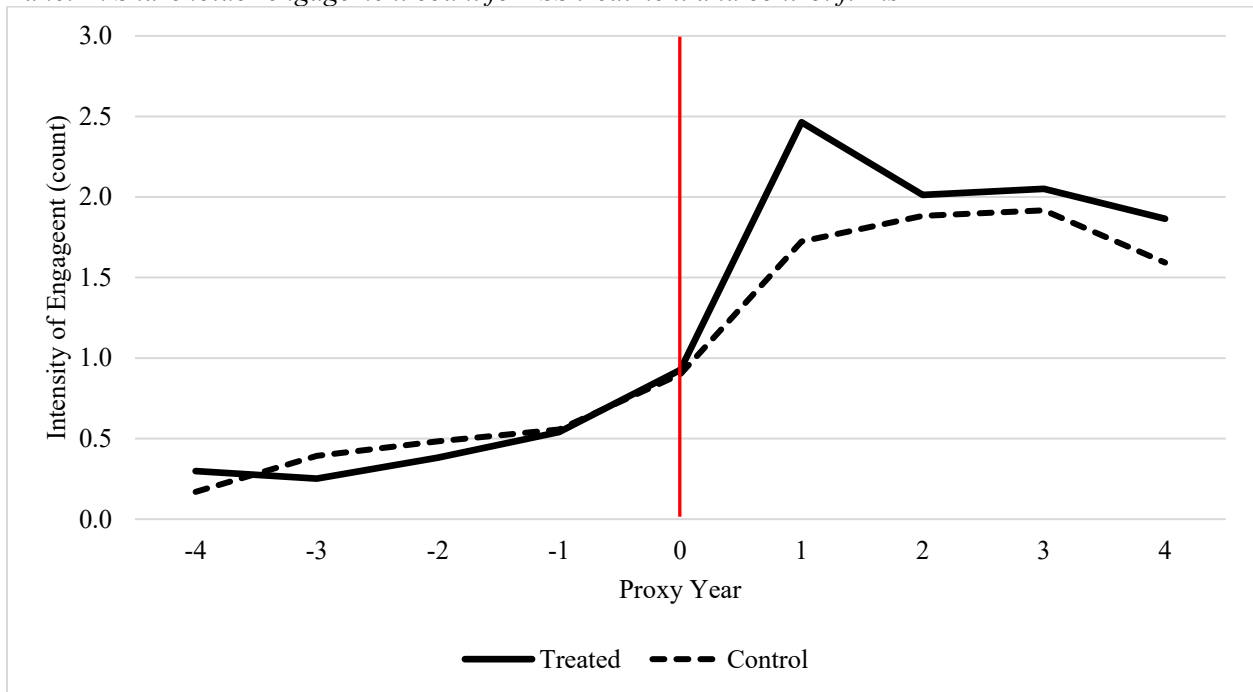
This figure presents the regression discontinuity plots of the *compensation committee (CC) tenure* in year  $t$ . Each dark gray circle depicts an evenly spaced bin with a bandwidth of  $\pm 2.5\%$  around the 70% Say-On-Pay (SOP) voting support threshold. ISS Treated (Control) firms have an SOP voting 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

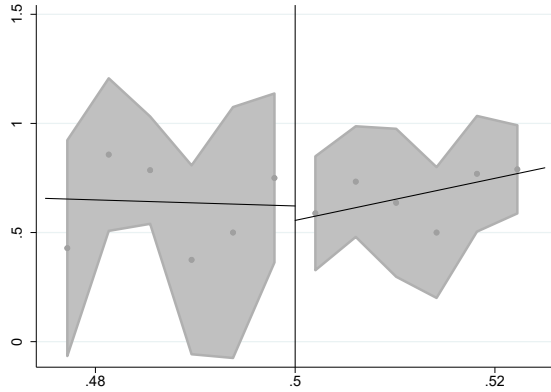


These figures graph the *engagement indicator* (Panel A) and *engagement count* (Panel B) for the ISS treated and control firms relative to the year of the low SOP vote (between 67.5% and 72.5%). All variables are defined in Appendix C of the manuscript.

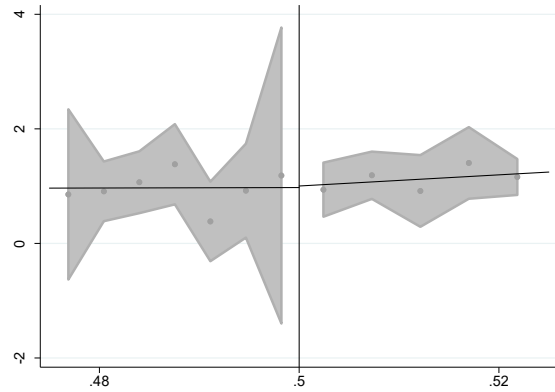


**Figure IA-3. Regression Discontinuity Plots for Placebo Treatment**

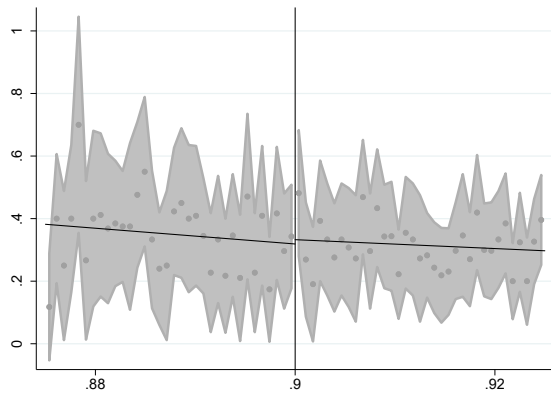
*Panel A. Engagement indicator with 50% placebo treatment*



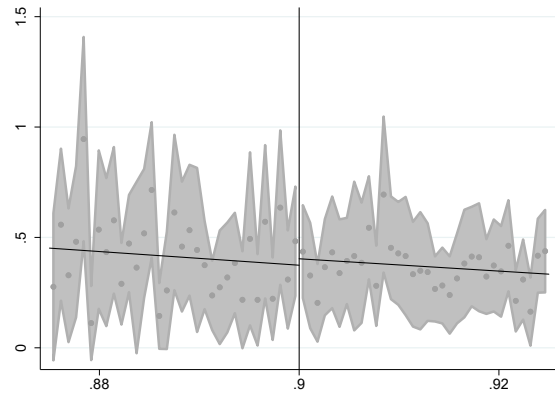
*Panel B. Engagement count with 50% placebo treatment*



*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**

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| <p><b>Corporate Governance Issues:</b><br/><b>Voting on Director Nominees in Uncontested Elections and Executive Pay Evaluation</b></p> <p><b>Board Response to High Levels of MSOP Opposition</b></p> <p><b>Current Recommendations:</b> 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</p> <p>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:</p> <ul style="list-style-type: none"><li>• Failure to respond to majority supported shareholder proposals on executive pay topics; or</li><li>• Failure to respond to concerns raised in connection with significant opposition to prior year's MSOP.</li></ul> <p><b>Key Changes:</b> 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.</p> <p><b>New Recommendation:</b> 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:</p> <ul style="list-style-type: none"><li>• The company's response, including:<ul style="list-style-type: none"><li>○ Disclosure of engagement efforts with major institutional investors regarding the issues that contributed to the low level of support;</li><li>○ Specific actions taken to address the issues that contributed to the low level of support;</li><li>○ Other recent compensation actions taken by the company;</li></ul></li><li>• Whether the issues raised are recurring or isolated;</li><li>• The company's ownership structure; and</li><li>• Whether the support level was less than 50 percent, which would warrant the highest degree of responsiveness.</li></ul> <p><b>Rationale for Update:</b> The Dodd-Frank Act requires issuers to address, in the CD&amp;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.</p> |
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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](https://www.issgovernance.com/file/files/ISS_2012US_Updates20111117.pdf).

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

|   |
|---|
| <p><b>16. If a company receives low support for its say-on-pay proposal, how does ISS assess the board's actions taken in response?</b></p> <p>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.</p> <p>This review of a company's responsiveness will take into consideration the following:</p> <ul style="list-style-type: none"><li>› 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);</li><li>› The disclosure of specific feedback received from investors on concerns that led them to vote against the proposal;</li><li>› Specific and meaningful actions taken to address the issues that contributed to the low level of support;</li><li>› Other recent compensation actions taken by the company and/or the persistence of problematic issues;</li><li>› Whether the issues raised are recurring or isolated;</li><li>› The company's ownership structure; and</li><li>› Whether the proposal's support level was less than 50 percent, which would warrant the highest degree of responsiveness.</li></ul> <hr/> <p>© 2018 ISS   Institutional Shareholder Services <span style="float: right;">10 of 31</span></p> <hr/> <p><b>ISS</b>  <span style="float: right;">FAQ: U.S. Executive Compensation Policies</span></p> <hr/> <p>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.</p> |
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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 <sub>t+1</sub>                   | 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<sub>t+1</sub></i> |                      |                    |                    |                    |
|--|----------------------|--------------------|--------------------|--------------------|
| Dependent variable:  | (1)                  | (2)                | (3)                | (4)                |
|  | Engagement Indicator |                    | Engagement Count   |                    |
| <i>ISS treatment</i>   | 0.160***<br>(3.78)   | 0.148***<br>(3.37) | 0.407***<br>(3.57) | 0.349***<br>(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 <sup>2</sup>                                       | 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***<br>(5.09)   | 0.100***<br>(4.77) | 0.413***<br>(6.41)  | 0.342***<br>(6.17) |
| ISS 'against' SOP                          | 0.286***<br>(9.39)   | 0.176***<br>(7.43) | 0.842***<br>(12.24) | 0.543***<br>(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 <sup>2</sup>           | 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***<br>(7.60)   | 0.128***<br>(6.12) | 0.642***<br>(9.48)  | 0.473***<br>(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 <sup>2</sup>           | 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<br>Treated | RD<br><i>p</i> -value | N<br>[T:C] |
| <b>Firm characteristics <sub><i>t</i></sub></b>                          |         |         |        |                 |               |                       |            |
| 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> |                      |                    |                           |                    |                        |                          |
|---|----------------------|--------------------|---------------------------|--------------------|------------------------|--------------------------|
|   | (1)                  | (2)                | (3)                       | (4)                | (5)                    | (6)                      |
| Dependent variable:                             | Engagement Indicator | Engagement Count   | Engagement References SOP | Engagement Table   | Shareholders Contacted | Shareholders Spoken With |
| <i>ISS treatment</i>                            | 0.158***<br>(3.74)   | 0.407***<br>(3.53) | 0.164***<br>(3.89)        | 0.100***<br>(3.11) | 0.122***<br>(4.32)     | 0.078***<br>(3.47)       |
| <i>Big 3 ownership</i>                          | 1.147***<br>(3.40)   | 2.704***<br>(3.28) | 1.201***<br>(3.57)        | 0.459*<br>(1.78)   | 0.691***<br>(3.13)     | 0.325*<br>(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 <sup>2</sup>                    | 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 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*<br>(0.066) | 2.068**<br>(0.039) | 1.992**<br>(0.046) | 1.831*<br>(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<br>Treated | RD<br><i>p</i> -value | N<br>[T:C] |
| ISS referenced <sub>t+1</sub> | 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 <math>t+1</math></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<br>(0.743) | 0.109<br>(0.626) | -0.062<br>(0.549) | -0.032<br>(0.642) | -0.032<br>(0.518) | -0.043<br>(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 <math>t+1</math></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<br>(0.644) | 0.148<br>(0.724) | -0.183<br>(0.380) | 0.072<br>(0.437) | -0.006<br>(0.927) | -0.004<br>(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.