Quality of Proxy Advice: Evidence from Say-on-Pay Recommendations *

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Abstract

Using a comprehensive sample of say-on-pay recommendations from the two largest proxy advisors over the period 2012 – 2019, I document that proxy advisors fail to filter out industry-level returns that are presumably beyond the control of management in evaluating a CEO's pay package. This finding contradicts the predictions of standard agency theory that CEOs should be evaluated on their relative performance in the presence of common industry shocks. I use proxy advisors' adjustment for industry performance as the quality measure of their recommendations. I find a decrease in quality (1) when proxy advisors are busy; (2) when proxy statements and pay contracts are complex; and (3) when there are other salient proposals at the same meetings. My analysis suggests that proxy advisors' capacity constraints are likely explanations for the limited applications of relative performance evaluations in their recommendations. By focusing on agency theory and predictions consistent with shareholder value maximization for a typical firm, my paper provides a new basis for assessing the quality of proxy advice and shows that proxy advisors' busyness negatively affects the quality of their recommendations.

Keywords: Proxy advisors, CEO compensation, Say-on-Pay, Shareholder voting
JEL Classification: G23, G34, J33, M12

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1 Introduction

Proxy advisory firms provide institutional investors recommendations on how to vote. The two largest proxy advisors, Institutional Shareholders Services Inc. (ISS) and Glass, Lewis & Co., LLC (Glass Lewis), control 98 percent of the advisory business (Spatt (2021)). Over the last decade, proxy advisors have emerged as prominent players in corporate governance.[1] Their recommendations substantially affect shareholder votes as well as firms' governance practices.[2][3] However, proxy advisors maximize profits from selling recommendations rather than the companies' value. Market participants and researchers have thus questioned whether proxy advisors have sufficient incentives to improve the quality of their proxy advice or whether shareholders can effectively hold them accountable for poor recommendations without good measures of proposal quality currently available. This raises important questions about the extent to which proxy advisors' recommendations are consistent with shareholder value maximization.[4]

In this paper, I examine whether profit-maximizing proxy advisors provide recommendations that represent shareholders' interests. I study this question with regard to proxy advice concerning executive compensations, one of the most important proposals that shareholders are routinely required to assess.[5] Answering this question is especially crutial now, given the recent effort of the Securities and Exchange Commission (SEC) to adopt a number of regulatory changes to rules governing proxy advisors.

Classical agency theory (Holmström (1979); Holmström (1982); Diamond and Verrecchia (1982)) posits that CEOs should be evaluated based on their relative performance when they are affected by common shocks.[6] Doing so would reduce the CEO's risk, allowing shareholders to lower the

[1] In this paper, proxy advisory firms and proxy advisors are interchangeable.

[2] Proxy advisors' impact on voting outcomes are well documented in the literature (e.g., Cai et al. (2009); Alexander et al. (2010); Iliev and Lowry (2015); Malenko and Malenko (2019)).

[3] Companies often make changes to executive compensation to cater to proxy advisors. For example, Larcker et al. (2015) show that firms change their compensation policies prior to say-on-pay votes in a manner consistent with proxy advisor recommendations, particularly if the firm is likely to receive a negative proxy advisor recommendation in the absence of a policy change.

[4] In this paper, I take the view that shareholders unanimously prefer to maximize firm value, which is consistent with seminal models in the corporate governance literature. I thus interpret proxy advisors' recommendations as being of high quality if the proxy advice is consistent with this goal. It is possible that shareholders may have preferences with other objectives in addition to firm value maximization.

[5] Executive compensation is a particular source of tension between shareholders and management (Burgess and McCrum (2012); Stathopoulos and Voulgaris (2016); Obermann and Velte (2018)). Iliev and Lowry (2015) find that compensation-related proposals are in general, more contentious than director proposals. Iliev et al. (2021) show that investors engage in governance research and focus their attention on say-on-pay proposals.

[6] This prediction has been extensively studied in CEO pay compensation set by the board (see, for example, Gibbons and Murphy (1990); Aggarwal and Samwick (1999a); Aggarwal and Samwick (1999b); Oyer (2004), and

cost of compensation without compromising the level of incentive alignment. Motivated by such theories, I investigate whether proxy advisors, in their decisions to support or oppose an executive pay package, can filter out industry performance that is beyond a CEO's control.

As industry-specific shocks resulting from the pandemic or green regulations have been growing in importance, it becomes increasingly critical to use relative performance evaluation (RPE) in assessing CEOs. Although proxy advisors explicitly emphasize benchmarking in their voting guidelines, many market participants have raised concerns regarding proxy advisors' failure to consider industry factors and individual company circumstances. Using a comprehensive sample of say-on-pay (SOP) recommendations from ISS and Glass Lewis over the period 2012 – 2019, I document that contrary to relative performance evaluation theory, proxy advisors fail to filter out industry stock returns beyond the control of management when they evaluate executive compensations. Proxy advisors are 2% more likely to recommend against a CEO pay package with a one standard deviation decrease in industry performance, which is an 18% increase from the sample mean. This result remains robust to various alternative industry definitions and regression specifications.[7]

A simple reason for the failure to benchmark performance is that doing so can be time-consuming and costly for proxy advisors. Benchmarking requires analysts to have a good understanding of the firm and industry. The final recommendation would reflect the overall consideration of the systematic industry performance. I conjecture that proxy advisors when under capacity constraints, may be inattentive to filter out industry performance in periods of increased busyness. Proxy advisors are subject to intense workloads during the busy proxy season. More than 70% of shareholder meetings take place within five weeks between April and May. Meanwhile, ISS has only 900 employees producing proxy research and vote recommendations for more than 38,000 shareholder meetings (ISS (2016)). Compared to credit rating agencies, proxy advisors maintain surprisingly small workforces for the number of meetings they track.[8]

To evaluate the effects of this workload and attention mechanism, I first examine whether seasonal busyness affects ISS' use of RPE in assessing CEOs. I find that the effect of industry performance on ISS recommendations is only present among firm meetings during the busy proxy season, which is consistent with inattentive ISS lowering the effort to filter out industry performance

reviews in Bebchuk et al. (2001); and Frydman and Jenter (2010)). Although early empirical evidence showed a lack of relative performance evaluation for CEO pay, recent studies find significantly greater use of relative performance evaluation, especially after 2011 (e.g., Ma et al. (2018); Choi et al. (2021); and see the survey by Edmans et al. (2017))

[7]There are also different ways to construct peer groups, and proxy advisors may have access to more precise measures of peer group performance than the one I employ. However, using a less informative benchmark, bias me in favor of accepting the relative performance evaluation hypothesis.

[8]Moody's Corporation, for example, employs 11,700 individuals (Moody's, 2016).

when it is busy.

Because of the increased length and complexity of executive compensation practices (Larcker et al. (2015); Albuquerque et al. (2022)), I then conjecture that busy proxy advisors would leave less time for due diligence in firms with more complex proxy statements and pay contracts. Extensive evidence shows that individuals pay less attention to complex and difficult-to-process information (e.g., Kahneman (1973)) and are thus likely to make inferior decisions. For example, Ghent et al. (2014) find that credit rating agencies rate more favorably on complex securities that generally default more. To this end, I examine whether complexity affects ISS' ability to filter out industry performance when evaluating CEO pay packages. I find that ISS does less adjustment for industry performance as the proxy statement gets longer and more complex. Similarly, ISS' propensity to use RPE abates with a greater number of performance-based compensation plans and features included in the compensation contracts.

I complement this analysis by further exploring whether having other more salient proposals distracts ISS analysts' attention and thus negatively affects ISS' ability to filter out industry performance. I show that the adjustment for industry performance when ISS evaluates CEOs is lower when the same meeting has other more contentious proposals, such as shareholder-sponsored proposals.

On the other hand, proxy advisors can almost fully adjust for industry performance in high-profile firms such as S&P500 firms and firms experiencing low monthly returns right before the shareholder meeting. All these findings are consistent with proxy advisors' limited attention and capacity constraints.

The finding that proxy advisors' adjustment for industry performance systematically varies with busyness is puzzling, given that such seasonal busyness is well expected by proxy advisors. Board members of public firms and investors have frequently questioned ISS' hiring of temporary staff during busy season and their lack of competence to accurately evaluate the full scale of proxy items (e.g., Copland et al. (2018); Hayne and Vance (2019)).[9] Because proxy advisors do not disclose the exact number of staff specifically dedicated to analyzing and providing voting recommendations on shareholder meetings, to shed light on the above criticism against temporary staff, I hand-collect information on ISS' corporate governance team over the period 2010 – 2020 from Linkedin.com. I find that relative to full-time staff, temporary staff are, on average, less likely to have any work experience or governance-related experience prior to joining ISS and are less likely to have a business or economics degree. This corroborates market participants' criticism

[9] I also collect employee reviews from Glassdoor and build a word cloud from these employee reviews. The reviews are consistent with proxy advisors' constrained resources, especially limited human capital and busy workloads.

regarding the lack of experience among temporary workers.

Last, I exploit the fact that ISS relies heavily on seasonal workers to examine how the effect of industry performance on ISS recommendations varies with ISS' ability to hire workers. I measure ISS' ability to hire workers by calculating the tightness of the labor market within the six states in which their main offices are located. The labor market is "tight" if vacant jobs are plentiful and available workers are scarce. I find that ISS is less likely to filter out industry performance when the labor market is tight. I find similar results when I use aggregate labor tightness for the college graduates whom ISS typically hires.

There are other possible explanations for why proxy advisors allow industry performance unrelated to firm-specific performance to influence their recommendations. Some may argue that proxy advisors may optimally evaluate CEOs based on industry performance if CEOs' actions directly affect industry peers' performance. Aggarwal and Samwick (1999a) show that optimal compensation contracts may put positive weight on both own-firm and rival-firm performance to avoid excessive competition among rival managers. It is also possible that CEOs may optimally be evaluated based on industry performance because their outside employment opportunities vary with the economy's fortunes (Himmelberg and Hubbard (2000); Oyer (2004)).[10] I find little support for these ideas. The effect of industry performance on proxy advisors' SOP recommendations persists even when I restrict the sample to small firms that are unlikely to affect the product market equilibrium in their industry. The effect of industry performance on proxy advisors' recommendations also persists in firms located in states with many CEOs so that the firm can place less emphasis on the need to retain talent. Taken together, the above results suggest that in a context where RPE is suitable as a benchmark, proxy advisors' recommendations are not aligned with shareholder value maximization as they do not filter out industry performance in evaluating a CEO.

I then investigate whether potential conflicts of interest might distort the incentives of ISS to provide high-quality recommendations. ISS provides consulting services to firms on how to improve their vote outcomes. Potential favoritism by ISS for its corporate clients may allow CEOs to hide behind industry peer performance in good times. Glass Lewis, on the other hand, does not offer consulting services. Thus, Glass Lewis' recommendations can serve as a benchmark. I find a similar effect of industry performance on Glass Lewis' recommendations, which speaks against the view that conflicts of interest alone limit proxy advisors' use of RPE.

Overall, I show that proxy advisors allow industry performance unrelated to firm-specific performance to influence their recommendations in assessing CEOs. The proxy statement and pay

[10] Edmans et al. (2021) show that although directors believe the CEO talent pool is scarce, investors generally disagree.

contract complexity decrease proxy advisors' propensity to use RPE. This effect is only present in firm meetings during the busy period. My findings suggest that proxy advisors' capacity constraints are likely explanations for the limited occurrence of relative performance evaluations in proxy advisors' recommendations.

My paper contributes to multiple strands of the literature. First, I add to the growing literature on the role of proxy advisors in corporate governance, in particular that on the quality of proxy advice.[11] Recent theoretical work studies proxy advisors' incentives to provide high-quality advice and show how their incentives can be distorted. For example, Malenko et al. (2022) examine proxy advisors' incentives to stir controversy to increase the value of advice. Matsusaka and Shu (2020) examine how proxy advisors cater their recommendations to biased shareholders such as socially responsible investing funds. However, empirically it is challenging to measure the quality of proposals and recommendations from a firm's perspective. Prior literature use ISS recommendations as a standard proxy for proposal quality (e.g., Cai et al. (2009); Morgan et al. (2011); Crane et al. (2019)). Albuquerque et al. (2020) use a firm's accounting performance as the quality of its compensation practices. Blonien et al. (2022) develop a structural framework to estimate proposal quality. My paper contributes to the literature by providing a new basis for assessing the quality of proxy advice in CEO pay. I use adjustment for industry peer performance as a measure of recommendation rationality which is guided by agency theory and predictions consistent with shareholder value maximization for a typical firm.

Second, I contribute to the literature studying busy economic agents and their implications for decision-making.[12] For example, Fich and Shivdasani (2006) show that firms with busy boards are associated with weak corporate governance and poor performance. Kempf et al. (2017) study distracted shareholders, while Shu et al. (2022) study busy patent officers. My paper is most related to Albuquerque et al. (2020) and Calluzzo and Kedia (2022). Calluzzo and Kedia (2022) show that ISS is less likely to issue negative recommendations during busy voting periods. Albuquerque et al. (2020) find that ISS' ability to identify low-quality compensation packages only occurs for firms with non-December fiscal year-end. I complement this literature by showing how proxy advisors' busyness affects their ability to adjust for industry performance in evaluating CEO pay packages. I also provide additional labor-side evidence that ISS' constrained ability to hire staff negatively affects the quality of ISS recommendations.

Third, my results contribute to current debates on the role of proxy advisors. I make the

[11] E.g., Maug (1999), Alexander et al. (2010), Ertimur et al. (2013), Iliev and Lowry (2015), Malenko and Shen (2016), Malenko and Malenko (2019), Buechel et al. (2022), and others.

[12] E.g., Falato et al. (2014), Kacperczyk et al. (2014), Lu et al. (2016), Ben-Rephael et al. (2017), Abuzov (2022), and others.

first attempt to look at the qualifications of proxy advisors' corporate governance analysts using Linkedin data. My findings echo the recent criticism of other market participants regarding proxy advisors' limited staff and the hiring of seasonal, temporary workers, highlighting areas of improvement and informing public debate on how to regulate this sector of the economy. The SEC has adopted standards and rules for rating agencies to report on their standards of training and experience for their rating analysts. The SEC requires that "at least one individual with an appropriate level of experience in performing credit analysis, but not less than three years, participates in the determination of a credit rating" (SEC, 2014). The regulators may similarly recommend or require proxy advisors to disclose the ratio of part-time vs. full-time employees in the research division and their standards for their employees' training, expertise, and experience.

The rest of the paper is organized as follows. Section 2 describes the institutional background. Section 3 describes the data and sample construction. Section 4 presents the empirical strategy and main findings. Section 5 describes and tests the capacity constraints view of proxy advisors. Section 6 concludes.

2 Institutional Background and Conceptual Framework

2.1 Proxy advisory industry

Proxy advisors provide subscription-based voting advice to their institutional clients on proposals ranging from director elections, executive compensations to acquisitions and environmental issues. ISS is the largest proxy advisor with a U.S. market share of over 60% (Shu (2022)), and covers more than 44,000 shareholder meetings for over 1,600 institutional clients. In the last two decades, the importance of proxy advisors increased dramatically when the SEC required mutual funds to disclose their voting decisions in 2003 and when the Dodd Frank Act led to the SEC implementing a non-binding say-on-pay vote in 2011.

Prior literature shows that proxy advisors have a considerable influence on voting outcomes. Brav et al. (2021) highlight that proxy advisors have a significant impact on proxy contest outcomes. Malenko and Shen (2016) provide causal evidence that a negative ISS recommendation on SOP proposals leads to a 25 percentage point reduction in shareholder support. Many market participants have also raised concerns about the possibility of investors blindly following proxy advisors' recommendations, the so-called robo-voting (e.g., Iliev and Lowry (2015)). Shu (2022) find that over 40 percent of small funds (and over 50 percent of small index funds) robo-voted with ISS in 2017. Given their strong influence, the quality of proxy advisors' recommendations

has become critical among market participants and policymakers.

While proxy advisors should make recommendations consistent with shareholder value maximization, they have incentives not necessarily aligned with the interests of the value-maximizing shareholders. Proxy advisors maximize their profits from selling recommendations rather than the value of the companies as they do not own any direct economic stake in the companies. To increase information sales to institutional clients, proxy advisors may issue recommendations that are biased against the a priori more likely alternative to increase shareholders' incentive to subscribe to its research report (Malenko et al. (2022)). ISS also provides consulting services to public firms. The potential for a conflict of interest may as well distort the incentives of proxy advisors (Li (2016)). At the same time, proxy advisors may have limited incentives to invest in resources that will improve the quality of their advice. Without good measures of proposal quality, any such effort would decrease the proxy advisors' profitability while having no substantive impact on their ability to attract or retain institutional clients.

2.2 Say-on-pay proposals

Last decade has witnessed a fundamental shift in shareholder perspectives on executive compensation which now receives more attention than nearly any other recurrent corporate decision (Edmans et al. (2021)). Since the 2010 Dodd-Frank Act required all public companies to have an advisory SOP vote at their annual meetings, shareholders regularly voice their views through SOP votes, leading to more scrutiny of executive pay through lower voting support (e.g., Ertimur et al. (2013); Ferri and Maber (2013)). Average shareholder support in 2021 declined to its lowest level since SOP were made mandatory in 2011 (e.g., Ashwell (2021)).

While SOP is non-binding in the U.S., the SOP result sends an important signal about shareholder satisfaction with CEO pay and performance. Low shareholder support can trigger lawsuits and reputational losses for firms and directors (Badgett et al. (2022)). Companies' boards may thus make changes to executive compensation to cater to proxy advisors. Over 70% of the director and executives indicated that the design of their compensation plans was influenced by proxy advisors' policies (Copland et al. (2018)). Ertimur et al. (2013) document that more than half of the firms respond to declines in shareholder votes following a negative recommendation by engaging with shareholders and changing their compensation plan. Similarly, Larcker et al. (2015) find that to avoid negative recommendations from proxy advisors, firms change their executive compensation plans favored by proxy advisors. Given the potential influence of proxy advice on firms' governance practices, it is important to understand how much proxy advice aligns with shareholder value maximization.

In general, a shareholder meeting, on average, takes place one month after a firm files a proxy statement (DEF 14A) which contains substantial information such as directors' qualifications and executive compensation in the last fiscal year. It takes approximately 13 – 25 trading days between the date ISS issues its voting recommendation and the meeting date (ISS (2020)).

3 Data Description

3.1 Data and sample construction

The main analysis focuses on proxy advisors' recommendations in SOP proposals voted on between 2012 and 2019. I start my sample in 2012 because 2011 is the first year that SOP became mandatory following the implementation of the Dodd-Frank Act in 2010, and there are few observations in 2011 because of the limited data access to Glass Lewis' recommendations. The sample excludes CEO turnover years and firm-years with multiple CEOs because of the irregularity of the pay period.

The data on ISS recommendations and voting outcomes are obtained from the ISS Voting Analytics database that covers all Russell 3000 firms. For each firm and each proposal on the agenda, the database provides ISS recommendation, the percentage of votes for, votes against, and abstentions, and whether the proposal passed or failed. Glass Lewis' recommendations is obtained through a Freedom of Information Act (FOIA) request to a large public pension fund and from Proxy Insight.

The CEO compensation data come from the ExecuComp database, which covers the S&P1500 firms.[13] I obtain stock return data from the Center for Research in Security Prices (CRSP) and firm characteristics from Compustat. Institutional ownership data are collected from Thomson Reuters.

I hand-collect information on ISS' corporate governance team over the period 2010 – 2020 from Linkedin.com, the world's largest professional network with more than 800 million members worldwide. I classify an ISS employee as a corporate governance staff if his/her title is either "analyst" or "associate" and then collect their education, prior governance-related experience, as well as their work history in ISS. Thus senior leadership roles such as vice presidents and directors who are not likely to conduct hands-on proxy analysis are excluded. In addition, I exclude employees who work in software development, sales and general administration such as

[13]The universe of firms covers the S&P1500, plus companies that were once part of the S&P1500, plus companies removed from the index that are still trading.

accounting roles.

To calculate labor market tightness, I use the monthly job vacancy data from the BLS JOLTS (Job Openings and Labor Turnover Survey) and JOLTS state-level data series on the aggregate and state-level monthly job vacancies. Other labor force statistics come from the Current Population Survey.

The main panel sample consists of firm-year-proxy advisor observations, and I require firms to be covered by both ISS and Glass Lewis to take care of differences in firms followed by ISS and Glass Lewis. To ensure that performance periods are comparable across firms, the sample includes firms with December fiscal year-end.

3.2 Summary statistics

The final panel sample includes 9,854 firm-year-proxy advisor observations, with 928 unique companies and 4,927 SOP proposals from 2012 to 2019. I winsorize variables at the 1st and 99th levels to minimize the effect of outliers. All dollar values are in 2010 U.S. dollars.

Table 1 presents summary statistics for the sample. On average, proxy advisors recommend opposing a CEO pay package 10.8% of the time. Glass Lewis, on average, issues negative recommendations more often than ISS. Shareholders at the overwhelming majority of companies vote to support executive compensations, and the average percentage of votes against management (i.e., shareholder dissent) is low at 8.1%. In the Internet Appendix, I also present the panel sample distribution and summary statistics of proxy advisors' negative recommendations over time.

The firms in my sample are large. The average return on assets (ROA) of a firm is 0.12, while the previous-year stock return is 15% on average. The equal-weighted industry return is 10%, while the value-weighted industry return is 11%. In my sample, institutional investors hold about 82.7% of the shares, while executives and directors hold 2.9%. CEO annual pay, consistent with prior literature, is the total compensation measure (tdc1) from Execucomp. CEOs, on average, are paid $6.13 million in my sample. CEOs on average, are 57 years old and have an average tenure of 9 years.

4 Research Design and Results

In this section, I present the empirical methodology and baseline results that investigate whether proxy advisors' recommendations are consistent with shareholder value maximization in evaluating

executive compensation.

Standard agency theory (e.g., Holmström (1979); Holmström (1982); Diamond and Verrecchia (1982)) posits that CEO performance should be benchmarked against peers to filter out fluctuations caused by uncontrollable external factors. Doing so would reduce the CEO's risk, allowing shareholders to lower the cost of compensation. Motivated by such theories, I examine whether proxy advisors are able to filter out industry performance that is beyond a CEO's control in their decisions to support or oppose a CEO pay package.

My empirical strategy follows Bertrand and Mullainathan (2001), Garvey and Milbourn (2006), and Jenter and Kanaan (2015). I estimate the sensitivity of proxy advisors' recommendations to a firm's industry peer performance using a two-stage regression approach. The first stage decomposes firm performance into a systematic component caused by industry peer group performance and a firm-specific component that likely reflects CEO skill. The first stage regression partitions variation in firm performance into a predictable component caused by industry performance and a residual firm-specific component. In the second stage, I estimate the probability of a negative recommendation from a proxy advisor using both the estimated industry peer group component and the estimated residual component of firm performance.

First stage:

$$r_{i,t-1} \;=\; \beta_0 \;+\; \beta_1 \;\cdot\; r_{peer,\;t-1} \;+\; \epsilon_{i,t-1}$$

Second stage:

$$Prob(Against_{i,t,p}) \;=\; \gamma_0 \;+\; \gamma_1 \;\cdot\; \hat{r}_{i,t-1} \;+\gamma_2 \cdot\; \hat{\epsilon}_{i,t-1} \;+\pi_p \;+\; \mu_i \;+\; \theta_t \;+\; \sigma_{i,t,p}$$

where $\hat{r}_{i,t-1} \;=\; \hat{\beta}_0 \;+\; \hat{\beta}_1 \;\cdot r_{peer,\;t-1}$.

I measure performance using stock returns, as is typical in the literature. I use firm i's four-digit SIC equal-weighted industry returns as peer group performance. The dependent variable in the second stage is *Against*, which takes the value of one if proxy advisor p (ISS or Glass Lewis) recommends opposing firm i's executive pay package in year t. Industry peer performance, $\hat{r}_{i,t-1}$, is the estimated exogenous component of firm performance common to the industry peer group and not attributable to CEO ability. $\hat{\epsilon}_{i,t-1}$ is the estimated firm-specific performance component.

Following the existing corporate finance literature, I calculate the industry performance benchmark as equal-weighted average stock returns for all firms on Compustat from the same industry as the sample firm. I exclude each sample firm from its own industry benchmark. I define industry peers by four-digit SIC codes from Compustat. Four-digit SIC industry peers are a very common peer choice set.

Year fixed effects θ_t are included in all specifications to account for time trends and economy-wide shocks. I also include firm fixed effects μ_i to ensure that the results are not driven by unobserved time-invariant firm characteristics that happen to be correlated both with performance and proxy advisors' recommendations. Proxy advisor fixed effects π_p are included to account for the differences between ISS and Glass Lewis in evaluating proposals. To account for any within-firm correlation of the error term, I cluster the standard errors by firms in all of the specifications. Estimation errors are adjusted using clustered bootstrapping.[14]

4.1 Baseline results

Table 2 presents the first-stage regression of firm performance on industry performance. Table 3 presents the second-stage regression results. In Table 3 Column (1), the coefficients are significantly negative for both performance components, with the magnitude of industry performance being similar to that of firm-specific performance. In Column (2), I control for various firm characteristics such as the natural logarithm of book assets, insider and institutional ownership, and CEO tenure, that are likely to affect a proxy advisor's recommendation. The results remain to hold in Column (3) when I additionally include the annual flow pay of the CEO. There is a positive association between executive compensation paid to the CEO and the likelihood of an against SOP recommendation from proxy advisors. In Column (4), I also include return on assets (ROA) and stock volatility. The negative coefficient on industry peer performance remains statistically significant. In terms of other firm-level characteristics, proxy advisors are more likely to issue a negative SOP recommendation when insider ownership is higher, the firm is bigger, and CEO has longer tenure. The results remain robust after I control for other pay level characteristics such as the fraction of cash pay and pay growth in Column (5).

Table 3 show that proxy advisors' recommendation is negatively and significantly associated with both the firm's industry peer performance and firm-specific performance. The conclusion from Table 3 is standard: benchmarking is not an important feature of the proxy advisors' SOP recommendations, consistent with the criticism of proxy advisors' insufficient tailoring to industry and company specifics (e.g., Iliev and Lowry (2015); Larcker et al. (2015)). The results are intriguing to the extent that proxy advisors often explicitly emphasize benchmarking in their voting guidelines.

To mitigate concerns that my findings are driven by measurement errors defining industry peers, I perform the analysis and find robust results in Table 4 using various industry definitions, includ-

[14]Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates.

ing (1) value-weighted peer performance, (2) 10K text-based industry classifications of Hoberg and Phillips (2010) and Hoberg and Phillips (2016), and (3) board-selected compensation peers disclosed in the proxy statement. Despite the efforts to use alternative industry definitions as robustness, I acknowledge that proxy advisors may have access to more precise measures of peer group performance than the industry benchmarks I employ. However, using a less informative benchmark, I misclassify some peer group performance as skill, which biases me against finding any result. In other words, using a less informative benchmark bias me towards finding a non-result (zero coefficient) on industry performance measure, which is accepting (rather than rejecting) the null.

Another important choice in the empirical design is whether to allow the sensitivity of firm performance to industry performance to vary across firms. Estimating firm-specific or industry-specific betas introduces additional estimation error into the industry performance term in the second-stage regression. I thus estimate a common peer performance beta for all firms in the first-stage regression. In the Internet Appendix, I repeat the estimation with industry-specific betas and firm-specific betas and obtain similar results.

In the Internet Appendix, I also show that the effect of industry peer performance on proxy advisors' recommendations is robust to using (1) probit specification, (2) double clustering standard errors and (3) abnormal CEO pay instead of actual CEO pay in the regression.

Some may argue that relative performance evaluation is not optimal in a competitive market. Aggarwal and Samwick (1999a) show that optimal compensation contracts may put positive weight on both own-firm and rival-firm performance to soften competition in oligopolistic industries. In the context of proxy voting, proxy advisors whose recommendations may capture an aggregation of institutional investor preferences may recommend opposing a CEO's pay package for poor industry performance if such performance is caused by suboptimal CEO behavior, for example, because the CEO initiated a price war.

To this end, I repeat the analysis in a subsample of firms that are small relative to their industry and, therefore, unlikely to affect the industry equilibrium. In that case, RPE is more likely to be optimal. I calculate the ratio of a firm's market capitalization over the total market capitalization in the same industry and define small firms as the ones whose market cap ratio is smaller than 1%. The evidence speaks against the strategic competition view. In Table 5 Column (1), I continue to find that industry peer performance has a statistically significant influence on the likelihood of a negative recommendation from a proxy advisor in small firms.

Alternatively, CEOs may optimally be evaluated based on industry performance due to CEOs outside employment opportunities that vary with the economy's fortunes (Himmelberg and Hub-

bard (2000); Oyer (2004)). To test this conjecture, in Table 5 Column (2), I examine whether the effect of industry performance on proxy advisors' recommendations remains in a subsample of firms in which CEOs are not scarce in the state a firm locates. I calculate the number of public firms' CEOs in each state and repeat the analysis in firms that are located in states with many CEOs so that the firm can place less emphasis on the need to retain talent. The effect of industry performance on proxy advisors' recommendations remains in this restricted sample, in which RPE is more likely to be desirable.

Overall, the above findings are inconsistent with the predictions of RPE theory for an average firm. However, it is possible that proxy advisors may "correctly" allow industry peer performance to affect their decision-making in order to "undo" boards' decisions. For example, when some firms in the oil & gas sector allow their CEOs' pay to be driven by industry luck, proxy advisors may recommend voting against a CEO's pay package when the CEO's peers perform well. In this case, proxy advisors would "correctly" include peer performance in their decision-making to protect shareholders' interests. To evaluate this possible explanation, I first estimate the coefficients of industry peer performance from ISS' recommendations in evaluating CEO pay and from the board's decisions in designing CEO pay. I then examine the correlation of the estimated coefficients by industry. In the Internet Appendix, I show that only in industries where CEO pay packages exhibit very large pay-for-luck, proxy advisors would be more likely to recommend voting against such pay packages when industry peers perform well.

4.2 Discussion: Conflicts of interest

Notably, ISS also provides consulting services to firms through ISS Corporate Solutions, Inc. ("ICS"), a wholly-owned subsidiary of ISS. In 2013, almost 30% of ISS' total revenue was generated from its ICS subsidiary, up from 18% in 2010 (see MSCI Inc.'s annual reports for fiscal years 2010 and 2013), and the largest fraction of ISS' consulting revenue comes from selling its compensation models (Li (2016)). In this section, I examine whether the potential conflicts of interest might distort the incentives of ISS to provide high-quality recommendations.

Levit and Tsoy (2022) show that if proxy advisors' recommendations are non-verifiable and they have a conflict of interest with at least one of their clients, they will provide a one-size-fits-all recommendation. In the case of evaluating executive compensations, it is difficult to measure the compensation quality (i.e., non-verifiable), and ISS may make SOP recommendations that overlook industry-specific factors. In addition, potential favoritism by ISS for its corporate clients may also allow CEOs to hide behind peer performance in good times while not being punished in bad times.

Glass Lewis, on the other hand, does not offer consulting services, and thus its recommendations can serve as a benchmark. If conflicts of interest are the only cause, I shall expect the use of RPE in Glass Lewis' recommendations. Table 6 Column (3) shows that Glass Lewis, similar to ISS, does not adjust for industry performance when evaluating CEO pay packages. This result speaks against the view that conflicts of interest alone limit proxy advisors' use of RPE.

Taken together, the above results suggest that in the context that RPE is suitable as a benchmark, proxy advisors' recommendation is not aligned with shareholder value maximization as they do not filter out industry performance in evaluating a CEO.

5 Capacity Constraints of Proxy Advisors

The above results have demonstrated that when evaluating executive compensations, proxy advisors do not filter out industry peer performance that is beyond a CEO's control. There are several possible explanations for the effect of industry performance on proxy advisors' recommendations.

As of 2016, the largest proxy advisor, ISS, has 900 employees worldwide, producing proxy research and vote recommendations at more than 38,000 shareholder meetings. Moody's Corporation, on the other hand, employs 11,700 individuals (Moody's, 2016). Compared to credit rating agencies, proxy advisors maintain surprisingly small workforces for the number of meetings they track. I thus conjecture that the effect of industry performance on proxy advisors' recommendations may be caused by the proxy advisors' capacity constraints.

I first repeat the same analysis and report the firm-year regression results in the ISS sample. Table 6 reports the regression results. Column (1) confirm that ISS allows industry shocks to firm performance to affect their decisions in evaluating executive compensations. In Column (2), I look at other management proposals that are unrelated to executive compensation as a placebo test, such as auditor appointments and director elections. Table 6 Column (2) shows that stock return fails to play a role in ISS' decision-making in other non-compensation-related management proposals. Higher firm performance (ROA), in general, is associated with a lower likelihood of a negative recommendation from ISS. The summary statistics for the ISS sample can be found in the Internet Appendix.

5.1 Seasonal busyness

One important feature of proxy advisors' business is that the workload of proxy advisors is seasonally compressed as shareholder meetings cluster in a very short period of time during the proxy season. Hayne and Vance (2019) report that proxy advisors are subject to intense workloads during the busy season, whereby analysts work 12 to 16 hours per day, including weekends analyzing complex proxy statements. In this section, I examine whether seasonal busyness affects the sensitivity of ISS recommendations to the firm's industry peer performance.

Busyness or workload compression has been shown to have a negative impact on outcomes. For example, Fich and Shivdasani (2006) shows that firms with busy boards are associated with weak corporate governance and poor performance. More relatedly, Albuquerque et al. (2020) document that detailed ISS assessments are able to identify a firm's poor compensation practices as measured by the firm's subsequent accounting performance for firms with non-December fiscal year-end. Calluzzo and Kedia (2022) find that the compressed workload of ISS results in 17.6% fewer negative recommendations from ISS during the busy proxy season.

I make use of the fact that shareholder meetings are clustered during the spring proxy season, leading to time constraints and limited resources for proxy advisors during that time. In addition, meeting dates are relatively constant over time, as firms tend to have their meetings at a similar time every year. This suggests that the timing of firm meetings are exogenous to the contentiousness of items up for a vote.

Table 7 tabulates the number of meetings by week, and it shows that the number of meetings sharply increases in the 17th week and continues at the peak level until the 21st week. Thus, I create an indicator variable, $Busy$, that takes the value of one if a meeting takes place between the period of 17th week and the 21st week. During this busy period, there are, on average, 266 meetings every day, whereas there are only 13 meetings a day outside the busy period.

To examine how busyness affects the quality of ISS recommendations, in Table 8 , I compare the effect of industry performance on ISS recommendations during busy vs. non-busy periods. I find that the effect of industry performance is only present among firm meetings that take place during the busy period.

In the Internet Appendix, I interact $Busy$ with $Peer\,performance$ and show that when shareholder meetings take place during the busy period, ISS is less likely to filter out industry performance that is beyond the control of management. I also restrict the sample to firms that do not move the timing of their shareholder meetings from year to year and find similar results.[15] The

[15] A firm is considered as not having moved its meeting date if the firm has had its meeting in or out of the busy

results are consistent with proxy advisors being more likely to make low-quality recommendations when facing tight time constraints.

5.2 Complexity

Extensive psychological evidence shows that individuals pay less attention to complex and difficult-to-process information (e.g., Kahneman (1973)) and may therefore make inferior decisions. For example, Ghent et al. (2014) find that credit rating agencies rate more favorably on complex securities, which generally default more. Cohen et al. (2020) show that investors are inattentive to simple changes in annual reports due to the increased complexity and length of these reports.

Larcker and Tayan (2015) document that investors complain proxy statements are hard to read, which makes it difficult to determine whether executives are paid appropriately. A typical proxy has on average 80 pages among companies in the Russell 3000. It is thus possible that when the proxy statement becomes longer and more complex, inattentive proxy advisors may pay less attention to firms with longer and more complex proxy statement.

To this end, I examine whether the length and complexity of the proxy statement affect the quality of ISS' recommendations in evaluating CEOs. To test the conjecture, I create two indicator variables to capture the length and complexity of the firm's proxy statement. $Large\ file\ size$ equals one if the file size of the proxy statement is above the sample median. $Large\ frac.\ complex\ words$ equals one if the fraction of complex words that contain three or more syllables in the proxy statement is above the sample median.

I start with the file size measure because Loughran and McDonald (2014) find that the file size of firms' disclosures indicates friction in the communication between firms and shareholders and is proven to be a good measure of complexity. Since proxy statements are generally longer and more complex when there are more proposals up for a vote in the meeting, I also include the number of proposals in the same shareholder meeting in the regression. Table 9 reports the results. I find ISS does less benchmarking and is less able to adjust for industry peer performance in assessing CEOs when the proxy statement gets longer and more complex.

More relevantly, I examine whether the complexity of compensation contracts affects ISS' ability to adjust for industry performance in assessing CEOs using data from ISS Incentive Lab. Based on details of compensation contracts from proxy statements, I measure pay contract complexity in two different ways. First, I use the count of performance-based compensation plans to capture pay complexity (i.e., short-term cash bonus, long-term cash bonus, stock, and options). Second,

period in the past three years.

I follow Albuquerque et al. (2022) and aggregate different features of compensation contracts, such as the number of performance measures and performance measurement periods (see details in Albuquerque et al. (2022)). Table 10 reports the results. I find that ISS is less likely to filter out industry performance with a greater number of performance-based compensation plans and features included in the compensation contracts.

5.3 Firms with salient proposals

I next investigate whether having other more salient proposals at the same shareholder meeting distracts ISS analysts' attention and thus negatively affects ISS' ability to filter out industry performance.

Compared to management proposals, shareholder-sponsored proposals are in general more contentious. Iliev et al. (2021) document that meetings with shareholder proposals on the agenda are associated with higher institutional search and a higher likelihood of informed investors. Bena and Wang (2022) show that disagreement between passive and active mutual funds is substantially larger in shareholder proposals relative to management proposals. Firms with shareholder proposals may have other hostile issues and are thus more contentious. ISS may allocate more resources to evaluate these more salient issues in which case analysts may be distracted and pay less attention in evaluating pay packages. Similarly, as negative recommendations generally receive more attention from institutional investors who may review independently for these potentially conflicted proposals (Babenko et al. (2019)), it is likely that firms that receive a negative recommendation of other proposals from ISS draw more attention from ISS analysts to evaluate these more salient issues, and distracted from evaluating pay packages.

On the other hand, as firms with shareholder proposals and proposals with negative recommendations receive more attention from institutional investors, it is possible that ISS analysts pay more attention to these firms, including proposals regarding executive compensation at the same meeting.

To this end, I create two indicator variables. $Has\,shareholder\,proposals$ takes the value of one if the firm has at least one shareholder proposal. The second one is $Has\,other\,non-comp.\,proposals\,with\,Against$ which takes the value of one if the firm has at least one non-compensation-related proposal receiving a negative recommendation from ISS.

Table 11 reports the results. Column (1) shows that having at least one shareholder proposal in the meeting increases the sensitivity of ISS recommendations to the firm's industry performance. Similarly, Column (2) shows that having at least one negative recommendation of other

non-compensation-related proposals significantly increases the sensitivity of ISS negative recommendations to the firm's industry performance. In other words, ISS does less filtering of industry performance when the firm has shareholder proposals or other proposals with negative recommendations at the same meeting. The results are consistent with the idea that having other more visible proposals distracts the attention of ISS analysts and negatively affects ISS' ability to filter out industry peer performance that is beyond a CEO's control in evaluating CEO pay packages.

5.4 Limited staff

Many market participants have frequently questioned ISS' hiring of temporary staff and these workers' lack of competence to accurately evaluate the full scale of proxy items on which they provide recommendations each year (e.g.,Copland et al. (2018)).

I first collect ISS employee reviews from Glassdoor and build a word cloud from these employee reviews (Figure 1). Employees frequently complain about (1) intensive workload, (2) repetitive work, and (3) seasonal temporary staff only being hired during the proxy season. The reviews are consistent with proxy advisors' constrained resources, especially limited staff the competence of these temporary staff during the spring proxy season.

Preqin provides estimates of ISS' overall full-time employees by month. Table 12 Column (1) shows that the number of full-time employees does not vary with meeting months. Because the amount of corporate governance staff specifically dedicated to analyzing and providing voting recommendations on shareholder meetings annually is not disclosed, I hand-collect information on ISS' corporate governance team over the period 2010 – 2020 from Linkedin.com (see Section 3).

Similar to the average number of full-time employees, from Table 12 Column (2), the average number of corporate governance staff is no greater during the spring proxy season (April to June) than during the off-season. Column (3) tabulates the percentage of temporary corporate governance staff by month. Temporary corporate governance staff are the ones who identified the job as an "internship" or "contract" with a duration of less than a year. There is a substantially greater amount of temporary corporate governance staff in March, April, and May. Overall, Table 12 suggests that ISS hires seasonal workers to meet the tight deadline and intense demand during the busy proxy season.

Table 13 compares the experience and education background of full-time vs. temporary corporate governance staff. I find that relative to full-time staff, temporary staff are, on average, less likely to have any work experience or governance-related experience prior to joining ISS and are less likely to have a business or economics degree. This speaks to the criticism that these

temporary workers lack the competence to accurately evaluate the proxy statement.

A reasonable concern with the above analysis is that employees self-select to subscribe to and disclose information on Linkedin. My hand-collected dataset is by no means an exclusive list of ISS' corporate governance team. Nevertheless, the descriptive analysis using the hand-collection employee information of the ISS corporate governance team provides useful suggestive evidence to confirm the market criticism of proxy advisors' resource constraints regarding insufficient staff and the lack of experience of their temporary workers.

I then use the fact that ISS relies heavily on seasonal workers and formally test the limited staff by examining how the effect of industry performance on ISS recommendations varies with ISS' ability to hire temporary workers. I conjecture that the quality of proxy advice may be compromised when proxy advisors face unexpected labor market challenges. However, there are reasons why unexpected labor market challenges may not affect the quality of proxy advisors' recommendations. First, proxy advisors expected a high volume of proxy statements and an intense workload during the spring proxy season and hire staff in advance. Proxy advisors may also shift staff between divisions and offices. Thus, proxy advisors may appropriately account for and accommodate challenges in the labor market such that any drop in the labor supply does not adversely affect the quality of proxy advisors' recommendations.

Economists have typically turned to common slack measures such as the unemployment rate or the job vacancy rate to assess labor market tightness, as they can provide important information on labor market conditions facing employers. The labor market is "tight" if vacant jobs are plentiful and available workers are scarce. I measure ISS' ability to hire temporary staff by calculating the tightness of the labor market. Labor market tightness is measured as the number of job openings per unemployed within (1) the state in which ISS headquarter locates, and (2) the six states in which ISS' main offices locate. ISS has six main offices in Boston, Chicago, New York, Norman, Rockville, and San Francisco.[16]

Labor market tightness can act as a shock to ISS review capacity. Human capital constraints can affect the overall quality of proxy advisors' oversight. I examine whether labor market tightness in the areas where ISS offices are located impacts ISS' ability to filter out industry performance when evaluating executive compensations. I create an indicator variable, $Tighter\,labor\,market$, which takes the value of one if the 3-month average labor market tightness prior to the shareholder meeting is at the top decile of the sample. I then interact $Tighter\,labor\,market$ with $Peer\,performance$ and examine whether the quality of ISS recommendations is affected by the labor market tightness.

[16] I collected the historical ISS' office locations from Wayback machine.

Table 14 reports the results. In Column (1) and (2), the labor market tightness is measured in the states in which ISS headquarter office and six main offices locate. Consistent with the conjecture, the result suggests that when the labor market becomes tighter, ISS is less able to filter industry peer performance in evaluating executive compensation. I obtain similar results when the labor market tightness is measured as the number of job openings per unemployed college or up graduates who are typically hired by ISS (Figure 2).

5.5 High-profile firms

Next, I examine whether high-profile firms warrant more attention from ISS, and thus are more likely to receive high-quality recommendations. I first look at S&P 500 firms because ISS provides S&P500 firms the opportunity to review a draft version of their proxy research reports. ISS may therefore allocate limited attetion to these S&P500 firms. Table 15 shows that ISS can adjust for industry performance in S&P500 firms. Table 16 shows that ISS can adjust for industry performance in firms experiencing low returns immediately before the meetings.

I also examine whether the sensitivity of ISS' recommendations to the firm's peer performance varies with institutional monitoring in the Internet Appendix. Because proxy advisors' main revenue source comes from institutional clients, especially mutual funds, they may allocate limited resources and attention to more high-profile firms, which are likely to be continuously monitored by institutional investors. To capture the intensity of institutional monitoring, I create the indicator variable $High\,monitoring$ that takes the value of one if (1) the number of blockholders; or (2) institutional ownership; or (3) the number of mutual fund families following the firm is above the sample median. I then interact $High\,monitoring$ with the firm's industry $Peer\,performance$. I find the sensitivity of ISS recommendations to the industry peer performance does not vary with institutional monitoring. This might be due to the small variations of institutional monitoring in my sample.

6 Conclusion

Proxy advisors play an important role in corporate governance. Along with their significant influence over shareholder votes, proxy advisers have been put under the spotlight by regulators to publicize and justify their recommendations in recent years. Prior literature shows that proxy advisors' recommendations could induce firms to make governance changes that have unclear implications for shareholder value. My paper may be of interest to regulators and complement research

examining the quality of proxy advisors' recommendations.

By evaluating the two largest proxy advisors' recommendations of SOP proposals, I document that proxy advisors' recommendations do not feature strong elements of relative performance evaluation when assessing CEOs. Such departures from agency theory predictions are more severe for complex proxies and pay contracts. The effects are concentrated in the busy proxy season. My analysis suggests that proxy advisors' resource constraints are likely explanations for the limited occurrence of relative performance evaluation in proxy advisors' recommendations.

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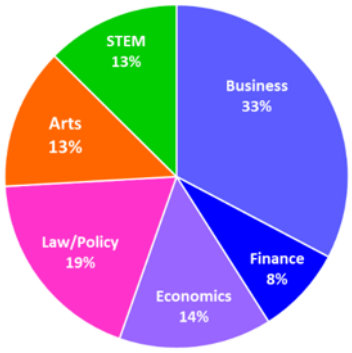
Figure 1. World Cloud Illustrations of Reviews from Employees Who Work in ISS

This figure presents word cloud illustrations from Glassdoor employee reviews for ISS. Word clouds are a visual representation of text data. Tags are single words, and the importance of each tag is shown with font size. For example, the largest word in the word cloud is the word mentioned most frequently in an employee review.

Figure 2. Composition of ISS Corporate Governance Staff

This figure presents the composition of corporate governance staff by majors (Panel A) and by degrees (Panel B). I hand-collect information on ISS' corporate governance team over the period 2010 – 2020 from Linkedin.com. I define ISS corporate governance staff as an employee whose title is either "analyst" or "associate", and I collect their education, prior governance-related experience as well as their work history within ISS from Linkedin. Senior leadership roles such as vice presidents and directors who are not likely to conduct hands-on proxy analysis are not included. In addition, I exclude employees who work in software development, sales, and general administration such as accounting roles.

Panel A: By majors



Panel B: By degrees

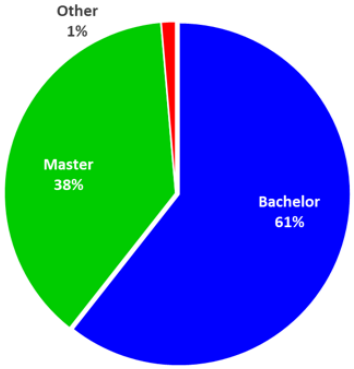


Table 1. Summary Statistics

This table presents the descriptive statistics of the main variables. The sample spans the meeting years of 2012 – 2019. The sample includes firms covered by both ISS and Glass Lewis and with December fiscal year-end. The unit of observation is firm × year × proxy advisor. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level.

Proposal-level	N	Mean	STD	P25	Median	P75
Against rec.	9,854	10.8%	31.1%	0	0	0
ISS Against rec.	4,927	9.0%	28.6%	0	0	0
Glass Lewis Against rec.	4,927	12.6%	33.2%	0	0	0
Shareholder SOP dissent	9,854	8.1%	11.5%	2.2%	4.0%	7.6%
Firm-level						
12-month stock return	9,854	0.15	0.37	-0.07	0.11	0.32
Equal-weighted industry return	9,854	0.10	0.30	-0.10	0.08	0.28
Value-weighted industry return	9,854	0.11	0.26	-0.05	0.11	0.27
Stock volatility	9,854	0.27	0.13	0.18	0.24	0.33
Log (Assets)	9,854	8.35	1.81	7.04	8.24	9.52
ROA	9,854	0.12	0.09	0.06	0.12	0.17
Institutional ownership	9,854	82.7%	13.9%	74.7%	85.4%	93.2%
Insider ownership	9,854	2.9%	6.0%	0.4%	1.1%	2.6%
CEO-level						
CEO annual pay (in mil)	9,854	6.13	4.95	2.53	4.75	8.23
CEO pay growth	9,854	22.6%	81.4%	-11.7%	6.5%	29.2%
Fraction of cash pay	9,854	47.8%	24.1%	30.0%	42.6%	61.4%
CEO tenure (in years)	9,854	9.0	7.3	3.7	7.0	12.0
CEO age (in years)	9,854	57	7	53	57	61

Table 2. First-stage Regression of Firm Performance on Industry Performance

This table presents the first-stage regression of firm performance on industry performance. The sample spans the meeting years of 2012 – 2019. The sample includes firms covered by both ISS and Glass Lewis and with December fiscal year-end. The unit of observation is firm × year × proxy advisor. The industry peer definitions use four-digit SIC codes. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: Firm stock return	(1)	(2)
EW industry peer performance	0.597***	
	(0.025)	
VW industry peer performance		0.645***
		(0.029)
Observations	9,854	9,854
Adj. R-sq	0.22	0.20

Table 3. Proxy Advisors' Recommendations and Industry Peer Performance

This table presents the regression results that examine the relationship between the likelihood of proxy advisors' negative say-on-pay recommendations and industry peer performance. The sample spans the meeting years of 2012 – 2019. The sample includes firms covered by both ISS and Glass Lewis and with December fiscal year-end. The unit of observation is firm × year × proxy advisor. The first-stage regressions use industry stock returns to predict contemporaneous company stock returns. The table shows the second-stage regressions that predict a proxy advisor's likelihood to recommend against a CEO's pay package using the predicted values and the residuals from the first-stage regression as estimates of the peer group component and the idiosyncratic component of firm stock returns, respectively. The dependent variable is the indicator variable, *Against*, which takes the value of one if a proxy advisor (ISS or Glass Lewis) recommends voting against the management. The industry peer definitions use four-digit SIC codes. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: Against	(1)	(2)	(3)	(4)	(5)
Peer performance	-0.066***	-0.064***	-0.073***	-0.077***	-0.084***
	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)
Firm-specific performance	-0.055***	-0.048***	-0.059***	-0.056***	-0.067***
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Insider ownership		0.135	0.302	0.257	0.267
		(0.547)	(0.509)	(0.510)	(0.525)
Institutional ownership		-0.068	-0.087	-0.089	-0.085
		(0.076)	(0.074)	(0.075)	(0.076)
Assets		0.041**	0.011	0.010	0.019
		(0.018)	(0.018)	(0.018)	(0.018)
CEO tenure		0.020***	0.013*	0.014*	0.010
		(0.008)	(0.008)	(0.007)	(0.008)
CEO annual pay			0.100***	0.105***	0.121***
			(0.012)	(0.012)	(0.017)
ROA				-0.418***	-0.455***
				(0.096)	(0.106)
Stock volatility				0.039	0.065
				(0.051)	(0.054)
Frac. of cash pay					0.109***
					(0.035)
Pay growth					0.012
					(0.007)
Observations	9,854	9,854	9,854	9,854	9,854
Adj. R-sq	0.223	0.225	0.239	0.242	0.249
F stat	0.25	0.40	0.33	0.72	0.49
Year FE, Firm FE	Yes	Yes	Yes	Yes	Yes
Proxy advisor FE	Yes	Yes	Yes	Yes	Yes

Table 4. Proxy Advisors' Recommendations and Industry Peer Performance: Alternative Peer Groups

This table presents the second-stage regression results that examine the relationship between the likelihood of proxy advisors' negative say-on-pay recommendations and industry peer performance using alternative peer groups. The sample spans the meeting years of 2012 – 2019. The sample includes firms covered by both ISS and Glass Lewis and with December fiscal year-end. The unit of observation is firm × year × proxy advisor. The first-stage regressions use industry stock returns to predict contemporaneous company stock returns. The second-stage regressions predict a proxy advisor's likelihood to recommend against a CEO's pay package using the predicted values and the residuals from the first-stage regression as estimates of the peer group component and the idiosyncratic component of firm stock returns, respectively. The dependent variable is the indicator variable, *Against*, which takes the value of one if a proxy advisor (ISS or Glass Lewis) recommends voting against the management. The industry peer definitions use four alternative groups. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: Against	(1)	(2)	(3)	(4)
	Value-weighted	SIC2 peers	TNIC-3 peers	Comp. peers
Peer performance	-0.071**	-0.055**	-0.065***	-0.089**
	(0.028)	(0.028)	(0.025)	(0.038)
Firm-specific performance	-0.054***	-0.064***	-0.060***	-0.064***
	(0.012)	(0.012)	(0.011)	(0.018)
Observations	9,854	9,854	9,854	9,854
Adj. R-sq	0.223	0.238	0.232	0.207
Controls	Yes	Yes	Yes	Yes
Year FE, Firm FE	Yes	Yes	Yes	Yes
Proxy advisor FE	Yes	Yes	Yes	Yes

Table 5. Proxy Advisors' Recommendations and Industry Peer Performance: Alternative Theories

This table presents the subsample regression results that examine the relationship between the likelihood of proxy advisors' negative say-on-pay recommendations and industry peer performance. The sample spans the meeting years of 2012 – 2019. The sample includes firms covered by both ISS and Glass Lewis and with December fiscal year-end. The unit of observation is firm × year × proxy advisor. The first-stage regressions use industry stock returns to predict contemporaneous company stock returns. The table shows the second-stage regressions that predict a proxy advisor's likelihood to recommend against a CEO's pay package using the predicted values and the residuals from the first-stage regression as estimates of the peer group component and the idiosyncratic component of firm stock returns, respectively. The dependent variable is the indicator variable, *Against*, which takes the value of one if a proxy advisor (ISS or Glass Lewis) recommends voting against the management. Column (1) looks at the subsample of small firms relative to the industry. Small firms are defined as ones with the firm's ratio of its own market capitalization over the industry's aggregate market capitalization being smaller than 1%. Column (2) looks at firms located in states with many CEOs so that the firm can place less emphasis on the need to retain talent. The industry peer definitions use four-digit SIC codes. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: Against	(1)	(2)
Peer performance	-0.174***	-0.063*
	(0.065)	(0.037)
Firm-specific performance	-0.047***	-0.056***
	(0.019)	(0.015)
Sample	Small firms	Firms in states with many CEOs
Observations	2,402	4,942
Adj. R-sq	0.287	0.239
Controls	Yes	Yes
Year FE, Firm FE	Yes	Yes
Proxy advisor FE	Yes	Yes

Table 6. ISS Recommendations and Industry Peer Performance

This table presents the second-stage regression results that examine the relationship between the likelihood of ISS recommendations and industry peer performance. The sample spans the meeting years of 2011 – 2019. The sample includes firms covered by ISS and with December fiscal year-end. The unit of observation is firm × year. The first-stage regressions use industry stock returns to predict contemporaneous company stock returns. The second-stage regressions predict the likelihood of ISS to recommend against a CEO's pay package using the predicted values and the residuals from the first-stage regression as estimates of the peer group component and the idiosyncratic component of firm stock returns, respectively. The dependent variable in Column (1) is the indicator variable *ISS Against*, which takes the value of one if ISS recommends voting against the management when evaluating executive compensation. Column (2) looks at other non-compensation related management proposals, and the dependent variable is the indicator variable *ISS Against* which takes the value of one if ISS recommends voting against the management proposal. Column (3) looks at Glass Lewis recommendations, and the dependent variable is the indicator variable *GL Against* which takes the value of one if Glass Lewis recommends voting against the management when evaluating executive compensation. The industry peer definitions use four-digit SIC codes. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

	(1)	(2)	(3)
Dependent variable	ISS Against	ISS Against	GL Against
Peer performance	-0.079***	0.007	-0.063**
	(0.024)	(0.010)	(0.031)
Firm-specific performance	-0.089***	-0.002	-0.028*
	(0.011)	(0.005)	(0.015)
Insider ownership	-0.055	0.074	0.224
	(0.343)	(0.178)	(0.836)
Institutional ownership	0.014	-0.109***	-0.059
	(0.043)	(0.039)	(0.092)
Assets	-0.012	0.004	0.047*
	(0.016)	(0.007)	(0.025)
CEO tenure	0.009	0.000	0.020**
	(0.007)	(0.003)	(0.009)
CEO annual pay	0.112***	-0.004	0.094***
	(0.012)	(0.004)	(0.014)
ROA	-0.292***	-0.75**	-0.485***
	(0.082)	(0.036)	(0.119)
Stock volatility	0.088**	-0.000	0.043
	(0.043)	(0.020)	(0.062)
Sample	ISS SOP proposals	ISS non-comp. proposals	has GL rec.
Observations	7,970	56,564	4,983
Adj. R-sq	0.217	0.226	0.299
Year FE, Firm FE	Yes	Yes	Yes

Table 7. Number of meetings by weeks

This table tabulates the number of meetings by weeks. The sample spans the meeting years of 2011 – 2019.

Meeting Week	# meetings	Percent
2-15	67	1.0
16	412	5.2
17	1,100	13.8
18	1,108	13.9
19	1,246	15.6
20	1,337	16.8
21	1,097	13.8
22	439	5.5
23	452	5.7
24	328	4.1
25	155	1.9
26-52	216	2.8

Table 8. ISS Recommendations and Busyness

This table presents how seasonal busyness affects ISS negative say-on-pay recommendations. This table presents subsample analysis on whether busyness affects the sensitivity of ISS say-on-pay recommendations to the use of RPE. The sample spans the meeting years of 2011 – 2019. The sample includes firms covered by ISS and with December fiscal year-end. The unit of observation is firm × year. The dependent variable is the indicator variable, *ISS Against*, which takes the value of one if ISS recommends voting against the management. *Busy* is an indicator variable that takes the value of one if a meeting takes place between the period of 17th week and 21st week. Column (1) and (2) look at firms that have meeting dates in the Busy period while Column (3) and (4) look at firms that have meeting dates in the Non-busy period. The industry peer definitions use four-digit SIC codes. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: ISS Against	(1)	(2)	(3)	(4)
Peer performance	-0.085***	-0.091***	0.016	-0.015
	(0.028)	(0.028)	(0.077)	(0.074)
Firm-specific performance	-0.080***	-0.088***	-0.061***	-0.077***
	(0.014)	(0.013)	(0.024)	(0.023)
Insider ownership	-0.105	0.088	-0.264	-0.219
	(0.486)	(0.475)	(0.746)	(0.658)
Institutional ownership	0.037	0.022	-0.015	-0.058
	(0.046)	(0.044)	(0.127)	(0.129)
Assets	-0.002	-0.031	0.042	0.003
	(0.020)	(0.020)	(0.033)	(0.032)
CEO tenure	0.017**	0.008	0.023	0.011
	(0.008)	(0.008)	(0.016)	(0.015)
CEO annual pay		0.098***		0.135***
		(0.014)		(0.025)
Sample	Busy firms	Busy firms	Non-busy firms	Non-busy firms
Observations	5,955	5,955	2,113	2,113
Adj. R-sq	0.165	0.180	0.227	0.255
Year FE, Firm FE	Yes	Yes	Yes	Yes

Table 9. ISS Recommendations and Proxy Statement Complexity

This table presents how the complexity of a firm's proxy statement affects the sensitivity of ISS negative say-on-pay recommendations to the industry peer performance. The sample spans the meeting years of 2011 – 2019. The sample includes firms covered by ISS and with December fiscal year-end. The unit of observation is firm × year. The dependent variable is the indicator variable, $ISS\ Against$, which takes the value of one if ISS recommends voting against the management. In Column (1) , $Large\ file\ size$ is an indicator variable that takes the value of one if the file size of a firm's proxy statement is above the sample median. In Column (2), $Large\ frac.complexwords$ is an indicator variable that takes the value of one if the fraction of complex words of a firm's proxy statement is above the sample median. The industry peer definitions use four-digit SIC codes. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: ISS Against	(1)	(2)
Peer performance × Large file size	-0.068*	
	(0.041)	
Large file size	-0.009	
	(0.017)	
Peer performance × Large frac. complex words		-0.076*
		(0.046)
Large frac. complex words		0.016
		(0.013)
Peer performance	-0.076***	-0.059*
	(0.024)	(0.030)
Firm-specific performance	-0.091***	-0.110***
	(0.015)	(0.013)
Observations	7,970	7,970
Adj. R-sq	0.084	0.098
Controls	Yes	Yes
Year FE, Industry FE	Yes	Yes

Table 10. ISS Recommendations and Pay Complexity

This table presents how the complexity of a firm's proxy statement affects the sensitivity of ISS negative say-on-pay recommendations to the industry peer performance. The sample spans the meeting years of 2011 – 2019. The sample includes firms covered by ISS and with December fiscal year-end. The unit of observation is firm × year. The dependent variable is the indicator variable, *ISS Against*, which takes the value of one if ISS recommends voting against the management. In Column (1) , *More incentive plans* is an indicator variable that takes the value of one if the number of incentive plans used by the firm is above the sample median. In Column (2), *More features* is an indicator variable that takes the value of one if the number of features included in the firm's compensation contract is above the sample median. The industry peer definitions use four-digit SIC codes. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: ISS Against	(1)	(2)
Peer performance × More incentive plans	-0.120**	
	(0.056)	
More incentive plans	-0.020	
	(0.015)	
Peer performance × More features		-0.073
		(0.054)
More features		-0.011
		(0.017)
Peer performance	-0.003	-0.026
	(0.049)	(0.042)
Firm-specific performance	-0.116***	-0.109***
	(0.020)	(0.017)
Observations	4,073	4,073
Adj. R-sq	0.095	0.111
Controls	Yes	Yes
Year FE, Industry FE	Yes	Yes

Table 11. ISS' Recommendations and Firms with Salient Proposals

This table presents whether having other salient proposals at the same shareholder meeting affects the sensitivity of ISS say-on-pay recommendations to the industry peer performance. The sample spans the meeting years of 2011 – 2019. The sample includes firms covered by ISS and with December fiscal year-end. The unit of observation is firm × year. I define that a meeting takes place in the *Busy* proxy season if the meeting takes place between the period of 17th week and 21st week. The dependent variable is the indicator variable, $ISS\ Against$, which takes the value of one if ISS recommends voting against the management. Column (1) looks at whether the sensitivity of ISS recommendations to industry peer performance varies when firms receive at least one shareholder proposal. Column (2) looks at whether the sensitivity of ISS recommendations to industry peer performance varies when firms receive at least one negative ISS recommendation of other non-compensation related management proposals. The industry peer definitions use four-digit SIC codes. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: ISS Against	(1)	(2)
Peer performance × Has shareholder proposals	-0.112**	
	(0.055)	
Has shareholder proposals	0.050***	
	(0.016)	
Peer performance × Has other non-comp. proposals with Against		-0.086*
		(0.046)
Has other non-comp. proposals with Against		0.327***
		(0.015)
Peer performance	-0.060**	-0.032*
	(0.026)	(0.017)
Firm-specific performance	-0.098***	-0.074***
	(0.011)	(0.009)
Observations	7,970	7,970
Adj. R-sq	0.093	0.288
Controls	Yes	Yes
Year FE, Industry FE	Yes	Yes

Table 12. Number of ISS employees by Month

This table tabulates the number of ISS employees and ISS corporate governance team by month. I hand-collect information on ISS' corporate governance team over the period 2010 – 2020 from Linkedin.com. I define ISS corporate governance staff as an employee whose title is either "analyst" or "associate" and collect their education, prior governance-related experience as well as their work history in ISS. Senior leadership roles such as vice presidents and directors who are not likely conducting hands-on proxy analysis are not included. In addition, I exclude employees who work in software development, sales and general administration such as accounting roles.

Month	Avg # full-time employees (Preqin)	Avg # corp.gov staff (Linkedin)	% Temp. corp.gov staff (Linkedin)
1	1,608	99	2.5%
2	1,638	105	4.5%
3	1,653	107	5.0%
4	1,653	107	5.1%
5	1,662	107	5.1%
6	1,653	107	4.5%
7	1,614	105	1.6%
8	1,601	106	0.9%
9	1,609	108	0.6%
10	1,614	112	0.3%
11	1,627	114	0.4%
12	1,636	116	0.5%

Table 13. Qualification of Temporary Corporate Governance Staff

This table provides descriptive statistics of ISS corporate governance (CG) team. I hand-collect information on ISS' corporate governance team over the period 2010 – 2020 from Linkedin.com. I define ISS corporate governance staff as an employee whose title is either "analyst" or "associate" and collect their education, prior governance-related experience as well as their work history in ISS. Senior leadership roles such as vice presidents and directors who are not likely conducting hands-on proxy analysis are not included. In addition, I exclude employees who work in software development, sales and general administration such as accounting roles. An employee has work experience prior to joining ISS if ISS is not his/her first job. An employee has relevant education background if he/she holds a degree in economics or business including finance.

	Full-time CG (1)	Temp. CG (2)	T-stat (1) - (2)
Work experience prior to joining ISS	28.9%	13.5%	5.60***
Corp. gov experience prior to joining ISS	15.6%	10.9%	2.12**
Relevant education background	54.5%	43.3%	3.70***

Table 14. ISS Recommendations and Labor Market Tightness

This table presents how ISS' ability to hire seasonal workers affects the sensitivity of ISS say-on-pay recommendations to the industry peer performance. The sample spans the meeting years of 2011 – 2019. The sample includes firms covered by ISS and with December fiscal year-end. The unit of observation is firm × year. The dependent variable is the indicator variable, $ISS\ Against$, which takes the value of one if ISS recommends voting against the management. In Column (1), I measure ISS' ability to hire temporary staff by calculating the labor market tightness as the number of job openings per unemployed in the state in which ISS headquater office locates. In Column (2), I measure ISS' ability to hire temporary staff by calculating the labor market tightness as the number of job openings per unemployed in the six states in which ISS main offices locate. ISS has six main offices in Boston, Chicago, New York, Norman, Rockville and San Francisco. In Column (3), I measure ISS' ability to hire temporary staff by calculating the labor market tightness as the number of job openings per unemployed college (or up) graduates. $Tighter\ labor\ market$ is an indicator variable that takes the value of one if the labor market tightness is above 90 percentile within the sample. The industry peer definitions use four-digit SIC codes. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: ISS Against	(1)	(2)	(3)
Peer performance × Tighter labor market in Maryland	-0.127*		
	(0.066)		
Tighter labor market in Maryland	-0.119		
	(0.074)		
Peer performance × Tighter labor market in six states		-0.114*	
		(0.057)	
Tighter labor market in six states		-0.016	
		(0.021)	
Peer performance × Tighter agg. labor market for college graduates			-0.077***
			(0.024)
Tighter agg. labor market for college graduates			-0.049**
			(0.019)
Peer performance	-0.095**	-0.086***	-0.090***
	(0.027)	(0.025)	(0.015)
Firm-specific performance	-0.101**	-0.099***	-0.120*
	(0.017)	(0.016)	(0.055)
Observations	7,970	7,970	7,970
Adj. R-sq	0.230	0.227	0.180
Controls	Yes	Yes	Yes
Year FE, Firm FE	Yes	Yes	Yes

Table 15. ISS Recommendations and S&P500 Firms

This table presents how industry performance affects ISS negative say-on-pay recommendations in S&P500 vs. non-S&P500 firms. TThe sample spans the meeting years of 2011 – 2019. The sample includes firms covered by ISS and with December fiscal year-end. The unit of observation is firm × year. The dependent variable is the indicator variable, *ISS Against*, which takes the value of one if ISS recommends voting against the management. Column (1) looks at S&P500 firms while Column (2) looks at non-S&P500 firms. The industry peer definitions use four-digit SIC codes. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: ISS Against	(1)	(2)
Peer performance	-0.001	-0.065**
	(0.055)	(0.030)
Firm-specific performance	-0.124***	-0.098***
	(0.029)	(0.015)
Sample	S&P500 firms	Non-S&P500 firms
Observations	2,192	4,532
Adj. R-sq	0.144	0.217
Controls	Yes	Yes
Year FE, Firm FE	Yes	Yes

Table 16. ISS' Recommendations and Firms with Low Returns Before Meetings

This table presents whether ISS can adjust for industry performance in firms experiencing bad performance immediately before the meetings. The sample spans the meeting years of 2011 – 2019. The sample includes firms covered by ISS and with December fiscal year-end. The unit of observation is firm × year. The dependent variable is the indicator variable, *ISS Against*, which takes the value of one if ISS recommends voting against the management. Column (1) defines bad performance as a negative monthly return immediately before the meeting. Column (2) defines bad performance as the bottom quartile monthly return immediately before the meeting. The industry peer definitions use four-digit SIC codes. Estimation error are adjusted using clustered bootstrapping. Specifically, I re-sample the data, estimate the regressions, and calculate standard errors based on the standard deviation of the coefficients estimates. All variables are defined in Appendix A. All dollar values are in 2010 dollars. All financial measures are winsorized at the 1% level. Standard errors are clustered at the firm level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Dependent variable: ISS Against	(1)	(2)
Peer performance × Negative monthly return	0.103***	
	(0.039)	
Negative monthly return	-0.005	
	(0.010)	
Peer performance × Bottom quartile monthly return		0.149***
		(0.047)
Bottom quartile monthly return		-0.011
		(0.012)
Peer performance	-0.130***	-0.122***
	(0.029)	(0.027)
Firm-specific performance	-0.099***	-0.100***
	(0.011)	(0.011)
Observations	7,970	7,970
Adj. R-sq	0.093	0.094
Controls	Yes	Yes
Year FE, Industry FE	Yes	Yes

Appendices

Variable Definitions

Variable	Definition
AGST	An indicator variable that takes the value of one if a proxy advisor recommends investors voting against a CEO pay package.
ISS/GL AGST	An indicator variable that takes the value of one if ISS/Glass Lewis recommends investors voting against a CEO pay package.
Shareholder dissent	Percentage of votes not in favor of a say-on-pay proposal in approving CEO pay.
CEO annual pay	Log of Tdc1 from ExecuComp.
Number of proposals	Total number of proposals in a shareholder meeting.
Institutional ownership	Institutional ownership reported in 13F, measured at the most recent quarter-end prior to the shareholder meeting.
Insider ownership	The fraction of shares held by top management and directors, as reported in the firm's most recent proxy statement.
Return	Past 12-month return in the year prior to the shareholder meeting.
Assets	Log of firm assets.
CEO tenure	Log of CEO tenure.
CEO age	Log of CEO age.
Stock volatility	Annualized standard deviation of monthly stock returns during the last 12 months.
M/B	Market-to-book ratio calculated as market value of equity plus debt divided by total assets.
Leverage	Book value of debt divided by the book value of equity, measured at the most recent year-end prior to the shareholder meeting.
ROA	Net income divided by the book value of assets, measured at the most recent year-end prior to the shareholder meeting.
Busy	An indicator variable that takes the value of one if a shareholder meeting takes place between the 17th week and 21st week of the year.
Tighter labor market	An indicator variable that takes the value of one if the labor market tightness measure is above the top decile of the sample.

High monitoring	An indicator variable that takes the value of one if the institutional monitoring measure is above the sample median.
Complicated file	An indicator variable that takes the value of one if one of the complexity measures is above the sample median.
Complex words	Fraction of words in the proxy statement with more than two syllables.
File size	Log of observed proxy statement DEF-14A file size in bytes.