Do Institutional Investors Monitor their Large vs. Small Investments Differently? Evidence from the Say-On-Pay Vote

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Abstract

We consider institutional voting on Say-On-Pay as a function of the size of an institution's position. Smaller positions, measured either as percent of a firm held or portfolio weight invested in a firm, lead to lower support of management in SOP voting, consistent with small-scale investors having limited incentives and opportunity to participate in governance through alternative venues. This result is largest when the firm has significant blockholder presence, and holds independent of ISS recommendations. We also find that the size of investment at the institutional advisor level, rather than the fund level, better predicts voting. Hence, in companies with a dispersed shareholder structure, the SOP vote is particularly likely to be used to oppose management. To summarize, we find that, when a low-cost monitoring opportunity is made available, small institutional positions, which aggregate to a large level of ownership across institutions, can play a meaningful role in corporate governance.

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1. Introduction

What is the role of small institutional shareholdings in corporate governance? It is commonly assumed that large institutional shareholders will be more active with respect to governance matters, as they are positioned to internalize more of the benefits of the governance actions they undertake. However, small institutional shareholders, in aggregate, own majority positions in most public firms.[1] If these shareholders can take actions that are of relatively low cost, they may, as a group, play an important role in corporate governance. The growth of various proxy advisory firms (e.g., Institutional Shareholder Services) has been partially driven by this motivation to lower the costs of monitoring by smaller shareholders. In this paper, we examine small shareholder participation in a low-cost monitoring opportunity, namely, "Say-On-Pay" (SOP) voting on executive compensation.

The SOP vote, introduced in 2011, allows shareholders of U.S.-listed companies to approve or disapprove of the compensation awarded to the firm's executive officers. This is the only vote that occurs routinely, and offers shareholders a direct opportunity to provide feedback focused on the quality of a firm's (named) executives. Prior evidence suggests that SOP is value-enhancing (Ferri and Maber, 2013; Iliev and Vitanova , 2015; Cuñat, Gine and Guadalupe 2016), and that it can have a meaningful impact on limiting compensation levels (Ertimur, Ferri, and Muslu 2010; Ertimur, Ferri, and Oesh, 2013; Correa and Lel, 2016; Denis, Jochem, and Rajamani, 2017). Moreover, practitioners have suggested that the SOP vote provides a mechanism for shareholders to provide communication to managers regarding their general level of satisfaction with managerial performance (Bew and Fields, 2012; Burr, 2012; Chasan, 2012; Spencer Stuart, 2014).

In this paper, we consider SOP voting as a function of the size of an institutional investor's position in a firm. We hypothesize that institutional investors will be particularly unlikely to voice displeasure through SOP votes for their large-scale investments relative to their small-scale investments. That is, the large shareholdings of an institution are more influential in their managed portfolio returns, and, thus, the institution will focus its efforts on these firms in their monitoring and feedback to management.[2] Such feedback mechanisms include direct discussions with management, which is receptive to such discussions from its large shareholders, and possibly to signaling to management (e.g., through the media) the institution's evaluation of management's performance.

[1] By "small institutional shareholders," we are referring to relatively small shareholdings by institutional investors of all sizes; e.g., shareholdings by an institution that are lower than 0.1% of the outstanding shares of a corporation.

[2] Institutional investors face a barrage of decisions on their numerous portfolio holdings during proxy season. From our discussions with Institutional Shareholder Services and with some institutional investors, we have learned that the vast majority of attention during proxy season is paid to the largest shareholdings of a particular institution.

In the case of impending SOP votes, private discussions with large shareholders are particularly likely to occur. In fact, Spencer Stuart (2014) report that the most frequent issue for which management proactively reaches out to their large shareholders is an upcoming SOP vote. However, as McCahery, Sautner, and Starks (2016) argue, such monitoring may occur discretely through "behind the scenes intervention". The opposite side of our hypothesis (specified above) is that, for their small-scale investments, institutions are more likely to voice displeasure through SOP, since other monitoring opportunities are less feasible for them, given their small positions.

In addition to the ability of shareholders with a large-scale investment to participate in governance outside of the confines of the actual SOP vote, there is also the more immediate issue that negative SOP votes may convey negative information to markets, resulting in a lower stock price. This negative news affects market prices, to the extent that large shareholders want to delay any negative price impact for their own incentive reasons (e.g., attracting fund flows, which are highly dependent on short-run recent performance, e.g., Sirri and Tufano, 1998) or to convince management to make changes to preclude negative outcomes. Accordingly, for large-scale investments, investors may be particularly averse to speeding up this negative information revelation, since a negative return (followed by a vote) for a large-scale investment will have a particularly large effect on the overall performance of an investor's portfolio over the short-run. Hence, we hypothesize that investors will tend to vote more positively (i.e., in support of management) when they hold a large stake in a company.

Further, we hypothesize that any negative relation between SOP voting and position size will be particularly evident when positions are measured at the institutional advisor level, rather than at the mutual fund level. Our reasoning is that decisions on voting are a costly and time-consuming process, sometimes accompanied by direct discussions with management. These costs are likely magnified by the short time frame of the busy proxy season, in which investors are voting on a large number of issues at many different firms. In addition, an institutional advisor with a large aggregate position in a firm, through many smaller positions at funds it oversees, will possess more power to influence management through direct communications. Consequently, we expect many institutions to make voting decisions at the institutional level, in which case the incentives of the institution as whole, and, therefore, the characteristics of the institution's aggregate portfolio, should be the best predictor of voting.

Our empirical strategy is as follows. Given that institutions are only required to publicly report votes for their mutual funds, as a proxy for the institution's overall SOP support rate, we aggregate

the votes cast by all mutual funds advised by an institution. Then, we estimate models explaining this support rate as a function of (a) the fraction of an institution's portfolio invested in a given company's equity (portfolio weight), and (b) the fraction of the total market capitalization of a company held by the institution (fraction held). As hypothesized, we find that higher portfolio weights and higher fraction held, measured at the institutional level, lead to a greater support rate in SOP voting (i.e., voting in support of management). For example, a one S.D. increase in the fraction of company's shares held by an institution is expected to decrease, by 11.8%, the SOP opposition propensity, relative to its mean. This effect is largest when the firm has a significant blockholder presence; thus, small institutional shareholders are most likely to use SOP as a governance mechanism in the face of blockholder presence. We detect similar behavior in other voting events, including the election of corporate directors, but the effect is largest and most evident for SOP votes.

To help understand some of the above-noted differing motivations of small versus large shareholders in SOP votes, we consider the market reaction to SOP vote outcomes. Here, we find that the revelation of a low support rate is followed by negative cumulative abnormal returns (CAR). For example, the abnormal return of companies that receive SOP support rates below 70% is approximately 0.8% smaller, compared to that of companies that receive support rates equal to or exceeding 70% (on average across firms during a nine-day event window). We confirm in our analysis that the abnormal CAR is not driven by other proposals. Moreover, some of these vote outcomes are associated with much more extreme negative returns.[3] To the extent that large shareholders wish to avoid the realization of these negative returns, their relatively more positive voting behavior on SOP may be part of an optimal strategy, given their position size.

To investigate our hypothesis that voting is largely driven by the magnitude of an investment at the aggregate institutional level, we consider models that allow for both institutional and fund-level characteristics to predict voting behavior. In the case of portfolio weights, we find that the institutional level variable has an estimated effect on voting that is an order of magnitude larger than its fund level analog. In the case of fraction of a firm's shares held, the institutional level variable is highly significant, while the fund level analog is smaller and less significant. Thus, the data clearly suggest that these voting decisions are determined by an economic calculus that typically takes place at the aggregated institutional level.

To explore the robustness of our findings to various sampling choices, we demonstrate that

[3] For example, in 2011, Talbots received only 47.41% support on the SOP vote, and experienced a -15.42% CAR in a nine-day window surrounding the vote.

our findings hold in various subsamples constructed based on: (1) whether ISS recommends a vote for or against SOP, (2) whether the firm's market capitalization is above or below $10 billion, (3) whether the fund is an index fund or not. The general patterns we detect regarding position size and voting hold in all of the identified subsamples, although some differences across subsamples are detected. Although, clearly, ISS influences the votes of financial institutions (Iliev and Lowry, 2015; Malenko and Shen, 2015), with respect to the SOP vote, we find that institutions will use the vote to oppose management, particularly for their small-scale investments, compared to their large scale investments, *both* when ISS recommends to vote "against", and when it recommends to vote "for" SOP. This pattern is different from that documented for non-SOP votes (Iliev and Lowry, 2015).[4]

In addition to considering shareholders viewed in isolation, we also consider interactions in voting behavior between different shareholders in the totality of the equity capital structure of a firm. At the company level, we find that an increasing fraction of shares held by 5% blockholders (i.e, above 5% ownership by either institutions or non-institutional investors) leads to a larger support rate for management on SOP. However, this greater support rate for management at the company level, when blockholders are present, is mitigated by a decreased propensity of small position institutions, to support management in the presence of such blockholders in the capital structure. Thus, an interesting equilibrium appears to emerge, in which shareholders condition their votes on the anticipated votes by other parties in the capital structure. Our findings here are consistent with an outcome in which large blockholders are generally more inclined to vote with management, compared with small institutional holders, to protect their interests (possibly because they have private negotiating power with management), but, at the same time, small shareholders may vote against management in cases where management appears to be ineffective in increasing shareholder value, in anticipation that this may force blockholder monitoring and discipline following the realization of a low support rate.

We recognize that the magnitude of a fund's or an institution's investment may well be endogenously chosen, meaning that funds and institutions will choose to invest a large magnitude in a company they are particularly enthusiastic about, and invest a smaller magnitude in a company they find less attractive. We acknowledge and agree that it is possible that the higher support rates we detect

[4] Iliev and Lowry (2015) document that, in the pre-SOP period, *conditional on* Institutional Shareholder Services (ISS), a leading proxy advisory service, recommending to vote against management, funds holding a large stake are less likely to oppose management, as compared to funds holding a smaller stake. Our results during the SOP period show that, with respect to the SOP vote, this pattern not only applies to the subset of SOP votes where ISS recommends to vote against management, but it also applies to the larger subset where ISS recommends to vote with management. Put differently, we find that funds holding a large stake are less likely to oppose management *across the board*, regardless of the recommendation of ISS.

for larger positions simply reflect the general enthusiasm of the investor for both the firm and its management. However, if institutions or funds do not particularly value a certain stock, as reflected in the small magnitude of their investment, this does not necessarily indicate that funds and institutions will use the SOP vote to express their displeasure. They may opt to avoid confronting management and vote in support of management for their small-scale investments. We are able to demonstrate that funds and institutions do tend to refrain from voicing their displeasure via the SOP vote for their large-scale investments, but do, in fact, use the SOP vote to oppose management for their small-scale investments.

Nevertheless, to further buttress our conclusion, we do conduct an instrumental variable analysis that addresses the above noted endogeneity concern. Our analysis focuses on index funds driven holdings. Because index funds do not have discretion on their investment allocations, their investment allocations provide a laboratory for examining the relation between the magnitude of a holding, and the SOP vote cast, when the magnitude of the investment is exogenously determined. We instrument for the fraction of a company's shares held by an institution, and similarly, that held by a fund, using the Russell discontinuity method (see Crane et al., 2016; Boone and White, 2016; and Appel, et al., 2016b). This analysis confirms the patterns described above—institutions and funds tend to be more likely to oppose management on the SOP vote when they hold a smaller stake.

We believe that our study makes several substantive contributions. First, we provide evidence indicating that, on the stock level, in companies with a dispersed shareholder structure (i.e.,a more disperse mixture of small- and large-scale shareholders), SOP vote outcomes are more likely to be unsupportive of management, because small-scale investors are increasingly likely to oppose management on the SOP vote, while larger investors pursue more subtle governance strategies (e.g., directly speaking with management, using "behind the scenes" actions). Thus, small investors can play a meaningful role in corporate governance, when the costs of doing so are relatively low.

A second contribution of our study is that we show that voting decisions are potentially conditioned on the presence of *other* shareholders in a firm. In particular, blockholder presence is associated with a general tendency for institutions with small-scale investments to more heavily oppose management on the SOP vote. More generally, it appears that size-diversity among shareholders, which may reflect varying shareholder interests, tends to stir opposition by small shareholders.

Finally, we believe our study is the first to examine how the magnitude of an investment at the institution level relates to a vote cast. Because our analysis includes the magnitude of an investment both at the institution and at the fund level, we are able to show that the magnitude of an investment

at the institutional level dominates the magnitude on the fund level with respect to the SOP vote cast. We are able to show that the magnitude on the institution level has an important role in voting behavior, above and beyond other owner characteristics that have been emphasized in the prior literature (e.g., Matvos and Ostrovsky, 2010; Morgan, Poulsen, Wolf, and Yang, 2011; Iliev and Lowry, 2015; Aggarwal, Erel and Starks, 2015, Dimmock, Gerken, Ivkovich, and Weisbenner, 2015; Appel, Gormley and Keim, 2016a; Davis and Kim, 2007; Poulsen, Wolf, and Yang, 2011; Ertimur, Ferri, and Oesch, 2013). Iliev and Lowry (2015) provide important evidence on how portfolio characteristics, including the magnitude of an investment at the fund level, relate to the votes cast by funds on votes other than SOP. We are able to build on their findings by identifying institutional-level holding variables as a key determinant of voting behavior with respect to SOP.[5] Our findings indicate that, when an overall governance monitoring opportunity is made available to shareholders, voting decisions are typically made at the institution level, while considering the aggregate position of the institution, perhaps because institutions manage governance issues (including communication with management) at the institutional level, thereby allowing them to benefit from economies-of-scale in analyzing the quality of corporate governance.

2. Background, Data and Descriptive Statistics

2.1. Background and Motivation

The seminal papers of Grossman and Hart (1980), Shleifer and Vishny (1986), and Hart (1995) all emphasize the free-rider problem. These papers predict that large shareholders may take costly actions, such as engaging in a proxy fight, making a tender offer, or promoting a takeover, if the private benefits of such actions exceed the costs; small shareholders will "free-ride" and benefit from the costly actions taken by large shareholders. McCahery, Sautner, and Starks (2016), who survey large investors—those "most likely to have the resources for and interest in pursuing shareholder engagement"—highlight that such shareholders can also engage in continuous dialogue and monitoring of management. All these papers focus on costly actions that large shareholders may take.

In this paper, we focus on the mandatory non-binding Say on Pay (SOP) vote, which took effect starting January 21, 2011, and offered shareholders an unprecedented, relatively "low-cost"

[5] Our analysis includes an institution (or alternatively, fund) fixed-effect, which importantly controls for the tendency of an institution (fund) to vote with or against management, as a policy at the institutional adviser (fund) level. Indeed, we will show evidence that certain institutions tend to vote with or against management persistently across companies and time.

opportunity to provide feedback to management on a regular basis. In the 2011-2013 period examined, the vote applied to companies with a public equity free float value exceeding $75 million.[6]

Other than SOP, the only issues that are raised routinely at shareholder meetings are the election of the directors proposed by management, and the ratification of the auditors. SOP is unique in that if offers shareholders an opportunity to provide feedback directed to management. While SOP is formally about the compensation awarded to the CEO and the other four named executives, this vote is about whether these executives deserve to receive their compensation, and, therefore, it reflects shareholders' perception on management performance.[7] We believe that, for this reason, SOP has been credited for increasing the dialogue between shareholders and management (Larcker, McCall, Ormazabal, and Tayan, 2012).[8]

We hypothesize that institutional shareholders, who have a fiduciary duty to vote, are especially likely to vote against SOP and, thereby, to oppose management for their small-scale investments, as opposed to their large-scale investments. Our reasoning is as follows. First, as mentioned above, large-scale shareholders have alternatives to the SOP vote—they likely have the ability to let their voice be heard by management via "behind-the-scenes intervention" (McCahery, Sautner, and Starks, 2016). Indeed, Ng and Troianovski (2015) claim that, each year, thousands of meetings are held between company management and its large shareholders. The SOP vote can serve as a catalyst to hold such meetings. Small shareholders typically do not have direct access to management, and moreover, are not likely to engage in costly actions such as proxy fights, because for small shareholders, they are too costly to coordinate.[9]

The second reasoning for our hypothesis above is that publicly disclosing discontent with

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[6] In 2011, each company held a frequency SOP vote, in which shareholders determined whether they wished to hold the SOP vote every one, two, or three years. Kronlund and Sandy (2015) find that 89.7% of the companies voted in favor of an annual SOP vote.

[7] In our discussions with Institutional Shareholder Services (ISS) (a leading proxy advisory company), their researchers have told us that a negative vote of as little as 30% is viewed quite unfavorably by a typical company's board of directors.

[8] While the SEC may have understood this effect of SOP on small-shareholder governance while preparing the SOP rule, we could find no clear reference to such a motivation in the SEC's final rule. In general, the final rule refers to the Dodd Frank Act (DFA) as motivation for implementing the rule. In turn, DFA does not clearly spell out the need to control excessive executive compensation as a structure that may have the consequence of improving the voice of small shareholders. Nevertheless, our results support that exactly this effect has resulted. See https://www.sec.gov/rules/final/2011/33-9178.pdf for the final rule.

[9] We note that, for every proposal bought up for vote at a shareholders' meeting, management issues a recommendation whether to vote for or against the proposal. For all SOP proposals, unsurprisingly, management has issued a recommendation to vote for SOP. Hence, there exists no variation in this variable, and accordingly, it is not addressed in this study.

management may decrease returns (at least in the short term), which could pose a concern for investors with respect to their large portfolio-weight investments. We will empirically examine whether, indeed, low SOP support rates lead to lower returns.

In addition, we hypothesize that the abovementioned pattern of shareholders opposing SOP for their small-scale holdings is likely to be prevalent, particularly on the institutional level, and, to a lesser extent, on the fund level, since we expect there to be some scale economies in voting.

Finally, we expect to find that the presence of a large non-insider blockholder motivates management to respond to a negative (or somewhat negative) SOP vote, as a large blockholder can pressure management to respond promptly to the negative SOP feedback through direct methods of communication (Levit and Malenko, 2011).

2.2. Data

Starting January 21, 2011, the SOP vote applied to all companies listed in the United States with a public free float exceeding $75 million. Approximately 2,200 companies fall under this definition in the average year. Since we wish to avoid a selection bias (e.g., examining only the S&P 1500 companies) we collect data for the 2011-2013 period from data sources that cover the universe of the companies that were required to hold a SOP vote.

Data on company performance is obtained from CRSP and Compustat. Data on executives and their compensation is obtained from Institutional Shareholder Services (ISS). Data on mutual fund holdings is obtained from the CRSP mutual fund database, and from the Thomson s-12 mutual fund holding files. Data on institutional shareholdings at the advisor level (13(f)) is obtained from the Thomson s-34 files. In Appendix A, we describe the multiple procedures we follow to match the Thomson s-12, Thomson s-34, and CRSP mutual fund databases to the ISS voting analytics dataset. Data on shareholder composition, including blockholders, is obtained from GMI ratings. Data on peer-companies selected to determine the executive's compensation is obtained from Institutional Shareholder Services (ISS). These data are extracted, by ISS, from the DEF 14-A filings of the corporations.[10]

Voting outcomes are obtained from the ISS Voting Analytics database. This dataset documents the aggregate vote outcomes for each proposal that came up for a vote at a shareholder meeting. These outcomes are generally reported in an 8-K filing, and occasionally in a 10-Q or 10-K

[10] We met with ISS, in person, several times in order to better understand the SOP voting data. In addition, ISS helped us in formulating expectations about how institutional investors vote on SOP.

filing. In addition, the ISS Voting Analytics database includes data on the votes cast by mutual funds, which are sourced from the N-PX form that mutual funds submit annually to the SEC. For each issue discussed at a shareholder meeting, the ISS dataset also includes management's recommendation on how shareholders should vote. With respect to the SOP votes examined in this paper, the ISS voting analytics database includes the votes cast by 8,307 mutual funds that are operated by the 357 largest investment advisors.

2.3. Descriptive Statistics

We start by highlighting the large impact institutions and mutual funds have on the outcome of votes by estimating the percentage of voted shares cast by institutions and funds. We first estimate this percentage for institutions by using data reported in ProxyPulse (2014), published by Broadridge—the only company through which shareholders can submit their votes electronically (which is how the vast majority of shareholders vote). ProxyPulse (2014) reports that, for S&P 1500 companies, 90% of all institutional shareholdings are voted, while only 29% of all retail shareholdings are voted. ProxyPulse (2014) also reports that institutions own, on average, 70% of the outstanding shares of these companies, while the remaining 30% are held by retail investors. Hence, 87.8% of all votes cast are cast by institutions. This figure emphasizes that vote outcomes on the company level are typically determined by the votes cast by its institutional investors.

In addition, Table 1 reports that, on average, in a given corporation-year, mutual funds own 28.5% of the outstanding shares of the companies that hold an SOP vote during the 2011-2013 period.[11] Using the abovementioned figures, on average, 35.7% of all voted shares are voted by mutual funds. These figures highlight that mutual funds, as a subset of institutional investors, also have a large impact on the aggregate level of the votes.

Table 2, Panel A, documents that, in general, SOP support rates are high: among shareholders who vote, on average, 89.8% vote in favor of SOP ("fraction voted for SOP"), as opposed to voting against SOP (or, in a small percentage of cases, withholding or abstaining from the vote). This low frequency of opposition serves to "single out" companies for which shareholders express such opposition. (We note that variables are further defined in the Glossary of Variables.)

Table 3 focuses on the votes cast on the institutional advisor level. Column 3 reports, for the

[11] This figure is calculated by dividing the aggregate number of shares held by all mutual funds in a given stock and a given year (in the quarter preceding the vote), by the total number of shares outstanding (both figures are obtained from the Thompson s12 database), and then calculating the average across all stock-years.

20 institutions which have participated in the largest number of SOP votes, the frequency they voted in the opposite direction from the recommendation of Institutional Shareholder Services (ISS)—the leading proxy advisory company. Note that some investment advisors never vote against ISS's recommendation, while other investment advisors do so quite frequently. Thus, institutions, to a large degree, appear to have a "house policy" on whether to fully trust ISS's opinion or to form their own opinion about the quality of management at a particular firm.

In the final column of Table 3 we focus on the delegation of the SOP voting decision within the institution (e.g., BlackRock), meaning whether this decision is made by the institution or by the fund advised by the institution (e.g., BlackRock Large Cap Core Fund). Bew and Fields (2012, p. 22) report that some institutions determine, on the institutional level, how their funds should vote, while other institutions delegate this decision to their fund managers. Indeed, Column 4 of Table 3 indicates that, within some institutions, funds vote unanimously (e.g., Vanguard with a 0 "S.D. of votes within institution"), while other institutions vote on the fund level (e.g., Jackson National Management with a 20.38% S.D.).

The median standard deviation, which is equal to 0.07%, indicates that the median institution almost always votes unanimously, but the average institution seems to delegate some amount of discretion on the voting decision to individual funds, as indicated by the average standard deviation equaling 3.05%. Following this pattern of variation, we shall examine how both the magnitude of an institution's holdings, and that of a fund, relate to the votes cast.

3. Are Institutional Shareholders More Likely to Support Management for their Large Scale Investments?

We start our analysis by examining how the magnitude of a holding on the institutional advisor level relates to its voting. We first focus on the institutional advisor level because, as shown in Section 2.3, a substantial fraction of an institution's funds vote consistently with each other, suggesting that the voting decision is frequently made on the institutional advisor level. In addition, financial institutions, which are required by the Advisors Act Rule 206(4)-6 to "adopt and implement written policies and procedures that are reasonably designed to ensure that you vote client securities in the best interest of clients," frequently establish these policies on the institutional advisor level. While funds may diverge from the institution's policies on a regular or an occasional basis, the existence of

institutional policies suggest that voting is largely determined at the advisor level.[12]

We start by examining how the magnitude of each stock investment at the institutional level relates to the SOP vote cast. We note that, to the best of our knowledge, we are the first to study the relation between the magnitude of an investment on the institutional level and the votes cast by an institution. To carry out this analysis, we define the following two "holding variables" that each capture the magnitude of a holding: [1] "Institution's portfolio weight (in fraction)"—following Fich, Harford, and Tran (2015), we examine the stock's portfolio weight in the institution's "portfolio" (the aggregate of the holdings of mutual funds advised by that institution). The average value for this variable is equal to 0.18%, see Table 2, Panel A. [2] "Fraction of company's shares held by institution," which is the aggregate of the holdings of mutual funds advised by each institution, which, on average, equals 1.38%.

Since institutions are required to publicly report only the votes they cast for the mutual funds they manage (rather than for all the assets they manage), we construct a proxy for how an institution voted for all its stock holdings based on the votes cast by the institution's mutual funds. We note that based on the figures in Table 1, 41% (28.5%/70%) of institution's equity assets are managed by mutual funds. Our measure captures the weighted average of the fraction of funds that voted for SOP among all funds managed by a given institutional advisor, or more formally, for each institution-company-year we estimate:

$$\text{Weighted average of institution's SOP support} = \sum_{i=1}^{n} W_i * V_i \qquad (1)$$

where W_i denotes the weight of fund i's holding of a stock, relative to the institution's aggregate (mutual fund) holding (i.e., fraction of company held by fund i, divided by the total fraction of company held by the institution across all of its mutual funds, both measured at the end of the calendar quarter preceding the vote), and V_i is a binary variable that equals one if fund i voted for SOP, and zero, otherwise. We later discuss a second measure that we use for robustness.

Each observation included in Table 4 (Panel A) is on the institution-company-year level. Year, industry, and institution fixed effects are included (or not) as indicated at the bottom of Table 4 (Panel A), and errors are clustered at the institution level. We emphasize that including an institution fixed effect allows observing how a given institution votes differently for its small-scale investments versus its large-scale ones, as such a fixed effect controls for the unobserved tendency of a given institution to vote in a particular manner across stocks and over time (which is evident in Table 3). We note that

[12] For example, BlackRock's and Vanguard's policies are published on the following webpages, respectively: https://www.blackrock.com/corporate/en-us/literature/fact-sheet/blk-responsible-investment-guidelines-us.pdf, and https://about.vanguard.com/vanguard-proxy-voting/voting-guidelines.

the approach of including an institution (and later fund) fixed effect differs from that of Iliev and Lowry (2015), who do not include a fund or an institution fixed effect in their empirical specifications, as they are primarily interested in examining the type of funds that follow ISS recommendations. In contrast to their paper, our primary focus is understanding what factors motivate *a particular fund or institution* to oppose management (e.g., a single institution's relatively small- versus large-scale investments). Our findings demonstrate that including a fund or an institution fixed effect is crucial to our findings.[13]

We first point out some control variables included in Table 4 (Panel A), which are significantly related to the SOP vote, with the expected sign: the larger the compensation awarded to the CEO ("total CEO comp t-1 (in millions)"), the more likely institutions are to vote against SOP, i.e., against the compensation awarded to the named executives during that same previous year.[14] In addition, companies with strong prior-year stock price performance (i.e., large "firm abnormal return") are likely to receive high SOP support rates from institutions. This finding implies that SOP voting is related to management performance, and not simply to the level of executive compensation (Iliev and Vitanova, 2015; Cuñat, Gine, and Guadalupe, 2016; Correa and Lel, 2016). In addition, a recommendation issued by ISS to vote against SOP dramatically increases the likelihood that shareholders vote against SOP (consistent with Larcker, McCall, and Ormazabal, 2012; Ertimur, Ferri, and Oesch, 2013; Thomas, Palmiter, and Cotter, 2012; and, particularly, Malenko and Shen, 2015).

We next focus on our primary variables of interest in Table 4 (Panel A)–those measuring the magnitude of the holding of a particular stock by an institutional advisor. As we shall demonstrate, our findings document that the larger the magnitude of the holding, the more likely the institution's funds are to support management on the SOP vote. Specifically, model 1 of Table 4 (Panel A) estimates that a one standard deviation increase in the "institution's portfolio weight" (0.0059, see Table 2, Panel A) is expected to increase the institution's SOP support rate by 0.52% [0.0059*.8845]. Since the mean institutional opposition rate is only 12.81% (1-0.8719, based on 0.8719 being the mean institutional SOP support rate) this is equivalent to a 4.05% (0.52%/12.81%) decrease in the opposition propensity.

Similarly, model 1 of Table 4 (Panel A) estimates that a one S.D. increase in the "fraction of company's shares held by institution" is expected to decrease, by 11.8% ((0.0231*0.6422)/ (1-0.8719))

[13] Specifically, the reader can compare the results for models 1 and 3 in Table 4 (Panel A).

[14] In unreported specifications, we replace the variables controlling for CEO compensation with variables controlling for the compensation awarded to the five named executives, and the results are very similar.

the SOP opposition propensity, relative to its mean. Taken together, these results point out that, the smaller a holding on the institutional level, the more likely the institution is to vote against SOP—and the magnitude of this effect is economically significant. In unreported specifications we include an additional company fixed effect, and results are similar. Results are also similar when we cluster the errors on the company level. In model 2 of Table 4 (Panel A), we document that our findings are robust to adding squared holding variables.

Model 3 replicates model 1, but does not include an institution fixed effect. We point out that in this regression, the "institution's portfolio weight" is no longer significant, and the "fraction of company shares held" remains significant, but the coefficient is reduced in magnitude. These findings emphasizes that institution's SOP votes are determined at the institutional level, given the magnitude of an investments *relative* to the other investments in the institution's portfolio. Hence, the relation between the importance of a stockholding for an institution and the tendency to vote with management on SOP is much more evident when we examine within-institution variation, as opposed to pooled cross-sectional and time-series variation.

One of the unique advantages of examining the votes on the fund level is that the data allow us to test how the combination of a fund's position, and the overall shareholder structure catalyze a certain voting pattern. Hence, we next investigate whether the presence of large shareholders particularly catalyzes the small shareholders to vote against SOP. To do this, we define in model 4 a dummy variable "top third blockholders, bottom third port. weight" which equals one if the portfolio weight of the fund voting is within the bottom third of the portfolio weights within the sample (i.e., the fund's holding is relatively small), and the "fraction of shares held by blockholders" is within the top third within the sample examined (indicating that a relatively large stake of the company's shares is held by blockholders). Indeed, we find here that the combination defined above ("top third blockholders, bottom third port. weight") significantly increases the likelihood that funds oppose management. We find a similar pattern when we use somewhat different cutoffs to define a small position of a fund and a large position of blockholders. This finding further implies that from the point of view of a small shareholder, the presence of a large blockholder particularly increases the likelihood that he will protest against management via the SOP vote.[15] Our findings demonstrate that

[15] We have also used models with an interaction variable between level of blockownership and portfolio weight. These models, while qualitatively consistent with the results for the conditional model, are statistically significant but economically weaker, indicating that the interaction between blockholders and portfolio weights is nonlinear (i.e., is especially impactful with a large presence of blockholders in a firm's capital structure).

large blockholders are generally inclined to vote with management (possibly because they have private negotiating power with management), but, at the same time, small shareholders are particularly likely to vote against management, possibly in the anticipation that following the realization of a low support rate, large blockholders will be forced to monitor and discipline management.

Large institutions may have the resources required to monitor actively and directly their large investments. Therefore, they may be the institutions that particularly vote differently for their small versus large holdings. Accordingly, in model 5 we include only the largest institutions, defined as those within the top tercile of assets under management within each year. Here, we find that a one S.D. increase in the "institution's portfolio weight" is expected to decrease, by 20.9% ((0.0059*4.5302)/ (1-0.8719)) the SOP opposition propensity, relative to its mean. The latter magnitude is substantially larger than that documented in model 1 above for all institutions. In unreported specifications we find smaller magnitudes for the holding variables of smaller institutions. Hence, particularly large institutions use the SOP vote differently for their small-scale versus their large-scale investments.

A possible concern is that certain companies are better than others, and that the quality of a company is endogenously correlated with institutional's magnitude of holding. Hence, the quality of the company is driving our results. To address this concern we conduct a simple test—in model 6 of Table 4 (Panel A) we include a company fixed effect. By including a company fixed effect, we are able to observe whether different institution's votes vary for the same company, given the different magnitudes of holding of each institution. In addition, in unreported specifications we replace our holding variables with a one-year lag, or one year lead variables as proxies for levels of holdings that are unrelated to expected future performance of a stock (i.e., mutual fund trades of stocks are most strongly related to following-year returns; lagged and leaded holdings are unlikely to be related to these returns, and serve as a proxy for the "normal" long-term holding of a particular stock by a particular fund or institution). Once again, results are very similar. In Section 6.3 we further address endogeneity concerns.

In model 7 of Table 4 (Panel A), we add an interaction variable between the holding variables and the abnormal return over the 12 calendar months prior to the beginning of the calendar month of the SOP vote ("fraction of comp. held by institution X ab. return" and "institution's portfolio weight X ab. return"). The results from this model are revealing: they indicate that the prior-year abnormal return affects the difference between the voting of an institution on its large vs. small shareholdings. Model 7 indicates that a one standard deviation increase in portfolio weight for a stock with a prior-year abnormal return that is two standard deviations below the mean (i.e., an abnormal

return of 74.7%=37.36%*2) results in an increased propensity (relative to the mean) to vote with management of 11.18% ((0.9789*0.0059-1.94*(-0.747)*0.0059)/0.1281). This magnitude is substantially larger than that documented in model 1 which indicated that a one standard deviation increase in portfolio weight of a company's shares held by an institution is expected to increase the propensity to vote with management (relative to its mean) by 6.62%. Thus, poorly performing stocks tend to be those with the biggest difference in voting patterns between small and large shareholders.

Finally, in model 8, we repeat model 1, but use an alternative measure capturing an institution's SOP support rate. Here, we follow Davis and Kim (2007), who analyze votes cast on the institutional level (but do not address the effect of the magnitude of a holding), and create an equal weighted measure of an institution's SOP support level:

$$\text{Equal weight of institution's SOP support} = \sum_{i=1}^{n} \frac{1}{n} * V_i \qquad (2)$$

where n is the total number of mutual funds advised by an institution for which ISS reports voting data, and V_i equals 1 if fund i votes with management, and zero, otherwise. The correlation between our two measures (the weighted average and the equal weighted measure) is 0.98. Accordingly, it is not surprising that model 8 documents results similar to those documented in model 1.

We now point to further evidence implying that shareholder composition relates to votes cast. We find that the larger the "fraction of shares held by blockholders" (each holding at least 5% of the outstanding shares), the more likely institutions are to oppose SOP. Hence, the presence of a large shareholder may stir further dissent from institutions—which as pointed out, are typically small shareholders (the median institution in our sample holds only 0.29% of a company).

In addition, we find that the larger the "fraction of shares held by executives" (who are permitted to cast votes, just like any other shareholder) the more likely institutions are to oppose SOP. Thus, while prior research (e.g., Jensen and Murphy, 1990) indicates that management share ownership helps align the incentives of management with shareholders, institutions apparently perceive heavy ownership by management as being problematic, at least with respect to compensation. We will further discuss these blockholders and executive patterns when we discuss the vote outcomes on the aggregate level in Section 6.2.

Our findings, thus far, suggest that, even though theory predicts that small-scale investors are more likely to free-ride, they apparently are more likely to use the SOP vote to voice discontent. Accordingly, the SOP vote appears to serve as a coordinating mechanism for a large number of small shareholders, which can be challenging to accomplish (Fluck, 1999). We also note that Table 4 (Panel

A) documents that shareholders increasingly use the SOP vote to voice discontent when it is more feasible to coordinate votes–when the "number of institutions voting on a proposal" is small, consistent with Edmans and Manso (2011) and Edmans and Holderness (2016).

While our analysis focuses on say-on-pay, in Panel B of Table 4 we address the question whether the patterns we document prevail beyond SOP. Accordingly, we expand the analysis to all votes. Since the regressions include many different types of votes, we include in the regressions a fixed effect for each type of proposal (using ISS's "issagendaitemid" classifications). Regressions 1-3 do not include institution fixed effect, and are not clustered at the institution level, while Regressions 4-6 do include the latter. Models 1 and 4 report all votes. We also report separate results for proposals sponsored by management (models 2 and 5) versus those sponsored by shareholders (models 3 and 6) since proposals sponsored by shareholders tend to be less routine, and may potentially be more contentious. These models document a similar pattern as we have documented thus far–institutions are more likely to vote in support of management the larger their holding. Hence, Panel B suggests that the pattern documented extends beyond SOP. However, the results in Panel B are not always significant, and document smaller economic magnitudes compared to those documented for the SOP vote (Table 4 panel A). Hence, while the pattern of small-shareholders-opposing management seems to be prevalent across the board, the results are particularly strong and consistent for the SOP vote.

In sum, this section documents that, by the time institutions cast their SOP vote, they are more likely to oppose SOP when the magnitude of their holdings is small relative to their other holdings.

4. Why do Shareholders with Large Holdings Vote for SOP?

Thus far, we have documented that institutional shareholders with a small holding of a stock are likely to oppose SOP, while institutional shareholders with a large holding are likely to support SOP. This raises the question—why do large shareholders refrain from opposing SOP? In this section, we will propose two explanations.

As noted in the introduction, our first explanation for the question posed above is that the SOP vote may serve as a potential threat to management, and, accordingly, may increase the dialogue between management and shareholders before the vote takes place. If we consider voting against management on SOP as a form of intervention, as Fos and Khan (2016) demonstrate, shareholders can discipline management through the threat of intervention. Hence, this will catalyze communication and negotiations—by large-scale shareholders—before the SOP vote takes place

(Brady, 2012), thus, mitigating the need for these investors to vote against management. This argument is supported by the report of Semler Brossy (2013) who note "one of the positive outcomes of the Say on Pay provision in the Dodd Frank legislation has been more regular dialogue between companies and shareholders." Once the large shareholders have had this dialogue with management, and they reach consensus, large shareholders may well vote in support of SOP.

The second reason why large shareholders may support SOP is that there may be negative consequences, in the short-term, to opposing management. For instance, if a SOP vote has lower support for management than expected, the market may interpret this as a signal from shareholders that management is performing below expectations at a particular firm. Under this scenario, we might expect a negative market abnormal return following SOP votes with low support rates. In turn, this may motivate funds and institutions to refrain from voting against SOP for their large portfolio weight investments, since such a vote may have a negative impact on their portfolio return. In related work, Iliev and Vitanova (2015) and Cuñat, Gine, and Guadalupe (2016) document that the decision to hold a SOP vote leads to positive abnormal returns. In our analysis, we shall examine how the outcome of the SOP vote affects abnormal returns.

In Table 5, following, Cuñat, Gine, and Guadalupe (2012), we examine abnormal returns around the meeting date. Because companies can observe the votes cast electronically as soon as they are cast, i.e., before the meeting date, information on the votes cast may leak before the meeting date. Companies are required by the SEC to disclose the results of the SOP vote within four days after the meeting date. Given these issues, in Table 5, we examine the cumulative abnormal returns during event windows of different size that surround the meeting date.

Abnormal returns are estimated by subtracting, from a company's buy-and-hold return around the meeting date, the buy-and-hold CRSP value-weighted market return for the corresponding period. The universe of events included in Table 5 are the days in which a given company held a shareholders' meeting which included a SOP proposal. Because the latter is already an event (that is, the existence of the SOP proposal itself), in our CAR analysis, we control for this event with an intercept.

The primary variable of interest in Table 5 is the "fraction voted for SOP." As the coefficient estimates indicate, holding a meeting in which shareholders vote on SOP, but all shareholders vote in favor of management (i.e., "fraction voted for SOP"=1.0) leads to almost no price reaction for the stock (i.e., the estimated constant plus the estimated coefficient on "fraction voted for" multiplied by 1 sum to roughly zero). However, as opposition for SOP grows, the CAR becomes increasingly negative. For example, model 3 in Panel A of Table 5 indicates that, using a nine-day window (-4,+4),

a one S.D. decrease in the SOP support rate is expected to lead to a 0.21% (-0.127*0.017) CAR decrease, results are statistically significant at the 1% level.

In Panel B of Table 5 we examine whether votes that received particularly low support rates are followed by a negative CAR. We define an indicator variable that equals one if the vote received support rate that exceeded 70%, and 0 otherwise. We choose the 70% threshold because votes below this threshold are viewed by ISS as low support votes.[16] As the results demonstrate, when SOP receives support rates below 70%, the abnormal return during a nine-day window (-4,+4) is 0.79% smaller compared to that of companies that received support rates equal to or exceeding 70%.

We next address the possible concern that the market response documented results from other vote outcomes made public on the same day the SOP vote is made public. Accordingly, in Panel C we exclude all companies for which a proposal submitted by a shareholder was voted upon, since these non-routine proposals may be driving the CARs. The results of models 1-5 of Panel C are very similar to those reported in Panel A, indicating that the CARs are not driven by irregular shareholder proposals.

In models 6-10 of Panel C, we address the possibility that the market is responding to the outcome of director's vote. Before SOP was introduced, a director's election was the best opportunity shareholders had to provide, on a regular basis, some feedback to management (Cai, Garner and Walking, 2009). It is possible that shareholder voting on director elections, and not on SOP, are driving the CARs we observe above. Accordingly, we include in the specifications the average support rate directors received. The results indicate that the latter variable is insignificant, while that the fraction of votes in support of SOP remains significant. Hence these results further corroborate the conclusion that the CARs documented are a response to the SOP vote rather than to other votes. These results also emphasize that the market "cares" about the SOP vote.

We note that while Cuñat, V., Gine, M., and Guadalupe, M. (2012) find a positive abnormal return for votes that have passed and are just above the threshold required to pass, Gillan and Starks (2000) do not find a relation between the fraction of votes cast in support of proposals submitted by shareholders and abnormal returns in the 1987-1994 period. Hence, the market has not always responded to the outcome of shareholder votes. However, as we show, the market responds to the SOP vote.

[16] See this source for example: https://www.isscorporatesolutions.com/shareholder-support-for-say-on-pay-wanes-slightly-in-2016/

In unreported specifications, we repeat the CAR analysis using value-weighted size-decile portfolios as benchmarks against which we compute abnormal stock returns, and find almost identical results.[17] In additional unreported specifications, we examine whether a negative relation exists between low SOP support rates and CARs in each of the following subsamples: Glass Lewis (the chief competitor to ISS) recommended to vote for SOP, Glass Lewis recommended to vote against SOP, firms within the top quartile of the 12 month abnormal return, and first within the bottom quartile of the 12 month abnormal return. Our findings consistently prevail in these subsets further supporting the conclusion that higher opposition to SOP leads to a more negative abnormal return.[18]

5. Votes Cast on the Mutual Fund Level

In this section, we return to our previous result from Section 3—institutions oppose management on their small scale investments—and examine whether similar patterns exist at the fund level, meaning that funds are particularly likely to vote in support of SOP for the fund's large-scale holdings. Accordingly, in the analysis in this section, we will measure the magnitude of fund's holdings on the fund level. As discussed in Section 2.3, some institutions delegate their voting decision to the fund managers, and fund's voting decision may be affected by the magnitude of the fund's holding, as documented by Iliev and Lowry (2015).

To conduct our fund level analysis, we use the CRSP mutual fund database,[19] and estimate each of the two holding variables on the fund level—the fund's portfolio weight (which, on average, is equal to 0.005, see Table 2, Panel A) and the fraction of outstanding shares held by the fund (which, on average, is equal to 0.0021). We exclude from our analysis funds that manage less than 50 million dollars because we want to avoid the results being driven by small funds. Nevertheless, excluding these funds does not alter the results.

The analysis reported in Table 6 is performed at the fund-company-year level. Our specifications include fund fixed effects, because we wish to observe how the SOP votes cast by a

[17] The buy-and-hold value-weighted size-decile portfolio includes all companies that are in the same size decile (using NYSE size breakpoints) as the company of interest, as of the end of the most recent calendar year (following, e.g., Lakonishok, Shleifer, and Vishny, 1992). The "WRDS CRSP stock-portfolio assignments, capitalization deciles" is used to assign stocks to size deciles.

[18] In unreported specifications, we do not find a discontinuity around the 50% opposition rate and its effect on CAR. We generally find a linear relation–the larger the SOP opposition rate, the more negative the CAR.

[19] We use the CRSP mutual fund database as our primary source for computing the holding variables (as opposed to the Thompson s-12 files), because Schwarz and Potter (2015) estimate that, starting from the 4th quarter of 2007, the CRSP mutual fund dataset is the most thorough individual dataset available.

specific fund differ, depending on the magnitude of each holding. The dependent variable in Table 6 equals 1 if the fund voted "for" SOP (indicating funds supported the compensation awarded), and zero, otherwise. Unless noted otherwise, the regressions are OLS, since logit models are not suited for including interaction terms (Ali and Norton, 2003; Greene, 2010). However to provide support of the robustness of our findings, we also report a logit model of the main findings.

The results in Table 6 show that, similar to the institutional level results (Table 4, Panel A), mutual funds are likely to vote in support of SOP when compensation is small, and performance is strong. With respect to our primary variables of interest–the holding variables on the fund level, indeed, the Table 6 specifications document that, the larger a stock's weight in a mutual fund's portfolio, the more likely the fund is to vote in support of SOP. For example, assume a "fund's portfolio weight (in fraction)" for a given company were to increase by one S.D. According to the estimates reported in model 1 of Table 6, this fund's opposition rate is now expected to decrease by 6.8% ((0.87%*0.8098)/(100%-89.66%)) relative to the fund's mean opposition rate.

Similarly, model 1 of Table 6 documents that, the larger the "fraction of company's shares held by a fund", the more likely a fund is to vote against SOP. The specification estimates that a one S.D. increase of this variable is expected to be associated with a 4% decrease in the SOP opposition rate. These findings indicate that mutual funds exhibit voting behavior consistent with those of institutions—the larger the holding, the less likely funds are to publicly oppose management via the SOP vote. Hence, the results thus far suggest that both holding variables, at both the institutional and the fund level, relate to the votes cast.

We next examine in model 2 whether our results are robust to adding squared holding variables. We find that this is indeed the case. In model 3 we report a logit version of model 1, which reports results consistent with those of model 1. The results imply that, assuming all control variables are equal to their mean, a one S.D. increase in a fund's portfolio weight, or the fraction of company held, is expected to decrease the opposition rate by 6.31%, and 2.87%, respectively.

In model 4 we repeat the analysis, but do not include fund fixed effects. The results pertaining to the fund level holding variables are even stronger, indicating that not only do the results apply with respect to the variation of the magnitude of holdings within funds, they also apply to such variation between funds. This result is to some extent different from our result in Table 4 (Panel A) for institutions, where a fixed-effect weakens the difference between small and large holdings (and, verifies how our analysis at the institutional level, with a fixed-effect, results in a different outcome from the inference of Iliev and Lowry (2015), who examine (non-SOP) voting at the fund level without a fixed-

effect).

Now that we have shown that the holding variables at both the fund and the institution level relate to the SOP votes cast, we next examine whether the institution, or alternatively, the fund level holding variables dominate our results. We note that each of the holding variables at the fund level and the intuition level are positively correlated (see Table 2, Panel B). In model 5 of Table 6, we include both holding variables (portfolio weight and fraction of company) on both levels (institution and fund). Regressions 5 documents that the effect of the institution's portfolio weight is particularly dominant compared to that of the fund: the coefficient of the portfolio weight magnitude is approximately 5 times larger than the parallel coefficient on the fund level. In terms of changes in S.D.s, if the portfolio weight of a company in an institution's portfolio decreases by one S.D., the institution's opposition rate is expected to increase by 9.13% ((0.0059*1.9838)/(1-0.8719)). In comparison, a one S.D. decrease in the fund's portfolio weight, is expected to increase the fund's SOP opposition rate by 3.23% ((0.0087*0.3837)/(1-0.8966)). These two magnitudes demonstrate that the portfolio weight effect is substantially larger at the institutional level, compared to the fund level—which reinforces the conclusion that institutions frequently decide at the institution level how their advised funds should vote.

Similar to the results above, model 5 of Table 6 documents that if an institution's fraction of outstanding shares held decreases by one S.D., its SOP opposition rate is expected to increase by 3.86% ((0.0231*0.2140)/(1-0.87194)). In this specification, the fraction of company's shares held by the fund is insignificant, further highlighting the robustness of the institution level holding variables. As in Table 4 (Panel A, model 4), to address the possibility that holdings of funds may be endogenous (i.e., funds may invest more in "good" companies, and invest less in "bad" companies), in model 6 of Table 6 we include a company fixed effect. The results of model 6 are very similar to those of model 5, further supporting the robustness of our findings above.

As in Table 4 Panel A, in model 7 of Table 6 we examine whether our results are robust to adding an interaction term between each of the holding variables on the fund level and performance ("fund's portfolio weight X ab. return" and "fraction of comp. held by fund X ab. return"). Our primary results of funds voting in support of management for their large-scale investments remains intact, while the former interaction variable ("fund's portfolio weight X ab. return") implies that when a fund's portfolio weight is small, and the stock abnormal return is negative, funds tend to more frequently oppose management on the SOP vote.

However, when we also include in model 8 the holding variables on the institutional level, and

an interaction variable for that level ("institution's portfolio weight X ab. return" and "fraction of comp. held by institution X ab. return") both holding variables on the institutional level remain significant, while those on the fund level are not as robust. Moreover, the interaction variables on the institutional level reflect a consistent pattern, while those on the fund level do not do so anymore. The results document that when an institution's portfolio weight is small, and abnormal returns are negative, the institution's funds tend to more frequently oppose management on the SOP vote, which demonstrates the increased sensitivity of institutions to performance for their large-scale investments. This consistent and robust pattern on the institutional level further suggests that, compared to the fund level, the institutional level holding variables are particularly related to the votes cast by an institutional advisor's funds.

Hence, across Regressions 7 and 8, the institutional level variables dominate the fund level variables emphasizing that voting decisions seem to be made particularly on the institutional level, and that institutions use the SOP vote differently for their small-scale holdings as opposed to their large-scale holdings.

Similar to our findings on the fund level, also on the institutional level, we find that funds are more likely to oppose management, when coordination is easier–when the "number of funds voting on proposal" is small, indicating that the feasibility of coordination plays a role when funds determine whether they want to publicly oppose management. Two other variables for which we find results that are consistent with those on the institutional level are the fraction of shares held by blockholders, and the fraction of shares held by executives which once again seem to catalyze opposition to SOP. We will further discuss these two variables in Section 6.2.

Finally, as an additional robustness check we re-estimate our results using Thompson s-12 mutual fund holdings data, rather than the CRSP holding dataset. We do this analysis because each of these two datasets includes mutual funds that are not included in the other dataset (Schwarz and Potter, 2015). We find that the holding variables that we compute and match in both datasets are highly correlated. In unreported specifications in which we use the Thompson data, the results are very similar to the results reported throughout this paper.

In sum, in this section we document that when measuring the holding variables on the fund level, funds are more likely to support management on SOP for their large-scale holdings compared to their small-scale holdings. However, once we include the holding variables on the institutional level, the latter variables dominate those on the fund level, indicating that the results are driven by the institutional level holding variables. Hence, institutions determine particularly on the institutional level

how to vote on SOP, and they ultimately use the SOP vote to publicly oppose management particularly for their small-scale holdings.

6. Subsets, Aggregate level, and Endogeneity

6.1. Are the Findings Driven by a Subset?

It is possible that the pattern we document of small shareholders opposing SOP, particularly at the institutional level, applies only to a certain subset. Accordingly, in this section we examine whether this pattern prevails across the board, or only to a certain subset. We first follow Iliev and Lowry (2015) who show that, on the fund level, when ISS recommends to vote against management, funds are more likely to vote independently of ISS when a fund holds a large holding. Accordingly, we repeat the analysis from model 5 of Table 6, but split the sample according to whether ISS recommended to vote "for" or "against" SOP. The results are reported in Table 7, models 1 and 2, respectively.

In model 1, which is restricted to cases for which ISS recommended to vote against SOP, similar to our previous results, we observe that the institution level holding variables dominate the fund level holding variables. The former are substantially larger than the corresponding variables on the fund level, and they are significant at the 1% level, while those on the fund level are insignificant.

In model 2, which includes only the observations for which ISS issued a recommendation to vote for SOP, we still observe the pattern of shareholders opposing SOP for their small-scale investments, particularly on the institution level, and to a lesser extent on the fund level: Both holding variables are significant at the institutional level, while only "fraction of company's shares held by fund" is significant on the fund level. We note that the magnitudes of the coefficients of the variables controlling for the size of the institutional holding are substantially smaller in model 2, compared to those of model 1. This suggests that in the potentially contentious votes, as identified by ISS who recommended to vote against management, the magnitude of the investment is a particularly important determinant with respect to the SOP vote cast.

Iliev and Lowry (2015) focus on the question of which type of funds deviate from ISS's recommendation. They document an opposite pattern for the subset of ISS recommending to vote for management, as opposed to the subset of ISS recommending to vote against management.[20] In

[20] Iliev and Lowry (2015) document that when ISS recommends to vote against management funds with large portfolio weights and a large fraction of company held are likely to support management; in contrast, when ISS recommends to vote for management, funds with large portfolio weights and a large fraction of company, tend to oppose management.

contrast, we document the same kind of pattern—funds opposing management on SOP for their small-scale investments—for both of these subsets. Hence this pattern is extremely robust, and exists even in the larger subset of ISS recommending to vote for SOP (and thereby for management), implying that shareholders will explicitly oppose management on the SOP vote for their small-scale investments for both types of ISS recommendations.

In models 3 and 4 we examine whether the results apply only to small companies (those below 10 billion dollars market capitalization, model 3) or large ones (those above this threshold, model 4). We address this possibility because the SOP vote may plausibly be more important for governing small- and mid-cap firms, who may have more power concentrated in top management relative to independent board members. As models 3 and 4 indicate, our findings are robust in both subsets.

Following Admati and Pfleiderer (2009), we also examine whether funds that have the option to sell their shares rather than "demonstrating" against management by voting against SOP, vote differently from funds that do not have the option to walk the "Wall Street walk." The natural approach for examining this question is by analyzing the votes casts by index funds, as opposed to those cast by actively managed funds. Index funds may monitor less intensively than actively managed funds (and thus tend to vote for SOP), since their explicit goal is to simply track an index. On the other hand, index-funds are "stuck" with their companies for the long run, and, therefore, may prefer to monitor their companies more aggressively and vote against SOP.

Accordingly, we split our funds depending on whether the fund is an actively managed fund (model 5 of Table 7) as opposed to an index fund (model 6 of Table 7).[21] Once again, we find that our prior result—when institutions own a small ownership stake they are more likely to vote against SOP—are particularly strong on the institutional level for both subsets. In model 5 (actively managed), this pattern applies to both holding variables, indicating that although the actively managed funds have an option to completely sell a stock, perhaps surprisingly, at least for some of the stocks, they hold on to a small stake, but choose to vote against SOP. In model 6 (index funds) only the portfolio weight of institutions and of funds are significant (at the 7% level), but once again, the magnitude and significance level are larger for the holding variable at the institutional level, compared to those at the fund level. Taken together, these findings emphasize, once again, that the magnitude of the holding on the institutional level is particularly related to the vote cast, and that the holding variables on the

[21] We categorize funds as index funds if CRSP flags the fund as an index fund, or the fund's name suggests this is an index find (e.g., fund name contains the words "index" or "idx" or "S&P 500" or "Russell 1000").

institutional level relate to the votes cast both by index funds and by non-index funds.[22]

In unreported specifications we examine whether, during the 2011-2013 period, the pattern documented—that institutions are more likely to support management on their large-scale holdings compared to their small-scale ones—is also prevalent for other proposals (e.g., director election, declassifying the board etc.). Overall, we do not find such a consistent and robust pattern with respect to other proposals. We view this as further demonstrating that the SOP vote is a relatively holistic vote, and therefore, particularly this vote is used by institutions, and to some extent also by funds, to govern differently their small-scale versus their large-scale investments.

In sum, in this section we document that the magnitude of investments on the institutional level is consistently related to the votes cast across different subsamples.

6.2. Aggregate Level Votes

In Sections 3 and 5 we documented that large shareholders are likely to support SOP. In this section we examine whether the aggregate level votes (i.e., on the company level) further support this conclusion by documenting that the larger the fraction of shares held by blockholders (each holding at least 5% of the company's shares), the larger are SOP support rates.

In table 8 we examine the aggregate level of voting, and accordingly, include one observation for each company-year combination. Indeed, model 1 of Table 8 indicates that the larger the "fraction of shares held by blockholders", the larger the "fraction voted for SOP" (results are significant at the 1% level). Using the coefficient from model 1 of Table 8, we estimate that a one S.D. increase in the "fraction of shares held by blockholders" is expected to lead to a decrease of 8.5% ((0.1669*0.0519)/(1-0.8981)) in the SOP opposition rate.

We note that the abovementioned pattern documented on the aggregate level contradicts that documented on the institution and the fund level—the larger the fraction of shares held by blockholders, the *smaller* the support rates for SOP. This contrast further suggests that the positive relation between blockholders and SOP support rates on the aggregate level is likely driven by the large blockholders voting in support of SOP, while as we have shown (in model 6 of Table 4, Panel A), particularly the institutions who hold very small stakes, are those opposing SOP when blockholders are present. Perhaps small shareholders tend to oppose management when large shareholders are present, in hope that large shareholders will govern management following a vote

[22] In unreported specifications, which include the fund level holding variables, but not the institution level ones, we find, similarly to Iliev and Lowry (2015) that our prior results are particularly prevalent in the index-funds subsample.

with low support rates. Alternatively, it is possible that large shareholders are able to secure their interests, at the cost of the interests of the small shareholders, which catalyzes opposition of small shareholders.

We also point out that the larger the "fraction of shares held by executives", the larger the SOP support rates.[23] This result is also in contrast to the result reported in Tables 4 and 6 (the institution and fund level, respectively)—the larger the fraction of shares held by executives, the more likely institutions and funds are to oppose SOP. This contrast is consistent with executives voting in support of their own compensation, but, apparently, the mutual funds and institutions not supporting large executive compensation.

Our results above regarding the blockholders and executive's shares are robust to controlling for the compensation awarded to the other four named executives (i.e., excluding the CEO, model 2), and controlling separately for the predicted versus the residual compensation of the CEO (model 3) and of the other four named executives (model 4).[24]

In Appendix B we examine whether companies respond to SOP given the shareholder structure. We find that after controlling for performance, companies with a non-insider blockholder, and low SOP support rate are likely to: (1) experience CEO turnover within 12 months of the SOP vote; (2) pick more modest peer-companies for determining executive compensation; and (3) decrease the growth rate of the residual executive compensation. These findings indicate that, while blockholders and other large-scale shareholders are less likely to vote against management on SOP, companies are particularly likely to demonstrate responsiveness to shareholder dissatisfaction when a non-insider blockholder is present, as reflected in the SOP vote. Thus, while large blockholders may not vote against management, they may serve as a "reluctant watchdog" for small-scale investors.

In sum, this section further supports the conclusion that large shareholders tend to support management on the SOP vote. However, as noted, large shareholders may use the threat of voting against SOP, and thereby against management, to negotiate with management certain issues before

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[23] Since, as we discussed earlier, management always recommends an affirmative vote on SOP, we would expect a coefficient of unity on "fraction of shares held by executives." Since the coefficient is much smaller, about 0.16, consistent with the results of Table 4 (Panel A) and Table 6, we infer that non-management shareholders vote much more frequently against management when management holds a greater level of ownership. Non-executive shareholders appear to "push back" by voting more frequently against management when management owns more of the company.

[24] Specifications 3 and 4 follow Core, Guay, and Larcker (2008) and Ertimur, Ferri, and Muslu (2010). The compensation model for company i in year t is estimated by regressing the total compensation awarded to the CEO/four other named executives on the lagged: ROA, abnormal returns, market capitalization, age of CEO, tenure of CEO, as well as on fixed year and industry effects. The residual of this model is a proxy for what investors may perceive as excessive compensation, since it is not explained by the observed variables.

the vote. The results suggest, however, that by the time the vote is cast, large shareholders are typically in sync with management.

6.3. Endogeneity

As we have noted, the magnitude of a fund's or an institution's investment may well be endogenously chosen, meaning that funds and institutions are more likely to buy larger stakes in companies which they find particularly attractive, and smaller stakes in companies they find less attractive (and they will likely not hold any stocks of companies they find least attractive). We embrace the above noted endogeneity, meaning that we agree that the latter is very likely. Nevertheless, we can and do wish to address this potential endogeneity with respect to the holdings driven by index funds, because index funds do not have discretion with respect to their investments allocation. Hence, the investment allocations driven by index funds provide a laboratory for examining the relation between the magnitude of a holding, and the votes cast, when the magnitude of the investment is exogenously determined. Our analysis in this section focuses on one of our primary holding variables—the fraction of company held (at both the institution and at the fund level).

We follow, among others, Crane et al. (2016) and Boone and White (2016), who document a discontinuity in the holdings of financial institutions: institutions hold a smaller fraction of companies that are at the bottom of the Russell 1000 index, compared to companies at the top of the Russell 2000 index. Appel et al. (2016b) document a similar discontinuity for index fund's holdings. Following these papers, we define the following first stage regression that is limited to the 250 companies on both sides of Russell 1000-2000 cutoff (as ranked by Russel's portfolio weights):

$$\%\ \text{company held}_{ict} = \alpha + \beta * \text{R2000}_{ct} + \gamma * \text{Ln(marketcap)}^2_{ct} + \text{banding controls} + \text{other controls} + u_{ict} \quad (3)$$

We define "$\%\ \text{company held}_{ict}$" as the predicted percent of company c, held by institution i in year t (i.e., the voting year). R2000_{ct} is equal to 1 if company c is within the top 250 companies of the Russell 2000 index, and 0 if it is within the bottom 250 companies of the Russell 1000 index, in year t; $marketcap$ is the CRSP market capitalization of equity. "Banding controls" are the variables used by Appel et al. (2016b) to control for the post-2007 Russell banding methodology for classifying companies in the Russell indexes: an indicator for having an end-of-May market capitalization sufficiently close to the cutoff such that the firm will not switch indexes, a dummy for being in the Russell 2000 in the previous year, a dummy variable of the latter two variables, ln(marketcap)^2, and

ln(float adjusted market cap as estimated by Russell). Finally, "other controls" include the Ln(float adjusted market cap), as defined by Russell, and all control variables included in Table 4 (Panel A).

In models 1-2 of Table 9 we report the results of the 2sls analysis at the institution level, while in models 3-4 we report this analysis at the fund level. In model 1 of Table 9, our first stage regression indeed predicts that institutions are likely to hold a larger fraction of companies that are in the top of the Russell 2000 index, compared to companies at the bottom of the Russell 1000 index. Model 2, which reports the second stage at the institutional level, confirms our prior results—the larger the fraction of company held, the more likely the fund is to vote in support of SOP (results are significant at the 10% level, and the F-statistic is larger than 10, as required by Stock et al., 2002). Similarly, model 3 (first stage regression at the fund level) and model 4 (second stage regression at the fund level) document a similar pattern on the fund level (results are significant at the 5% level, and the F-statistic is larger than 10).[25] Hence, these findings confirm our main results while addressing endogeneity concerns.

7. Conclusion

Our study shows that offering a low-cost monitoring opportunity increases the extent to which institutional shareholders are likely to explicitly voice criticism for their small-scale investments. Hence, offering low-cost monitoring opportunities increases the extent to which the most common type of shareholders—institutionals holding small stakes—are involved in governing companies, and offers them a coordination mechanism. Large shareholders, for whom the benefits of active monitoring may exceed the costs, may also be using the SOP vote as a threat to govern management via "behind-the-scenes intervention", consistent with the accounts of Brady (2012) and Spencer Stuart (2014). Taken together, the findings suggest that introducing a low-cost monitoring opportunity offers both small and large shareholders a mechanism which may be used, albeit in different ways by each of these types of shareholders, to govern the companies they hold.

[25] The magnitude documented in our second stage regressions (model 2 and 4) are larger than those documented in the OLS regression, perhaps because the Table 9 specifications includes only a subset of our observations—those around the Russell 1000-2000 cutoff; within this subset the pattern we have documented throughout the paper may be more pronounced. Nevertheless, the results in Table 9 confirm the pattern we have observed throughout the paper—institutions and funds are more likely to vote in support of SOP for their large-scale holdings.

Glossary of Variables

Variable name	Definition	Dataset use
Company level variables		
Abnormal return of company	Firm abnormal return above the value weighted market portfolio, for the 12 months preceding the vote	CRSP
Average compensation of 4 executives t-1 (in millions)	Average compensation of top 4 executives, computed by authors	ISS compensation data, based on proxy data
CEO age (years)	Age of CEO	ISS dataset on executives
CEO tenure (years)	Tenure of CEO	ISS dataset on executives
Fraction of shares held by blockholders	Fraction of outstanding shares held by blockholders that each hold at least 5% of the outstanding shares	GMI, based on proxy data
Fraction of shares held by executives	Aggregate fraction of shares held by executives	GMI, based on proxy data
Fraction of shares held by institutions	Total number of shares held by institutionals/ number of shares outstanding	Thompson s-34 and CRSP, correspondingly
Fraction voted for SOP	Fraction of votes cast for SOP/ all SOP votes cast	ISS voting analytics dataset
ISS recommended to vote for SOP	Equals one if ISS recommended to vote for SOP, and zero otherwise	ISS voting analytics dataset
Market capitalization in $Millions	shrout*prc/1,000	CRSP
Residual compensation	The residual from regressing the total compensation awarded to the CEO on the lagged: ROA, abnormal returns, market capitalization, age of CEO, tenure of CEO, and fixed year and industry effects.	ISS compensation data
ROA of company t-1	ebitda/(the one year lagged "at", i.e., total assets)	Compustat
Total compensation of CEO t-1 (in millions)	Total compensation of CEO	ISS compensation data, based on proxy data
Institution level variables		
Fraction of company's shares held by institution	shares/(shrout2*1000)	Thompson s-34 and CRSP, correspondingly
Fraction of funds voted for SOP	Fraction of funds within institution that voted for SOP	ISS voting analytics dataset
Number of institutions voting on proposal	Number of institutions voting on proposal included in the ISS voting analytics dataset	ISS voting analytics dataset
Institution's portfolio weight (in fraction)	prc*shares/ total assets managed by institution.	Thompson s-34
Total assets managed by institution in trillions	The sum of the value (prc*shares) all holdings of an institution in a given quarter/ one trillion	Thompson s-34 and CRSP, correspondingly

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Variable name	Definition	Dataset use
Mutual fund level variables		
Annual netflow of fund	We estimate first the monthly inflows (after taking in account the monthly return), and then estimate the total netflows during the 12 months preceding the vote.	CRSP mutual fund
Expense ratio (weighted average of shareclasses)	Weighted average (by class) of fund's expense ratio - "fexp_ratio."	CRSP mutual fund
Fraction of company's shares held by fund	nbr_shares/(shrout2 *1000)	CRSP mutual fund and CRSP, respectively
Fund twelve-months characteristic selectivity return	Calculated by the authors using the Daniel, Grinblatt, Titman & Wermers (1997) approach.	Thompson Reuters s12
Fund voted for SOP	A binary variable that equals one if the fund voted for SOP, and zero otherwise.	ISS voting analytics dataset
Fund's portfolio weight (in fraction)	percent_tna/100, where percent_tna is the "security's percentage of the total net assets in the portfolio"	CRSP mutual fund
Number of funds voting on proposal	Number of funds voting on proposal included in the ISS voting analytics dataset	ISS voting analytics dataset
Total net assets managed by fund (in thousand $)	mtna/1000, where mtna is defined as "assets minus total liabilities as of month-end."	CRSP mutual fund
Turnover ratio (weighted average)	Weighted average (by class) of fund's turnover ratio – "fturn_ratio."	CRSP mutual fund

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Table 1: Shares held and votes cast by institutions and mutual funds
This table estimates, for the 2011-2013 period, the shares held and votes cast by institutions and mutual funds, as described in the paper.

	Average	Median
Percentage of shares held by institutional investors	70.0%	
Estimation of percentage of SOP votes cast by institutional investors	87.8%	
Percentage of shares held by mutual funds	28.5%	29.2%
Estimation of percentage of SOP votes cast by mutual funds	35.7%	36.6%

Table 2
Panel A: Summary statistics
This table reports summary statistics for the SOP observations during the 2011-2013 period included in this study. Variables are defined in the Glossary of Variables.

Variable name	n	Mean	0.25 percentile	median	0.75 percentile	S.D.
Institutional level variables						
Fraction of funds voted for SOP	63,490	0.87194	1	1	1	0.32398
Fraction of company's shares held by institution	63,490	0.01383	0.00057	0.00292	0.01633	0.0231
Institution's portfolio weight (in fraction)	63,490	0.00181	0.00006	0.00025	0.00114	0.00591
Total assets managed by institution in $Trillions	63,490	0.15485	0.01139	0.03571	0.20244	0.22758
Number of institutions voting on proposal	63,490	62.97221	43	59	80	26.73242
Mutual fund level variables						
Annual netflow of fund	181,341	-0.0049	-0.1322	-0.0392	0.0766	0.2225
Expense ratio (weighted average of shareclasses)	181,341	0.0075	0.0025	0.007	0.0113	0.0051
Fraction of company's shares held by fund	181,341	0.0021	0	0.0002	0.0014	0.0127
Fund twelve-month characteristic selectivity return	181,341	0.0051	-0.0051	0.0024	0.0159	0.0357
Fund voted for SOP	181,341	0.8966	1	1	1	0.3045
Fund's portfolio weight (in fraction)	181,341	0.005	0.0004	0.0016	0.006	0.0087
Number of funds voting on proposal	181,341	304.1387	150	244	405	209.0957
Total net assets managed by fund (in thousand $)	181,341	2.7008	0.099	0.3988	1.9398	8.7968
Turnover ratio (weighted average)	181,341	0.5531	0.12	0.33	0.78	0.6416
Company level variables						
Abnormal return of company	4,612	0.0262	-0.1759	-0.0006	0.1745	0.3736
Average compensation of 4 executives t-1 (in $Millions)	4,612	1.9013	0.7276	1.2442	2.2642	2.3838
CEO age	4,612	55.8889	51	56	61	7.2622
CEO tenure	4,612	8.3407	2.6301	5.8288	10.6027	10.9238
Fraction of shares held by blockholders	4,612	0.2679	0.144	0.249	0.364	0.1669
Fraction of shares held by executives	4,612	0.1051	0.02	0.045	0.1115	0.1568
Fraction of shares held by institutions	4,612	0.6963	0.5853	0.7542	0.8565	0.2047
Fraction voted for SOP	4,612	0.8981	0.8759	0.9479	0.9752	0.127
ISS recommended to vote for SOP	4,612	0.8703	1	1	1	0.336
Market capitalization in $Millions	4,612	6627.54	437.11	1279.33	4067.23	22504.82
Number of institutional shareholders	4,612	219.3828	93	145	255	221.2978
ROA of company t-1	4,612	0.1109	0.0499	0.1187	0.1842	0.4942
Total compensation of CEO t-1 (in $Millions)	4,612	5.1781	1.5163	3.1844	6.5596	7.624

Table 2
Panel B: Correlation matrix of the holding variables
This table reports Correlation Matrix of the Holding Variables

	Institution's portfolio weight (in fraction)	Fraction of company's shares held by institution	Fund's portfolio weight (in fraction)	Fraction of company's shares held by fund
Institution's portfolio weight (in fraction)	1			
Fraction of company's shares held by institution	-0.0568	1		
Fund's portfolio weight (in fraction)	0.442	-0.0763	1	
Fraction of company's shares held by fund	-0.012	0.2929	0.0583	1

Table 3: SOP votes of financial institution
This table documents for the 20 institutions (i.e., investment advisors) with the largest number of votes cast, the average frequency institutions cast SOP votes in the opposite direction of ISS recommendation (Column 3), and the standard deviation of the SOP votes cast by the mutual funds advised by the institution (Column 4).

	Name of institution	Number of votes cast	% votes opposite ISS recomm.	S.D. of votes within institution
	(1)	(2)	(3)	(4)
1	BlackRock Advisors, Inc.	154,756	34%	1.02%
2	Vanguard Group, Inc.	124,903	7%	0.00%
3	Fidelity Management & Research	111,756	4%	3.67%
4	Dimensional Fund Advisors, Inc.	68,585	0%	0.01%
5	ProShare Advisors LLC	61,106	0%	0.00%
6	TIAA-CREF Asset Management LLC	60,822	9%	0.00%
7	Rydex Investments	48,975	21%	0.04%
8	T. Rowe Price Associates, Inc. (MD)	42,088	8%	0.50%
9	State Street Global Advisors	40,938	8%	1.96%
10	EQ ADVISORS TRUST	39,294	11%	10.87%
11	JPMorgan Asset Management, Inc. (US)	38,787	3%	1.89%
12	SEI Investments Management Corporation	33,414	0%	0.07%
13	Putnam Investment Management, Inc.	30,081	10%	4.07%
14	Charles Schwab Investment Management, Inc.	29,659	15%	0.04%
15	American Century Investment Management, Inc.	29,375	13%	0.00%
16	ING Funds	23,390	5%	0.46%
17	John Hancock Funds, LLC	22,518	3%	5.37%
18	Northern Trust Global Investments	22,048	22%	3.40%
19	Jackson National Asset Management, LLC	22,008	26%	20.38%
20	USAA Investment Management Company	21,880	11%	1.78%
	Average for all 357 fund families in study	5,016	11%	3.05%
	Median for all 357 fund families in study	535	9%	0.07%

Table 4: **Votes cast on the institutional advisor level**
Panel A: Say-on-Pay Votes
The table report OLS regressions at the institution-company-year level for the 2011-2013 period. The dependent variable in models 1-7 is the weighted average of the institution's SOP support rate, and in model 8 the equal weighted average of the institution's SOP support rate, both defined in the paper. All regressions include year, and Fama-French 48 industry fixed effect. Errors are clustered on the institutional level. P-values are reported in parenthesis. * indicates p<.05, ** p<.01, and *** p<.001.

	Weighted average of the institution's SOP support rate							EW inst. SOP support rate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Institution's portfolio weight (in fraction)	0.8845**	0.8474*	0.4842	0.9745**	4.5302**	0.8411**	0.9789**	1.0549**
	(.046)	(.061)	(.658)	(.044)	(.034)	(.047)	(.044)	(.015)
Fraction of company's shares held by institution	0.6422**	0.6421**	0.3732**	0.6579**	0.3806*	0.6376***	0.6551**	0.5932**
	(.014)	(.014)	(.023)	(.012)	(.070)	(.008)	(.012)	(.030)
Institution's portfolio weight (in fraction) squared		-13.1819						
		(.163)						
Fraction of company's shares held by institution squared		-3.0086*						
		(.084)						
Fund's portfolio weight X ab. Return							-1.9413*	
							(.089)	
Fraction of comp. held by fund X ab. return							-0.3986**	
							(.030)	
Top third blockholders, bottom third port. weight				-0.0077**				
				(.045)				
Top third blockholders				-0.0043				
				(.264)				
Bottom third port. weight				0.0009				
				(.886)				
Fraction of shares held by blockholders	-0.0201**	-0.0190**	-0.0172*	0.0001	-0.0259*	0.0188	-0.0203**	-0.0181**
	(.015)	(.024)	(.068)	(.993)	(.057)	(.199)	(.014)	(.017)
Fraction of shares held by executives	-0.0176*	-0.0168*	-0.0245*	-0.0161	-0.0330**	-0.0041	-0.0179*	-0.0240**
	(.077)	(.092)	(.074)	(.105)	(.033)	(.931)	(.073)	(.013)
Total assets managed by institution (in $million)	-0.0873	-0.0887	0.1153***	-0.0883	0.0171	-0.1418*	-0.0884	-0.0824
	(.311)	(.300)	(.003)	(.305)	(.831)	(.087)	(.305)	(.349)
Total CEO comp. t-1 (in $million)	-0.0036***	-0.0036***	-0.0035***	-0.0036***	-0.0053***	-0.0030***	-0.0036***	-0.0035***
	(.000)	(.000)	(.000)	(.000)	(.001)	(.000)	(.000)	(.000)
ROA of company t-1	0.0166	0.0164	0.0166	0.0165	-0.0053	0.0194	0.0166	0.0153
	(.161)	(.167)	(.177)	(.164)	(.171)	(.330)	(.160)	(.120)
Firm abnormal return	0.0085**	0.0084**	0.0136***	0.0172***	0.0061*	0.005	0.0173***	0.0097***
	(.019)	(.020)	(.003)	(.001)	(.062)	(.187)	(.001)	(.004)
Market capitalization in	0.0001**	0.0001**	0.0001*	0.0001**	0.0001	0	0.0001**	0.0001**
	(.032)	(.043)	(.083)	(.033)	(.650)	(.918)	(.041)	(.023)
Fraction of shares held by institutions	-0.0353***	-0.0363***	-0.0281*	-0.0336**	-0.0332*	0.0316	-0.0356***	-0.0391***
	(.008)	(.008)	(.078)	(.011)	(.068)	(.294)	(.008)	(.001)
Number of institutions voting on proposal	0.0005***	0.0005***	0.0005***	0.0005***	0.0008***	0.0001	0.0005***	0.0005***
	(.000)	(.000)	(.005)	(.000)	(.001)	(.499)	(.000)	(.000)
CEO tenure (years)	0.000	0.000	0.0001	0.000	-0.0004*	0	0.000	0.000
	(.984)	(.986)	(.669)	(.994)	(.070)	(.824)	(.998)	(.926)
CEO age (years)	-0.0005***	-0.0005***	-0.0007***	-0.0005***	-0.0004**	0.0002	-0.0005***	-0.0005***
	(.002)	(.003)	(.000)	(.003)	(.026)	(.691)	(.003)	(.001)
ISS recommended to vote for SOP	0.4977***	0.4977***	0.4997***	0.4980***	0.3864***	0.4794***	0.4978***	0.5055***
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)

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	Weighted average of the institution's SOP support rate							EW inst. SOP support rate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Institution fixed effect	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Compsny fixed effects	No	No	No	No	No	Yes	No	No
Errors clustered on instit. level	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations included	All	All	All	All	Large inst.	All	All	All
R-squared	0.476	0.476	0.299	0.476	0.411	0.488	0.476	0.483
N	63,490	63,490	63,490	63,490	21,843	63,490	63,490	69,004

Panel B: All Votes

The table report OLS regressions at the institution-company-year level for the 2006-2013 period. This table includes all proposals. The dependent variable is the weighted average of the institution's support with management. Regressions include, but do not report, all control variables included in Table 4 Panel A All regressions include a fixed effect for the type of proposal, and a year, and Fama-French 48 industry fixed effect. Errors are clustered on the institutional level. P-values are reported in parenthesis. * indicates p<.05, ** p<.01, and *** p<.001.

	Weighted average of the institution's funds voting with management					
	(1)	(2)	(3)	(4)	(5)	(6)
Institutions portfolio weight (in fraction)	0.105** (.012)	-0.024 (.538)	0.776*** (.001)	0.322** (.030)	0.234* (.088)	0.257 (.541)
Fraction of company's shares held by institution	0.270*** (.000)	0.215*** (.000)	2.478*** (.000)	0.131* (.057)	0.127* (.077)	0.994*** (.000)
Fraction of shares held by blockholders	-0.030*** (.000)	-0.014*** (.000)	-0.057*** (.004)	-0.029*** (.000)	-0.012** (.017)	-0.034** (.046)
Fraction of shares held by executives	-0.050*** (.000)	-0.030*** (.000)	-0.060*** (.001)	-0.048*** (.000)	-0.028*** (.007)	-0.070*** (.000)
ISS recommended for	0.437*** (.000)	0.504*** (.000)	-0.406*** (.000)	0.437*** (.000)	0.504*** (.000)	-0.406*** (.000)
Observations included	All	Management sponsored	Shareholders sponsored	All	Management sponsored	Shareholders sponsored
Additional controls	Yes	Yes	Yes	Yes	Yes	Yes
Institution fixed effect	No	No	No	Yes	Yes	Yes
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Errors clustered on instit. level	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.336	0.317	0.261	0.377	0.364	0.464
N	910,498	861,219	49,279	910,498	861,219	49,279

Table 5: **CARs around SOP votes**

This table reports the cumulative abnormal returns (CARs) around the SOP votes held in the 2011-2013 period. Abnormal returns are calculated around the meeting date, by subtracting, from a company's compounded return the compounded value weighted market return for: all observations (Panels A and B), companies for which no proposal was submitted by shareholders (model 1-5 of Panel C) all companies, while controlling for the average fraction of votes in support of directors (model 6-10 of Panel C). "SOP received support > 70%" is an indicator variable that equals one if SOP received support rates that exceeded 70%. In each panel we regress the abnormal returns estimated on the fraction of votes cast in support of SOP as well as an intercept. Panel D compares the coefficients of each pair of regressions from Panel C (e.g., model 1 versus 5 of Panel C are compared in specification 1 of Panel D). In all panels, CARs are expressed in fractions. P-values are reported in parenthesis. * indicates p<.05, ** p<.01, and *** p<.001.

Panel A: Value weighted CAR for all observations

Window	[-1, 1]	[-3, 3]	[-4, 4]	[-5, 5]
	(1)	(2)	(3)	(4)
Fraction voted for	0.0088**	0.0144***	0.0170***	0.0171**
	(.018)	(.008)	(.006)	(.010)
Constant	-0.0074**	-0.0121**	-0.0151***	-0.0154**
	(.032)	(.015)	(.008)	(.012)
N	7,123	7,123	7,122	7,121

Panel B: Value weighted CAR for all observations – contrasting low SOP support rates with high support rates

Window	CAR [-1, 1]	[-3, 3]	[-4, 4]	[-5, 5]
	(1)	(2)	(3)	(4)
SOP received support > 70%	0.0029*	0.0063**	0.0079***	0.0075**
	(.097)	(.014)	(.007)	(.017)
Constant	-0.002	-0.0048*	-0.0068**	-0.0068**
	(.232)	(.051)	(.015)	(.026)
R-squared	0.000	0.001	0.001	0.001
N	7,123	7,123	7,122	7,121

Panel B: Value weighted CAR for all companies for which no proposal was submitted by shareholders

Window	[-1, 1]	[-3, 3]	[-4, 4]	[-5, 5]	[-1, 1]	[-3, 3]	[-4, 4]	[-5, 5]
	(1)	(2)	(3)	(4)	(6)	(7)	(8)	(9)
Fraction voted for	0.0087**	0.0145**	0.0187***	0.0185**	0.0084*	0.0131**	0.0170**	0.0174**
	(.041)	(.017)	(.007)	(.014)	(.069)	(.040)	(.030)	(.053)
Average support for directors					0.0051	0.0098	0.0124	0.0102
					(.477)	(.339)	(.290)	(.423)
Constant	-0.0071*	-0.0119**	-0.0164**	-0.0166**	-0.0105	-0.0187*	-0.0238**	-0.0215*
	(.068)	(.034)	(.010)	(.017)	(.116)	(.053)	(.031)	(.071)
N	6,253	6,253	6,252	6,251	6,240	6,240	6,239	6,238

Table 6: **SOP votes cast by mutual funds**

This table reports regressions at the fund-company-year level for the 2011-2013 period. The dependent variable equals one if the fund voted for SOP. The regressions include year and Fama-French 48 industry fixed effects. Errors are clustered on the fund level. P-values are reported in parenthesis. * indicates p<.05, ** p<.01, and *** p<.001.

	Funds voted for SOP							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fund's portfolio weight (in fraction)	0.8098*** (.000)	0.8460*** (.000)	17.6285*** (.000)	1.8001*** (.000)	0.3837*** (.001)	0.3221*** (.003)	0.8556*** (.000)	0.4116*** (.000)
Fraction of company's shares held by fund	0.3238*** (.003)	0.3453* (.071)	10.1304* (.066)	0.7843*** (.002)	0.1701 (.343)	0.0772 (.665)	0.3268*** (.003)	0.1222 (.487)
Institution's portfolio weight (in fraction)					1.9838*** (.000)	1.8965*** (.000)		2.1321*** (.000)
Fraction of company's shares held by institution					0.2140*** (.002)	0.2373*** (.001)		0.2511*** (.000)
Fund's portfolio weight X ab. Return							-1.4431*** (.000)	-1.4386*** (.000)
Fraction of comp. held by fund X ab. return							0.3318 (.131)	0.9544*** (.000)
Institution's portfolio weight X ab. return								-3.2622*** (.002)
Fraction of comp. held by institution X ab. Return								-0.4755*** (.000)
Fund's portfolio weight (in fraction) squared		-0.4553 (.785)						
Fraction of company's shares held by fund squared		-0.0291 (.773)						
Fraction of shares held by blockholders	-0.0279*** (.000)	-0.0279*** (.000)	-0.4335*** (.000)	-0.0338*** (.000)	-0.0222*** (.000)	-0.0098 (.288)	-0.0273*** (.000)	-0.0214*** (.000)
Fraction of shares held by executives	-0.0306*** (.000)	-0.0306*** (.000)	-0.2035* (.084)	-0.0420*** (.000)	-0.0268*** (.000)	-0.0534** (.046)	-0.0309*** (.000)	-0.0279*** (.000)
Total compensation of CEO t-1 (in $million)	-0.0031*** (.000)	-0.0031*** (.000)	-0.0547*** (.000)	-0.0030*** (.000)	-0.0029*** (.000)	-0.0034*** (.000)	-0.0031*** (.000)	-0.0029*** (.000)
ROA of company t-1	0.0046 (.139)	0.0047 (.139)	0.1642*** (.001)	0.0046 (.202)	0.0027 (.362)	-0.0011 (.913)	0.0045 (.148)	0.0023 (.438)
Firm abnormal return	0.0152*** (.000)	0.0152*** (.000)	0.3100*** (.000)	0.0165*** (.000)	0.0096*** (.000)	0.0088*** (.000)	0.0181*** (.000)	0.0310*** (.000)
Market cap. ($millions)	0.0001*** (.004)	0.0001*** (.004)	0.0021*** (.000)	0.000 (.713)	0.0001* (.064)	-0.0004** (.012)	0.0001*** (.009)	0.000 (.208)
Fraction of shares held by institutions	-0.0110* (.099)	-0.0110* (.098)	0.0261 (.409)	0.0104 (.275)	-0.0166** (.014)	-0.0104 (.598)	-0.0118* (.073)	-0.0188*** (.005)

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	Funds voted for SOP							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO tenure (years)	-0.0001 (.422)	-0.0001 (.421)	-0.0038** (.022)	0.000 (.586)	-0.0001* (.054)	0 (.691)	-0.0001 (.416)	-0.0002* (.053)
CEO age (years)	-0.0006*** (.000)	-0.0006*** (.000)	-0.0168*** (.000)	-0.0008*** (.000)	-0.0006*** (.000)	0.0012*** (.000)	-0.0006*** (.000)	-0.0006*** (.000)
Annual netflow of fund	-0.0111 (.156)	-0.0111 (.156)	-0.4876** (.031)	-0.0043 (.798)	-0.0122* (.092)	-0.0111 (.116)	-0.0107 (.173)	-0.0117 (.105)
Expense ratio (weighted average of shareclasses)	0.911 (.698)	0.9144 (.697)	52.725 (.588)	-12.9671*** (.000)	1.9146 (.488)	1.3417 (.605)	0.8988 (.701)	1.8667 (.490)
Turnover ratio (weighted average)	0.0061* (.094)	0.0061* (.094)	0.1856** (.023)	0.0623*** (.001)	0.0079** (.012)	0.0077** (.015)	0.0060* (.095)	0.0077** (.013)
Total net assets managed by fund (in $thousand)	0.0004 (.309)	0.0004 (.312)	0.0207 (.117)	-0.0003 (.209)	0.0007* (.058)	0.0007* (.084)	0.0004 (.302)	0.0007* (.053)
Number of funds voting on proposal	0.0061*** (.000)	0.0061*** (.000)	0.2479*** (.000)	0.0099*** (.000)	0.0033 (.177)	0.0104*** (.000)	0.0064*** (.000)	0.0039 (.101)
Total assets managed by inst. Trillion					-0.0904*** (.001)	-0.1309*** (.000)		-0.0904*** (.001)
Number of institutions voting on proposal					0.0003*** (.002)	-0.0003* (.066)		0.0003*** (.003)
ISS recommended to vote for SOP	0.4319*** (.000)	0.4319*** (.000)	4.5807*** (.000)	0.4317*** (.000)	0.4185*** (.000)	0.3939*** (.000)	0.4320*** (.000)	0.4189*** (.000)
Type of regression	OLS	OLS	Logit	OLS	OLS	OLS	OLS	OLS
Fund fixed effect	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Year and ind. fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.43	0.43		0.31	0.443	0.483	0.43	0.443
N	181,341	181,341	119,206	181,341	153,387	153,390	181,341	153,387

Table 7: **Subsets**

This table reports OLS regressions at the fund-company-year level for the 2011-2013 period. The dependent variable equals one if the fund voted for SOP. This table includes, but for brevity, does not report, all control variables included in model 5 of Table 6. The regressions include year and Fama-French 48 industry fixed effects. Errors are clustered on the fund level. P-values are reported in parenthesis. * indicates p<.05, ** p<.01, and *** p<.001.

	Fund voted for SOP					
	(1)	(2)	(3)	(4)	(5)	(6)
Institution's portfolio weight (in fraction)	7.880*** (.000)	0.536** (.040)	3.182** (.014)	1.804*** (.000)	1.340*** (.001)	2.895* (.065)
Fraction of company's shares held by institution	1.092*** (.000)	0.157*** (.004)	0.230*** (.004)	0.435*** (.000)	0.436*** (.000)	0.219 (.174)
Fund's portfolio weight (in fraction)	0.689 (.157)	0.035 (.624)	0.557 (.137)	0.205 (.119)	0.393** (.012)	0.546* (.067)
Fraction of company's shares held by fund	-0.34 (.512)	0.252** (.049)	0.278 (.128)	0.008 (.982)	0.0120 (.944)	-0.46 (.318)
Fraction of shares held by blockholders	-0.025 (.210)	-0.008*** (.004)	-0.026*** (.000)	-0.018** (.041)	-0.028*** (.002)	-0.007 (.432)
Fraction of shares held by executives	0.024 (.298)	-0.012*** (.001)	-0.008 (.204)	-0.041*** (.000)	-0.0090 (.437)	-0.026*** (.001)
Number of funds voting on proposal	0.054*** (.000)	0.003*** (.002)	0.019*** (.000)	-0.003 (.158)	0.007*** (.003)	0.007 (.157)
Total assets managed by inst. Trillion	-0.662*** (.000)	-0.033* (.084)	-0.143*** (.000)	-0.092*** (.001)	-0.162*** (.000)	-0.066 (.128)
Number of institutions voting on proposal	0 (.498)	0 (.954)	-0.001*** (.000)	0.001*** (.000)	0.0000 (.512)	0.000* (.094)
Total CEO compen. t-1 (in millions)	-0.008*** (.000)	-0.002*** (.000)	-0.006*** (.000)	-0.003*** (.000)	-0.003*** (.000)	-0.004*** (.000)
ROA of company t-1	-0.105*** (.000)	0.012*** (.000)	0.001 (.613)	-0.007 (.402)	0.018* (.074)	0.002 (.663)
Firm abnormal return	0.029* (.075)	0.007*** (.009)	0.021*** (.000)	0.063*** (.000)	0.032*** (.000)	0.025** (.017)
ISS recommended to vote for SOP			0.450*** (.000)	0.337*** (.000)	0.353*** (.000)	0.483*** (.000)
Subset	ISS recommend against	ISS recommend For	Market cap. <= 10 Billion	Market cap. > 10 Billion	Non-index funds	Index funds
Year and industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Fund fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.485	0.467	0.468	0.413	0.488	0.425
N	17,976	135,411	101,784	51,603	57,275	42,553

Table 8: **Aggregate SOP vote outcomes**
This table reports OLS regressions at the company-year level for the 2011-2013 period. The dependent variable equals the fraction of votes cast for SOP. The regressions include year and Fama-French 48 industry fixed effects. Errors are clustered on the company level. P-values are reported in parenthesis. * indicates p<.05, ** p<.01, and *** p<.001.

	Fraction voted for SOP			
	(1)	(2)	(3)	(4)
Fraction of shares held by blockholders	0.0519*** (.000)	0.0552*** (.000)	0.0579*** (.000)	0.1054*** (.000)
Fraction of shares held by executives	0.1558*** (.000)	0.1621*** (.000)	0.1558*** (.000)	0.1621*** (.000)
Total compensation of CEO t-1 (in millions)	-0.0016** (.029)			
Average compensation of 4 executives t-1 (in millions)		-0.0056*** (.001)		
Predicted CEO compensation t-1			-0.0241*** (.007)	
Residual of CEO compensation t-1			-0.0016** (.029)	
Predicted 4 executives compensation t-1				-0.1844*** (.009)
Residual of 4 executives compensation t-1				-0.0056*** (.001)
ROA of company t-1	0.0123** (.039)	0.0117** (.037)	0.0192*** (.003)	0.0072 (.221)
Abnormal return	0.0256*** (.000)	0.0250*** (.000)	0.0186*** (.000)	-0.0023 (.833)
Market cap in Billions of $	0.0002* (.094)	0.0002** (.032)	0.0021*** (.007)	0.0049*** (.009)
Fraction of shares held by institutions	-0.0001 (.558)	-0.0001 (.419)	0.0003 (.159)	-0.0009*** (.009)
Number of institutional shareholders	0.0000* (.074)	0.0000*** (.001)	0.0003*** (.005)	0.0009*** (.008)
CEO tenure (years)	-0.0001 (.446)	-0.0001 (.354)	0.0005* (.063)	0.0007** (.046)
CEO age (years)	-0.0006*** (.010)	-0.0006** (.010)	-0.0004 (.108)	-0.0001 (.817)
ISS recommended to vote for SOP	0.2831*** (.000)	0.2841*** (.000)	0.2831*** (.000)	0.2841*** (.000)
Year and industry fixed effects	Yes	Yes	Yes	Yes
R-squared	0.601	0.599	0.601	0.599
N	4,612	4,610	4,612	4,610

Table 9: **Holdings around the Russell 1000-2000 discontinuity**

This table reports OLS 2sls models for the 2011-2013 period. Models 1-2 report an analysis at the institution-company-year level, while the analysis in models 3-4 is at the fund-company-year level. Models 1 and 3 instruments for the "fraction of company's shares held by institution", and "Fraction of company's shares held by fund", respectively, using the discontinuity of the Russell 1000 and Russell 2000 indexes. Following, among others, Crane et al. (2016) and Boone and White (2016), we define for models 1 and 3 the following first stage regression that is limited to the 250 companies on both sides of Russell 1000-2000 cutoff, as ranked by the Russel portfolio weights:

$$\%\ company\ held_{ict} = \alpha + \beta * R2000_{ct} + \gamma * Ln(marketcap)^2_{ct} + banding\ controls + other\ controls + u_{ict}$$

$\%\ company\ held_{ict}$ is the predicted percent of company held by institution i, in company c in year t. $R2000_{ct}$ is equal to 1 if the company is within the top 250 companies of the Russell 2000 index, and 0 if it is within the bottom 250 companies of the Russell 1000, at year t when the vote is held, and marketcap is the CRSP marketcap. "Banding controls" are variables used by Appel et al. (2016b) to control for the post 2007 Russell banding methodology for classifying companies in the Russell indexes: a dummy for having an end-of-May market capitalization sufficiently close to the cutoff such that the firm will not switch indexes, a dummy for being in the Russell 2000 in the previous year, an interaction variable of the latter two variables, ln(marketcap)^2, and ln(float adjusted market cap as estimated by Russell). "Other controls" include the Ln(float adjusted market cap), as defined by Russell, and all control variables included in Table 4 (Panel A). Models 2 and 4 report the second stage of the 2sls analysis. All models include all control variables included in Table 4 (Panel A), but not all control variables are reported for brevity. The regressions include year and Fama-French 48 industry fixed effects. Errors are clustered on the company level. P-values are reported in parenthesis. * indicates p<.05, ** p<.01, and *** p<.001.

	Fraction of company's shares held by institution (1)	Weighted average of the institution's SOP support rate (2)	Fraction of company's shares held by fund (3)	Fund voted for SOP (4)
Russell 2000	0.0023*** (.000)		0.0002*** (.002)	
Fraction of company's shares held by institution		5.5339* (.095)		
Fraction of company's shares held by fund				24.2601** (.011)
Stage	First	Second	First	Second
Bandwidth	250 companies on each side of the Russell 1000-2000 cutoff			
Year and industry FE	Yes	Yes	Yes	Yes
Post 2006 banding variables	Yes	Yes	Yes	Yes
Angrist-Pischke F-test	13.79		21.52	
R-squared (centered)		0.1486		0.1315
N	6,579	6,579	32,344	32,344

Appendix A: Procedures followed to match ISS voting analytics dataset to other datasets

In this appendix we explain how we match the ISS voting analytics dataset to three datasets: CRSP mutual fund dataset, Thomson Reuters S12 Database on mutual fund holdings, and Thomson s-34 dataset on the institutional 13-f filers.

CRSP mutual funds dataset. Unfortunately, the ISS voting analytics dataset on mutual fund's votes does not include conventional identifiers for mutual funds. However, ISS does provide links to the N-PX form which include, in virtually all cases, a fund family CIK code and a mutual fund "seriesid" identifier.[26] Reporting a fund ticker in the N-PX filing is voluntary, and most mutual funds do not do so. To increase the number of funds for which we are able to obtain a ticker, we follow the procedure used by Matvos and Ostrovsky (2008, see footnotes 6 and 7), and Iliev and Lowry (2014), and match the fund's seriesid to at least one of the tickers reported in the company's filing section of the Edgar database.[27]

To further increase the number of mutual funds for which we are able to match a ticker, we manually search in several additional databases for a ticker that is associated with the fund name and the institution's name, as reported in the N-PX filing. These additional databases include the CRSP Mutual Fund Database, Thomson Reuters Database on mutual fund holdings S12, Factset, and general searches on the internet.

Using all these approaches, we are able to match 40.2% of the SOP vote-observations included in the Mutual Funds ISS Voting Analytics database to a fund ticker. However, for a given company in a given year, the average aggregate holdings of mutual funds that we are able to match to a ticker amount to 19.9% of the outstanding stocks. We estimate in Table 1 that 27.5% of the outstanding stocks are held, on average, by mutual funds. Hence, we are able to match voting corresponding to the holdings of 72% (19.9%/27.5%) of the stocks held by mutual funds. Finally, we search in the CRSP mutual funds dataset for each ticker we have found for each fund included in the ISS voting analytics dataset, in a given quarter. If the quarter and the ticker match, we record the corresponding crsp_portno, which is the fund identifier in the CRSP mutual funds dataset.

[26] The Seriesid identifier is assigned by the SEC, and uniquely identifies a mutual fund. To the best of our knowledge the Seriesid identifier is not included in any of the mutual fund databases commonly available to academics.

[27] In Edgar, https://www.sec.gov/edgar/searchedgar/companysearch.html, one may type a seriesid in the "Fast Search" box, which leads to the hyperlink "List all Funds and Classes/Contracts for…" which details the available tickers of all funds branching from the seriesid.

Thomson Reuters S12 mutual funds holdings. We match each ticker we have identified for each of the funds included in the ISS voting analytics dataset in a given quarter to a WFICN (using the MFLINK table available from Wharton Research Data Services), and then to the Thomson fund identifier–"fundno."

Thomson s-34 institutionals holdings. For each fund, we map the Thomson fund identifier–"fundno," to a Thomson institution identifier ("mgrno"), using the S12type5 file from WRDS. The S12type5 file mapping is not always updated in cases in which one institution acquires another institution. Accordingly, we manually examine, for each institution, whether the latter is the case in the 2011-2013 period we study. In the cases a fund is held by an institution that is acquired by another institution, we identify the correct institution by searching for the name of the fund in Form N-SAR. This form identifies the primary advisor (i.e., institution) of each fund.

Appendix B: Shareholder Composition and a Company's Response to SOP

We have documented that shareholder composition is related to the votes shareholders cast. In this section, we address the question of whether shareholder composition is related to whether and how a company responds to the SOP vote.[28] Ertimur, Ferri, and Stubben, (2010), and Bach and Metzger (2015) highlight that a company's response in practice ("implementation") to a vote, is the measure that captures whether a non-binding vote is effective.

To measure the implementation of the nonbinding SOP vote, we focus on immediate actions a management/board of a company can take to demonstrate to shareholders that the company is responding to shareholder criticism, as reflected in a SOP vote that receives low support rates. Accordingly, we examine the relation between SOP and subsequent: (1) CEO turnover within 12 months of the voting date; (2) cherry-picking of peer-companies selected for determining executives compensation; and (3) change in the growth rate of the residual compensation awarded to the CEO.[29]

We emphasize that the relations we examine may be endogenous, since other factors may affect SOP and the above-mentioned outcomes. For example, performance may affect both the SOP vote and CEO turnover. Nevertheless, the SOP vote reflects the extent to which shareholders are satisfied. Examining if low support rates for SOP are followed by CEO turnover `demonstrates whether the extent to which shareholders are dissatisfied, as reflected in the SOP vote, is associated with a change occurring in company leadership, or whether shareholder opinions are ignored by the board. Moreover, as we shall demonstrate, changes in the outcomes we examine are not associated with directors' votes, which are the only other regular vote that takes place which may provide a governance opportunity.

I. CEO Turnover

We examine if low support rates for the SOP vote are associated with CEO turnover. Indeed, in model 1 of Table I we find that companies that received low support rates on SOP, are significantly

[28] Previous studies have found that non-binding SOP proposals are generally perceived as value enhancing. For example, Cuñat, Gine and Guadalupe (2016) find that voluntary adoption of SOP increases the market value and profitability of a company. Ferri and Maber (2013) and Iliev and Vitanova (2015) document that the UK and American markets, respectively, reacted positively to the requirement to comply with SOP. Correa and Lel (2016) document that companies in countries that have adopted a SOP vote have experienced a slower increase in CEO compensation, and a higher pay for performance sensitivity compared to companies in countries that did not adopt a SOP vote.

[29] Some studies report that a 30% opposition rate is sufficient to nudge a company to respond to a SOP vote (Ertimur, Ferri, and Oesch, 2013). Other studies argue that a 50% threshold is the point at which response rates jump (Cuñat, Gine, and Guadalupe, 2012). In unreported specifications and graphs, we examine both of these thresholds, but find that generally, a linear relation exists between the SOP support rates and the three outcome variables we examine.

more likely to experience CEO turnover within 12 months of the voting day (the dependent variable in Table I equals one if the latter is the case, and zero otherwise). To understand how responsiveness to SOP differs, given the shareholder structure, we break the data into subsets partitioned by shareholder structure. We hypothesize that, when no blockholder exists, companies will not respond to the SOP vote. Indeed, we do not find a relation between the SOP vote outcome and CEO turnover in companies without a blockholder (Table I, model 2).

We follow previous studies (Morck, Shleifer, and Vishny, 1988; McConnell and Servaes 1990; Hermalin and Weisbach 1998; Holderness, Kroszner, and Sheehan, 1999; Himmelberg, Hubbard, and Palia, 1999), which have distinguished between companies in which the executives hold at least 5% of the shares, versus less than that threshold. The notion of these studies is that, in companies in which executives hold at least 5% of the shares, the executives may have substantial power. Therefore, we do not expect to observe a response to SOP in these companies. Accordingly, in model 3, we include only companies in which executives aggregately hold a block equal to, or exceeding 5%.[30] Indeed, we find that such companies are less likely to experience CEO turnover following a SOP vote with low support rates.

However, as predicted, we do find that, in companies that have a non-insider block (and no block held by insiders), CEO turnover is significantly more likely to occur following a SOP vote that received low support rates (model 4). Hence, the results imply that companies are most likely to demonstrate responsiveness to shareholder satisfaction, as reflected in the SOP vote, when a non-insider blockholder is present. If we view the SOP vote as conveying "soft information" regarding the CEO's ability, these results are consistent with Cornelli, Kominek, and Ljungqvist (2013) who show that in companies with large blockholders, boards fire CEOs particularly as a consequence of such soft information they have gathered.

To rule out the possibility that CEO turnover is the outcome of the other major vote held annually—director's election (Cai, Garner and Walking, 2009), in Regressions 5 and 6 we repeat regressions 1 and 4, respectively, but include the control variable "average support for directors", which captures the average support rates directors received in the same year. As these specifications document, the latter variable is insignificant, while the fraction that voted in support of SOP remains significant, further emphasizing the link between SOP vote and CEO turnover.

[30] As reported in the holdings of "all current executive officers and directors as a group" item in the proxy statement.

II. Peer-companies

In this section we examine whether, in the year following the SOP vote, changes are observed in the peer companies selected for benchmarking and determining the compensation awarded to the named executives. Since 2006, the SEC requires companies to disclose which peer-companies they use to benchmark and determine the compensation of their named executives. Faulkender and Yang (2010), Bizjak, Lemmon, and Ngujen (2011), and Faulkender and Yang (2012) find that companies generally choose peer-companies that pay relatively large compensation to the CEO. Perhaps the SOP vote offers an opportunity to govern such cherry-picking of peer-companies.

We first examine whether companies add or exclude peer companies in the year following the SOP vote, given the SOP outcomes. On average, companies choose 19 peer-companies in a given year. We find that following low SOP support rates, companies are significantly more likely to add new peer-companies (Table II, model 1), but not significantly likely to exclude existing ones (Table II, model 2). Accordingly, in subsequent regressions in Table II we focus on the new peer-companies added in the year following the vote.

Companies can cherry-pick peer-companies that allow inflating compensation by picking, for example, larger peer-companies from better paying industries. To estimate the extent an inflated peer-company is selected, we use the difference between the predicted compensation of the peer company minus the predicted compensation of the "origin" company (i.e., the company for which a SOP vote is held). The predicted compensation is calculated using the Core, Guay, and Larcker (2008) methodology, as specified in n the Glossary of Variables.

Because the predicted compensation takes into account the factors that should affect the compensation awarded, the larger the difference between the predicted compensation of the peer company minus the predicted compensation of the "origin" company, the larger the extent the origin company is picking inflated peer-companies that are not similar to the origin company.

In Regressions 3-8 of Table II, our dependent variable is "new peer inflation below that of prior year." This variable is equal to one if the predicted compensation of the new peer is smaller than the average predicted compensation of the recurring peer companies (i.e., those picked both in the SOP vote and in the year following the SOP vote). Indeed, model 3 of Table II, which includes all observations, documents that companies with low SOP support rates are more likely to pick more modest peer companies. This finding is in line with Ertimur, Ferri, and Oesh (2013), who document that 55% of the companies who received a negative ISS recommendation on SOP, were likely to report in the proxy of the year following the SOP vote, that they restricted their compensation.

In model 4, which is restricted to observations of companies without a blockholder, we do not find that low SOP support rates decrease inflated peer picking. Similarly, in model 5, which includes only companies in which executives aggregately hold a block equal to, or exceeding 5%, we do not find that more modest peer-companies are chosen following a SOP vote which garnered low support rates. In model 6, we include only observations pertaining to companies that have a non-insider blockholder. Similar to the results in the previous section, we observe that following a SOP vote that yielded low support rates, companies with a non-insider blockholder are likely to pick more reasonable peer-companies. Put differently, when a non-insider block is present, companies seem to respond to a low-support-SOP vote by picking better matching peer-companies.

Models 7 and 8 repeat models 3 and 6, respectively, but include the control variable "average support for directors". Once again, we find that the latter variable is insignificant, indicating that selecting more modest peer companies is not related to director's elections; However, the fraction that voted in support of SOP remains significant in these regressions, further supporting that robustness of the relation between the SOP vote and new peer companies selected.

III. Compensation

In unreported specifications, we find that companies that receive low SOP support rates still exhibit, in the year following the SOP vote, significantly larger total compensation and significantly larger residual compensation (as defined in the Glossary of Variables). This finding applies also to the companies with a non-insider blockholder. This raises the question of whether the SOP vote is able to restrain, at least to some extent, the compensation awarded.

To address this question, in Table III, we report a diff-in-diff regression in which the dependent variable is the "percentage of change in residual compensation." This variable essentially captures the change in the growth rate of the residual compensation (as defined in the Glossary of Variables) following the SOP vote.[31] Model 1 of Table III reports that, indeed, companies with low SOP support rates experience a decrease in the "percentage of change in residual compensation" in the year following the SOP vote.

Similarly to the results above, following a SOP vote with low support rates, we do not observe a significant decline in the "percentage of change in residual compensation" for companies that do

[31] We compute the "change in residual compensation" variable by first calculating the percentage of change in the residual compensation awarded between the year following the SOP vote and the SOP vote year, and subtracting from this figure the percentage of change in the residual compensation awarded between the SOP vote year and the year prior to the vote.

not have a blockholder (model 2), or have an inside blockholder (model 3). However, model 4 documents that companies with a non-insider blockholder are significantly more likely to experience a decrease in the "percentage of change in residual compensation" following low SOP support rates. Hence, although SOP does not catalyze companies to set lower compensation and smaller residual compensation compared to other companies, SOP does seem to restrain the growth rate of the residual compensation when a non-insider blockholder is present.

Regressions 5 and 6 repeat regressions 1 and 4, respectively, but include the control variable "average support for directors". These regressions further demonstrate that the fraction of votes cast in support of SOP, rather than the fraction of votes cast in support of directors, is particularly related to the decline of the residual compensation.

The finding that companies tame the residual compensation following a SOP vote with low support rates is consistent with Ferri and Maber (2013), who document that in the UK, companies that received low support rates for the SOP vote reduced their severance pay, and removed provisions allowing to reevaluate compensation when original targets were not met.

To summarize, we have documented in the paper that small shareholders are likely to oppose SOP. In this section, consistent with Kandel, Massa, and Simonov (2011), we find that the actions taken by many small shareholders, in our case, voting against SOP, can have a disciplinary force on management, by pressuring the company to respond to the criticism expressed via the SOP vote. However, in the spirit of Levit and Malenko (2011), we find that management is more likely to respond to a non-binding vote if a blockholder who can discipline management is present, which in our case is a non-insider block.

Table I: **The SOP vote and CEO turnover**

This table reports OLS regressions at the company-year level for the 2011-2013 period. The dependent variable in all three panels equals one if CEO turnover occurred within 12 months of the vote, and zero otherwise. The primary variable of interest is the "fraction voted for SOP." All regressions include fixed year and fixed Fama-French 48 industry effect. Errors are clustered on the company level. P-values are reported in parenthesis. * indicates p<.05, ** p<.01, and *** p<.001.

	Was CEO replaced within 12 months following the vote?					
	(1)	(2)	(3)	(4)	(5)	(6)
Fraction voted for SOP	-0.1156*** (.001)	0.0802 (.177)	-0.0765 (.127)	-0.1572*** (.002)	-0.0842*** (.006)	-0.1318*** (.004)
Average support for directors					-0.0196 (.659)	-0.0049 (.943)
Fraction of shares held by blockholders	-0.0002 (.992)	-2.1349 (.161)	-0.033 (.290)	0.0329 (.208)	-0.0124 (.499)	0.0198 (.431)
Fraction of shares held by executives	0.0345 (.129)	-0.0007 (.973)	0.0331 (.270)	-0.7259*** (.008)	0.0295 (.187)	-0.7086*** (.007)
ROA of company t-1	-0.0018 (.780)	-0.0043 (.818)	0.0042 (.500)	-0.032 (.176)	-0.0004 (.950)	-0.0267 (.230)
Abnormal return	-0.0332*** (.000)	0.0097 (.585)	-0.0305*** (.000)	-0.0370*** (.001)	-0.0361*** (.000)	-0.0404*** (.000)
Market capitalization in millions	0 (.877)	0 (.999)	0 (.110)	0 (.942)	0 (.883)	0 (.992)
CEO tenure	-0.0003 (.322)	0.0014 (.175)	-0.0004 (.178)	0.0002 (.740)	-0.0002 (.487)	0.0004 (.497)
CEO age	0.0015*** (.001)	0.0029* (.052)	0.0012** (.048)	0.0020*** (.004)	0.0014*** (.000)	0.0016*** (.009)
Companies included	All	No blockholders	Insiders block	Non-insider block	All	Non-insider block
Company and industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.016	0.446	0.008	0.026	0.016	0.024
N	5,194	250	2,344	2,783	5,169	2,764

Table II: **The SOP vote and subsequent changes in peer-companies**

This table reports OLS regressions at the peer-company year level for the 2011-2013 period. The dependent variable: in model 1 is equal to one if a peer-company was added and zero otherwise, in model 2 is equal to one if a peer-company was excluded and zero otherwise, and in Regressions 3-8 equals one if a new peer selected in the year following the SOP vote is more "modest" than the peers selected in the year of the SOP vote. Specifically, this variable is equal to one if the predicted compensation of a new peer is smaller than the average predicted compensation of the recurring peer companies (i.e., those picked both in the SOP vote and in the year following the SOP vote). The primary variable of interest is the "fraction voted for SOP." All regressions include fixed year and fixed Fama-French 48 industry effect. Errors are clustered on the company level. P-values are reported in parenthesis. * indicates p<.05, ** p<.01, and *** p<.001.

	New peer added	Peer excluded	Excess compensation of new peer above average peer excess compensation					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fraction voted for SOP	-0.1079**		-0.1260**	-0.3275	-0.0714	-0.1615**	-0.1277**	-0.1922**
	(.032)		(.036)	(.646)	(.447)	(.039)	(.039)	(.020)
Average support for directors							0.034	0.195
							(.803)	(.357)
Fraction of shares held by 5% blockholders	0.0171	0.0782*	-0.0136		0.0793	-0.0397	-0.0195	-0.0429
	(.681)	(.078)	(.818)		(.343)	(.663)	(.743)	(.639)
Fraction of shares held by executives	0.0762	0.0736	0.0939	0.2239	0.1682*	0.0821	0.0901	0.157
	(.157)	(.313)	(.196)	(.289)	(.057)	(.935)	(.216)	(.878)
ROA of company t-1	-0.0387	-0.0194	0.0075	0.3991	0.0189	0.061	0.0072	0.0615
	(.423)	(.496)	(.813)	(.174)	(.608)	(.417)	(.822)	(.417)
Abnormal return	0.0261	0.0455**	0.0023	0.0246	0.0115	0.0381	0.0028	0.0356
	(.191)	(.023)	(.916)	(.898)	(.624)	(.341)	(.899)	(.378)
Market capitalization in millions	-0.0000***	-0.0000*	0	0	0	0	0	0
	(.000)	(.067)	(.228)	(.909)	(.934)	(.181)	(.235)	(.183)
CEO tenure	-0.0008	-0.0003	-0.0005	-0.0019	0.0012	-0.0024	-0.0005	-0.0024
	(.203)	(.677)	(.685)	(.852)	(.494)	(.202)	(.715)	(.220)
CEO age	-0.0020**	0.0011	0.0034**	-0.0093	0.0041**	0.0013	0.0035***	0.0015
	(.042)	(.238)	(.011)	(.225)	(.014)	(.510)	(.010)	(.466)
Type of companies included	All	All	All	No blockholders	Insiders block	Non-insider block	All	Non-insider block
Company and industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.031	0.489	0.022	0.035	0.032	0.034	0.022	0.034
N	43,270	40,134	9,023	361	4,382	4,497	8,990	4,489

Table III: **The SOP vote and the percentage of change in residual compensation**
This table reports OLS regressions at the company-year level for the 2011-2013 period. The dependent variable in these regressions is the "percentage of change in residual compensation" which captures the change in the growth rate of the residual compensation. This variable is computed by first calculating the percentages of change in the residual compensation awarded between the year following the SOP vote and the SOP vote year, and subtracting from this figure the percentages of change in the residual compensation awarded between the year of the vote and the year prior the vote. The primary variable of interest is the "fraction voted for SOP." All regressions include fixed year and fixed Fama-French 48 industry effect. Errors are clustered on the company level. P-values are reported in parenthesis. * indicates p<.05, ** p<.01, and *** p<.001.

	Percentage of change in excess compensation					
	(1)	(2)	(3)	(4)	(5)	(6)
Fraction voted for SOP	11.5350**	21.3774	14.9802	15.1592**	12.0085*	14.5314*
	(.045)	(.865)	(.214)	(.044)	(.075)	(.066)
Average support for directors					-3.4203	4.4059
					(.742)	(.616)
Fraction of shares held by blockholders	0.4187		18.4882	-11.3710**	0.4235	-11.3813**
	(.947)		(.268)	(.011)	(.947)	(.011)
Fraction of shares held by executives	-0.7523	-19.1123	1.8478	-22.7423	-0.7826	-21.1237
	(.775)	(.395)	(.715)	(.595)	(.765)	(.626)
ROA of company t-1	-4.3706	142.596	-5.373	-1.8666	-4.3935	-1.9061
	(.509)	(.519)	(.681)	(.408)	(.510)	(.396)
Abnormal return	-0.2836	-7.0704	0.861	-3.4383	-0.2793	-3.4963
	(.893)	(.587)	(.773)	(.181)	(.895)	(.176)
Market cap. $Mil.	0.000	0.000	0.000	0.000	0.000	0.000
	(.983)	(.831)	(.536)	(.191)	(.995)	(.191)
CEO tenure	0.161	0.0911	0.333	0.0023	0.1585	0.0032
	(.517)	(.804)	(.535)	(.951)	(.513)	(.931)
Type of companies included	All	No blockholders	Insiders block	Non-insider block	All	Non-insider block
Company and industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	-0.012	-0.434	-0.036	0.024	-0.013	0.023
N	2,016	65	782	1,216	2,016	1,216