

Sunlight is the Best Disinfectant: The Case of Proxy Advisory Regarding Peer Compensation

By

Subramanian. R. Iyer
Anderson School of Management
University of New Mexico
Albuquerque, New Mexico 87131
Ph: (505) 277-3207
Email: sriyer@unm.edu

Oded Palmon
Rutgers Business School
Newark and New Brunswick
Newark, NJ 07102
Ph: (732) 445-4209
Email: palmon@business.rutgers.edu

Harikumar Sankaran*
College of Business
New Mexico State University
Las Cruces, New Mexico 88003
Ph: (575) 646-3226
Email: sankaran@nmsu.edu

*Corresponding author

Sunlight is the Best Disinfectant: The Case of Proxy Advisory Regarding Peer Compensation

Abstract

We examine the fraction of ISS peer group members that are replaced, and the fraction of ISS added peers that have been previously chosen as peers by the focal company. We find that both are larger for small (non-S&P 500), low performing focal companies. Furthermore, these revisions are associated with increases in the size of the members of the ISS peer group and their average CEO compensation. These findings raise the suspicion that ISS caves to the pressure by low performance, out of the limelight firms that increase CEO compensation.

Sunlight is the Best Disinfectant: The Case of Proxy Advisory Regarding Peer Compensation

1.0 Introduction

As part of corporate governance, several important corporate decisions are brought to a vote in the shareholders' meeting. One of these issues is executive compensation. Since executive compensation may not be straight forward, and since the interests of the CEO and the stockholders regarding this issue may not align, stockholders may look for sources outside the company for information and guidance. Because obtaining this information may require considerable and costly research, a market for recommendations on these votes has emerged. Since the vote of any individual retail stockholder is not likely to affect any decision, and because such recommendations are costly, the buyers in this market are large stockholders, i.e., institutions. On the other side, the market is highly concentrated with Institutional Shareholder Services (ISS) and Glass Lewis, capturing 97 percent of the market.¹ This concentration may potentially provide cost efficiency and thorough research. However, because institutional stockholders that purchase these recommendations may not conduct their research, and because institutions hold over seventy percent of US equity, concerns have been raised that the recommendations of the major proxy advisory consultant may carry too much weight.²

The concerns regarding the recommendations of ISS may be in part due to its role as an advisor to corporate equity issuers. ISS operates two units: one that determines the appropriate

¹ See Glassman and Peirce (2018).

² See Glassman and Peirce (2018), Copland et al. (2018), <https://www.ft.com/content/0fd4e07d-35c9-31bd-ad94-882c716120bf>, and <https://www.pionline.com/article/20170425/INTERACTIVE/170429926/80-of-equity-market-cap-held-by-institutions>

set of peer firms for a focal firm (ISS peers) and provides information to investor clients (hereafter, ISS Proxy Advisors) and the other advises corporate clients (hereafter, ISS Corporate Solutions) on the construction of their actual peer group.³ These two units are supposed to operate independently and have a “Chinese Wall” between them. However, it is not clear that this is indeed the case (Li, 2016; Doyle, 2018). To improve the accuracy of the information that it provides to their investor clients, the ISS Proxy Advisors may solicit information from the focal firms.⁴ Despite the opportunity to provide feedback, compensation committees, law firms, and compensation consultants have argued that the peer firms chosen by proxy advisory firms are either inappropriate or do not file their proxy statements on time.⁵ The focus of this research is to examine the interaction between focal firms and ISS Proxy Advisors and the information the ISS peer group conveys to their institutional clients.⁶

Because of the CEO’s inherent conflict of interest, compensation benchmarking has become the norm⁷. While we are not aware of any study regarding the determination of the CEO

³ ISS Corporate Solutions, a subsidiary of ISS, provides data and benchmarking services to corporate issuers, subject to ISS’ Business Practices. Following 2006 proxy disclosure rules by the Security and Exchange Commission (see <https://www.sec.gov/rules/final/2006/33-8732a.pdf>), firms are required to post more detailed information regarding their executive compensation. Thus, compensation committees may seek advice from compensation consultants.

⁴ For more detail, please see, <https://www.issgovernance.com/iss-announces-peer-group-submission-review-window-open-november-20/>, and <https://www.issgovernance.com/file/policy/uspeergroupfaq.pdf>.

⁵ Please see (a) Letter dated April 3, 2018, to the shareholders of Abbot Laboratories from Ms. Roxanne Austin, Chair of the Compensation Committee (https://www.sec.gov/Archives/edgar/data/1800/000110465918022657/a18-9600_1defa14a.htm) (b) The post in Say-on-Pay by Ning Chiu on March 14, 2013 and reported in a briefing on governance by Davis Polk & Wardwell LLP, (<https://www.briefinggovernance.com/2013/03/early-examples-of-companies-disputing-iss-say-on-pay-recommendations/>) and (c) The post titled ‘Who Should Investors Believe When it Comes to Peer Groups?’ on May 14, 2011, by Robin Ferracone, Executive Chair of Farient Advisors LLC. (<https://www.forbes.com/sites/robinferracone/2011/05/24/who-should-investors-believe-when-it-comes-to-peer-groups/#617d5def42f1>)

⁶ In a recent study, Faulkender and Yang (2013) document the persistence of CEO pay inflation and self-serving behavior during the post-SEC 2006 disclosure rules. Although these authors suggest that proxy advisory firms have the incentives, abilities, and resources to address issues related to compensation peer benchmarking, they did not analyze this topic due to lack of data. We use the peer group data made available to us by ISS and pursue this line of inquiry in this paper.

⁷ In 2006, the SEC implemented changes to the required reporting of executive compensation. The amended final rule release was released on August 2006. See amended release 33-8732A; a 436-page document is available at <http://www.sec.gov/rules/final/2006/33-8732a.pdf>

compensation peer group that is provided to investors by the ISS Proxy Advisors unit, the compensation setting based on focal firms' peer group benchmarking has received considerable attention.⁸ These studies find that even after controlling for firm characteristics, prior performance, governance, and fixed effects (firm, industry and year), the compensation level among peer firms and the CEO's compensation are positively related. They further document that the upward bias in peer group pay is most evident in non-S&P 500 firms and that CEOs with pay below the median of their peers receive substantially larger raises compared to CEOs with pay above the peer group median. Such increases in CEO compensation may be motivated by an intent to inflate CEO compensation in some firms and by the need to retain talent in other firms.

The institutional framework provides a unique setting to empirically examine the information flow between the focal firm and ISS. The ISS Corporate Solutions unit communicates with firms in the fourth quarter of fiscal year $t-1$, to coordinate the setting of the firms' peer group to be used for benchmarking CEO compensation for fiscal year t . At this time, firms have access to the list of ISS Proxy Advisors proposed peers for fiscal year $t-1$ and form their peer groups to set the parameters that determine the CEO compensation for fiscal year t . During the fourth quarter of the fiscal year t , the ISS Proxy Advisors may communicate with firms in order improve the fit of their selected peers, before making their proposed list available to institutional clients before the annual meeting in the first quarter of fiscal year $t+1$. This communication includes updates on any change in business conditions that could materially affect the composition of the peer group.

Similar to earlier findings, we find that the median size (assets and sales) of actual peers is larger compared to the median size of a focal firm. While the median size of ISS peers is also

⁸ See, for example, Bizjak, Lemmon, and Naveen (2008), Faulkender and Yang (2010, 2013), Albuquerque, De Franco, Verdi (2013), and Bizjak, Lemmon, and Nguyen (2011).

larger than that of focal firms, it is smaller in size than the actual peer group. A similar relationship between focal firms, actual peers, and ISS peers hold for CEO compensation. The pairwise differences are statistically significant between 5% and 1% level. These findings are indicative of ISS Proxy Advisors holding the line on both size and CEO compensation.

A comparison of peer group dynamics between 2012 and 2016 indicates that on average 83% of the actual peer group of fiscal year t consists of firms from the previous year's actual list and about 5% from the previous year's ISS proposed peer group. In contrast, ISS retains on average only 64% from its previous year's proposed list and 10% from the previous year's actual list. While this by itself is not alarming, we find that aside from size considerations such replacements occur more frequently when the CEO's compensation is increased in low-performance, out-of-the-limelight (i.e., non-S&P 500) firms. Our findings are robust to difference measures of performance and turnover of ISS proposed peer firms. This raises the suspicion that CEOs of such companies affect the composition of their company's ISS' proposed peer groups to impede an objective evaluation of their compensation.

The rest of the paper is laid out in the following format. We describe the institutional framework in Section 2. Section 3 contains the related literature and hypotheses. Sample selection, descriptive statistics, and the baseline compensation regression are contained in Section 4. The main results of our research are presented in sections 5 and 6. Section 5 describes the relation between actual peers and ISS peers in terms of size and CEO compensation, and the dynamics of peer group changes. Section 6 contains regression analyses of the impact of a focal firm's influence over ISS. Section 7 contains the concluding remarks.

2.0 Institutional Framework

Although the academic literature has studied the role of proxy advisory firms in a variety of settings, their role in CEO compensation peer benchmarking has not been researched.⁹ Proxy advisory firms meet with their clients and focal firms to form the list of peer firms they determine as being appropriate for a focal firm. From a governance standpoint, this proposed list of peers is important due to the significant ownership (about 70% of outstanding shares) of publicly traded firms by institutional investors such as mutual funds, index funds, pensions, and hedge funds (Broadridge and Pricewaterhouse Coopers, 2017).

The methodology developed by ISS Proxy Advisors focuses on selecting peers that are similar to the focal company in terms of industry profile, sales, and market capitalization. Before making the list of proposed peers available to their institutional clients, ISS Proxy Advisors attempt to make sure that it has up to date information concerning the focal firms. Hence, focal firms are invited to submit their input through a web portal made available on the ISS website.¹⁰ Appendix-A describes the sequence of activities involved in the CEO peer benchmarking by ISS and the focal firm. It is important to note that the focal firm designs the parameters of the CEO compensation contract at the beginning of a fiscal year, whereas ISS forms its proposed peer list later in the fiscal year. Consequently, reasonable estimates of their CEO compensation are known to focal firms at the time of their discussion with ISS. Thus, focal firms may have the incentive to request that the ISS peer lists include firms that pay their CEOs compensations that would not make their compensations seem too high.

⁹ Prior research has studied the proxy advisory industry in the context of equity pay design (Larcker, McCall, Ormazabal, 2015; Gow, Larcker, McCall, and Tayan, 2013), director elections (Cai, Garner, and Walkling, 2009; Choi, Fisch, and Kahan, 2009), and say on pay votes (Ertimur, Ferri, and Oesch, 2013; Malenko and Shen, 2016).

¹⁰ See Appendix-A for details.

3.0 Related Literature and Hypotheses Development

The compensation setting based on focal firms' peer group benchmarking has received considerable attention.¹¹ These studies document that focal firms choose high paying peers and attribute their choices to two alternative motives: the need to attract and retain talented executive who are expected to generate high firm performance ("talent" motivation; see Bizjak, Lemmon, and Naveen, 2008; Albuquerque, Franco, and Verdi, 2013) and the incentive to inflate their own compensation ("self-serving" or "rent-seeking" motivation; see Bizjak, Lemmon, and Nguyen, 2011; Faulkender and Yang (2010, 2013)). The current study examines a related issue which has not been investigated so far: the information that is provided to investors regarding this benchmark. The two issues may be closely related also because of the association of ISS with both. While the Corporate Solutions unit of ISS advises companies regarding the selection of the members of their peer group ("actual peers"), the Proxy Advisors unit of ISS provides its proposed peers ("ISS peers") to its clients. These two ISS units are supposed to be separated, but previous studies have raised concerns regarding the degree to which that is indeed the case (see Li, 2016; Doyle, 2018). The current paper documents that biases in the information that is provided to investors are associated with focal company characteristics.

3.1 Literature on Peer-Benchmarking of CEO Compensation

Before developing our hypotheses, we provide a summary of the literature on peer benchmarking of CEO compensation. Before the SEC 2006 ruling, although firms were not required to report their actual peers, the common practice was to choose peer firms based on the focal firms' industry and size. Hence, in the absence of data on actual peers, Bizjak, Lemmon,

¹¹ Previous studies on the choice of peer companies as a benchmark in the process of determining executive compensation include Bizjak, Lemmon, and Naveen (2008), Faulkender and Yang (2010, 2013), Bizjak, Lemmon, and Nguyen (2011), and Albuquerque, De Franco, Verdi (2013).

and Naveen (2008) construct a peer group for each firm based on industry and size and show that increases in CEO pay attributable to peer selection is consistent with tighter labor markets and argue that the pay increases are meant to retain or attract talent. Several studies emerged upon the availability of data on the actual peers reported in the proxy statements. The talent view found support in a study by Albuquerque, Franco, and Verdi (2013). These authors provide evidence that the excess of average CEO compensation of actual peers over that of a set of peers that are otherwise similar to the focal firm (i.e., a propensity score-matched peer group) is meant as a reward for CEO talent.¹²

Critics of the use of peer group benchmarking argue that actual peer groups are chosen strategically by powerful CEOs to justify excessively high pay (Bebchuk and Fried (2003, 2004, 2005)). Two studies that support this view include Bizjak, Lemmon, and Nguyen (2011) and Faulkender and Yang (2013). While the former study finds some evidence that the non-S&P 500 firms inflate pay in a self-serving manner, the latter study uses a longer sample period and finds that the SEC (2006) mandate is ineffective in curbing the self-serving motive in selecting actual peers. Faulkender and Yang (2013) suggest that firms such as ISS have the incentives, abilities, and resources to address issues related to compensation peer benchmarking. However, due to the lack of data at the time of their study, these authors do not examine the role of ISS on peer benchmarking.

¹² Faulkender and Yang (2010) is the first study to compare the list of actual peer companies used by S&P 500 firms and S&P 400 midcap with a propensity-score matched peer group. While they document a similar pay difference between the two peer groups, they do not address the underlying motivation behind the choice of actual peers.

3.2 Hypotheses Development

We were able to obtain data on the ISS Proxy Advisors' proposed list of peers and the actual peers selected by focal firms for fiscal years ending 2012 to 2016.¹³ While our research is also related to peer benchmarking of CEO compensation, we focus on the interaction between the focal firm and ISS and the information conveyed by the peer group that ISS Proxy Advisors provide to their institutional clients.¹⁴ As detailed in Appendix-A, ISS Proxy Advisors select peer group members by matching the focal firm's industry and size. Because peer group members are selected so that they match the focal firm's size, when the focal firm grows in size, ISS should replace some of the smaller members of its peer group with larger-size new members. Also, even if the focal firm's size (measured as total assets) does not increase, an increase in sales (and consequently performance) may be a reason for replacing low-performance peers with higher-performance peers.

Aside from the impact of changes in sales or assets on ISS peer group changes, focal firms are concerned about the information conveyed by the average CEO compensation for the ISS peer group. Focal firms may have an interest in revising investors' perceptions when they increase the compensation of their CEOs. Furthermore, a focal firm may have an interest in raising the average compensation of the ISS peer group when it recognizes that its CEO has above average skills and expects to increase his or her compensation to retain him or her. High performance in the current year may be rewarded according to the current contract but may trigger demands for a revised future contract. As explained in figure 1, in the fourth quarter of a fiscal year, ISS Proxy Advisors start putting together their peer group and solicit updates from

¹³ Our research is based on data provided by ISS, and we thank ISS for providing it. We attempted to obtain similar data from Glass Lewis but were not successful due to prohibitively high costs.

¹⁴ Although the implications of our study apply to proxy advisors in general, we report results for ISS due to lack of data on other proxy advisors.

focal firms. Because the compensation contract is set at the beginning of a fiscal year t , while the ISS peer group is determined at the end of fiscal year t , we argue that focal firms know their expected CEO compensation and performance when they hold the discussions with ISS Proxy Advisory regarding the ISS peer group for the year. This leads us to our first hypothesis:

H1a: *Ceteris paribus*, the percentage change in the average CEO compensation of the ISS peer group is positively related to the percent change in the focal firm's CEO compensation and change in focal firm performance.

Focal firms that expect low performance may be concerned that the firm's investors may think that their performance does not justify their compensation. Thus, these firms may try to preempt this problem by asking ISS Proxy Advisors to provide its clients with a set of peers whose CEO compensation exceeds the corresponding compensation from the previous year. Hence,

H1b: *Ceteris paribus*, the percentage change in the average CEO compensation of the ISS peer group is positively related to the percent change in the focal firm's CEO compensation and negatively with the change in focal firm performance.

Recall that the average CEO compensation of the actual peers is well above the CEO compensation of the focal firm and the average ISS peers. Thus, CEOs of focal firms that intend to influence ISS Proxy Advisors to increase the average CEO compensation of the ISS peer group may suggest replacing low paying ISS peers with higher paying companies, especially from actual peers. It is in the focal firm's interest to reward and retain CEOs who perform well.

Our second hypothesis is:

H2a: *Ceteris paribus*, the fraction of ISS peer firms replaced, especially with actual peers, is positively related to the percent change in the focal firm's CEO compensation and change in focal firm performance. Such replacements induce an increase in the average CEO compensation of ISS peers.

As mentioned earlier, CEOs of a focal firms that expect low performance may be concerned that the firm's investors may think that their performance does not justify their compensation. These

CEOs may suggest replacing low paying ISS peers with higher paying companies. They may suggest adding to the ISS peers, members of their actual peer group.

H2b: *Ceteris paribus*, the fraction of ISS peer firms replaced, especially with actual peers, is positively related to the percent change in focal firm's CEO compensation and negatively to a change in focal firm performance. Such replacements induce an increase in the average CEO compensation of ISS peers.

4.0 Sample Selection, Descriptive Statistics, and Baseline Regression

4.1 Sample Selection

This research uses peer group data provided by the Institutional Shareholder Services. The data set contains, for each focal firm, two sets of peer group members for the fiscal years 2012-2016. One group contains the peer firms that were reported by focal firms in their proxy statements. The second group contains the ISS proposed peer firms for the corresponding fiscal years. Variables measuring firm characteristics are obtained from COMPUSTAT, returns data are obtained from CRSP, and Institutional ownership data are obtained from Thompson f-filings. Our initial sample of 8339 firm-year observations includes CEO and firm characteristics from COMPUSTAT, and peer firm data from ISS. After including the governance data, the sample has 4705 firm-year observations.

4.2 Descriptive Statistics

Table 1 contains the descriptive statistics for the overall sample, and the S&P 500 and non-S&P 500 subsamples. The detailed description of the variables is provided in Appendix-B. The overall sample has mean (median) assets of \$16,490 MM (\$2167 MM), sales of \$5719 MM (\$1046 MM), leverage of 39.64% (35.05%), market-to-book ratio of 5.06 (2.40), return on assets of 4.51% (6.07%), CEO ownership of 4.32% (0.68%), independent directors of 80.72%

(83.33%), number of institutional owners of 271.12 (182), and institutional ownership of 77.57% (84.19%). The high percentage of institutional ownership indicates a large shareholder base, and the potential importance of advisory firms.

The mean (median) assets of S&P 500 firms is \$66,143 MM (\$16, 557 MM). The non-S&P 500 firms are smaller, with corresponding values of assets \$3469 MM (\$1413 MM). A similar relation holds for sales as a measure of size. The S&P 500 firms, on average, perform better than non-S&P 500 firms in terms of median annual stock returns (14.85% for S&P firms versus 12.90% for non-S&P 500 firms) and return on assets (9.44% for S&P firms versus 5.27% for non-S&P 500 firms) and are less risky in terms of standard deviation of stock returns (5.95% for S&P 500 firms versus 8.63% for non-S&P 500 firms). On average, the CEOs in non-S&P 500 firms have a relatively higher tenure and own a higher fraction of stock in their firm relative to CEOs in S&P 500 firms, indicating relatively higher entrenchment. The S&P 500 firms have a better governance structure as indicated by a higher average number of board members and a higher fraction of independent directors than that in non-S&P 500 firms. In summary, S&P 500 firms are larger, better performers, have less entrenched CEOs, and have a better governance structure than non-S&P 500 firms.

Table 2 presents the summary statistics of the number of ISS peer and actual peers per focal firm in our sample.

[Insert Table 2 here]

The mean and median number of ISS peers for S&P 500 (non-S&P 500) firms is approximately 16 (18). The ISS peer group generally contains a minimum of 12 and a maximum of 24 firms based on the factors described in Appendix-A. In comparison, the mean and median number of actual peers for S&P 500 (non-S&P 500) firms is approximately 17 (16). These averages remain

stable during the period 2012 to 2016. Appendix-C contains a description of the extent of actual and ISS peers' industry and sales match with the focal firm.

4.3 Baseline Regression

The baseline regression estimates the impact of firm characteristics, profitability, CEO characteristics, and governance on CEO compensation. The dependent variable is total compensation (cash, performance-based, and other compensation). Total compensation variable is log transformed and winsorized at the 1st and 99th percentile. We use raw stock returns and excess returns (returns excess of S&P 500 index) as market-based performance measures and return on assets as the accounting-based performance measure.

The explanatory variables are based on those identified in prior literature.¹⁵ Firm size is measured by log assets or log sales (Size). Due to the unavailability of contemporaneous accounting information at the time the compensation is determined, we lag some of the financial variables. We include one-year lagged values of capital expenditure (CAPEX), leverage (Leverage), advertising (Advert), and market-to-book value (MB).¹⁶ Firm performance is captured by one-year lagged stock returns (Stockret) and one-year lagged return on assets (ROA). We control for risk using stock return volatility measured over the previous seven years (Stdstockret). We measure CEO entrenchment by Duality (i.e., an indicator variable that equals one when the CEO is also the chair of the board), percent of shares in the focal firm owned by the CEO (CEO_Own), and CEO tenure (Tenure).¹⁷ The variables that capture the effect of

¹⁵ See, for instance, Core, Holthausen, and Larcker (1999).

¹⁶ See Smith and Watts (1992) or Lewellen, Loderer, and Martin (1987), for a discussion of the relationship between these variables and executive compensation.

¹⁷ More entrenched CEOs are expected to extract higher rents (Brick, Palmon, and Wald, 2006). Thus, we expect compensation to be positively related to Duality and Tenure. The relation between CEO ownership and compensation is potentially non-monotonic. Low levels of ownership indicate better alignment with shareholders' interests, but as the ownership percentage increases beyond a threshold, it can lead to entrenchment (Albuquerque, De Franco, and Verdi, 2013; Morck, Shleifer, and Vishny, 1988).

governance on compensation are the number of board directors (Boardsize), the percent of independent directors on the board (Independent), the number of institutional owners in the focal firm (NumInst), and the percent of focal firm shares owned by institutions (InstPerc).¹⁸ We winsorize the compensation variables at the 1st and 99th percentiles and apply log transformation to the heavily right-skewed compensation variables. All the regressions control for year and industry fixed effects with robust standard errors clustered at the firm level.

Table 3 reports the estimates from three baseline regressions: using the overall sample of firms, the S&P 500, and non-S&P 500 firms.

[Insert Table 3 here]

In all three regressions, we find that CEOs have higher pay at larger firms, that perform well, exhibit higher risk, and have higher market-to-book values.¹⁹ CEOs who serve as chairman of the board in S&P 500 (non-S&P 500) firms receive 8.18% (5.31%) higher salary than CEOs who do not serve as chairman, possibly indicating the difference in CEO power between S&P 500 and non-S&P 500 firms. CEOs in S&P 500 firms with longer tenure receive higher pay compared to those in non-S&P 500 firms.²⁰ The impact of an independent board and institutional ownership on CEO compensation is higher in non-S&P 500 firms, consistent with the notion that CEOs in non-S&P 500 firms are more sensitive to governance than in S&P 500 firms. This difference between S&P 500 firms and non-S&P 500 firms may be due to public scrutiny that S&P 500

¹⁸ As CEOs face more monitoring, they expect to be compensated higher. Hence, we expect a positive relation between compensation and independent directors and institutional ownership.

¹⁹ Regressions with performance variables (MKBK, Stockret, and ROA) taken one at a time as explanatory variables indicate a positive and significant (at 1% level) coefficient on each performance variable.

²⁰ The differential impact of board size and the number of institutional owners on the level of CEO compensation in the S&P 500 and non-S&P 500 firms is due to a non-linear effect of governance. From table 1, we note that the median number of directors and the number of institutional owners in S&P 500 firms is greater than that in non-S&P 500 firms. Since the impact of board size is non-monotonic (Coles et al., 2008), increase in board size in S&P 500 firms result in less monitoring, causing CEOs to have a lower level of compensation. We conjecture the presence of a similar non-linear effect of the number of institutional owners on governance.

firms are subject to, which acts as an additional element of governance, making board independence less crucial to effective governance.

5.0 Actual Peers and ISS Peers: Dynamics, Size and Compensation

5.1 Peer Group Dynamics

The institutional framework allows ISS Proxy Advisors to solicit information on any updates in business conditions and changes to the actual peer group during the process of determining the list of proposed peer firms for a given fiscal year. We categorize the ISS proposed peers for fiscal year t into three subgroups: (1) peer firms retained from ISS proposed list in fiscal year $t-1$, (2) peers from the actual peers reported by the focal firm in fiscal year $t-1$, and newly added peers from the list of peers added by the focal firm during fiscal year t , and (3) other added peers by ISS during fiscal year t . The list of actual peer firms published in the proxy statement for fiscal year t comes from four sources: (1) peer firms retained from fiscal year $t-1$ actual list, (2) peers proposed by ISS for fiscal year $t-1$, (3) peers proposed by ISS during the fourth quarter of fiscal year t , and (4) other added actual peers during the fiscal year t . Our primary focus is to examine the focal firm's influence on the proposed peer group determined by ISS Proxy Advisors. Table 4 describes the peer group dynamics present in our sample.

[Insert Table 4 here]

Consider the overall sample in Table 4. The actual peers reported in the proxy statement in 2013 indicates that focal firms retained 79.92% peer firms from its previous peer's actual list, 5.06% from the ISS proposed list, 3.08% ISS proposed list for 2013, and 11.94% new firms added in 2013. The actual peer list in 2013 included only 8.14% of firms from ISS peers. A similar analysis indicates that the ISS list in 2013 included 18.31% from the focal firm's actual peers. Over the years 2012 to 2016, the overall sample indicates that approximately 80% of the

actual peers chosen by a focal firm in a given year consists of actual peers from the previous year and about 11% are newly added peers in the current year. The remaining 8% of the peers are drawn from the list of ISS peers. In comparison, ISS retains a much smaller fraction, between 47% and 78%, of its peers from the previous year. The fraction of actual peers in the ISS peer group was 16% in 2013 and has declined to 7% in 2016. Overall, the numbers suggest that ISS tends to change its peer firms to match the selections of the focal firm, while the focal firm does not seem to pay as much heed to the recommendations made by ISS.

A comparison between the S&P 500 and non-S&P 500 firms indicates that S&P 500 firms retain approximately 10% more from its previous year's actual peers and adds approximately 6% fewer firms during the current year. Furthermore, S&P 500 firms incorporate fewer firms from the ISS peer group relative to non-S&P 500 firms. ISS retains a smaller percentage of firms from its previous year's list in non-S&P 500 firms relative to S&P 500 firms. Additionally, ISS consistently adds a higher fraction of firms from the actual peer list in the current year relative to S&P 500 firms. These numbers suggest a higher turnover of ISS peers in non-S&P 500 firms than in S&P 500 firms.

5.2 Focal Firm, Actual Peers, and ISS Peers: Size and CEO Compensation

In this section, we report the mean and median size (assets and sales) and CEO compensation (total, cash, and performance) of focal firms, their actual peers, and ISS peers. Table 5, Panel A contains the means and medians for size, and Table 5, Panel B contains the means and medians for CEO compensation.

[Insert Table 5 here]

The results for the overall sample in Table 5, Panel A indicates that the mean asset size of focal firms (ISS peers) is \$16,490 MM (\$16,547 MM) and the median is \$2,167 MM (\$2,657

MM). The mean assets and sales of ISS peers and the corresponding focal firm do not differ significantly from each other. However, the difference in medians indicates that the size of ISS peer firms is significantly (at the 1% level) greater than that of the corresponding focal firm. To avoid the skew in the distribution of the variables, we report the standardized difference between the mean ISS peer variable and the corresponding variable for the focal firm as $\frac{(ISS\ peer - Focal)}{(ISS\ Peer + Focal)}$.

This variable is bounded between -1 and +1. We observe that the difference in mean and median standardized size (assets and sales) of ISS peers is significantly greater than the size of the corresponding focal firm at the 1% level. The mean and median size (assets and sales) of actual peers is significantly greater than that of ISS peers for the same focal firm. Focal firms tend to choose their peer firms that are significantly larger than their own. These results suggest that the ISS proxy advisors suggest a peer group match that is closer to the focal firm's size. We observe a similar pattern in the S&P 500 and non-S&P 500 samples. The actual peer group mean, and median CEO compensation also significantly exceeds that of the ISS peers for a given focal firm. This result suggests that despite the presence of ISS proxy advisors, focal firms continue to target peers with higher CEO compensation.

The next section examines the hypotheses developed in section 3.

6.0 Analysis of Focal Firm's Incentives

6.1 Compensation and Performance: Focal Firm's Pressure on ISS Advisory Services

The sequence of activities in figure 1 indicates that ISS Proxy Advisors seek input from the focal firms before they determine their list of peer firms to recommend to their institutional clients. Note that even though focal firms may consult ISS Corporate Solutions, it is assumed that the Chinese Wall precludes any communication between the two ISS units. Although ISS

Proxy Advisors obtain updates from focal firms, *a priori*, we expect ISS Proxy Advisors to determine their peers (and hence the average CEO compensation of ISS peers) based on their selection criteria described in Appendix-A.

The dependent variable in the multivariate regressions in Table 6 is the percent change in

[Insert Table 6 here]

average CEO compensation of ISS peers. Focal firms may have an interest in revising investors' perceptions when they increase the compensation of their CEOs. Thus, we use the percentage increase in the compensation of the focal firm's CEO as an explanatory variable. To capture the different incentives of focal firms related to their performance, we include a change in performance as another explanatory variable. We also include size controls to account for changes in ISS peer compensation that are related to focal firm size changes. Table 6 Panel A (B) presents results with asset size (sales) as a control variable.²¹

The overall sample and the two S&P 500 subsamples contain three models, each with a different performance metric (market-based and accounting measures). Consider Table 6, Panel A, Model (1). The coefficient 0.0189 is the elasticity of the change in mean CEO compensation of ISS peers to change in mean CEO compensation of the focal firm. The coefficient -0.0496 indicates the percent change in mean CEO compensation of ISS peers caused by a change in stock returns. Focal firms in the S&P 500 and non-S&P 500 subsamples also indicate similar signs on the coefficients. The signs on the control variables suggest that non-S&P 500 firms are more successful in influencing the ISS Proxy Advisors to increase peer compensation by changes in their assets and sales than S&P 500 firms. These results suggest that poorly performing focal

²¹ Each of the regressions in Table 6 was performed after orthogonalizing the percent change in focal firm CEO compensation and change in performance. The qualitative results remained unchanged. These results are available upon request.

firms tend to hide behind ISS peers to justify an increase in their CEO compensation. Conversely, focal firms that perform well do not have an incentive to influence ISS to choose peers with higher compensation. This may be consistent with the view that firms that increase CEO compensation despite the mediocre performance and thus may be suspected of self-serving policy, have an incentive to obscure the benchmark that is used by ISS Proxy Advisors. Overall, these results reject hypothesis H1a in favor of H1b.

6.2 Mechanism to Induce Change in CEO Compensation in ISS Peers

We first define three variables to describe the type of turnover in ISS peers. We denote the first variable as *ISS_Replace* to denote the fraction of newly added peers by ISS during the current fiscal year. The second measure refines *ISS_Replace* to account for an abnormal change in the ISS peer group. For each focal firm, we follow the ISS guidelines and count the number of industry firms with sales volume between 40% and 250% of the sales volume of the focal firm that is not in the ISS peer group (denoted as x). This constitutes the pool of firms from which ISS may choose additions for its focal company's peer group. Next, we count the firms from the above pool that is already present in the focal firm's actual peer group in the previous year and those that were added to the focal firm's list this year (denoted as y). Assuming, that all the firms in the pool have equal probability to be selected as ISS peers, the ratio $\hat{p} = y/x$ is the probability of ISS choosing a new ISS peer group member that was in the focal firm's actual peer group from the previous year. Next, we calculate the fraction of the firms that were added to the ISS peer group that was in the focal firm's peer group in the previous year (denote as p). The difference between p and \hat{p} is denoted as *Ab_ISS_Act* to represent the abnormal or excess of the fraction of new ISS peer members that were from the actual peers over its expected value. A

positive value of Ab_ISS_Act indicates that members of the actual peer group are more likely than other pool members to be selected as new members in the ISS peer group.

We note that a positive Ab_ISS_Act may emerge due to two reasons. First, the focal firm can influence the choice of ISS peers. Second, the members of the actual peer group are more like the focal firm than the average member of the pool. To ascertain whether the focal firm influences ISS, we test hypothesis 2 by examining the relation between the ratio Ab_ISS_Act and the following variables: (1) the percent change in CEO compensation, and change in performance of the focal firm (market-based and accounting measures), and (2) the percent change in average CEO compensation of the actual peers of the focal firm. The results are reported in Table 7.

[Insert Table 7 here]

Table 7, Panel A reports the descriptive statistics for $ISSReplace$ and Ab_ISS_Act . The mean (median) fraction of newly added peers added by ISS Proxy advisors as indicated by $ISSReplace$ is 35.6% (30%). The mean $ISSReplace$ for non-S&P 500 firms of 37.22% is significantly higher (at the 1% level) than that of 29.07% in S&P 500 firms. A similar pattern exists even if the replacements control for expected additions from actual peers. The overall sample indicates a mean (median) of 4.7% (1.48%) for Ab_ISS_Act . The mean and median values of Ab_ISS_Act are higher for non-S&P 500 firms, implying that ISS peers contain a higher (abnormal) fraction of actual peers relative to the S&P 500 firms. The values in the fourth quartile indicate a skew in this variable. Hence, we treat the fourth quartile separately in our analysis. The t-test for the mean difference from zero is significant at 1% level. In summary, ISS Proxy Advisors replace their peers more often for non-S&P 500 firms relative to S&P 500 firms.

Table 7, Panel B reports the influence of a percent change in the focal firm's CEO compensation and change in performance on *ISS_Replace*.²² Results for the overall sample indicates that ISS Proxy Advisors replace their peer group more often if the focal firm's CEO compensation increases. The negative and statistically significant coefficient on each of the performance variables indicates that ISS Proxy Advisors replace their peer group more often if focal firms experience poor performance. The results in the S&P 500 sub-samples indicate that these findings are prevalent in a significant manner among non-S&P 500 firms but not S&P 500 firms.

Table 7, Panel B, reports results for *Ab_ISS_Act* as the dependent variable. We create a dummy variable equal to 1 to represent quartile 4 of *Ab_ISS_Act*, denoted as *Ab_ISS_Act_q4*, as dependent variable due to the presence of non-linearity in *Ab_ISS_Act* and to guard against the impact of extreme observations of *Ab_ISS_Act*. Results are reported in Table 7, Panel C. The overall sample and the non-S&P 500 subsamples indicate focal firms induce a higher turnover in ISS peers as measured *Ab_ISS_Act* and *Ab_ISS_Act_q4* as their CEO compensation increases. However, the relationship is not statistically significant. The negative and statistically significant coefficient on each of the performance variables among non-S&P 500 firms; however, indicate that ISS Proxy Advisors replace their peer group more often if focal firms experience poor performance.

Collectively, these results suggest that poorly performing, non-S&P 500 (out of the limelight) firms that expect to increase their CEO compensation tend to influence the ISS Proxy Advisors to turnover the composition of the members of their peer group. Because S&P 500 firms are more visible and are scrutinized more by the investment community, they do not

²² Each of the regressions in Table 7 was performed with assets and sales as controls. The qualitative results remained unchanged. These results are available upon request.

engage in such inducement. The overall sample and the sub-sample results indicate a negative (and significant) coefficient on each performance metric, possibly implying that poorly performing, non-S&P 500 firms engage in influencing ISS to increase the turnover in their peers.²³

Table 7, Panel C reports the influence of a percent change in average CEO compensation of actual peers on ISS peer firm dynamics for each measure of performance. S&P 500 firms induce a higher turnover in ISS peers as measured by *ISS_Replace* and *Ab_ISS_Act_q4*, through an increase in the percent change in average CEO compensation of their actual peers. Furthermore, such an inducement by S&P 500 firms is accompanied by poor performance in the case of *ISS_Replace*. ISS Proxy Advisors are not responsive to changes in the compensation of the actual peer firms among non-S&P 500 firms. These results hold for each performance metric.

The overall results reject hypothesis H2a in favor of H2b. We find that ISS peer group replacements associated with non-S&P 500 focal firms are more closely associated with a change in focal firm CEO compensation than with the average compensation of the CEOs of the actual peers. This is consistent with our claim that the changes in the compensation of the ISS peers are induced to provide cover for changes in the compensation of the CEO of a non-S&P 500 focal firm. Our results are consistent with the existence, primarily in non-S&P 500 firms, of a self-serving motivation for increasing CEO compensation.

²³ We added a control variable that measures newly added firms in the actual peer group for the fiscal year t . The results still hold.

6.3 Impact of ISS Peer Replacement on the Average Asset Size and CEO compensation of ISS Peers

To complete the mechanism that delivers a percent change average CEO compensation of ISS peers due to a percent change in focal firm's (or actual peers) CEO compensation, we examine if the replacements made by ISS proxy advisors indeed increase the average compensation of ISS peers. Table 8 contains the regression results.

[Insert Table 8 here]

The results from the overall sample, S&P 500 and non-S&P 500 subsamples indicate that the percent change in average CEO compensation of ISS peers is positively and significantly (at the 1% level) related to each measure of ISS peer turnover: *ISS_Replace*, *Ab_ISS_Act*, and *Ab_ISS_Act_q4*. Furthermore, each of the above measures of ISS peer turnover increases the average asset size of the ISS peer group. These results reject hypothesis H2a in favor of H2b.

The mechanism of change, however, differs across the S&P 500 subsamples. Results in Table 6 indicates that poorly performing S&P 500 and non-S&P 500 firms induce an increase in the average CEO compensation of ISS peers as an endorsement to an increase in their CEO compensation, *albeit* unjustified. Table 7 and Table 8 results suggest that non-S&P 500 firms achieve the increase in average CEO compensation of ISS peers by influencing ISS Proxy Advisors to replace larger peers with higher CEO pay. ISS Proxy Advisors do not engage in any turnover of their peer firms because of a change in the actual peers among non-S&P 500 firms. This enables such firms, that are not in the limelight, to 'hide' behind ISS proxy advisors when ISS proxy advisors propose their list of peers to their institutional clients. Although S&P 500 firms also influence ISS proxy advisors, due to their greater visibility, they do so by making changes to their actual peers. Any change in ISS peer composition that increases the average

CEO compensation of ISS peers serves to endorse an increase in the focal firm's CEO compensation and reduces the wrath they face from institutional clients.

7.0 Conclusion

Institutional investors such as mutual funds, index funds, pensions, and hedge funds own about 70% of outstanding shares of publicly traded firms. Such firms have a fiduciary responsibility to vote shares held in their portfolios. Due to the time and specialized effort it takes, these institutions find it cost-effective to engage the services of proxy advisory firms to conduct research and provide recommendations on issues ranging from director elections, CEO compensation to mergers and acquisitions. While proxy advisory firms might wield influence over the voting process, their objectivity has come under question (Belinfanti, 2009; Li, 2016; Doyle, 2018). Considering that major shareholders rely on proxy advisory firms for research and recommendations, it is important from a firm's viewpoint to ensure that proxy advisors have relevant and accurate information about the firm. This research focuses on the interaction between firms and proxy advisory firms in the context of peer-benchmarking of CEO compensation.

Proxy advisory firms such as Institutional Shareholder Services (ISS) and Glass Lewis (GL) have been providing their clients (institutional investors) with a list of peer firms that they consider as appropriate for the focal firms they follow.²⁴ Of the two units ISS operates, ISS Corporate Solutions advice firms on the construction of actual peers and ISS Proxy Advisors determine the appropriate set of peer firms for a focal firm and provides information to investor clients.

²⁴ Our research uses data provided by ISS.

At the time ISS Proxy Advisors determine their proposed list of peer firms, they solicit information about any changes in business conditions or revisions to the actual list of peer firms used by focal firms. We find that non-S&P 500 firms that expect low performance induce ISS Proxy Advisors to replace their proposed peer group with larger and higher paying peers. Such behavior suggests that non-S&P 500 firms may be concerned that the firm's investors may think that their performance does not justify their compensation and may try to preempt this problem by influencing the peer composition that ISS Proxy Advisors. Due to their greater visibility, S&P 500 firms do not find it easy to 'hide' their potentially unjustified increase in CEO compensation. By choosing actual peers with highly paid CEOs, these firms influence ISS proxy advisors to follow suit by making changes in the composition of the proposed peers that increase the average CEO compensation of ISS peers. These findings raise the suspicion that ISS caves to the pressure by low performance, out of the limelight firms that increase CEO compensation.

References

- Albuquerque, A. M., De Franco, G., & Verdi, R. S. (2013). Peer choice in CEO compensation. *Journal of Financial Economics*, 108(1), 160-181.
- Bebchuk, L. A., & Fried, J. M. (2003). Executive compensation as an agency problem. *Journal of economic perspectives*, 17(3), 71-92.
- Bebchuk, L., & Fried, J. (2004). *Pay without performance* (Vol. 29). Cambridge, MA: Harvard University Press.
- Bebchuk, L. A., & Fried, J. M. (2005). Pay without performance: Overview of the issues. *Journal of applied corporate finance*, 17(4), 8-23.
- Belinfanti, T. C. (2008). The proxy advisory and corporate governance industry: The case for increased oversight and control. *Stanford Journal of Law, Business, & Finance*, 14, 384-439.
- Bizjak, J. M., Lemmon, M. L., & Naveen, L. (2008). Does the use of peer groups contribute to higher pay and less efficient compensation? *Journal of Financial Economics*, 90(2), 152-168.
- Bizjak, J., Lemmon, M., & Nguyen, T. (2011). Are all CEOs above average? An empirical analysis of compensation peer groups and pay design. *Journal of Financial Economics*, 100(3), 538-555.
- Brick, I. E., Palmon, O., & Wald, J. K. (2006). CEO compensation, director compensation, and firm performance: Evidence of cronyism? *Journal of Corporate Finance*, 12(3), 403-423.
- Broadridge and Pricewaterhouse Coopers (2017). Proxy Pulse: 2017 Proxy season Review.
- Cadman, B., & Carter, M. E. (2013). Compensation peer groups and their relation with CEO pay. *Journal of Management Accounting Research*, 26(1), 57-82.
- Cai, J., Garner, J. L., & Walkling, R. A. (2009). Electing directors. *The Journal of Finance*, 64(5), 2389-2421.
- Choi, S., Fisch, J., & Kahan, M. (2009). The power of proxy advisors: Myth or reality. *Emory LJ*, 59, 869.
- Coles, J. L., Daniel, N. D., & Naveen, L. (2008). Boards: Does one size fit all? *Journal of Financial Economics*, 87(2), 329-356.
- Copland, J., Larcker, D. F., & Tayan, B. (2018). The Big Thumb on the Scale: An Overview of the Proxy Advisory Industry (May 31, 2018). Rock Center for Corporate Governance at Stanford University Closer Look Series: Topics, Issues and Controversies in Corporate Governance No. CGRP-72; Stanford University Graduate School of Business Research Paper No. 18-27. Available at SSRN: <https://ssrn.com/abstract=3188174>

- Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance¹. *Journal of Financial Economics*, 51(3), 371-406.
- Cotter, J. F., Palmiter, A. R., & Thomas, R. S. (2013). The first year of say-on-pay under Dodd-Frank: an empirical analysis and look forward. *Geo. Wash. L. Rev.*, 81, 967.
- Doyle, (2018). The conflicted role of proxy advisors. American Council for Capital Formation.
- Ertimur, Y., Ferri, F., & Oesch, D. (2013). Shareholder votes and proxy advisors: Evidence from say on pay. *Journal of Accounting Research*, 51(5), 951-996.
- Espahbodi, R., Liu, N., & Westbrook, A. (2016). The effects of the 2006 SEC executive compensation disclosure rules on managerial incentives. *Journal of Contemporary Accounting & Economics*, 12(3), 241-256.
- Faulkender, M., & Yang, J. (2010). Inside the black box: The role and composition of compensation peer groups. *Journal of Financial Economics*, 96(2), 257-270.
- Faulkender, M., & Yang, J. (2013). Is disclosure an effective cleansing mechanism? The dynamics of compensation peer benchmarking. *The Review of Financial Studies*, 26(3), 806-839.
- Ferri, F., Zheng, R., & Zou, Y. (2018). Uncertainty about managers' reporting objectives and investors' response to earnings reports: Evidence from the 2006 executive compensation disclosures. *Journal of Accounting and Economics*, 66(2-3), 339-365.
- Glassman, James K. and Hester Peirce (2018). How Proxy Advisory Services Became So Powerful. Mercatus Center paper, <https://www.mercatus.org/system/files/Peirce-Proxy-Advisory-Services-MOP.pdf>
- Gow, I. D., Larcker, D. F., McCall, A. L., & Tayan, B. (2013). Sneak Preview: How ISS Dictates Equity Plan Design (October 23, 2013). Rock Center for Corporate Governance at Stanford University Closer Look Series: Topics, Issues and Controversies in Corporate Governance and Leadership No. CGRP-37. Available at SSRN: <https://ssrn.com/abstract=2346401>
- Kimbro, M. B., & Xu, D. (2016). Shareholders have a say in executive compensation: Evidence from say-on-pay in the United States. *Journal of Accounting and Public Policy*, 35(1), 19-42.
- Larcker, D. F., McCall, A. L., & Ormazabal, G. (2015). Outsourcing shareholder voting to proxy advisory firms. *The Journal of Law and Economics*, 58(1), 173-204.
- Lewellen, W., Loderer, C., & Martin, K. (1987). Executive compensation and executive incentive problems: An empirical analysis. *Journal of Accounting and Economics*, 9(3), 287-310.
- Li, T. (2016). Outsourcing corporate governance: Conflicts of interest within the proxy advisory industry. *Management Science*, 64(6), 2951-2971.

Malenko, N., & Shen, Y. (2016). The role of proxy advisory firms: Evidence from a regression-discontinuity design. *The Review of Financial Studies*, 29(12), 3394-3427.

Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, 20, 293-315.

Schneider, T. (2018). Executive Compensation and Aspirational Peer Benchmarking (March 1, 2018). Available at SSRN: <https://ssrn.com/abstract=3048503> or <http://dx.doi.org/10.2139/ssrn.3048503>

Smith Jr, C. W., & Watts, R. L. (1992). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Financial Economics*, 32(3), 263-292.

Appendix-A (Peer firm selection process)

In what follows, we explain the dynamics of peer group formation by a focal firm and the corresponding peer group recommended by ISS during a fiscal year cycle.

ISS Methodology in Selecting Peers:

The ISS methodology focuses on selecting peers that are similar to the focal company in terms industry profile, size, and market capitalization. The financial data to measure these characteristics are obtained from Standard and Poor's Compustat on a twelve-month trailing basis as of December 1 for annual meetings between February 1 and September 15, and June 1 for annual meetings between September 16 and January 31.

Industry: ISS uses a sequence of filters based on the industry the focal firm belongs.

Specifically, keeping the size close to the focal firm's size, peers are chosen in the following order: from the focal firm's 8-digit GCIS group, the 8-digit GICS group of the focal firm's peers, followed successively by the 6-digit and 4-digit GICS groups.

Size: ISS measures size based on revenues and market capitalization. As a rule of thumb, firms with revenues in the range 40% to 250% of the focal firm's revenues (or assets) qualify to be in the pool of peer firms. ISS uses discretion and adjusts the range depending on the size of the focal firm.

Market Capitalization: Focal firms are classified into small (0 to \$200m), micro (\$200m to \$1000m), mid (\$1000m to \$10,000m) and large (\$10,000m and above) categories. A potential peer must have a market capitalization between 25% of the low end and up to 400% of the high end of the focal firm's classification.

Communication Between ISS and Focal Firms

Figure 1 illustrates the information set and communication between the focal firm and ISS during a fiscal year cycle.

[Insert Figure 1 here]

For ease of illustration, we assume that the fiscal year coincides with the calendar year. Consider the peer benchmarking process for determining the CEO compensation for FY 2018. We illustrate the process from the focal firms and ISS viewpoint.

The selection of actual peers: In Q4 of FY 2017, the focal firm, along with their compensation consultant determine the parameters of the CEO compensation contract for FY 2018. At this time, the focal firm knows the list of peers reported in the proxy statement for FY 2017, the list of ISS recommended peers for FY 2017, and any updates provided to ISS proxy advisors in Q4 of 2017. It is during Q4 of 2017 that ISS corporate solutions provide data and help focal firms determine their peer group selection.

The parameters defined in the CEO contract determine the incentives faced by the CEO and the actions thereof during FY 2018. Focal firms may adjust the peer group subsequently, if warranted by major changes in the business. During Q4 of 2018, a focal firm may also advise ISS advisors and suggest changes to the ISS peer group. The final set of peers used for benchmarking FY 2018 CEO compensation are published in the proxy statement filed with SEC in Q1 of FY 2019.

The selection of ISS peers: As in the case of focal firms, ISS proxy advisors begin the determination of the FY 2018 peer firms in Q4 of 2017, starting with its list of proposed peers for FY 2017. ISS may revise these peers to include peers from the focal firm's FY 2017 actual

peers and those newly selected peers by the focal firm for its FY 2018 actual peer group. This list is made available in Q1 of FY 2019.

Appendix-B: Variable Definitions

Variable	Definition	Source
Assets	Total Assets of the Firm in Millions	COMPUSTAT
Sales	Total Sales of the Firm in Millions	COMPUSTAT
CAPEX	Capital Expenditures scaled by Total Assets	COMPUSTAT
Leverage	Total liabilities divided by the sum of total liabilities and market value of Equity (MVE)	COMPUSTAT
MVE	The product of common shares outstanding and year-end Price per share	COMPUSTAT
Advertising	Advertising expenses scaled by Total Assets	COMPUSTAT
MKBK	The market value of equity scaled by the book value of equity	COMPUSTAT
Stockret	Yearly Stock Returns	CRSP
Stdstockret	Standard Deviation of Stock Returns	CRSP
Excessret	Excess returns calculated as the difference between Stockret and S&P500 returns in the corresponding year	CRSP
ROA	Operating Income scaled by Total Assets	COMPUSTAT
STDROA	Standard Deviation of ROA over five years	COMPUSTAT
Tenure	Number of years since the current CEO appointment	EXECUCOMP
Duality	A dummy variable that takes a value of 1 if the CEO also serves as Chair of the Board	EXECUCOMP
CEO Ownership	Percentage of Common shares owned by CEO	EXECUCOMP
Board Size	Total number of members on the Board of Directors	ISS Riskmetrics
Independent Directors	Percentage of independent directors on the Board of Directors	ISS Riskmetrics
Number of Institutional Owners	Total number of institutional owners	Thomson 13F
Institutional Ownership (%)	Percentage of Common shares owned by Institutional owners	Thomson 13F
Cash compensation	Salary plus Bonus compensation	EXECUCOMP
Performance-Based Compensation	Stock plus Option compensation	EXECUCOMP
Total Compensation	Cash plus Performance-Based Compensation	EXECUCOMP
LogAssets	Log of Total Assets	COMPUSTAT
LogSales	Log of Total Sales	COMPUSTAT
ISS_Replace	The percentage of firms in the current year ISS Peer List that were newly added in the current year	ISS PEER Data
Ab_ISS_Act	The abnormal fraction of ISS Peers from Actual Peers. It indicates that members of the actual peer group are more likely than other pool members to be selected as new members in the ISS peer group.	ISS PEER Data

Appendix-C: Focal Firm Match with ISS Peers and Actual Peers

Panel A describes the extent of ISS peers' industry and sales match with the focal firm. Panel B describes the extent of Actual peers' industry and sales match with the focal firm.

Panel A: ISS Peer Firm Match with Focal Firm

Variables	Mean	Standard Deviation	Number of Observations
Match (two-digit industry)	58%	49%	184908
Match (three-digit industry)	45%	49%	184908
Dummy (Assets within 40-250%)	73%	44%	184908
Dummy (Sales within 40-250%)	87%	34%	184908
Peer in S&P 500 if Firm is in the S&P 500	68%	46%	29274
Peer in non-S&P 500 if Firm is in non- S&P 500	93%	26%	155634

Panel B: Actual Peer Firm Match with Focal Firm

Variables	Mean	Standard Deviation	Number of Observations
Match (two-digit industry)	59%	49%	130819
Match (three-digit industry)	45%	49%	130819
Dummy (Assets within 40-250%)	70%	46%	130819
Dummy (Sales within 40-250%)	75%	43%	130819
Peer in S&P 500 if Firm is in the S&P 500	78%	41%	28326
Peer in non-S&P 500 if Firm is in non- S&P 500	86%	35%	102493

Figure 1: Sequence of Activities: Focal firm, ISS corporate solutions, and ISS advisors

This figure describes the sequence of events about the peer benchmarking process by focal firms and ISS. The illustration assumes calendar fiscal years for ease of illustration. Fiscal years 2017, 2018, and 2019 are depicted to illustrate the information set available to the focal firm and ISS during the benchmarking cycle.

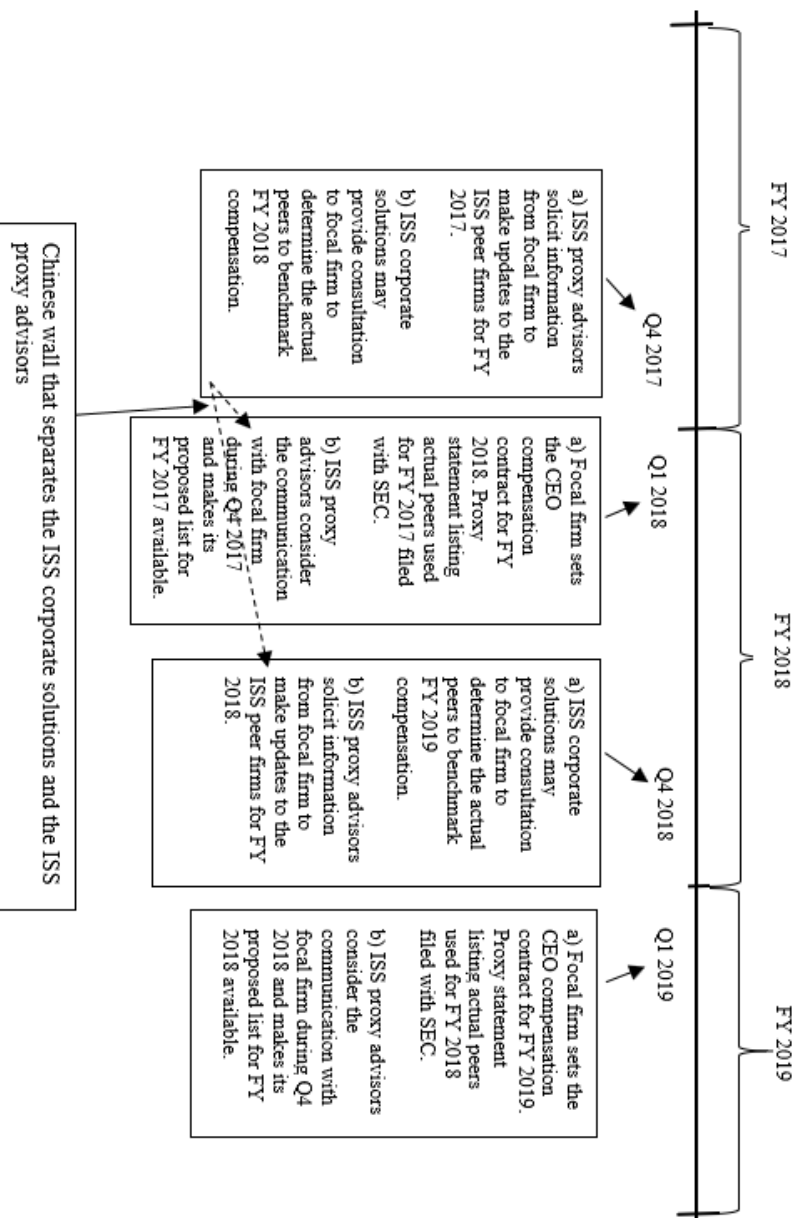


Table 1: Descriptive Statistics of Focal Firms

This table contains the descriptive statistics of the focal firm for the overall sample and the S&P 500 subsamples. Appendix-B contains a description of the variables.

Variables	Overall Sample				S&P 500				Non-S&P 500			
	Mean	Median	Std Dev	N	Mean	Median	Std Dev	N	Mean	Median	Std Dev	N
<i>Firm Characteristics</i>												
Assets (\$M)	16490.00	2167.00	23698.78	9023	66143.00	16557.00	43206.90	1798	3469.00	1413.00	7939.98	7225
Sales (\$M)	5719.00	1046.00	11206.89	9023	21361.00	8979.00	20479.30	1798	1617.00	693.00	2991.87	7225
MKBK	5.06	2.40	7.67	9012	5.38	3.08	5922.62	1798	4.98	2.27	3634.73	7214
CAPEX	4.13%	2.48%	5.30%	9023	4.29%	3.00%	4.65%	1798	4.09%	2.33%	5.44%	7225
Leverage	39.64%	35.05%	25.49%	9023	38.68%	33.85%	22.26%	1798	39.88%	35.55%	26.23%	7225
Advertising	1.01%	0.00%	2.72%	9023	1.24%	0.00%	2.81%	1798	0.95%	0.00%	2.69%	7225
<i>Firm Performance</i>												
Stockret	16.79%	13.46%	40.78%	8943	16.67%	14.85%	31.08%	1779	16.82%	12.90%	42.85%	7164
Stdstockret	9.33%	7.99%	5.12%	8943	6.74%	5.95%	3.24%	1779	9.98%	8.63%	5.29%	7164
ROA	4.51%	6.07%	14.94%	9023	10.08%	9.44%	9.25%	1798	3.13%	5.27%	15.74%	7225
<i>CEO Characteristics</i>												
Tenure	7	6	7	6171	6	5	6	1782	8	6	7	4389
Duality	0	0	0	5185	1	1	0	1737	0	0	0	3448
CEO Ownership	4.32%	0.68%	11.88%	6104	0.58%	0.07%	4.38%	1769	5.85%	1.47%	13.52%	4335
<i>Governance Characteristics</i>												
Board Size	9	9	2	5185	11	11	2	1737	9	9	1.904219	3448
Independent Directors	80.72%	83.33%	9.73%	5185	83.30%	87.50%	9.20%	1737	79.42%	81.82%	0.097314	3448
Number of Institutional Owners	271.12	182.00	266.19	8601	665	562	348	1720	172.57	156.00	98.43	6881
Institutional Ownership	77.57%	84.19%	24.48%	8594	80.81%	84.45%	17.83%	1719	76.77%	84.15%	25.82%	6875

Table 2: Summary Statistics of ISS Proposed peers and Actual peers

This table provides a summary of the number of ISS peers and Actual peers (i.e., self-selected) per focal firm during the sample period 2012 to 2016, categorized by S&P 500 and non-S&P 500 samples. The numbers are rounded to the nearest integer.

Number of ISS peers per firm						
Focal Firm	Stats	2012	2013	2014	2015	2016
S&P 500	Min	11	10	12	12	12
	Mean	14.77	16.45	16.8	16.45	16.30
	Median	14	16	16	16	16
	Max	25	25	24	24	24
Non-S&P 500	Min	11	10	11	10	10
	Mean	18.71	18.74	19.2	19.04	18.95
	Median	19	18	18	18	18
	Max	70	47	54	54	46

Number of Actual peers per firm						
Focal Firm	Stats	2012	2013	2014	2015	2016
S&P 500	Min	1	1	1	3	2
	Mean	17.02	17.63	17.21	17.03	17.07
	Median	16	17	17	17	17
	Max	73	70	51	52	75
Non-S&P 500	Min	1	1	1	1	2
	Mean	16.20	16.40	16.24	16.27	16.36
	Median	16	16	16	16	16
	Max	79	98	96	67	62

Table 3: Baseline Regression

This table reports the results from the baseline regression of total compensation on firm characteristics, CEO characteristics, performance, and governance. All the regressions contain the year and industry fixed effects. Standard errors are robust and clustered at the firm level. We report t-values where ***, **, * indicate 1%, 5% and 10% levels of significance. Appendix-B contains the variable definitions.

	Dependent Variable: Log CEO Total Compensation (t)		
	Overall Sample	S&P 500 Firms	Non-S&P 500 Firms
Assets _{t-1}	0.5136*** (33.6859)	0.4144*** (11.6337)	0.4260*** (15.6164)
Capex _{t-1}	-0.7327*** (-3.4081)	-0.8073** (-2.1951)	-0.6656** (-2.5020)
Leverage _{t-1}	-1.1046*** (-14.7542)	-0.8288*** (-5.2736)	-0.8333*** (-7.9584)
Advertising _{t-1}	0.8452 (1.3536)	0.918 (0.9217)	0.718 (0.9481)
MKBK _{t-1}	0.0211*** (9.493)	0.0104*** (2.6056)	0.0263*** (8.608)
Stockret	0.0736** (2.1759)	0.1003 (1.5066)	0.0043 (0.1049)
Stockret _{t-1}	0.0372 (1.1131)	0.0886 (1.5573)	0.004 (0.0959)
ROA	0.0871 (0.3551)	0.2275 (0.8111)	-0.1528 (-0.4127)
ROA _{t-1}	0.2328 (0.8715)	0.1151 (0.357)	0.2959 (0.7689)
Stdstockret	1.5001*** (5.1118)	1.3487** (2.0687)	1.3277*** (3.9927)
Duality	0.0648*** (3.0719)	0.0818*** (2.7231)	0.0531* (1.9306)
Tenure	0.0042** (2.3316)	0.0066** (2.1242)	0.0041* (1.8538)
Tenure Missing Dummy	0.2230** -2.5417	-0.3648** (-2.2054)	0.4217*** -5.1041
CEO Ownership	-0.4021*** (-3.4958)	-4.0203*** (-2.6581)	-0.2469** (-2.4154)
Log Boardsize	-0.2055 (-1.1524)	0.6968** (2.2)	-0.5301*** (-2.6059)
Independent Board	0.3583*** (3.6589)	0.0853 (0.4836)	0.4130*** (3.6382)

Num of Inst Owners	-0.0003*** (-5.1465)	-0.0003*** (-2.8224)	0.0007** (2.484)
Inst Ownership	0.4461*** (7.6914)	0.3240*** (3.5493)	0.4100*** (5.3859)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Constant	11.2381*** (47.3681)	11.2635*** (22.9164)	11.9974*** (43.608)
Observations	4,705	1,595	3,110
R-Squared	0.55	0.355	0.359
Adj-R-Squared	0.5467	0.3416	0.3522
F-test	183.3***	30.06***	48.68***

Table 4: Peer Group Dynamics

This table provides a breakdown about the composition of the actual and ISS peer group for the years 2013 to 2016. The list of actual peer firms published in the proxy statement for fiscal year t comes from four sources: (1) peer firms retained from fiscal year $t-1$ actual list (% of previous year actual), (2) peers proposed by ISS (ISS peers) for fiscal year $t-1$ (% of previous year ISS), (3) peers proposed by ISS during fourth quarter of fiscal year t (% of newly added from ISS current year), and (4) other added actual peers during the fiscal year t (% of newly added in the current year). ISS proposed list for fiscal year t comes from four sources: (1) peer firms retained from ISS proposed list in fiscal year $t-1$ (% of peers retained previous year ISS), (2) peers from the actual peers reported by the focal firm in fiscal year $t-1$ (% of peers from previous year actual), (3) newly added peers from the list of peers added by the focal firm during fiscal year t (% of peers newly added from actual in current year), and (4) other added peers by ISS during fiscal year t (% of peers newly added current year). Since our data begins in 2012, the first observation that records the peer group dynamics were in 2013.

Actual peers	Overall Sample			
	2013	2014	2015	2016
% of peers retained previous year actual	79.92%	80.55%	80.08%	80.63%
% of peers from previous year ISS	5.06%	5.80%	6.07%	5.29%
% of peers newly added from ISS current year	3.08%	2.44%	1.43%	2.31%
% of peers newly added in the current year	11.94%	11.21%	12.42%	11.77%
ISS peers				
% of peers retained previous year ISS	47.27%	59.64%	76.63%	66.68%
% of peers from previous year actual	16.17%	10.02%	4.24%	6.91%
% of peers newly added from actual in the current year	2.14%	1.68%	0.97%	1.51%
% of peers newly added current year	34.42%	28.66%	18.16%	24.90%

Actual peers	S&P 500 Sample			
	2013	2014	2015	2016
% of peers retained previous year actual	86.95%	89.13%	89.81%	86.67%
% of peers from previous year ISS	3.17%	3.74%	3.14%	3.79%
% of peers newly added from ISS current year	2.24%	1.51%	0.97%	1.30%
% of peers newly added in the current year	7.64%	5.62%	6.07%	8.24%
ISS peers				
% of peers retained previous year ISS	47.63%	69.24%	81.11%	73.95%
% of peers from previous year actual	24.02%	9.56%	4.95%	6.87%
% of peers newly added from actual in the current year	2.08%	1.10%	0.71%	0.99%
% of peers newly added current year	26.27%	20.10%	13.23%	18.20%

Actual peers	Non-S&P 500 Sample			
	2013	2014	2015	2016
% of peers retained previous year actual	79.92%	80.55%	80.08%	80.63%
% of peers from previous year ISS	5.06%	5.80%	6.07%	5.29%
% of peers newly added from ISS current year	3.08%	2.44%	1.43%	2.31%
% of peers newly added in the current year	11.94%	11.21%	12.42%	11.77%
ISS peers				
% of peers retained previous year ISS	47.27%	59.64%	76.63%	66.68%
% of peers from previous year actual	16.17%	10.02%	4.24%	6.91%
% of peers newly added from actual in the current year	2.14%	1.68%	0.97%	1.51%
% of peers newly added current year	34.42%	28.66%	18.16%	24.90%

Table 5: Focal firm, Actual Peers, and ISS Peers: Assets, Sales, and Compensation

This table contains mean and median Assets, Sales (\$M), and CEO compensation (Total, Salary, and Bonus (Cash), and Stocks and Options (Performance) (\$ '000) for Focal firm and its' corresponding Actual peers and ISS proposed peers. The table also contains standardized values of the above variables. The standardized form $(A-B)/(A+B)$ is half the percentage difference between A and B relative to the average of the two magnitudes. We use the average of the two magnitudes as base because none of them is a natural candidate for a base. We report t-values for the difference in means and medians, where *, **, and *** denote 10%, 5%, and 1% levels of significance, respectively.

Panel A: Assets and Sales

	Overall Sample			
	Assets		Sales	
	Mean	Median	Mean	Median
Focal	\$16,490	\$2,167	\$5,719	\$1,046
ISS Peers	\$16,547	\$2,657	\$5,491	\$1,168
Actual Peers	\$21,392	\$3,726	\$6,930	\$1,756
(ISS-Focal)/(ISS+Focal)	0.0857	0.0785	0.0624	0.0438
(Actual-ISS)/(Actual+ISS)	0.1441	0.1108	0.1472	0.1106
(Actual-Focal)/(Actual+Focal)	0.2237	0.2072	0.2019	0.1621
Significance tests				
ISS - Focal	0.04	29.41***	-0.88	29.70***
Actual - ISS	3.173***	48.15***	4.28***	51.90***
Actual - Focal	3.28***	57.71***	2.62***	59.63***
(ISS-Focal)/(ISS+Focal)	33.11***	33.22***	30.64***	36.51***
Actual-ISS)/(Actual+ISS)	58.35***	54.13***	61.54***	58.39***
(Actual-Focal)/(Actual+Focal)	83.46***	66.84***	77.58***	67.88***

Table 5: Cont'd

	S&P 500 Sample			
	Assets		Sales	
	Mean	Median	Mean	Median
Focal	\$66,143	\$16,557	\$21,361	\$8,979
ISS Peers	\$64,390	\$17,815	\$19,705	\$9,392
Actual Peers	\$77,625	\$24,113	\$21,180	\$11,616
(ISS-Focal)/(ISS+Focal)	0.0456	0.0394	0.0212	0.0272
(Actual-ISS)/(Actual+ISS)	0.1018	0.0813	0.0876	0.0707
(Actual-Focal)/(Actual+Focal)	0.1457	0.1459	0.1088	0.1079
Significance tests				
ISS - Focal	-0.28	6.17***	-1.51*	8.66***
Actual - ISS	2.30***	17.01***	1.79*	16.12***
Actual - Focal	1.70*	18.33***	-0.16	18.13***
(ISS-Focal)/(ISS+Focal)	8.20***	7.58***	6.25***	10.18***
Actual-ISS)/(Actual+ISS)	20.44***	20.12***	19.54***	19.38***
(Actual-Focal)/(Actual+Focal)	25.07***	22.54***	22.27***	21.97***
Non-S&P 500 Sample				
	Assets		Sales	
	Mean	Median	Mean	Median
	Mean	Median	Mean	Median
Focal	\$3,469	\$1,413	\$1,617	\$693
ISS Peers	\$3,974	\$1,666	\$1,759	\$760
Actual Peers	\$6,646	\$2,480	\$2,508	\$1,092
(ISS-Focal)/(ISS+Focal)	0.0962	0.0875	0.0732	0.0489
(Actual-ISS)/(Actual+ISS)	0.1553	0.1193	0.1630	0.1228
(Actual-Focal)/(Actual+Focal)	0.2441	0.2235	0.2263	0.1785
Significance tests				
ISS - Focal	3.46***	29.50***	2.53***	30.58***
Actual - ISS	6.22***	47.32***	10.52***	52.64***
Actual - Focal	7.44***	59.01***	13.27***	60.37***
(ISS-Focal)/(ISS+Focal)	33.04***	33.32***	30.55***	35.60***
(Actual-ISS)/(Actual+ISS)	55.14***	50.37***	59.24***	55.27***
(Actual-Focal)/(Actual+Focal)	82.06***	63.07***	76.45***	64.38***

Table 5: Cont'd

Panel B: CEO Compensation

	Overall Sample					
	Total		Cash		Performance	
	Mean	Median	Mean	Median	Mean	Median
Focal	\$6,116.23	\$3,965.57	\$1,066.11	\$834.81	\$3,530.35	\$2,000.88
ISS Peers	\$6,076.79	\$4,587.42	\$1,084.33	\$948.65	\$3,436.37	\$2,530.77
Actual Peers	\$6,891.94	\$5,391.95	\$1,165.97	\$996.02	\$3,985.10	\$3,112.87
(ISS-Focal)/(ISS+Focal)	0.0744	0.0695	0.0623	0.0686	0.1477	0.0979
Actual-ISS)/(Actual+ISS)	0.0690	0.0517	0.0219	0.0147	0.0806	0.0606
(Actual-Focal)/(Actual+Focal)	0.1388	0.1268	0.0827	0.0869	0.2122	0.1583
Significance tests						
ISS - Focal	-0.43	17.25***	1.25	26.60***	-1.38*	17.22***
Actual - ISS	11.18***	38.63***	7.35***	17.11***	11.81***	35.99***
Actual - Focal	8.13***	36.81***	6.18***	33.60***	6.49***	34.49***
(ISS-Focal)/(ISS+Focal)	24.85***	24.65***	24.99***	29.97***	32.81***	28.27***
Actual-ISS)/(Actual+ISS)	39.99***	40.50***	15.64***	17.28***	34.90***	36.39***
(Actual-Focal)/(Actual+Focal)	47.99***	44.73***	33.61***	37.46***	50.10***	44.29***

Table 5: Cont'd

	S&P 500 Sample					
	Total			Cash		
	Mean	Median	Mean	Median	Mean	Median
Focal	\$13,100.00	\$10,900.00	\$1,644.10	\$1,191.67	\$7,798.56	\$6,407.66
ISS Peers	\$12,400.00	\$11,500.00	\$1,669.54	\$1,393.45	\$7,246.04	\$6,781.97
Actual Peers	\$13,300.00	\$12,200.00	\$1,786.52	\$1,413.48	\$7,833.10	\$7,389.19
(ISS-Focal)/(ISS+Focal)	0.0274	0.0252	0.0736	0.0719	0.0486	0.0271
Actual-ISS)/(Actual+ISS)	0.0348	0.0252	0.0121	0.0076	0.0378	0.0279
(Actual-Focal)/(Actual+Focal)	0.0611	0.0639	0.0853	0.0778	0.0823	0.0583
Significance tests						
ISS - Focal	-2.63***	1.87*	0.49	12.95***	-2.82***	2.65***
Actual - ISS	5.50***	13.74***	3.24***	5.06***	5.45***	13.20***
Actual - Focal	1.02	8.69***	2.51***	15.13***	0.17	8.46***
(ISS-Focal)/(ISS+Focal)	5.03***	4.80***	12.36***	14.54***	6.97***	5.56***
Actual-ISS)/(Actual+ISS)	13.67***	14.17***	3.97***	5.20***	12.59***	13.34***
(Actual-Focal)/(Actual+Focal)	11.54***	11.88***	14.64***	16.82***	12.10***	11.50***

Table 5: Cont'd

	Total		Cash		Performance	
	Mean	Median	Mean	Median	Mean	Median
Focal	\$4,268.92	\$3,137.07	\$912.79	\$750.00	\$2,395.22	\$1,495.20
ISS Peers	\$4,417.01	\$3,735.71	\$930.57	\$849.92	\$2,435.18	\$2,009.44
Actual Peers	\$5,200.76	\$4,454.39	\$1,002.93	\$898.23	\$2,974.75	\$2,469.62
(ISS-Focal)/(ISS+Focal)	0.0869	0.0875	0.0594	0.0681	0.1740	0.1280
Actual-ISS)/(Actual+ISS)	0.0781	0.0630	0.0244	0.0168	0.0920	0.0763
(Actual-Focal)/(Actual+Focal)	0.1595	0.1509	0.0820	0.0893	0.2468	0.2038
Significance tests						
ISS - Focal	2.08**	19.33***	1.56*	22.98***	0.69	18.85***
Actual - ISS	14.69***	37.01***	8.35***	16.83***	14.79***	34.21***
Actual - Focal	12.50***	38.09***	7.14***	29.77***	9.70***	35.45***
(ISS-Focal)/(ISS+Focal)	24.89***	24.74***	21.70***	26.18***	32.55***	28.37***
Actual-ISS)/(Actual+ISS)	37.86***	37.90***	15.52***	16.68***	32.91***	33.76***
(Actual-Focal)/(Actual+Focal)	47.75***	43.45***	30.30***	33.42***	49.66***	43.09***

Table 6: Focal Firm Pressure on ISS Advisory Services

The dependent variable in the regressions is the percent change in mean total CEO compensation in the ISS proposed peer firms. At the time ISS advisors determine their proposed peer firms in Q4 of fiscal year t , the focal firm's performance for the year and the change in focal firm's total compensation is (approximately) known. The regression models measure the influence of focal firm's percent change in CEO total compensation and performance on the percent change in mean total CEO compensation in the ISS proposed peer firms. As a rule of thumb, ISS Proxy Advisors consider focal firms with revenues in the range 40% to 250% of the focal firm's revenues (or assets) qualify to be in the pool of peer firms. Panel A contains results without any controls. Panel B contains results with percent change in focal firm (log) sales and Panel C contains results with % change in focal firm (log) assets. Standard errors are robust and clustered at the firm level. We report t-values where ***, **, * indicate 1%, 5% and 10% levels of significance, respectively.

Panel A: Impact of % change in focal firm CEO compensation and Performance (% change in assets as control)

Variables	Overall Sample			S&P 500 Sample			Non-S&P 500 Sample		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
% change in focal firm CEO total compensation	0.0189** (2.2945)	0.0189** (2.3030)	0.0237*** (2.8914)	0.0443*** (2.6555)	0.0455*** (2.7342)	0.0473*** (2.8760)	0.0137 (1.4872)	0.0135 (1.4724)	0.0188** (2.0622)
Change in stock returns	-0.0496*** (-7.0569)			-0.0496*** (-3.2698)			-0.0501*** (-6.5001)		
Change in excess returns		-0.0476*** (-6.6274)			-0.0450*** (-2.7192)			-0.0483*** (-6.2415)	
Change in ROA			-0.0295 (-0.5290)			-0.1010 (-1.5612)			-0.0283 (-0.4404)
% Change in Assets	0.1540*** (7.3781)	0.1526*** (7.3337)	0.1570*** (7.4929)	0.0155 (0.4901)	0.0153 (0.4769)	0.0219 (0.6682)	0.1794*** (7.9119)	0.1780*** (7.8740)	0.1825*** (7.9917)
Constant	0.0548*** (13.7873)	0.0553*** (13.9314)	0.0552*** (13.8750)	0.0375*** (6.3228)	0.0382*** (6.4292)	0.0381*** (6.3138)	0.0596*** (12.4302)	0.0601*** (12.5473)	0.0598*** (12.4575)
Observations	5,553	5,553	5,600	1,190	1,190	1,198	4,363	4,363	4,402
Adjusted R-squared	0.0274	0.0277	0.0170	0.0178	0.0153	0.0085	0.0307	0.0313	0.0201
F test model	37.97***	34.81***	22.10***	6.716***	5.802***	3.605***	36.53***	34.23***	23.31***

Panel B: Impact of % change in focal firm CEO compensation and Performance (% change in sales as control)

Variables	Overall Sample				S&P 500 Sample			Non-S&P 500 Sample		
	Dependent Variable: % change in mean CEO compensation of ISS peers									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
% change in focal firm CEO total compensation	0.0204** (2.4433)	0.0204** (2.4453)	0.0250*** (3.0085)	0.0443*** (2.6460)	0.0455*** (2.7237)	0.0469*** (2.8352)	0.0158* (1.6941)	0.0156* (1.6716)	0.0207** (2.2343)	
Change in stock returns	-0.0490*** (-6.9548)			-0.0495*** (-3.2250)			-0.0496*** (-6.4218)			
Change in excess returns		-0.0475*** (-6.5729)			-0.0448*** (-2.6725)			-0.0483*** (-6.2140)		
Change in ROA			-0.0298 (-0.4777)			-0.1130* (-1.6961)			-0.0093 (-0.1261)	
% Change in Sales	0.0579*** (4.4422)	0.0576*** (4.4239)	0.0656*** (4.7902)	0.0109 (0.2796)	0.0111 (0.2819)	0.0358 (0.8435)	0.0584*** (4.3167)	0.0581*** (4.2985)	0.0641*** (4.4740)	
Constant	0.0618*** (16.2357)	0.0623*** (16.3644)	0.0620*** (16.2551)	0.0380*** (6.4919)	0.0387*** (6.5894)	0.0383*** (6.4646)	0.0686*** (15.0175)	0.0691*** (15.1172)	0.0688*** (15.0237)	
Observations	5,553	5,553	5,600	1,190	1,190	1,198	4,363	4,363	4,402	
Adjusted R-squared	0.0186	0.0190	0.0089	0.0177	0.0152	0.0089	0.0184	0.0193	0.0085	
F test model	25.30***	23.30***	11.04***	6.748***	5.848***	3.873***	21.04***	20***	8.895***	

Table 7: Changes in the composition of ISS proposed peer

This table contains regressions estimating the influence of focal firms on the turnover of ISS peers. ISS peer turnover is measured by *ISSReplace* (the fraction of newly added peers by ISS during the current fiscal year) and *Ab_ISS_Act* (Abnormal fraction of ISS Peers from Actual Peers). The variable *Ab_ISS_Act_q4* is equal to 1, denoting the fourth quartile of *Ab_ISS_Act*. Panel A presents descriptive statistics of the two variables. Panel B contains estimates of the influence of percent change in focal firm CEO compensation and performance (market-based and accounting metrics) on the turnover of ISS peers. Logit regressions are used when the dependent variable is *Ab_ISS_Act_q4*; Panel C contains estimates of the influence of percent change in the mean CEO compensation of actual peers and focal firm performance (market-based and accounting metrics) on the turnover of ISS peers. All the regressions contain the year and industry fixed effects. Standard errors are robust and clustered at the firm level. We report t-values where ***, **, * indicate 1%, 5% and 10% levels of significance.

Panel A: Descriptive Statistics:

Variable	Min	p25	p50	Mean	p75	Max	T-Test (Mean different from zero)	T-Test (Difference in mean Non- S&P 500 and S&P 500)
ISSReplace	Overall	0.0000	0.1667	0.3000	0.3560	0.5000	1.0000	120.61***
	S&P500	0.0000	0.1176	0.2308	0.2907	0.4211	1.0000	47.53***
	NonS&P500	0.0000	0.1765	0.3182	0.3722	0.5200	1.0000	111.92***
Ab_ISS_Act	Overall	-0.9444	-0.0250	0.0148	0.0470	0.1017	0.8333	25.68***
	S&P 500	-0.9286	-0.0370	0.0000	0.0373	0.1000	0.7500	7.69***
	Non-S&P 500	-0.9444	-0.0229	0.0174	0.0494	0.1022	0.8333	25.47***

1. Although, *ISSReplace* is a variable that has values between 0 and 1, we report the significance results for completion.

Panel B: Influence of percent change in focal firm CEO compensation

Variables	Overall Sample			S&P 500			Non-S&P 500		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
% change in focal firm CEO total compensation	0.0137** (2.3291)	0.0134** (2.2877)	0.0154*** (2.6203)	0.0075 (0.5697)	0.0077 (0.5831)	0.0076 (0.5802)	0.0122* (1.9554)	0.0119* (1.9126)	0.0141** (2.2590)
Change in stock returns	-0.0200*** (-3.7229)			-0.0273* (-1.8456)					-0.0187*** (-3.2981)
Change in excess returns		-0.0199*** (-4.1561)			-0.0255* (-1.6922)				-0.0185*** (-3.7637)
Change in ROA			-0.0487** (-2.4890)			-0.1636** (-2.2753)			-0.1045*** (-2.7845)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.4873*** (41.8932)	0.4843*** (41.6537)	0.4830*** (41.8077)	0.5405*** (29.1256)	0.5360*** (29.1564)	0.5358*** (29.1708)	0.4754*** (32.3377)	0.4726*** (32.1268)	0.4708*** (32.3309)
Observations	5,553	5,553	5,600	1,190	1,190	1,198	4,363	4,363	4,402
Adjusted R-squared	0.2780	0.2786	0.2788	0.4163	0.4163	0.4185	0.2617	0.2623	0.2621
F test model									

Table 7: Cont'd

Variables	Overall Sample			S&P 500			Non-S&P 500		
	(1) Ab ISS Act	(2) Ab ISS Act	(3) Ab ISS Act	(4) Ab ISS Act	(5) Ab ISS Act	(6) Ab ISS Act	(7) Ab ISS Act	(8) Ab ISS Act	(9) Ab ISS Act
% change in focal firm CEO total compensation	0.0037 (0.9372)	0.0036 (0.9094)	0.0041 (1.0407)	-0.0024 (-0.1617)	-0.0025 (-0.1704)	-0.0031 (-0.2117)	0.0038 (0.9895)	0.0037 (0.9725)	0.0043 (1.1561)
Change in stock returns	-0.0066* (-1.7123)			0.0030 (0.2223)			-0.0070* (-1.8082)		
Change in excess returns		-0.0070** (-2.1162)			-0.0008 (-0.0584)			-0.0067** (-2.0577)	
Change in ROA			-0.1258*** (-8.6432)			-0.0211 (-0.4602)			-0.0534** (-2.5680)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.0768*** (5.7749)	0.0758*** (5.7110)	0.0772*** (5.8766)	0.1605*** (6.6653)	0.1611*** (6.7294)	0.1621*** (6.7864)	0.0428*** (2.7128)	0.0418*** (2.6487)	0.0440*** (2.8350)
Observations	5,493	5,493	5,539	1,163	1,163	1,171	4,330	4,330	4,368
Adjusted R-squared	0.1375	0.1378	0.1392	0.2045	0.2044	0.2084	0.1338	0.1340	0.1349
F test model	49.70***	49.79***	50.30***	15.41***	15.41***	16***	38.53***	38.59***	38.65***

Table 7: Cont'd

Variables	Overall Sample			S&P 500			Non-S&P 500		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
% change in focal firm CEO total									
compensation	0.0172 (1.5469)	0.0170 (1.5360)	0.0188* (1.6999)	0.0184 (0.6530)	0.0181 (0.6449)	0.0177 (0.6330)	0.0162 (1.3542)	0.0162 (1.3543)	0.0182 (1.5243)
Change in stock returns	-0.0278** (-2.4613)			-0.0055 (-0.1804)			-0.0292** (-2.4091)		
Change in excess returns		-0.0251** (-2.5259)			-0.0125 (-0.3974)			-0.0247** (-2.3487)	
Change in ROA			-0.0764 (-1.1916)			-0.0698 (-0.4758)			-0.0776 (-1.1080)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.4484*** (16.4902)	0.4441*** (16.3787)	0.4462*** (16.5422)	0.5942*** (12.3317)	0.5933*** (12.4333)	0.5966*** (12.5060)	0.3943*** (11.9666)	0.3898*** (11.8472)	0.3927*** (12.0325)
Observations	5,553	5,553	5,600	1,190	1,190	1,198	4,363	4,363	4,402
Adjusted R-squared	0.1257	0.1258	0.1264	0.2264	0.2265	0.2311	0.1093	0.1093	0.1090
F test model	47.35***	47.26***	47.38***	18.14***	18.12***	19.01***	35.10***	34.96***	34.55***

Table 7: Cont'd

Panel C: Influence of percent change in mean CEO compensation of actual peers

Variables	Overall Sample			S&P 500			Non-S&P 500		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
% change in actual peer CEO total compensation	0.0103 (1.0719)	0.0101 (1.0487)	0.0126 (1.3123)	0.0563* (1.9494)	0.0559* (1.9390)	0.0519* (1.8031)	0.0003 (0.0265)	0.0001 (0.0078)	0.0031 (0.3090)
Change in stock returns	-0.0211*** (-4.1303)			-0.0316*** (-2.2794)				-0.0196*** (-3.6433)	
Change in excess returns		-0.0198*** (-4.3839)			-0.0290** (-2.0872)			-0.0184*** (-3.9369)	
Change in ROA			-0.1185*** (-3.6888)			-0.0899 (-1.3058)			-0.1179*** (-3.4167)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.4916*** (43.1740)	0.4883*** (42.9134)	0.4874*** (43.0593)	0.5460*** (29.7147)	0.5409*** (29.7848)	0.5410*** (29.7343)	0.4817*** (33.5357)	0.4787*** (33.2998)	0.4772*** (33.5128)
Observations	6,211	6,211	6,264	1,292	1,292	1,305	4,919	4,919	4,959
Adjusted R-squared	0.2734	0.2738	0.2741	0.4197	0.4196	0.4195	0.2573	0.2577	0.2579
F test model									

Table 7: Cont'd

Variables	Overall Sample			S&P 500			Non-S&P 500		
	(1) Ab ISS Act	(2) Ab ISS Act	(3) Ab ISS Act	(4) Ab ISS Act	(5) Ab ISS Act	(6) Ab ISS Act	(7) Ab ISS Act	(8) Ab ISS Act	(9) Ab ISS Act
% change in actual peer CEO total compensation	0.0039 (0.6261)	0.0038 (0.6147)	0.0048 (0.7775)	0.0366 (1.4826)	0.0366 (1.4831)	0.0331 (1.3583)	0.0003 (0.0265)	-0.0003 (-0.0398)	0.0012 (0.1895)
Change in stock returns	-0.0084** (-2.3155)			-0.0010 (-0.0792)			-0.0196*** (-3.6433)		
Change in excess returns		-0.0080** (-2.5351)			-0.0038 (-0.3008)			-0.0077** (-2.4607)	
Change in ROA			-0.0510*** (-2.8086)			0.0018 (0.0412)			-0.0596*** (-3.0585)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.0754*** (5.9453)	0.0741*** (5.8523)	0.0756*** (6.0272)	0.1563*** (6.6871)	0.1562*** (6.7236)	0.1578*** (6.8039)	0.4817*** (33.5357)	0.0429*** (2.8767)	0.0450*** (3.0630)
Observations	6,148	6,148	6,200	1,263	1,263	1,276	4,919	4,885	4,924
Adjusted R-squared	0.1322	0.1323	0.1338	0.2034	0.2035	0.2084	0.2573	0.1265	0.1274
F test model	53.13***	53.16***	53.98***	16.43***	16.42***	17.11***	106***	40.91***	41.25***

Table 7: Cont'd

Variables	Overall Sample			S&P 500			Non-S&P 500		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
% change in actual peer CEO total compensation	-0.0105 (-0.5484)	-0.0104 (-0.5450)	-0.0065 (-0.3437)	0.1482** (2.4280)	0.1480** (2.4270)	0.1461** (2.4215)	-0.0274 (-1.3588)	-0.0271 (-1.3448)	-0.0226 (-1.1272)
Change in stock returns	-0.0298*** (-2.7651)			-0.0133 (-0.4627)			-0.0314*** (-2.7262)		
Change in excess returns		-0.0246** (-2.5606)			-0.0171 (-0.5859)			-0.0245** (-2.4141)	
Change in ROA			-0.0835 (-1.3892)			0.0101 (0.0709)			-0.0963 (-1.4621)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ind FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.4439*** (16.9295)	0.4393*** (16.8004)	0.4419*** (16.9763)	0.5938*** (12.7390)	0.5917*** (12.8277)	0.5961*** (12.9294)	0.3906*** (12.2762)	0.3857*** (12.1427)	0.3887*** (12.3291)
Observations	6,212	6,212	6,265	1,292	1,292	1,305	4,920	4,920	4,960
Adjusted R-squared	0.1191	0.1189	0.1197	0.2212	0.2214	0.2269	0.1041	0.1038	0.1036
F test model	49.76***	49.52***	49.90***	18.65***	18.63***	19.65***	37.05***	36.78***	36.57***

Table 8: Impact of Change in Mean Composition of ISS Proposed Gear group on ISS Peer Compensation, Assets, and Sales

This table reports results documenting impact of the turnover of ISS peers measured by *ISSReplace* (the fraction of newly added peers by ISS during the current fiscal year), *Ab_ISS_Act* (Abnormal fraction of ISS Peers from Actual Peers), and *Ab_ISS_Act_q4* an indicator variable denoting the fourth quartile of *Ab_ISS_Act* on percent change in mean ISS peer CEO Total Compensation, mean ISS peer assets. All the regressions contain the year and industry fixed effects. Standard errors are robust and clustered at the firm level. We report t-values where ***, **, * indicate 1%, 5% and 10% levels of significance.

Variable	ISS Peers (Overall Sample)					
	% Change in Mean Peer Log CEO TC	% Change in Mean Peer Log CEO TC	% Change in Mean Peer Log CEO TC	% change in Mean Peer Assets	% change in Mean Peer Assets	% change in Mean Peer Assets
ISS_Replace	0.1589*** (6.2498)	0.2118*** (6.7626)	0.0660*** (6.6116)	0.1893*** (5.0733)	0.2416*** (5.9054)	0.0840*** (6.3800)
Ab_ISS_Act						
Ab_ISS_Act_q4						
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.0107 (-0.4610)	0.0523*** (2.4733)	0.0373* (1.7850)	0.0200 (0.7705)	0.0921*** (4.4088)	0.0750*** (3.6046)
Observations	6,268	6,204	6,270	6,268	6,204	6,270
Adj-Rsquared	0.0320	0.0317	0.0295	0.0377	0.0362	0.0359
F-test	13.42***	14.10***	13.80***	12.99***	14.57***	14.89***

ISS Peers (S&P 500 sample)											
Variable	% Change in Mean Peer Log CEO TC	% Change in Mean Peer Log CEO TC	% Change in Mean Peer Log CEO TC	% change in Mean Peer Assets	% change in Mean Peer Assets	% change in Mean Peer Assets					
ISS_Replace	0.1310*** (2.9306)	0.1427*** (3.6793)	0.0547*** (3.1658)	0.1250 (1.6236)	0.1167* (1.7493)	0.0749*** (2.5566)					
Ab_ISS_Act											
Ab_ISS_Act_q4											
Year FE	Yes	Yes	Yes	Yes	Yes	Yes					
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes					
Constant	0.0001 (0.0034)	0.0470*** (2.3208)	0.0384* (1.7679)	0.1287*** (2.7107)	0.1776*** (4.9568)	0.1515*** (4.1522)					
Observations	1306	1,277	1,306	1,306	1,277	1,306					
Adj-Rsquared	0.0693	0.0730	0.0683	0.0598	0.0599	0.0636					
F-test	6.639***	7.052***	6.806***	4.547***	4.707***	5.018***					
ISS Peers (Non-S&P 500 Sample)											
Variable	% Change in Mean Peer Log CEO TC	% Change in Mean Peer Log CEO TC	% Change in Mean Peer Log CEO TC	% change in Mean Peer Assets	% change in Mean Peer Assets	% change in Mean Peer Assets					
ISS_Replace	0.1481*** (4.9551)	0.2282*** (5.4364)	0.0660*** (5.6506)	0.2019*** (4.6734)	0.2762*** (5.3963)	0.0832*** (5.5925)					
Ab_ISS_Act											
Ab_ISS_Act_q4											
Year FE	Yes	Yes	Yes	Yes	Yes	Yes					
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes					
Constant	-0.0011 (-0.0355)	0.0622*** (2.0511)	0.0660*** (5.6506)	-0.0171 (-0.5366)	0.0652*** (2.4966)	0.0467* (1.7859)					
Observations	4962	4,927	4,964	4,962	4,927	4,964					
Adj-Rsquared	0.0283	0.0294	0.0274	0.0349	0.0329	0.0314					
F-test	10.04***	10.74***	10.57***	10.05***	11.48***	11.38***					