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Abstract

Using detailed information from the largest proxy advisor in the U.S., Institutional Shareholder Services (ISS), we examine whether proxy advisors' assessments of firms' compensation practices are able to identify poor compensation practices as measured by subsequent performance. While prior research provides consistent evidence of an association between shareholder voting outcomes and proxy advisors' Say-on-Pay recommendations, the evidence is mixed over whether their recommendations are informative about the quality of firms' compensation practices. We find that ISS "Against" recommendations and negative assessments are associated with worse future accounting performance, consistent with ISS being able to detect low quality compensation packages. However, workload compression has an effect, as we find that the relation between assessments and future performance only occurs during the off season (i.e. for firms with non-December fiscal year ends).

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1. Introduction

Proxy advisors issue recommendations to institutional investors on how to vote on the nomination of board members and other corporate governance issues, such as executive compensation contracting. Research shows that proxy advisors' recommendations have a significant influence on Say-on-Pay voting outcomes (e.g., Ertimur, Ferri and Oesch (2013), Malenko and Shen (2016)) and, consequently, on firm's governance choices (see Copland, Larcker and Tayan (2018) for a review).[1] As a result of their increasing influence on corporate governance practices, these advisors have come under scrutiny recently and have been the subject of potential legislative and Securities and Exchange Commission (SEC) reforms.[2] The demand for proxy advisory services has increased in the recent past due to greater institutional ownership, the volume and the complexity of shareholder proposals voted upon, and the greater reliance of institutional investors on proxy advisors to inform them on how to vote on shareholder proposals as a result of the 2003 SEC rule requiring them to disclose their proxy voting policies (see Gramm and Solon (2018), Malenko and Malenko (2019)).[3] Thus proxy advisors are regarded as powerful.

The most influential proxy advisor with the largest market share in the US is Institutional Shareholder Services (ISS) (Choi, Fisch and Kahan, 2009; Alexander, Chen, Seppi and Spatt, 2010). As a consequence of their influence, management and shareholder activists lobby ISS to endorse their respective positions. As mentioned by Delaware's Vice-Chancellor Leo Strine:

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[1] Say-on-Pay is a non-binding advisory vote required with the adoption of the Dodd-Frank Wall Street Reform and Consumer Protection Act, passed in 2010.

[2] In 2017, the House of Representatives passed The Corporate Governance Reform and Transparency Act (H.R. 4015). If enacted, the bill would require, among other things, proxy advisors to disclose any conflicts of interest and make their methodologies for formulating recommendations publicly available. In November 2019, the SEC issued proposed rule 34-87457, which would require, among other things, proxy advisors to disclose conflicts of interest, allow companies to review and comment on recommendations, and provide links to a company's statement on the recommended if requested by the company.

[3] In 2003, the SEC required that mutual funds disclose their proxy voting policies or that they rely on the voting policies developed by an independent party, such as proxy advisors, to fulfill their fiduciary duties. (https://www.sec.gov/rules/final/33-8188.htm).

> *[P]owerful CEOs come on bended knee to Rockville, Maryland, where ISS resides, to persuade the managers of ISS of the merits of their views about issues like proposed mergers, executive compensation, and poison pills. They do so because the CEOs recognize that some institutional investors will simply follow ISS's advice rather than do any thinking of their own.*

ISS's dominant position in the advisory industry and thus the lack of competitive pressure and market discipline can impact the quality of their services. Moreover, ISS could exploit its influential position by issuing negative recommendations so that companies feel compelled to buy its consulting services (Knutson (2018), Hayne and Vance (2019)). Compounding the potential conflicts of interest are concerns that proxy advisors have limited accountability. Proxy advisors do not own equity in the companies in which they provide voting advice, nor do they have any fiduciary duty to the shareholders of those companies.

Researchers, including Larcker, McCall, and Ormazabal (2015) argue that proxy advisors' compensation assessments and voting recommendations are not useful as they induce firms to adopt compensation contracts that reduce shareholder value. Nonetheless, prior work has documented strong associations between their recommendations and voting outcomes (see, for example, Ertimur, Ferri and Oesch (2013), Malenko and Shen (2016)). Continued shareholder reliance on these recommendations appears at odds with the limited evidence that the assessments of proxy advisors can reduce shareholder value. We therefore revisit whether ISS voting guidance are informative and examine if ISS "Against" recommendations can identify low quality compensation practices.

A challenge in our research design is defining low quality compensation practices. Compensation contracts are multifaceted, complex (level of pay, form of pay, performance measures used and horizon over which to determine pay), and often idiosyncratic to particular strategic choices of organizations or to CEO abilities, making it difficult for the researcher to define

an objective benchmark for compensation quality.[4] Additionally, ISS recommendations involve evaluating aspects of compensation practices (e.g. communication practices of compensation committees, or policies related to CEO succession and change in control) that are not directly reflected in the level of pay or the components of the compensation contract. For these reasons, we take a different approach to identify low quality practices. Assuming that firm performance is influenced by the quality of its compensation practices (for example, high pay-performance sensitivity encourages the CEO to take actions that improve future performance), we expect that firms with low quality compensation practices exhibit lower industry-adjusted performance. As we describe in greater detail later, we choose industry-adjusted *accounting* performance as our measure to avoid confounding problems that *stock returns* raise when used to proxy for future firm performance in this setting. For example, investors might react to the issuance of an unfavorable recommendation (see Brochet, Ferri and Miller, 2020) rather than to the underlying compensation quality. In addition, total shareholders return is a metric often included in executive compensation contracts and one that ISS focuses on; it is possible that ISS recommendations might be endogenously related to firms' market performance.

We obtain granular data on ISS ratings of individual executive pay practices (i.e. "Levels of Concern"), comprehensive relative evaluations of firm compensation quality (i.e., overall compensation "Quality Scores"), and the ultimate Say-on-Pay (SOP) recommendations. Using these data, we examine whether negative assessments of compensation are associated with lower

[4] For example, researchers estimate "excess" compensation as the positive residual value from regressions estimating compensation as a function of economic and market characteristics for large samples of firms. In our context, using this measure would be challenging for at least two reasons. First, pay level is just one component of compensation quality taken into consideration by ISS. Second, what appears to be "excess" compensation might reflect appropriate compensation for more talented executives or outstanding levels of goal achievement that are not captured by regression models due to measurement error (omitted variables). Despite these limitations, in additional analyses in Section 5.1, we examine whether ISS "Against" recommendations and low compensation quality scores are associated with proxies for poor pay practices to help triangulate our findings.

future accounting performance. If accounting performance is influenced by the quality of the compensation practices, a negative association between ISS negative assessments and accounting performance suggests that ISS evaluations identify low quality compensation practices.

Using a sample of 16,480 firm-year observations (3,676 unique firms) from 2010 to 2017, univariate tests indicate that for most ISS ratings, firms receiving negative assessments (in ISS words, firms with "riskier" compensation practices) have worse future industry-adjusted accounting performance. However, multivariate tests performed on our full (pooled) sample of firms show that ISS assessments signaling low quality compensation practices are associated with lower, but not statistically significant, future performance.

We then examine whether the effectiveness of ISS assessments at identifying lower quality compensation practices is influenced by their availability of resources, as prior research documents that workload compression can affect financial statement evaluation (see, for example, Gunny and Hermis, 2018). In particular, recent qualitative work (Hayne and Vance, 2019) highlights operational constraints faced by proxy advisory firms during the busy season. As ISS hires temporary, and potentially less experienced analysts, lower quality assessments can be expected given the complexity of compensation packages (Doyle, 2018). Thus, we examine whether the quality of assessments for December fiscal year end (FYE) firms (the majority of ISS's coverage) differs from non-December FYE firms. Indeed, we find that ISS' ability to identify poor compensation practices resides only in the subsample of non-December FYE firms, consistent with resource constraints during the December FYE proxy season influencing the quality of their recommendations.

Although the literature documents a strong association between ISS recommendations and SOP voting outcomes, there is not a one-for-one correspondence between the recommendation and

the passage of the SOP ballot item.[5] We exploit this discordance to evaluate whether shareholders perform better evaluations of pay practices relative to ISS using two proxies for shareholders' assessments – SOP voting outcomes and large mutual fund companies' SOP votes. We find that ISS unfavorable assessments are consistently associated with poor performance, independent of the SOP vote outcome. That is, even when shareholders pass SOP, a negative recommendation by ISS is associated with lower levels of performance that are indistinguishable from cases where the SOP vote did not pass. As before, this result is strongest for the non-December fiscal year end firms. However, we find evidence that the largest three fund companies (BlackRock, Vanguard and State Street Global Advisors) with resources to perform their own analyses of CEO compensation plans are more effective than ISS at identifying poor compensation practices. Interestingly, these investors do not appear to suffer from workload compression.

In additional analyses, we validate our assumption that low quality compensation manifests in lower future abnormal ROA by showing that proxies for low quality compensation are associated with negative ISS assessments and with lower future performance. We also subject our results to a variety of robustness tests, including entropy balanced matching between firms with "Against" and "For" recommendations and placebo tests randomly assigning "Against" recommendations to our firm/year observations. We continue to find that ISS "Against" recommendations are associated with lower future abnormal ROA in the former set of tests and not (as expected) in the latter. Finally, we provide additional analyses to assuage concerns that our results may be driven by ISS basing "Against" recommendations on poor performance.

Collectively, our study contributes new evidence to the literature and informs the debate over the concerns about the activities of proxy advisors. Our results suggest that ISS evaluations

[5] Many investors use proxy advisors' recommendation as one of the inputs into their own evaluation of the firm's compensation practices (Hayne and Vance, 2019).

can identify low quality compensation practices which are, in turn, reflected in future firm performance. Our findings that these results only hold for firms with "off season" fiscal year ends suggest that ISS assessments are of higher quality when the proxy advisor can devote more resources to the analysis of firm disclosures. Therefore, our study also contributes to the literature examining how busyness can influence the quality of services provided. Furthermore, building on studies that document independent research by institutional investors (Iliev, Kalodimos, and Lowry (2019)), we provide evidence that those efforts are fruitful. Some institutions can provide incrementally better assessments than ISS.

2. Background and Research Questions

Proxy advisors sell services to investors, including research and analyses of firms' corporate governance, voting guidelines, and recommendations on how to vote on ballot items at annual meetings. The rise of investor activism, the recognition of corporate governance as a major corporate risk, and the 2003 SEC rule requiring mutual investors to disclose their proxy voting policies, has led to an increase in the demand for proxy advisor's services (Barr and Burton, 2007). In essence, proxy advisors act as information intermediaries, synthesizing information from public sources for investors (Ertimur et al. 2013). However, their motives for recommendations have come under scrutiny (e.g., Rose, 2010 and Li, 2018).[6] As ISS has no fiduciary duties towards the firms they analyze, their recommendations may not be in the best interest of those firms (Belinfanti, 2009).

Further compounding concerns about ISS assessments is the opacity of the processes and methods used to derive recommendations. Iliev and Lowry (2015) provide evidence that ISS

[6] For example, in 2013, the US Securities and Exchange Commission fined ISS $300,000 for breach of confidentiality with respect to clients' proxy voting information: https://www.sec.gov/news/press-release/2013-2013-92htm.

appears to issue blanket recommendations for some types of proxy ballot questions, namely compensation and governance policies. In contrast, Choi, Fisch, and Kahan (2009) argue that policy guidance issued by most proxy advisors indicates that their recommendations are company-specific and based on the evaluation of a variety of performance and governance factors. Their detailed processes, however, remain largely undisclosed, making it difficult to understand the details behind the recommendations. Similarly, Ertimur, et al. (2013) find that ISS does not appear to follow a "one-size fits all" recommendation approach, making the lack of transparency more salient. In examining reports behind ISS recommendations on shareholders Say-on-Pay votes that occurred in 1,275 firms (from the S&P 500) between January and November 2011, they find that firms with similar compensation attributes (for example, lacking a clawback policy) received both "for" and "against" recommendations.[7] While this evidence is consistent with firm-level assessments to identify poor compensation practices, it also makes their processes less transparent.

Despite the opacity behind ISS processes, empirical research provides evidence of an association between proxy advisor recommendations and voting outcomes related to a variety of proxy questions such as director elections and incentive plans (see, for example, Cai, Garner and Walking (2009) and Morgan, Poulsen, and Wolf (2006)). Prior studies also show a strong association between proxy advisory recommendations and outcomes in the context of SOP votes. For example, Ertimur et al. (2013) estimate an upper bound sensitivity of shareholder voting to ISS recommendations at approximately 34%. They further find that ISS influence varies with the rationale behind the recommendations. Within the compensation categories, they find that when ISS identifies concerns related to severance and pay-for-performance there is greater voting dissent. They interpret their evidence as consistent with shareholders incorporating some of their

[7] The authors also examine Glass Lewis reports for the same firms. As we do not have access to Glass Lewis reports, we limit our discussion of their results to ISS reports to align with our sample.

own research in assessing compensation plans. Using a regression discontinuity design to establish causality, Malenko and Shen (2016) document that an ISS "negative" recommendation leads to a 25% reduction in support for SOP voting proposals.

Given their significant influence on shareholder voting, it is important to understand whether ISS can identify poor compensation practices. However, several factors undermine the ability to draw causal inferences. First, a lack of a counterfactual measure of "optimal" compensation makes it difficult to benchmark the "correct" assessment. Second, there is the issue of potential correlated omitted variables. The factors that influence ISS recommendations may also influence firm value but, because they are unobservable to the researcher, it is challenging to attribute causality to the ISS recommendation. As a result, researchers have taken different approaches.

Larcker, McCall, and Orzamabal (2015) study 2,008 firms (from the Russell 3000) holding SOP votes in 2011 and examine compensation changes in response to proxy advisor policy recommendations. They find that firms that are likely to receive "Against" recommendations are more likely to change their compensation policies prior to the vote to align with policies suggested by proxy advisors. The SEC filings reporting these compensation changes are associated with negative stock market reaction, which the authors interpret as evidence proxy advisor recommendations lead firms to make suboptimal changes that destroy firm value.

Larcker, McCall, and Ormazabal (2013) examine proxy advisor recommendations on stock option repricing programs. Analyzing 264 programs announced between 2004 and 2009, the authors find lower stock price reactions to the option repricing announcement and lower subsequent operating performance for firms whose repricing program more closely align to proxy

advisor guidelines.[8] They conclude that proxy advisor recommendations on stock option repricing don't increase value for firms.

Ertimur et al. (2013) find negative market reactions to unexpected "Against" ISS recommendations. However, for a sample of 147 firms announcing changes to compensation plans motivated by non-binding SOP votes, the market reaction is not significant, even within the subset of firms who receive a "For" recommendation after previously receiving an "Against" recommendation by proxy advisors. They interpret this, together with other findings in their study, as evidence that the primary role of proxy advisors is to synthesize information for investors and not to identify and promote superior compensation practices.

Outside of the realm of executive compensation, there is also mixed evidence on whether proxy advisor recommendations can identify suboptimal practices. Alexander, et al. (2010) examine advisor recommendations in corporate proxy contests. They find that a voting recommendation in favor of a dissident board team yields positive announcement returns, which they attribute to a "certification" effect – that is, the recommendation conveys information about the value the dissident team will bring to the firm. Daines, Gow and Larcker (2010) examine whether corporate governance ratings are associated with subsequent indicators of poor governance. In the context of ISS ratings (referred to as CGQ – Corporate Governance Quality), they find no relation between CGQ and future restatements, future class action lawsuits, future ROA or future credit ratings. They find some evidence that CGQ is associated with lower future Tobin's Q and has a weak ability to predict future stock returns. The authors infer that ratings,

[8] ISS guidelines favor plans in which the program extend vesting periods, exclude officers and directors, exchanges equivalent value, or does not include options that recently been in-the-money or that were recently granted.

including CGQ, contain "a large amount of measurement error" and "boards of directors should not implement governance changes solely for the purpose of increasing their ranking".[9]

Adding to the question of the quality of proxy advisor recommendations is the concern that constrained resources may impact their assessments. Hayne and Vance (2019) use qualitative data collected via structured interviews of stakeholders involved in the relation between firms and proxy advisors. They report that proxy advisors are subject to intense workloads during the busy season, whereby analysts work 12 to 16 hours per day (including the weekends) analyzing complex proxy statements and process between 1 and 12 reports per day. Interviewed board members expressed concerns about the lack of expertise of some of the proxy advisors' temporary or seasonal workers hired during the busy season, the fact that proxy advisors have little time to process thousands of proxy statements, and the potential negative impact that such constraints might have on the quality of their analyses. ISS has approximately 1,200 employees and covers more than 20,000 companies and 40,000 meetings worldwide, but the size of the staff dedicated to analyzing the large amount of data is not disclosed.[10] Doyle (2018) mentions that "(T)o handle its proxy season workload, ISS hires temporary employees and outsources work to employees in Manila. Given the large number of companies that the proxy advisors opine on each year, the inexperience of their staffs, and the complexity of executive pay practices, it's inevitable that proxy reports will have some errors." Based on the findings in Hayes and Vance (2019) and research documenting workload compression effect on evaluations by auditors (Lopez and Peters, 2012) and SEC staff (Gunny and Hermis, 2018), it is possible that resource constraints affect the quality of ISS assessments.

[9] See Daines, et al. (2010), pages 460-461.
[10] See https://www.issgovernance.com/about/about-iss/

In sum, empirical evidence indicates that proxy advisor recommendations have significant influence on shareholder voting and may be a catalyst for change in firms' governance practices. However, research also suggests that their recommendations may not identify poor governance practices, thus influencing firms to make changes that may be simply window-dressing or worse, value-destroying. Given the continued reliance on proxy advisors' recommendations (Rose and Sharfman, 2015) and concerns about the opacity of their evaluations (Hayne and Vance 2019), we revisit the quality of ISS recommendations. In particular, we examine whether ISS recommendations identify firms with suboptimal CEO pay packages and whether the quality of these assessments differs in the "busy season" (i.e., corresponding to the release of proxy statements by firms that have a December FYE) from other times during the year. To the extent that ISS is able to devote more resources and time to non-December FYE firms, we expect the quality of their assessments and recommendations to be higher for those firms.

3. Methodology

3.1. Sample and Data

We obtained detailed compensation assessment information from ISS for companies in the Russell 3000 index over the period 2010 to 2017. Our sample includes 3,676 unique firms and 16,480 firm/year observations.[11] As reported in Table 1, our sample spans the typical industries. Approximately 76% of our observation have December fiscal year ends.

Compensation assessment information includes firm ratings based on ISS "Levels of Concern" and "Quality Scores".[12] Levels of Concern assess the risk associated with specific

[11] ISS back- and forward-fills information about firms that exit or enter the sample included in the Russell 3000, which explains why the number of unique firms is greater than 3000.

[12] ISS publishes Quality Scores for a number of governance practices, including executive compensation, overall assessments of the board, audit risk and oversight practices, shareholder rights, and the firm's governance in its entirety. See https://www.issgovernance.com/esg/rankings/governance-qualityscore/.

characteristics of executive compensation and with related governance practices of the compensation committee for each covered firm in each year. These five characteristics include: (1) pay for performance components of executive compensation contracts, (2) non-performance pay characteristics, (3) the composition of the compensation peer group selected by the compensation committee, (4) the definition of severance and change-in-control provisions, and (5) the communication practices of the compensation committee. ISS expresses its level of concern with respect to each of these practices using a three-point scale – low, medium, and high.

Different from Levels of Concern, which are expressed at an absolute level, Compensation Quality Scores represent a *relative* evaluation of firm compensation practices. Quality Scores are generated each year by ranking firms, within a size index, into deciles based on an overall compensation assessment focused on qualitative aspects of governance. Firms with low compensation risk (less likely to have suboptimal compensation practices) are ranked in the top deciles (i.e. 1, 2, or 3), while those with greater risk (more likely to have suboptimal compensation practices) are ranked in the bottom deciles (8, 9, or 10). To facilitate comparison with Level of Concern information, we aggregate the compensation Quality Score (hereafter *QSComp*) to range from 1 to 3, with a value of 1 capturing compensation practices associated with low risk (i.e. quality score is 1, 2, or 3), a value of 2 capturing medium risk (i.e. a quality score of 4, 5 or 6), and value 3 capturing high risk (i.e., a quality score of 8, 9 or 10).[13]

Finally, ISS provides an overall recommendation with respect to the SOP vote. The recommendation can be "For" or "Against" a firm's compensation package as reported in the Compensation Discussion and Analysis (CD&A) section of the proxy statement.[14]

[13] To keep a relatively equal number of firms in each category, we exclude firms in decile 7. Our results are unchanged if we exclude firms in decile 4 and redefine medium risk as firms in deciles 5, 6 and 7.
[14] We exclude from our sample all cases in which the ISS recommendation relative to Say-on-Pay was to abstain from the vote (i.e. "abstain", "do not vote", or "withhold").

An important consideration in our research design is the relation between the ISS assessments described above and future industry-adjusted accounting performance. Our research design attempts to address two challenges. First, defining an "optimal" compensation practice for a firm is inherently difficult. Therefore, we rely on the notion that less-than-optimal practices should be associated with worse performance, acknowledging that our tests reflect this joint hypothesis. Second, we depart from prior studies by using accounting performance and not stock returns. Stock returns reflect shareholder reactions to the ISS assessment, and its ensuing effects, without necessarily providing an independent signal of whether the assessment is appropriate. That is, shareholders may be responding to potential fall out of a firm receiving an "Against" recommendation despite the "Against" recommendation not being justified by the firm's compensation policies. Even if an "Against" recommendation is warranted (i.e., the compensation package is suboptimal), future stock returns may be unaffected; investors would impound the future performance implications of low-quality compensation practices at the ISS recommendation announcement.[15] Since we are unable to obtain information on the timing of the release of ISS recommendations, we cannot directly test any announcement effect.[16] Consequently, it is difficult to observe a clear signal of investors' assessments through stock returns. Finally, total shareholder returns (TSR) is a metric by which ISS evaluates firms' pay-for-performance practices, leading to a potential endogenous relation between ISS assessments and firm performance.

To avoid these difficulties, we use industry-adjusted return on assets (ROA) as our measure of performance. Accounting performance reflects the effect of compensation practices

[15] Brochet et al. (2020) examine abnormal stock returns between the filing of the proxy statement and the annual meeting and find that investors anticipate the impact of shareholder activism on firm's actions in contentious shareholder meetings.

[16] ISS did not share with us the dates at which they issue the proxy report to their clients. Their policy is to issue the proxy report between eight and thirty days prior to the annual shareholder meeting.

uncontaminated by how investors may view ISS recommendations, correctly or incorrectly. Further, it does not have the self-fulfilling feedback concern of stock returns; absent changes to compensation policy, future return on assets will be unaffected by any announcement implications of unfavorable assessments. Finally, accounting performance is unaffected by changes in investors' assessments of the risk of the firm, which is important if ISS recommendations change how investor perceive firm risk. For these reasons, accounting performance is a cleaner measure of future performance. Thus, if ISS research can identify sub-optimal compensation practices and if these practices are associated with poor performance, we should document a negative association between ISS unfavorable compensation assessments and future abnormal ROA.

3.2. Descriptive Statistics

Table 2 Panel A reports the descriptive statistics for all our variables of interest. Consistent with the within-sample ranking of the Quality Score, the average (median) quality score is close to 2.[17] At least 50% of firm year observations rank "low" on each of the Levels of Concerns. Among the Levels of Concern, ISS expresses high concerns most frequently about severance and change-in-control provisions (variable *SevCICConcern*), with a sample average of 1.498. Concerns about performance-based pay (variable *P4PConcern*) and compensation committee communications (variable *CCCommConcern*) are the next most frequent, with sample averages of 1.392 and 1.380, respectively. Finally, we note that ISS SOP recommendations against pay packages (variable *ISSAgainst*) are a relatively infrequent event. In our sample, an average of 11.6% of firm-year observations receive an "Against" recommendation.

Table 2 Panel B reports changes in ISS assessments. Each of the assessments exhibits some variation from the prior year, with *QSComp* and *P4PConcern* having the highest proportion of

[17] Recall that we group the possible values of the Compensation Quality Score into three categories.

changes at 43% and 33%, respectively, of observations changing from the prior year, calculated as the proportion of off-diagonal observations. At the other extreme, *NPPConcern* assessments have little variation with only 7% of observations being different from the prior year.

Table 3 reports the pairwise Pearson correlations between all our variables of interest. As we would expect, Levels of Concerns are positively correlated with the compensation Quality Score (*QSComp*). Interestingly, though, the correlations are low in magnitude. The Level of Concern about compensation committee communications (*CCCommConcern*) has the highest correlation with *QSComp* at 0.354, followed by the Level of Concern about performance-pay (*P4PConcern*) at 0.259. It is also interesting to note that the correlation between the compensation Quality Score and the likelihood of an "Against" recommendation is only 0.226 (recall that high Quality Scores reflect greater risk assessed by ISS). Correlations among the Levels of Concerns are also relatively low, though positive, consistent with these concerns reflecting different characteristics of pay practices. Examining the correlation between Levels of Concern and ISS "Against" recommendation (*ISSAgainst*), the concern exhibiting the greatest correlation (0.708) relates to pay for performance (*P4PConcern*). Appendix B provides further evidence of the internal consistencies of ISS assessments.

3.3. Research Design

Our research design comprises two main sets of tests. First, we examine whether ISS assessments (overall SOP recommendations as well as their more granular concerns) identify suboptimal compensation policies. That is, we explore the predictive ability of these assessments with respect to subsequent firm abnormal ROA. We take into consideration the moderating effect of workload compression by evaluating the correspondence between ISS assessments and future abnormal ROA on subsamples constructed based on the month of fiscal year end of each firm.

Second, we examine the implications of discordance between ISS recommendations and shareholder positions. We explore whether firms with an "Against" ISS recommendation have significantly lower abnormal ROA compared to firms that do not (i.e., for which ISS issued a "For" recommendation) regardless of whether: (1) the overall SOP vote passes or fails or (2) large mutual funds vote for or against the pay package. This allows us to validate whether ISS assessments are able to identify suboptimal compensation policies when ISS and shareholders disagree.

3.3.1 ISS Assessments and Future Accounting Performance

If ISS can identify sub-optimal compensation plans, then poor scores, high concerns, and "Against" recommendations should be associated with lower future performance. As discussed earlier, this is a joint test of the assumption that low quality compensation practices are associated with poor future accounting performance. We measure firm performance using industry-adjusted accounting performance (*AbnROA)*. We then estimate the following model describing the relation between ISS compensation assessments and firm performance:

$$AbnROA_{i,t} = \alpha + \sum_j \beta_j ISSAssessment_{i,t} + \sum_m \gamma_m Controls_{i,t} + \sum_n \delta_n FixedEffects + \varepsilon \quad (1)$$

We estimate the relation between performance and three sets of ISS assessments: Levels of Concern (*P4PConcern, NPPConcern, PeerGroupConcern, SevCICConcern, and CCCommConcern)*, compensation Quality Score (*QSComp*), and the SOP recommendation (*ISSAgainst*). Due to potential collinearity among these assessments (see Appendix B), we evaluate the categories of assessments separately. If ISS unfavorable assessments identify low quality compensation practices, we expect to find negative correlations between those assessments and *AbnROA*.

We control for firm economic and governance characteristics that are associated with variation in the quality of compensation practices in prior literature (e.g., Core and Guay 1999,

Core et al. 1999). We include proxies for firm size: *LogMktVal*, the natural logarithm of the firm's market capitalization at the end of the fiscal year, and *LogSales*, the natural logarithm of net sales reported for the fiscal year. *MTB* measures the market-to-book ratio, which is commonly used to represent the investment opportunities associated with the firm in a given year. We include lagged values of industry adjusted ROA (*AbnROA*) to control for previous accounting performance, and the standard deviation of ROA (*SDAbnROA*) over the three years ending with year *t* to control for its variability. Governance characteristics include those associated with the CEO, such as *DualCEO*, an indicator variable equal to one if the CEO is also the Chairman of the board, and zero otherwise, *CEOTenure*, which measures the tenure (in years) of the CEO at the particular firm, and *NewCEO*, an indicator variable that is equal to one if the CEO is in her first year at the firm, and zero otherwise. Board characteristics include the number of directors on the board (*BoardSize*), the percentage of non-executive board members that sit on three or more other boards (*BusyNEDirectors*), the percentage of directors that are also employees of the company (*InsideDirPct*), and the percentage of male directors (*GenderRatio*). Other governance characteristics include *InsiderPct*, the percentage of outstanding shares held by insiders to the organization and *BlockholdersPct*, the percentage of outstanding shares held by institutional investors holding at least 5% of the shares. All variables are defined in Appendix A. In all our tests we include year and industry fixed effects.

We estimate Eq. (1) on the pooled sample and then on two subsamples: firms with December FYE and firms with non-December FYE. When we estimate Eq. (1) for the subsample of non-December FYE firms, we further include controls for the fiscal year end month to allow

for performance differences that may be correlated with fiscal year end months.[18] We expect to find a stronger relation between ISS assessments and industry-adjusted accounting performance for the non-December FYE firms if workload compression impairs ISS's ability to evaluate pay practices.

Eq. (1) examines the relation between accounting performance during fiscal year *t* and ISS assessments about compensation practices from fiscal year *t–1* but made available to investors during the same fiscal year *t*. ISS evaluations are predominantly based on the content of the Compensation Discussion and Analysis (CD&A) section of the proxy statement, which reports information about compensation of the CEO, CFO, and the three highest paid executives of the firm for the fiscal year just completed (*t–1*). Shareholders SOP advisory votes are related to those same pay packages. Despite the backward-looking timeframe of the information included in the proxy statement, it is expected that the board of directors will communicate in the same document any material changes to the structure of executive compensation for the upcoming fiscal year. Absent disclosure of any material changes, shareholders will interpret the CD&A not only as an ex-post description of past pay practices, but also as an ex-ante declaration of pay practices that the board intends to apply in the upcoming fiscal year. Therefore, the SOP vote provides shareholders with an opportunity to not only affirm or protest pay received by executives in the prior fiscal year, but also affirm or protest planned changes, or lack thereof, regarding compensation practices for the upcoming year.

Appendix C provides a timeline that reflects the flow of information. For a December fiscal year end firm, the proxy statement for the 2015 fiscal year will be filed two to four months after

[18] Fiscal year ends, other than December, might be correlated with particular industries. For example, most retail companies adopt a January 31 fiscal year end. In addition to controlling for the fiscal year end month, recall that all our analyses include industry fixed effects and estimate a dependent variable (accounting performance) defined as industry-adjusted ROA.

the fiscal year end, in our example March 2016. The annual shareholder meeting, during which shareholders will provide the non-binding Say-on-Pay vote, will typically occur two to three months after the proxy filing date, June 2016 in our example.

It is possible that firms alter their compensation practices after the release of the proxy statement and the ISS assessments in response to concerns identified. If these changes are ones that would receive more favorable assessments from ISS, this would bias against our predicted relation between ISS assessments and performance as it could lead to negative assessments being associated with higher future performance. Alternatively, boards could introduce changes that ISS would consider to be suboptimal. Since we do not have access to ISS evaluations of these changes, we exclude from our sample 352 observations corresponding to firms filing a Form 8-K after their annual shareholders meeting that included a change impacting the compensation of the CEO.[19]

3.3.2 ISS/Shareholders Agreement/Disagreement

Research provides evidence that investors perform independent research on proxy ballot items and reach different opinions from ISS. For example, Iliev and Lowry (2015) find that that mutual funds for which the benefits of independent assessment outweigh the costs appear to be "actively voting", thus not necessarily following ISS recommendations.[20] More recently, Iliev, et al. (2019) provide more direct evidence of investor research by examining the extent to which mutual funds access proxy statements. This evidence suggests that shareholders may independently assess compensation packages and reach a different opinion from ISS. To further

[19] Including them weakens our results but does not materially alter our inferences.

[20] Specifically, examining mutual fund voting on proxy ballot items from 2006-2010, Iliev and Lowry (2015) document that only 25% of the funds in their sample appear to rely on ISS recommendations.

examine whether ISS recommendations are informative about poor performance practices, we examine the discordance between ISS recommendations and shareholder positions.

If ISS recommendations identify sub-optimal compensation policies, then recommendations that are against a pay package should predict poor future performance, regardless of whether shareholders are supportive. We use two proxies to capture shareholders' position on compensation packages: SOP voting outcomes and mutual fund votes cast. Mutual fund votes are reported in mandatory N-PX filings. We focus on the voting positions on firms in our sample made by the three largest fund institutions, or Big Three, following Bebchuk and Hirst (2019): BlackRock, Vanguard, and State Street Global Advisors.[21]

To leverage variation in the agreement between ISS and shareholder positions taken on compensation policies, we partition our sample into four categories: (1) both ISS and shareholders support ("For/For"), (2) both ISS and shareholders are against ("Against/Against"), (3) ISS supports but shareholders are against ("For/Against"), and (4) ISS is against but shareholders support ("Against/For"). For SOP voting outcomes, shareholders are "For" if the SOP passes, as defined by the required threshold, and against otherwise. For mutual fund voting positions, we

[21] Votes are cast at the fund level and there are multiple funds within each Big Three institution. There is some limited amount of variation in the voting behavior of the individual funds within each institution. Because we are not able to determine the weight of each vote on the final outcome (i.e., we do not have information on the number of shares held by each individual fund in each firm), in this analysis we only consider cases where there is consensus at the institution level on the SOP vote. That is, we code an institution as voting for (against) SOP in a particular firm/year if all of its mutual funds vote for (against). As a robustness test, we calculate the standard deviation of SOP voting (for or against) across funds and years at the Big Three institutions. We find that the variation is economically small, meaning that, in these prominent institutions, there isn't a significant discrepancy of voting across funds within the same institution.

define support when all fund companies vote in favor of the pay package and we define opposition when anyone votes against.[22]

We estimate the following model to examine the relation between accounting performance and agreement/disagreement between shareholders and ISS:

$$AbnROA_{i,t} = \alpha + \beta_1 AA_{i,t} + \beta_2 FA_{i,t} + \beta_3 AF_{i,t} + \sum_k \gamma_k Controls_{i,t} + \sum_n \delta_n FixedEffects + \varepsilon, \quad (2)$$

where firm/year observations associated with favorable agreement between ISS and shareholders (*FF*) serve as the reference case. If ISS "against" recommendations reflect compensation practices that lead to poor future accounting performance, we expect the coefficient associated with *FA* not to be statistically different from the coefficient associated with *AA*.

4. Results

4.1 ISS Assessments and Accounting Performance

Our first set of tests examine whether ISS negative assessments of compensation practices are predictive of future accounting performance. Table 4, Panel A reports the results of our univariate tests examining mean differences in industry-adjusted ROA (*AbnROA*) between firms that receive unfavorable evaluations by ISS and those receiving favorable ones. We examine all three types of ISS evaluations: overall SOP recommendation, compensation Quality Scores and individual Levels of Concern. For the latter two groups, we compare firm/years associated with high risk (i.e. high Levels of Concern or Quality Scores) to those associated with low risk (i.e. low Levels of Concern or Quality Scores).[23] With respect to ISS overall recommendations, we compare firm-years with an "Against" recommendation to those with a "For" recommendation. We find

[22] By defining "Against" in this manner, we allow strong support to be captured in the "For" cases and include disagreement within the Big Three funds companies in the "Against" case.

[23] Recall that we defined our measure of quality scores (*QSComp*) based on a three-point scale, assuming value 1 if low compensation risk, 2 if medium compensation risk, and 3 if high compensation risk. In the univariate tests, we compare firm/years associated with high risk (*QSComp* = 3) with those associated with low risk (*QSComp* = 1).

that firms with unfavorable ISS evaluations have worse future accounting performance, with the exception of compensation committee communications and peer group concerns. The results are, however, generally consistent across all types of ISS evaluations when we restrict the sample to only passing SOP votes.

Table 4 Panel B reports results from estimating Eq (1) using OLS with standard errors clustered by firm and including year and industry fixed effects. In Columns (1-3), we report results from the pooled sample. Interestingly, we find no evidence that ISS evaluations are significantly associated with lower industry-adjusted accounting performance (*AbnROA*). In untabulated analyses, we also estimate the levels of concerns in Column (3) separately to ensure that potential correlations are not affecting our findings and continue to find that levels of concerns are not significantly related to performance.

4.2 ISS Assessments and Workload Compression

Recall that over 75% of our sample firms have a December FYE, meaning that ISS is the busiest during the months of March and April (proxy season). To the extent that ISS is less able to devote high-quality resources proportionally to the volume of work during the busy months, we expect the average quality of their assessments and recommendations to be lower. In Columns (4-6) of Table 4, Panel B, we examine the relation between ISS assessments and future industry-adjusted accounting performance for firms with December FYE. Consistent with workload compression affecting the quality of the assessments, similar to the pooled sample, we find no significant relation between ISS assessments and future performance.

In Columns (7-9), we include only firms with non-December FYE and report results with fiscal year end month fixed effects, in addition to the year and industry fixed effects. For these firm-year cases, we expect that ISS assessments will be less affected by resource constraints.

Consistent with that, we find that future performance is negatively associated with ISS "Against" SOP recommendations (Column 7), Quality Scores representing high overall compensation risk (Column 8), and high-risk assessments with respect to pay-for-performance and communication practices (Column 9).[24] Examining differences across the two samples, the coefficients on *QSComp*, *NPPConcern* and *CCCommConcern* are statistically different between the December and non-December FYEs.

In untabulated analyses, we explore whether the quality of ISS assessments is higher for firms with December fiscal year end that file early (up through March) rather than later (in April). This test allows us to consider the "ego depletion" hypothesis (see Hurley, 2015 for a summary as it pertains to auditing research) whereby analysts are less accurate as they become overworked and tired of doing the same task. We find no difference in quality of assessments between the early and the later filers inconsistent with this hypothesis. Instead, our results suggest that the poorer quality of ISS assessments for the December FYE firms is more likely due to lower average ability of the analyst pool in the busy season.

Together, these results suggest that ISS evaluations of compensation practices are informative about future firm performance, mostly for firms in the off-season (non-December FYE). When ISS is busier, the quality of their assessments seems to degrade, as ISS evaluations are not significantly associated with lower future performance.[25] It is important to recall that our analyses include several control variables that have been shown to be associated with poor

[24] The curious result that non-performance pay concerns are positively associated with future performance is likely driven by outliers. In this regression, only six firms have high risk assessments and of those, three are in the top quartile of abnormal ROA. Non-performance pay concerns are also correlated with pay for performance concerns. When the six firms are excluded and *P4PConcern* is dropped, the coefficient on *NPPConcern* is not significant.

[25] In untabulated tests, we find that the relation between ISS assessments (i.e., Levels of Concern, Quality Score and ISS recommendations) and SOP vote outcome are similar between December and non-December FYE firms. We interpret these results as an indication that ISS follows the same protocol all the times (internal consistency) and that shareholders follow ISS recommendations independently of FYE, but the quality of ISS analysis and interpretation of proxy statement information deteriorates if the firm has a December FYE impacting its ability to inform shareholders.

compensation practices. Therefore, the interpretation of ISS assessments is incremental to economic and governance characteristics that predict the quality of compensation practices.

4.3 Informativeness of ISS Assessments when Overall SOP voting and ISS disagree

Our next set of tests incorporates cases of disagreement between ISS recommendations and shareholder SOP voting, the distribution of which is summarized in Table 5, Panel A. In these tests, we allow the relation between ISS "Against" recommendations and future performance to depend on whether shareholders pass the SOP vote or not. In the estimation of Eq. (2), the base case (included in the intercept) corresponds to firm/year observations where both the SOP vote passes, and ISS recommends "For" the compensation package (*FF*). We drop the rare cases (13 observations) for which ISS recommends against but the SOP vote passes. We report these results in Table 5 Panel B.

In the pooled sample (Column 1), we find that future abnormal ROA is lower only when both ISS and shareholders oppose the compensation package (*AA*). The coefficient on *FA* (when shareholders vote for a compensation package that ISS recommended against) is not significantly different from zero. However, Wald tests document that the negative and significant coefficient on *AA* and the non-significant coefficient on *FA* are not significantly different from each other.

In Column (2), we report the results for the sub-sample of firms with December FYE. We find no significant relation between ISS recommendations (either with or without shareholder agreement) and future performance. Column (3) reports the results for the non-December FYE sub-sample. In line with our prior findings (Table 4, Panel B), we find negative and significant relations between ISS recommendations and future performance. Additionally, Wald tests indicate that there is no difference in the informativeness of the "Against" recommendation when

shareholders vote contrary to ISS. That is, when ISS recommends against a compensation package, future performance is lower, regardless of how shareholders vote on the pay package.

In sum, our results suggest that ISS "Against" recommendations are able to uncover low quality compensation practices that are associated with worse future ROA, even in the presence of a favorable shareholder vote. However, these recommendations are mostly informative during the "off" season when assessments are less affected by workload compression.

4.4 Informativeness of ISS Assessments when Large Mutual Funds and ISS disagree

Our last set of tests incorporates cases of voting position disagreements between ISS recommendations and any (or at least two) of the Big Three mutual fund companies (BlackRock, Vanguard and State Street Advisory Services). Table 6, Panel A reports the distribution of these cases for the Big Three. The results from estimating Eq. (2) are reported in Table 6, Panel B. We find no evidence of predictive ability either in the pooled sample or in the sub-sample of December FYE firms. However, the sub-sample of non-December FYE reveals an interesting picture. As with shareholder voting, future abnormal performance is lower when at least *one* of the Big Three and ISS agree against a compensation package, but the coefficient is not significant.[26] If instead we require that at least *two* of the Big Three vote against the package along with an "against" recommendation from ISS, then we find that future abnormal performance is negative and significant (coefficient is -0.033, p-value<0.01 in Column 6). Interestingly, when at least two of the Big Three vote against SOP while ISS expresses support for the compensation contract, performance is significantly lower (β_3<0) even for the December fiscal year end. This result suggests that mutual fund companies' research quality does not suffer as much during proxy

[26] When we restrict the sample to those firms for which ISS continues to issue the same recommendation in the following year, the coefficient is negative and statistically significant (p-value<0.01) as expected. This constitutes the sample where we would expect to find the strongest results as these firms continued not to adopt ISS suggested changes and thus are expected to suffer from higher agency costs.

season, probably because mutual funds do not rely on temporary analysts with less experience during peak season. Note that the coefficient on *AF* in Column 6 is excluded; there are only 8 observations where two of the Big Three funds vote *against* and ISS votes *for* a compensation proposal (see Panel A).

Taken together, these results mitigate our earlier conclusions about the usefulness of ISS assessments, by showing that sophisticated investors committing significant resources to the evaluation of executive compensation packages in the firms in their portfolio can detect poor quality compensation practices better than ISS.

5. Additional Analyses

5.1 Assessing our assumptions

Our inferences hinge on the joint assumption that ISS assessments identify low quality compensation packages and that those packages are associated with lower future performance. To help assuage concerns that these assumptions are unrealistic, we attempt to measure individual aspects of low-quality compensation and examine whether they are correlated with ISS assessments and future abnormal ROA. We consider three proxies for low quality compensation: excess compensation using the model in Core, Guay and Larcker (2008)[27], the proportion of total pay that is unrelated to firm performance, measured as the sum of salary and other pay scaled by total compensation (Execucomp variable TDC1), and the natural logarithm of perquisites. CEO consumption of perquisites represents a classic example of agency conflicts associated with the misuse of firm resources (Grossman and Hart, 1980; Jensen and Meckling, 1976).

[27] Excess pay is the residual of log pay from an expected CEO log compensation model that controls for economic determinants such as CEO tenure, firm size, book-to-market of assets, concurrent and lagged stock returns, concurrent and lagged accounting returns, whether the firm belongs to the S&P500, and year and industry controls.

To examine whether low quality compensation is associated with negative ISS assessments, we estimate separate OLS regressions of each ISS assessment on each proxy for low quality compensation. We report the only relevant coefficients (i.e., those estimated for the low quality compensation proxies) and *t*-statistics in Table 7 Panel A and find that they are largely supportive of our assumption. Higher excess pay is significantly related to all ISS negative assessments except for committee communications. Higher non-performance pay is significantly associated with "Against" recommendations and higher non-performance pay level of concern. Greater perquisite compensation is also significantly associated with "Against" recommendations and higher levels of concern for pay-for-performance, non-performance pay and severance. Curiously, it is negatively related to compensation quality scores and committee communications. The latter result may be due to greater explanations provided for non-standard forms of pay.

In Table 7 Panel B, we report estimates of OLS regressions of future abnormal ROA on our proxies for low quality compensation. For each proxy, we find a negative and significant relation with future performance. We are cautious to place too much emphasis on what are essentially correlations. However, we believe the results help establish some support for our key research design choices.

5.2 Entropy balancing and placebo tests

To address concerns about endogeneity or omitted variables, we test the robustness of our results using entropy balancing. This approach uses a reweighting scheme to adjust the covariate balance between treatment and control samples (see Hainmueller and Xu 2013). Our treatment firms are those that receive an "Against" recommendation, while firms receiving a "For" recommendation make up our control sample. We reweight the distribution of the control sample so that the mean of each covariate (i.e., all governance and economic characteristics included in

Eq. (1)) is equal across the two samples. We then estimate Eq. (1) on the full sample generated with this procedure. As documented in Table 8, Panel A, we continue to find lower performance for firms receiving "Against" recommendations.

Next, we perform a series of placebo tests, whereby we randomly assign firm/year observations to values of the indicator variable *ISSAgainst*. We estimate Eq. (1) using this random assignment 1,000 times and report the average value of the estimated coefficient on *ISSAgainst* in Table 8, Panel B. We perform the routine on the pooled sample and on the subsamples of firms with December and non-December fiscal year ends. To explore the possibility that poor firm performance drives the ISS unfavorable recommendations, we repeat the estimation on a subsample of firms in the lowest tercile of lagged *AbnROA* in each year of our sample period. In all cases, the estimated coefficient is not statistically different from zero, confirming that our main findings are not due to chance.

5.3 Performance Determining ISS Assessments

One concern of our analyses is that the ISS assessments may be a function of current firm performance which is correlated with future performance. We address this concern in several ways. First, in our main tests, we control for lagged performance. To the extent that ISS recommendations are driven by how the firm *has* performed and not how it *will* perform, this variable should capture ISS assessments and we should not have significant explanatory power from our variables of interest. We find an association between ISS assessments and future performance that is incremental to the predictive ability of past performance, suggesting that prior performance is not solely determining these assessments. Second, we repeat the estimation of Eq. (1) on the subsample of firms with lagged performance ranking in the lowest tercile of each year. If ISS "against" recommendations are determined by poor accounting performance, our main findings should not

hold in this subsample. Inconsistent with that explanation, findings from this test are in line with our main analyses. Third, our tests examining December FYE separate from non-December FYE also address this concern. If ISS "against" recommendations are mechanically driven by past poor performance that persists rather than by ISS' ability to inform shareholders about suboptimal packages, we should find that the relation between an "Against" recommendation and future performance to be similar between firms with December FYE and non-December FYE. As mentioned above, we do not find such a result.

5.4 Other Tests

As accounting performance may be influenced by other characteristics of corporate governance, we repeat our analysis (untabulated) examining the relation between Quality Scores and future ROA (see Table 4, Panel B, Columns 2, 5, and 8) including other ISS Quality Scores related to the assessment of firm audit and risk oversight practices, shareholder rights, and overall board structure assessments. Our results remain consistent with our main findings. Finally, we estimate all our statistical models excluding firms in the financial services industry and utilities. Our results continue to remain consistent with our main findings.

6. Conclusion

Proxy advisors have come under increased scrutiny. The opacity of their methodology and the potential for conflicts of interest with the firms for which they provide recommendations to institutional investors, amplified by their influence on voting outcomes, calls into question whether their recommendations are informative about the quality of executive compensation practices. Although academic research suggests that their recommendations may not improve firms' compensation policies and that they merely synthesize information for investors, their services are still in high demand. The lack of congruence between market forces that continue to support proxy

advisory services and academic evidence suggesting their services may not add value leads us to revisit the question of whether ISS assessments identify firms with suboptimal CEO pay packages.

We take advantage of a large data set obtained from ISS Executive Compensation Data from 2010 to 2017 for Russell 3000 companies for which we have detailed information on the rationale behind ISS recommendations. Compared to prior research, our larger and more detailed dataset allows us to leverage the cross-sectional and within-firm variation to assess whether ISS recommendations identify suboptimal compensation practices.

We find that ISS recommendations are associated with future industry-adjusted accounting performance, but only when firms have a non-December fiscal year end. This suggests that when ISS is less busy and able to devote better resources to analyzing firms' compensation packages, their recommendations are of higher quality and they are better able to identify poorer compensation packages. Collectively, these results provide the first evidence, to our knowledge, that ISS activities may be value-added to shareholders to the extent that they are exposed to low levels of workload compression. This evidence sheds new light on why proxy advisors remain widely used by institutional investors but also highlights why these assessments should be viewed with caution.

Our study is not without some limitations. First, we infer the quality of ISS assessments of compensation practices by exploring their association with accounting performance, but we do not measure the actual characteristics of each firm's full compensation contract. Although it is still possible that an omitted variable explains both low quality compensation practices and future poor industry-adjusted accounting performance across firms with different fiscal year ends, our results are robust to a battery of robustness tests including placebo tests, matching firms on economic and governance characteristics using entropy balancing, and considerations of the influence of

observed performance on the determination of the recommendation. Second, while we provide evidence that ISS assessments are predictive of future industry-adjusted accounting performance, our results do not establish whether ISS performs a key intermediary role in the capital markets that cannot be conveniently substituted by investors' capabilities to process the same information. As our results show, the Big Three (BlackRock, Vanguard, and State Street Global Advisors) mutual fund assessments are also associated with future performance suggesting that other channels exist through which the market incorporates proxy statement information in the absence of ISS recommendations.

Despite these limitations, we believe our work contributes to the literature by providing novel evidence that ISS evaluations can identify sub-optimal compensation practices and by identifying conditions where ISS effectiveness is greater (i.e. in the off-season).

Appendix A

Variable Definitions

Variable	Definition
Dependent Variables	
AbnROA	Industry-adjusted return on assets.
ISS evaluations of governance factors related to Say-on-Pay	
QSComp	Ordinal variable representing the ISS Compensation Quality Score. The score ranges from 1 to 10. The higher the score, the more negative is ISS evaluation of this particular aspect of the firm's governance. We measure the ISS QS score with an ordinal variable assuming a value of 1 if the QS score is good (QS scores between 1 and 3), a value of 2 if the QS is medium (QS scores between 4 and 6), and a value of 3 if the QS score is poor (QS score between 8 and 10).
P4PConcern	Ordinal variable representing the ISS level of concern relative to pay-for-performance aspects of executive compensation, and assuming a value of 1 if the concern is low, a value of 2 if the concern is medium, and a value of 3 if the concern is high.
NPPConcern	Ordinal variable representing the ISS level of concern relative to non-performance pay aspects of executive compensation, and assuming a value of 1 if the concern is low, a value of 2 if the concern is medium, and a value of 3 if the concern is high.
SevCICConcern	Ordinal variable representing the ISS level of concern relative to severance and change in control provisions, and assuming a value of 1 if the concern is low, a value of 2 if the concern is medium, and a value of 3 if the concern is high.
PeerGroupConcern	Ordinal variable representing the ISS level of concern relative to the choice of peer groups for executive compensation purposes, and assuming a value of 1 if the concern is low, a value of 2 if the concern is medium, and a value of 3 if the concern is high.
CCCommConcern	Ordinal variable representing the ISS level of concern relative to compensation committee communication policies and practices, and assuming a value of 1 if the concern is low, a value of 2 if the concern is medium, and a value of 3 if the concern is high.
ISSAgainst	Indicator variable assuming a value of 1 if ISS recommends against management's Say-on-Pay proposal, and zero if ISS recommends in favor of the Say-on-Pay proposal. Observations for which ISS recommendation was to withhold or abstain were dropped from the sample.
Big Three_Against	Indicator variable assuming a value of 1 if any of the three largest mutual funds (BlackRock, Vanguard, and State Street Global Advisors) votes against the SOP proposal, and 0 if all of them vote in support of SOP. The variable is defined only if all three funds invest in the firm/year. The variable is undefined if only a subset of the funds underneath each institution votes in support, while other funds within the same institution vote against.
Pass	Indicator variable assuming a value of 1 if Say-on-Pay vote is favorable, and zero otherwise. A Say-on-Pay vote passes when the votes in favor are greater than the required percentage of base, as set by the firm.

(Appendix A continues on the next page)

Appendix A – Variable Definitions – Cont'd

Variable	Definition
Control Variables	
LogMktval	Natural logarithm of the market value of the firm.
MTB	Market-to-book ratio of equity.
LogSales	Natural logarithm of the sales revenue of the firm.
SDAbnROA	Standard deviation of the industry-adjusted return on assets calculated over the prior 3 years.
DualCEO	Indicator variable assuming a value of 1 if the CEO is also the Chairman of the Board, and zero otherwise.
BusyNEDirectors	Percentage of non-executive directors that sit on three or more boards.
InsideDirPct	Percentage of directors that are also employees of the company.
CEOTenure	CEO tenure measured in years.
NewCEO	Indicator variable assuming value 1 if the CEO is in his first year, and 0 otherwise.
GenderRatio	Percentage of male directors.
BoardSize	Number of directors.
InsidersPct	Percentage of shareholders that are insiders of the company.
CompChangeAfterMeeting	Indicator variable assuming value 1 if the firm issued an 8-K after the annual meeting communicating a change to the CEO compensation contract.
BlockholdersPct	Percentage of outstanding shares held by blockholders. Blockholders are defined as investors who hold at least 5% of outstanding shares.

Appendix B
Internal Consistency between ISS Assessments

Given the small correlation between ISS assessments reported in Table 3, we test whether ISS assessments are internally consistent. To evaluate the association between ISS SOP recommendations, Quality Scores, and Levels of Concern pertaining to characteristics of compensation packages, we estimate the following models:

$$QSComp_{i,t} = \alpha + \sum_j \beta_j Concerns_{i,t} + \sum_m \gamma_m Controls_{i,t} + \sum_n \delta_n FixedEffects + \varepsilon \quad \text{(B-1)}$$

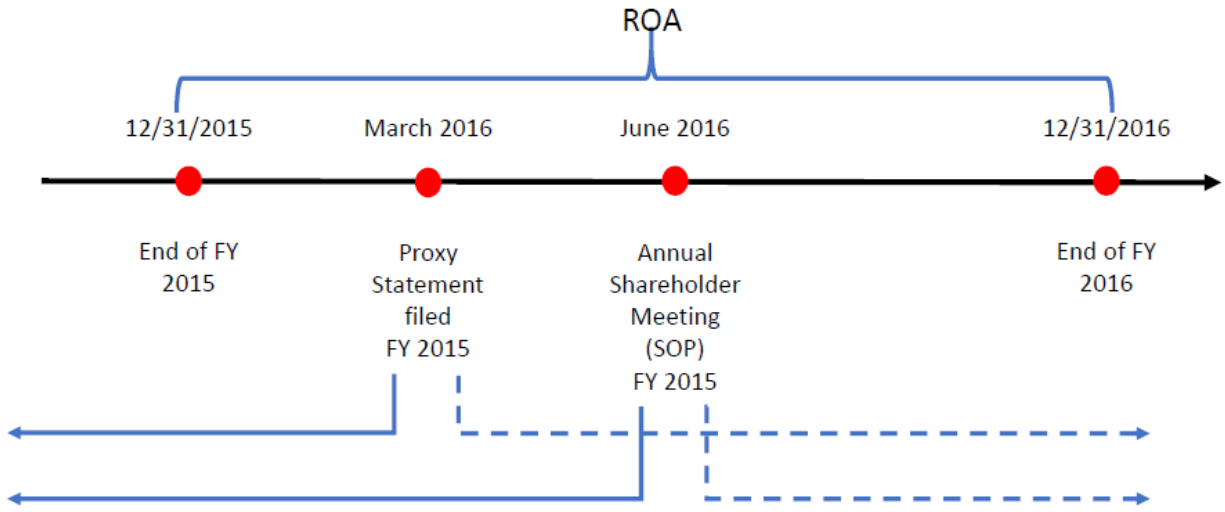
$$ISSAgainst_{i,t} = \alpha + \sum_j \beta_j Concerns_{i,t} + \eta QSComp_{i,t} + \sum_m \gamma_m Controls_{i,t} + \sum_n \delta_n FixedEffects + \varepsilon \quad \text{(B-2)}$$

We estimate Eq. (B-1) using OLS (column (1)) and Eq. (B-2) using a linear probability model (columns 2-4). In all cases, we include control variables and fixed effects in line with our main tests:

Variables	*DV = QSComp*	*DV = ISSAgainst*		
	(1)	(2)	(3)	(4)
P4PConcern	0.196***	0.318***		0.318***
	(10.93)	(36.14)		(34.58)
NPPConcern	0.159***	0.101***		0.106***
	(3.78)	(5.00)		(5.08)
PeerGroupConcern	-0.009	0.027**		0.025**
	(-0.29)	(2.39)		(2.15)
SevCICConcern	0.120***	0.096***		0.098***
	(6.00)	(9.43)		(9.50)
CCCommConcern	0.327***	0.064***		0.062***
	(13.42)	(6.28)		(5.87)
QSComp			0.053***	-0.004
			(7.29)	(-0.73)
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Clustering by Firm	YES	YES	YES	YES
N	4,508	4,669	5,005	4,477
Adj-R^2	0.242	0.537	0.074	0.531

Notes: This table reports the results of the estimation of Eq. (B-1) and of Eq. (B-2). Coefficients are estimated using OLS with heteroskedasticity robust standard errors clustered by firm. The value of the *t*-statistic is reported in parenthesis underneath each coefficient. Statistical significance is reported as follows: * p<0.10; ** p<0.05; *** p<0.01.

Appendix C
Timeline of proxy filing and ISS recommendations
for a representative firm with a December fiscal year end



In this example a firm has a fiscal year ending on December 31 of 2015. The proxy statement and related ISS assessments will likely be issued around March 2016. The proxy statement will include descriptions of the compensation paid to executives in fiscal year 2015, and any material changes (or lack thereof) to compensation practices determining the pay of executives in fiscal year 2016. Proxy statement, ISS assessments, recommendations, and SOP vote are all dated 2016 and we posit that they are predictive of accounting performance of fiscal year 2016. In our regressions we indicate the ISS assessments issued in March of 2016 as $ISSAssessment_{i,2016}$ to indicate that the information included in the proxy statement (describing the compensation paid in fiscal year 2015) becomes available to investors and to ISS in 2016.

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Table 1: Sample Composition by Industry

Global Industry Classification (GIC)		Pooled Sample - Any FYE			December FYE			Non-December FYE		
		Nr Firms	Nr Obs.	% Sample	Nr Firms	Nr Obs.	% Sample	Nr Firms	Nr Obs.	% Sample
10	Energy	227	1,017	6.17	200	898	7.1	27	119	3.1
15	Materials	159	796	4.83	124	637	5.04	35	159	4.14
20	Industrial	472	2,314	14.04	343	1,703	13.47	129	611	15.91
25	Consumer Discretionary	458	2,073	12.58	267	1,182	9.35	191	891	23.2
30	Consumer Staples	136	619	3.76	70	314	2.48	66	305	7.94
35	Healthcare	591	2,279	13.83	477	1,861	14.72	114	418	10.89
40	Financials	688	3,181	19.3	623	2,947	23.31	65	234	6.09
45	Information Technology	552	2,341	14.21	344	1,425	11.27	208	916	23.85
50	Telecommunication Services	137	600	3.64	113	505	4	24	95	2.47
55	Utilities	83	428	2.6	72	377	2.98	11	51	1.33
60	Real Estate	173	832	5.05	164	791	6.26	9	41	1.07
	Total	3,676	16,480	100	2,797	12,640	100	879	3,840	100

Notes: This table reports the composition of our sample using the MSCI Global Industry Classification Standard (GICS). We limit the granularity of our classification to the first two digits of the industry code.

Table 2: Descriptive Statistics

Panel A: Descriptive statistics on ISS assessments, firm characteristics and voting outcomes

Variable	N	Mean	Std. Dev.	p25	p50	p75
AbnROA	16,240	0.043	0.654	-0.016	0.025	0.107
QSComp	10,943	1.982	0.775	1.000	2.000	3.000
P4PConcern	8,106	1.392	0.658	1.000	1.000	2.000
NPPConcern	8,123	1.080	0.303	1.000	1.000	1.000
PeerGroupConcern	8,131	1.138	0.362	1.000	1.000	1.000
SevCICConcern	8,118	1.498	0.555	1.000	1.000	2.000
CCCommConcern	8,029	1.380	0.520	1.000	1.000	2.000
ISSAgainst	14,264	0.116	0.320	0.000	0.000	0.000
Pass	14,295	0.981	0.135	1.000	1.000	1.000
AllBigThree_For	8,353	0.898	0.302	0.000	1.000	1.000
AnyBigThree_Against	8,353	0.102	0.302	0.000	0.000	0.000
LogMktval	15,196	6.917	1.977	5.551	6.927	8.222
MTB	15,196	1.429	2.947	0.416	0.903	1.677
LogSales	16,015	6.452	2.199	5.116	6.564	7.889
SDAbnROA	15,721	0.064	0.241	0.008	0.025	0.058
DualCEO	14,905	0.398	0.489	0.000	0.000	1.000
InsideDirPct	14,905	0.162	0.086	0.100	0.143	0.200
BusyNEDirectors	14,905	0.054	0.089	0.000	0.000	0.100
CEOTenure	14,248	5.873	6.090	1.700	3.900	8.000
NewCEO	14,248	0.166	0.372	0.000	0.000	0.000
GenderRatio	14,905	0.877	0.109	0.800	0.889	1.000
BoardSize	14,905	8.859	2.486	7.000	9.000	10.000
InsidersPct	12,374	0.125	0.183	0.020	0.049	0.140
BlockholdersPct	12,375	0.269	0.170	0.146	0.249	0.366
CompChangeAfterMeeting	16,480	0.021	0.145	0.000	0.000	0.000

Panel B: Changes in ISS assessments from the prior year

	Any FYE			Dec FYE			Non-Dec FYE		
P4PConcern	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)
Low (t-1)	3,339	567	200	2,627	445	167	712	122	33
Med (t-1)	621	388	170	468	296	139	153	92	31
High (t-1)	153	206	184	129	166	155	24	40	29
Off-Diagonal Obs.			32.9%			33.0%			32.6%
NPPConcern	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)
Low (t-1)	5,253	162	12	4,124	128	12	1,129	34	0
Med (t-1)	190	174	10	145	141	9	45	33	1
High (t-1)	20	17	11	17	16	11	3	1	0
Off-Diagonal Obs.			7.0%			7.1%			6.7%
PeerGroupConcern	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)
Low (t-1)	4,676	355	15	3,710	288	15	966	67	0
Med (t-1)	406	350	18	299	254	16	107	96	2
High (t-1)	16	19	2	15	15	2	1	4	0
Off-Diagonal Obs.			14.2%			14.0%			14.6%
SevCICConcern	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)
Low (t-1)	2,486	488	43	1,926	375	34	560	113	9
Med (t-1)	418	2,159	96	329	1,741	75	89	418	21
High (t-1)	50	89	11	39	72	9	11	17	2
Off-Diagonal Obs.			20.3%			20.1%			21.0%
CCCommConcern	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)
Low (t-1)	3,347	318	27	2,616	246	22	731	72	5
Med (t-1)	634	1,278	47	489	1,029	40	145	249	7
High (t-1)	28	24	30	26	16	25	2	8	5
Off-Diagonal Obs.			18.8%			18.6%			19.5%
QSComp	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)	Low (t)	Med (t)	High (t)
Low (t-1)	1,662	706	239	1,259	520	183	403	186	56
Med (t-1)	757	1,739	765	551	1,343	602	206	396	163
High (t-1)	271	786	1287	216	617	1045	55	169	242
Off-Diagonal Obs.			42.9%			42.4%			44.5%
ISS Recommend.	Against (t)	For (t)		Against (t)	For (t)		Against (t)	For (t)	
Against (t-1)	385	683		311	544		74	139	
For (t-1)	725	8,223		575	6,325		150	1,898	
Off-Diagonal Obs.		14.1%			14.4%			12.8%	

Notes: **Panel A** reports descriptive statistics for the variables of interest in our study. The descriptive statistics were calculated for each variable on the entire range of observations. In our statistical analyses we winsorize all continuous variables at the 1st and 99th percentiles. **Panel B** reports the stationarity of the ISS assessments with the counts of observations that fall into each cell, comparing year *t* to year *t*–1.

Table 3: Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) AbnROA	1.000									
(2) QSComp	-0.090***	1.000								
(3) P4PConcern	-0.055***	0.259***	1.000							
(4) NPPConcern	-0.009	0.079***	0.157***	1.000						
(5) PeerGroupConcern	0.031***	0.074***	0.246***	0.052***	1.000					
(6) SevCICConcern	-0.004	0.121***	0.060***	0.067***	0.026**	1.000				
(7) CCCommConcern	-0.024**	0.354***	0.155***	0.056***	0.030***	0.004	1.000			
(8) ISSAgainst	-0.018**	0.226***	0.708***	0.213***	0.207***	0.218***	0.220***	1.000		
(9) Pass	-0.005	-0.099***	-0.324***	-0.102***	-0.101***	-0.063***	-0.110***	-0.358***	1.000	
(10) LogMktval	0.144***	-0.218***	-0.016	0.113***	0.036***	0.011	-0.218***	0.003	-0.011	1.000
(11) MTB	-0.704***	0.040***	-0.028**	-0.041***	0.088***	-0.034***	0.088***	-0.014	0.006	0.050***
(12) LogSales	0.256***	-0.233***	-0.029***	0.133***	-0.046***	0.006	-0.263***	-0.005	-0.009	0.801***
(13) SDAbnROA	-0.473***	0.106***	0.057***	-0.026**	0.088***	-0.026**	0.101***	0.041***	-0.003	-0.146***
(14) DualCEO	0.011	0.015	0.055***	0.079***	0.065***	0.055***	0.046***	0.028***	-0.032***	0.143***
(15) InsideDirPct	-0.046***	0.122***	0.025**	-0.004	-0.016	-0.001	0.234***	0.047***	-0.026***	-0.264***
(16) BusyNEDirectors	0.035***	0.000	0.061***	0.060***	0.066***	-0.025**	-0.042***	0.033***	0.004	0.286***
(17) CEOTenure	0.031***	0.007	0.016	0.036***	0.039***	0.063***	0.076***	0.020**	-0.027***	-0.052***
(18) NewCEO	-0.035***	0.009	0.014	0.025**	-0.007	0.000	-0.014	0.016*	-0.008	-0.005
(19) GenderRatio	-0.087***	0.153***	0.032***	0.001	0.022*	0.019	0.194***	0.043***	-0.024***	-0.305***
(20) BoardSize	0.052***	-0.131***	-0.035***	0.050***	-0.028**	0.007	-0.176***	-0.027***	0.022**	0.480***
(21) InsidersPct	-0.028***	0.164***	0.009	0.023*	-0.018	-0.070***	0.229***	0.056***	0.026***	-0.248***
(22) BlockholdersPct	-0.005	-0.022**	0.036***	-0.015	0.035***	0.045***	-0.067***	0.010	-0.012	-0.110***

(Table 3 continues on the next page)

Table 3: Correlation Matrix (Cont'd)

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
(11) MTB	1.000										
(12) LogSales	-0.187***	1.000									
(13) SDAbnROA	0.272***	-0.226***	1.000								
(14) DualCEO	-0.005	0.131***	-0.026***	1.000							
(15) InsideDirPct	0.112***	-0.246***	0.061***	0.080***	1.000						
(16) BusyNEDirectors	0.037***	0.247***	0.022***	0.003	-0.159***	1.000					
(17) CEOTenure	-0.002	-0.056***	-0.044***	0.212***	0.165***	-0.096***	1.000				
(18) NewCEO	-0.006	0.021**	0.058***	-0.087***	-0.014*	0.015*	-0.389***	1.000			
(19) GenderRatio	0.022***	-0.300***	0.059***	-0.046***	0.221***	-0.099***	0.050***	-0.026***	1.000		
(20) BoardSize	-0.190***	0.446***	-0.140***	0.013	-0.361***	0.122***	-0.039***	0.018**	-0.285***	1.000	
(21) InsidersPct	0.058***	-0.182***	0.039***	0.054***	0.366***	-0.091***	0.185***	-0.052***	0.134***	-0.178***	1.000
(22) BlockholdersPct	0.014	-0.083***	0.023**	-0.100***	-0.092***	0.023**	-0.090***	0.019**	0.039***	-0.123***	-0.361***

Notes: This table reports the pairwise Pearson correlation coefficients with respect to all our variables of interest. Statistical significance is indicated as follows: * $p<0.10$; ** $p<0.05$; *** $p<0.01$.

Table 4: ISS Assessments and Future Accounting Performance (ROA)

Panel A: Univariate Analyses – Comparison of Industry-Adjusted ROA between Firms with Unfavorable ISS Assessments to Firms with Favorable ISS Assessments

	N	Mean Difference	*t*-Stat	*p*-value (two-tail)	N	Mean Difference	*t*-Stat	*p*-value (two-tail)
	ISSAgainst				*QSComp*			
Pooled Sample	14,066	-0.037 ***	6.37	0.000	5,279	-0.043 ***	7.86	0.000
Restricted to Pass	13,808	-0.046 ***	7.35	0.000	5,147	-0.046 ***	8.17	0.000
	P4PConcern				*NPPConcern*			
Pooled Sample	6,395	-0.030 ***	4.44	0.000	7,485	-0.039 *	1.81	0.070
Restricted to Pass	6,231	-0.037 ***	4.94	0.000	7,334	-0.040 *	1.71	0.087
	SevCICConcern				*CCCommConcern*			
Pooled Sample	4,458	-0.029 **	2.40	0.017	5,172	-0.009	0.61	0.539
Restricted to Pass	4,371	-0.036 ***	2.80	0.005	5,055	-0.033 **	2.01	0.044
	PeerGroupConcern							
Pooled Sample	6,979	-0.030	1.20	0.229				
Restricted to Pass	6,844	-0.049 *	1.69	0.091				

Panel B: Multivariate Analyses: ISS Assessments Predictive Ability of Firm Accounting Performance (ROA)

DV = $AbnROA_{i,t}$	Any Fiscal Year End			December Fiscal Year End			Non-December Fiscal Year End		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$ISSAgainst_{i,t}$	-0.007			-0.004			-0.018**		
	(-1.43)			(-0.71)			(-2.48)		
$QSComp_{i,t}$		0.001			0.003			-0.005**	
		(0.45)			(1.18)			(-1.97)	
$P4PConcern_{i,t}$			-0.003			-0.001			-0.007**
			(-1.07)			(-0.49)			(-2.15)
$NPPConcern_{i,t}$			-0.001			-0.007			0.019***
			(-0.27)			(-1.33)			(2.65)
$PeerGroupConcern_{i,t}$			0.000			-0.002			0.002
			(0.07)			(-0.36)			(0.42)
$SevCICConcern_{i,t}$			0.002			0.003			-0.003
			(0.70)			(1.09)			(-0.71)
$CCCommConcern_{i,t}$			-0.003			-0.001			-0.011***
			(-1.04)			(-0.19)			(-2.92)
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
FYE Month FE	NO	NO	NO	NO	NO	NO	YES	YES	YES
Clustering by Firm	YES	YES	YES	YES	YES	YES	YES	YES	YES
N	6,693	6,125	4,707	5,050	4,653	3,588	1,643	1,472	1,119
Adj. R^2	0.740	0.705	0.747	0.724	0.688	0.735	0.826	0.806	0.814

Notes: This table reports the results of our statistical tests analyzing the relation between ISS assessments issued in year *t* (about compensation paid in year (*t*-1)) and firm accounting performance in year *t*. **Panel A** reports the results of univariate analyses comparing the average industry-adjusted ROA exhibited by firms that received an unfavorable assessment by ISS with that of firms that received a favorable assessment by ISS. A negative difference indicates that firms with unfavorable ISS assessment exhibited lower industry-adjusted ROA compared to firms that received favorable assessments. For ISS assessments measured with ordinal variables whose scale has more than two values (i.e. *P4PConcern*, *NPPConcern*, *SevCICConcern*, *CCCommConcern*, *PeerGroupConcern*, and *QSComp*, all have 3 levels: low, medium, and high) we compared firms classified as high risk (i.e. ordinal variable equal to 3) with firms classified as low risk (i.e. ordinal variable equal to 1); since the variable *ISSAgainst* is defined as an indicator variable assuming only values of 0 or 1, we compared ROA between firms for which ISS recommended "for" and firms for which ISS recommended "against". **Panel B** reports the results of multivariate analyses. We estimate Eq. (1) three times: first on the pooled sample (col (1)-(3)), then splitting the sample between firms that end their fiscal year in December (Columns (4) – (6)) and firms whose fiscal year ends in

months other than December (Columns (7) – (9)). Columns (1), (4), and (7) relate to the specification of *ISSAssessment* corresponding to the ISS SOP recommendations. Columns (2), (5), and (8) relate to the specification referring to ISS compensation quality score. Columns (3), (6), and (9) refer to the specification of Eq. (1) where *ISSAssessment* is substituted by each ISS level of concern. All estimations are performed using OLS with standard errors clustered at the firm level and include industry and year fixed effects. In the specification related to firms with fiscal year end not in December, we also include fiscal year month fixed effects. All variables are defined in Appendix A. All continuous variables are winsorized at the 1st and 99th percentiles. The value of the *t*-statistic is reported in parenthesis underneath each coefficient. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 5: Predictive Ability of ISS and SOP Vote Agreement vs. Disagreement with respect to Industry-Adjusted ROA

Panel A: Correspondence between ISS SOP Overall Recommendations and SOP Vote Outcomes

ISS recommendations and Say-on-Pay vote outcome		*SOP Vote Outcome*		
		Fail	*Pass*	*Total*
ISS recommendation	*For*	13	12,595	12,608
	Against	251	1,405	1,656
	Total	264	14,000	14,264

Panel B: Multivariate analyses

DV = $AbnROA_{i,t}$	Any Fiscal Year End (1)	December FYE (2)	Non-Dec FYE (3)
AA_t	-0.012*	-0.008	-0.022*
	(-1.68)	(-0.86)	(-1.74)
FA_t	-0.006	-0.004	-0.016**
	(-1.07)	(-0.54)	(-1.96)
Controls	YES	YES	YES
Year FE	YES	YES	YES
Industry FE	YES	YES	YES
FYE Month FE	NO	NO	YES
Clustering by Firm	YES	YES	YES
Wald test: H_0: "AA ≠ FA"	p>0.10	p>0.10	p>0.10
N	6,690	5,047	1,643
Adj. R^2	0.740	0.724	0.827

Notes: This table reports the results of our statistical tests analyzing the relation between ISS/SOP voting disagreement and firm accounting performance in the subsequent year. **Panel A** reports the composition of the combinations between ISS recommendations "for" and "against" and the outcomes of the Say-on-Pay votes for the all the firm-years included in our sample. A Say-on-Pay vote passes ("Pass") when the votes in favor are greater than the required percentage of base, as set by the firm. **Panel B** reports the estimations of Eq. (2), which describes the relation between agreement and disagreement between ISS and shareholders and accounting performance. Column (1) relates to the pooled sample, Column (2) to the firms with December fiscal year, and Column (3) to the firms with non-December fiscal year end. Agreement and disagreement are defined as follows. When the SOP vote passes and ISS recommends "for", we say that ISS and shareholders agree on the favorable outcome (indicator variable FF assumes a value of 1 in this case, and 0 otherwise); when the SOP vote passes and ISS recommends "against", we say that ISS and shareholders disagree on the SOP outcome (indicator variable FA assumes a value of 1 in this case, and 0 otherwise); when the SOP vote fails and ISS recommends "against", we say that ISS and shareholders agree on the unfavorable outcome (indicator variable AA assumes a value of 1 in this case, and 0 otherwise); cases in which ISS recommends "for" and the SOP vote fails are extremely rare, and dropped from our sample. We estimate Eq. (2) using OLS regressions with standard errors clustered by firm and including industry and year fixed effects. FF is the base case included in the intercept. All other variables are defined in Appendix A. All continuous variables are winsorized at the 1st and 99th percentiles. The *t*-statistic are reported in parentheses below each coefficient. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 6: Predictive Ability of Agreement vs. Disagreement between ISS and the Big Three Fund Companies with respect to Industry-Adjusted ROA

Panel A: ISS Recommendations and Big Three Mutual Funds' Say-On-Pay Vote Outcomes

		ISS Against		
		No	Yes	Total
Any of the Big Three vote against	No	6,996	417	7,413
	Yes	136	691	827
	Total	7,132	1,108	8,240
Two of the Big Three vote against	No	6,996	417	7,413
	Yes	8	378	386
	Total	7,004	795	7,799

Panel B: Predictive ability of agreement vs. disagreement between ISS and the Big Three Fund Companies

DV = *AbnROA*	Any Big Three			At Least Two of the Big Three		
	Any FYE	December FYE	Non-December FYE	Any FYE	December FYE	Non-December FYE
	(1)	(2)	(3)	(4)	(5)	(6)
AA	-0.007	-0.003	-0.019	-0.012	-0.003	-0.033***
	(-1.12)	(-0.37)	(-1.53)	(-1.50)	(-0.37)	(-3.08)
FA	0.000	0.002	-0.008	-0.000	0.001	-0.008
	(0.01)	(0.16)	(-1.12)	(-0.05)	(0.08)	(-1.10)
AF	-0.027**	-0.025	-0.030**	-0.078**	-0.080**	
	(-2.12)	(-1.64)	(-2.29)	(-2.41)	(-2.31)	
Controls	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES
FYE Month FE	NO	NO	YES	NO	NO	YES
Clustering by Firm	YES	YES	YES	YES	YES	YES
Wald Test: H_0: "AA=FA"	p>0.10	p>0.10	p>0.10	p>0.10	p>0.10	p<0.10 *
Wald Test: H_0: "FA=AF"	p<0.10*	p>0.10	p>0.10	p<0.05 **	p<0.05 **	p>0.10
Wald Test: H_0: "AA=AF"	p>0.10	p>0.10	p>0.10	p<0.05 **	p<0.05 **	p>0.10
N	4,814	3,639	1,175	4,606	3,479	1,127
Adj-R^2	0.728	0.714	0.814	0.730	0.713	0.823

Notes: **Panel A** reports the composition of the combinations between ISS recommendations "for" and "against" and the SOP votes for the Big Three (BlackRock, Vanguard, and State Street). **Panel B** reports the estimations of Eq. (2) restricting the sample to firm/years in which the Big Three mutual funds cast a vote with respect to SOP. Columns (1) and (4) reflect this restricted sample without distinction between fiscal year end months, Columns (2) and (5) relate to the subsample of December fiscal year end firms, and Columns (3) and (6) relate to the non-December fiscal year subsample. *FF* is defined as one when all Big Three fund companies vote in favor of the SOP proposal and ISS recommends "for", and zero otherwise. This category is included in the intercept. *AA* is defined as one when any (or at least two) mutual fund votes against the SOP proposal and ISS recommends "against", and zero otherwise. *FA* is defined as one when

all Big Three vote in favor of the SOP proposal but ISS recommends "against", and zero otherwise. *AF* is defined as one when any (or at least two) mutual fund votes against the SOP proposal and ISS recommends "for", and zero otherwise. We estimate the coefficients using OLS regressions with standard errors clustered by firm and include industry and year fixed effects. In Columns 3 and 6 we further control for fiscal year end month fixed effects. All other variables are defined as indicated in Appendix A. All continuous variables are winsorized at the 1st and 99th percentiles. The value of the *t*-statistic is reported in parenthesis underneath each coefficient. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Table 7: Relation between ISS Compensation Assessments, Low Quality Compensation, and Future Performance

Panel A: Coefficients from OLS regressions of ISS Assessments and Measures of Low Quality Compensation

	(1) *ISSAgainst* $_t$	(2) *QSComp* $_t$	(3) *P4PConcern* $_t$	(4) *NPPConcern* $_t$	(5) *PeerGroupConcern* $_t$	(6) *SevCICConcern* $_t$	(7) *CCCommConcern* $_t$
ExcessPay $_t$	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	-0.000
NonPerformancePay $_t$	0.008*	0.020	0.002	0.011**	-0.015	-0.009	0.038
LogPerquisites $_t$	0.012***	-0.016*	0.035***	0.043***	0.004	0.031***	-0.029***

Panel B: Proxies for Low Quality Compensation and Future Performance

DV = *AbnROA* $_{t+1}$	(1)	(2)	(3)
ExcessPay $_t$	-0.000***		
	(-4.18)		
NonPeformancePay $_t$		-0.009***	
		(-2.68)	
LogPerquisites $_t$			-0.004***
			(-3.13)
Intercept	0.104***	0.103***	0.117***
	(48.88)	(47.25)	(21.17)
N	6904	7307	7310
Adj-R^2	0.002	0.001	0.001

Notes: **Panel A** reports the coefficients from separate OLS estimations of each ISS compensation assessments in year *t* as a function of proxies for low quality compensation for year *t*. *ExcessPay*, defined as in Core, Guay, and Larcker (2008), is the residual pay from an expected CEO log compensation model that controls for economic determinants such as CEO tenure, firm size, book-to-market of assets, concurrent and lagged stock returns, concurrent and lagged accounting returns, whether the firm belongs to the S&P500, and year and industry controls. *NonPerformancePay* is defined as the proportion of total pay that is not related to firm performance (the sum of salary and other pay scaled by the value of the TDC1 field in Execucomp). *LogPerquisites* is defined as the natural logarithm of other compensation. **Panel B** reports the OLS estimation of the relation between proxies for low quality compensation and future industry-adjusted accounting performance. The value of the *t*-statistic is reported in parenthesis underneath each coefficient. Statistical significance is reported as follows: * p<0.10; ** p<0.05; *** p<0.01.

Table 8: Robustness Tests

Panel A: Entropy Balancing tests

DV = *AbnROA*	Any FYE	December FYE	Non-December FYE
	(1)	(2)	(3)
ISSAgainst	-0.013*	-0.009	-0.022**
	(-1.70)	(-1.04)	(-2.30)
Intercept	0.030*	0.031*	0.054
	(1.88)	(1.81)	(1.50)
Year FE	YES	YES	YES
Industry FE	YES	YES	YES
FYE Month FE	NO	NO	YES
Clustering by firm	YES	YES	YES
N	8,128	6,239	1,889
Adj-R^2	0.260	0.247	0.414

Panel B: Placebo tests

Full sample						
Variable	N	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
ISSAgainst	1,000	0.00008	0.00010	0.00323	-0.00012	0.00028
t-stat	0.760					
Sample restricted to Dec FYE						
Variable	N	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
ISSAgainst	1,000	0.00002	0.00012	0.00392	-0.00022	0.00027
t-stat	0.199					
Sample restricted to Non-Dec FYE						
Variable	N	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
ISSAgainst	1,000	0.00006	0.00014	0.00448	-0.00022	0.00033
t-stat	0.396					
Sample restricted to poorly performing firms in prior year						
Variable	N	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
ISSAgainst	1,000	-0.00026	0.00025	0.00801	-0.00076	0.00024
t-stat	-1.028					

Notes: This table summarizes our robustness tests. **Panel A** reports the results of the estimation of Eq. (1) on a sample constructed by matching firms on economic and governance characteristics using entropy balancing, by which the control sample (i.e., firms with a "For" ISS Recommendation) is reweighted to force the mean of each matching variable to be the same as in the treatment sample (i.e., firms with "Against" recommendations). The value of the *t*-statistic is reported in parenthesis underneath each coefficient. All continuous variables are winsorized at the 1st and 99th percentiles. Statistical significance is reported as follows: * p<0.10; ** p<0.05; *** p<0.01. **Panel B** reports the results of our placebo tests, whereby we randomly assign the value of the variable *ISSAgainst* and estimate Eq. (1) 1,000 times. We report the characteristics of the average coefficient estimated for each of the following samples: pooled sample, sample of firms with December FYE, sample of firms with non-December FYE, sample restricted to firms for which *AbnROA* is in the bottom tercile in year (*t*-1).