

Does Proxy Advice Allow Funds to Cast Informed Votes?*

John G. Matsusaka and Chong Shu

University of Southern California and University of Utah

This paper investigates if proxy advice leads mutual funds to vote as if they had acquired information on their own. We find, for the period 2004-2017, that advice from Glass Lewis typically moved fund voting in the same direction as self-information, while advice from ISS led funds to vote in the opposite direction. A vote was “self-informed” vote if the fund visited and downloaded information about a company from the SEC’s Edgar website before voting. A fund’s proxy advisor is identified from the format of its regulatory filing. We also find that ISS advice typically made funds more likely to support outcomes preferred by socially responsible investors. We suggest that ISS may have slanted its recommendations in response to pressure from socially responsible investors that wanted to influence ISS’s robo-voting customers.

October 25, 2022

* Contact authors at matsusak@usc.edu and chong.shu@eccles.utah.edu. We received helpful feedback from Odilon Camara, Joanne Juan Chen, Jill Fisch, Davidson Heath, Peter Iliev, Matthew Kahn, Doron Levit, Dorothy Lund, Erin Smith, Irene Yi, and workshop attendees at the University of Cambridge, USC, University of Utah, FIRS Conference, and Wasatch Finance Conference. We thank USC for financial support.

1. Introduction

The purpose of proxy advice is to allow investors to cast their votes as if they were informed without them having to do the research themselves. How well this works is a matter of considerable consequence now that institutional investors cast a majority of the votes in corporate elections, and their votes are often based on recommendations from proxy advisors. If proxy advice is poor or biased, as critics suggest, then corporate elections will not represent the preferences of investors, and shareholder monitoring will be ineffective.

Assessing whether proxy advice allows funds to vote their preferences is challenging because we do not observe fund preferences independent of the votes they cast. To get around this problem, researchers sometimes assume that funds prefer to maximize firm value, and then test whether proxy advice advances that goal. However, the assumption that funds want advice for the sole purpose of maximizing firm value is not necessarily correct, and is probably incorrect for some socially responsible investment (SRI) funds, a growing segment of the market. SRI investors are willing to trade off value at the margin in order to advance nonpecuniary “social” goals, such as environmental protection and human rights (Riedl and Smeets, 2017). Assessing whether proxy advice helps funds vote in accordance with their goals requires a research strategy that recognizes the diversity of fund goals.

This paper proposes a strategy for assessing the effectiveness of advice that relies on the votes of self-informed funds to reveal their underlying interests. Our idea is to focus not on the value consequences of advice or some other a priori goal, but instead on whether advice allows funds to cast the same votes they would have cast had they been independently informed. Specifically we ask: do funds that receive proxy advice vote in the same way they would have voted if they had independently acquired information? To conduct this exercise requires establishing a baseline for how a fund would have voted if it had been independently informed, and then comparing the baseline with the fund’s vote when it relied on proxy advice. Both steps present measurement challenges.

To establish a baseline for how a fund would have voted if it had been independently informed, we tracked each fund’s activities on the SEC’s Edgar website. We label a fund’s vote as “self-informed” about a company if the fund downloaded information about that company from Edgar prior to the election. Our use of Edgar access follows Iliev et al. (2021), which supplies corroborating evidence that funds do in fact become more informed by visiting Edgar.

To determine how a fund voted when advised, we need to know its proxy advisor (if any) and that advisor's recommended vote. Since most funds do not routinely disclose the identity of their proxy advisor, we use the method developed in Shu (2022) that identifies a fund's advisor from the format of its N-PX form filed with the SEC. Shu (2022) verifies that this method correctly identifies the customers of the two main proxy advisory firms, Institutional Shareholder Services (ISS) and Glass Lewis. As for recommendations, ISS's are available in standard databases, and we recovered Glass Lewis's recommendations through FOIA requests made to several public pension funds that purchase advice from Glass Lewis.

We examine over 6 million votes cast by 155 mutual fund families on 305,709 corporate election items during 2004-2017. We measure the effect of self-information on a given election item as the difference in the approval rate by funds that visited and did not visit Edgar, and compare it with the effect of advice, measured as the difference in approval rate by advised and unadvised funds. One key finding is that while Glass Lewis advice shifted fund votes in the same direction as when they self-informed, ISS advice shifted their votes in the opposite direction as self-information. These patterns hold with a few exceptions across the most common governance proposals, compensation proposals, and director elections.

We then consider whether these differences can be interpreted as causal effects of information and advice. In terms of self-information, a key question is whether visiting Edgar produced information that changed voting behavior, or whether funds that visited Edgar had different voting preferences to begin with. We find that the information effects survive fund-year and election-item fixed effects, ruling out that they are due to fund-specific preferences or election-specific factors. To investigate the possibility that visiting Edgar is a proxy for management-friendliness, we estimate regressions of whether a fund's votes agreed with management's recommendations. We find no connection between visiting Edgar and supporting management for director elections and management proposals, and only a quantitatively small connection for shareholder proposals. We also employ three instruments for Edgar visits, two of which are new: whether the election took place during the busy proxy season (following Iliev et al., 2021); whether the company had a contentious item on the proxy statement other than the item in question; and the number of items on the proxy statement. The difference in voting between self-informed and uninformed funds is robust to all three of these exercises. Finally, we show that Edgar visits had a similar effect on voting as other proxies for information – fund assets,

years that a fund held a stock, and portfolio weight of a stock – further supporting the interpretation of Edgar visits as information.

To address the “advice effect” – whether advised funds voted differently because of advice, or whether they sought advice because they were inclined to vote differently – we estimate the main regressions with fund-year fixed effects, and allow votes to depend on the actual recommendations from a fund’s proxy advisor. The fixed effects remove all fund selection effects. We find a strong connection between a fund’s votes and its advisor’s recommendations, indicating that the recommendations themselves, and not the mere fact of being an advice customer, influenced voting decisions. We also employ quasi-exogenous changes in funds’ proxy advisors as a result of mergers and acquisitions and find that the proxy advice effect continues to appear.

Having established a case for a causal interpretation, we then explore why ISS advice moved fund voting in a different direction than self-information (and Glass Lewis advice). We first establish a descriptive fact: ISS advice did not just cause funds to shift their votes in the opposite direction from self-information – it moved their votes towards outcomes preferred by SRI investors. We show that SRI funds had significantly different voting preferences than non-SRI funds, and that ISS recommendations shifted votes in the direction favored by SRI funds. This was not the case for Glass Lewis advice.

One possible explanation for this pattern is that ISS recommendations led some funds to vote in favor of SRI outcomes contrary to (or unconnected with) their core interests. Such an explanation begs the question why funds would purchase advice that leads them to vote against their preferences. We describe some features of proxy voting and the proxy advice industry that suggest it could have been rational. For most funds, the benefit from casting an accurate vote is negligible: their votes are not pivotal and their ownership share is so small that portfolio gains even from a pivotal vote are tiny; it is therefore not rational for most funds to pay to acquire quality advice. They may nevertheless acquire proxy advice in order to demonstrate fiduciary responsibility in the eyes of the SEC. They may also purchase proxy advice because it is bundled with proxy execution services. Transmitting thousands of votes to hundreds of companies each year can be costly, and utilizing low-cost execution services is a cost-effective strategy, regardless of the quality of the bundled advice. In support of the idea that some funds do not care how their votes were cast, we find that 16.5 percent of ISS customers were “robo-voters” who followed ISS

recommendations more than 99 percent of the time. These funds were not updating based on advice, but entirely delegating their vote to ISS.

Another (nonexclusive) explanation of the findings is that funds did update their beliefs rationally based on ISS advice, and this shifted their beliefs such that they were more likely to support SRI outcomes. As shown in the Bayesian persuasion literature, a truthful advisor can persuade rational advisees to change their votes by appropriate selection of the process mapping states of the world to signals (Kamenica and Gentzkow, 2011; Alonso and Camara, 2016). Intuitively, ISS could design its information collection and advice process (“policy experiment”) in a way that is valuable for funds, but nevertheless shifts their votes in a different direction than if they designed their own process. ISS advice could be informative and valuable but not “neutral.”

Finally, we discuss why ISS might find it optimal to offer advice that tilts voting toward the outcomes favored by SRI funds. While the votes of typical non-SRI funds have no effect on their bottom line, SRI funds use their proxy voting as a way to attract business. They will pay for advice with a pro-SRI slant, and equally important, they want ISS to influence the votes of its other non-SRI customers, particularly the robo-voters. From ISS’s perspective, then, it may be optimal to slant its recommendations in an SRI direction in order to attract SRI funds, knowing that this drive away non-SRI customers. A corollary of this conjecture is that Glass Lewis, which has half the market share of ISS, may find it optimal to align its recommendations with non-SRI customers as a result of spatial competition (Hotelling, 1929).

Our study is part of a growing literature on proxy advice and shareholder voting. Several studies have established that ISS recommendations swing votes. Cai et al. (2009), Choi et al. (2010), Ertimur et al. (2013), and Larcker et al. (2015) find that ISS recommendations in favor of a proposal were associated with about 6 to 25 percent more support; Malenko and Shen (2016), exploiting a discontinuity, find that ISS recommendations shifted support for say-on-pay proposals by about 25 percent in 2010-2011; and Shu (2022), extending the analysis to include Glass Lewis, finds that negative recommendations from ISS and Glass Lewis reduced support by 21 and 22 percent, respectively. We contribute to this stream of research by assessing how the effect of advice compares to the effect of self-information.

Our findings suggest that proxy advice from Glass Lewis is aligned with the information funds collect on their own. Advice from ISS, on the other hand, is not neutral – it causes the distribution of fund votes to shift toward support for SRI outcomes. The literature exhibits

substantial skepticism about the quality of ISS advice¹ – we add to the literature by raising the possibility that advice may be informative but filtered in such a way that induces funds to support outcomes they would not support when collecting their own information.

Finally, our study is related to Bolton et al. (2020) and Bubb and Catan (2022), which draw on methods from the political science and machine-learning literatures to estimate the preferences of funds based on their voting behavior. Those estimates reveal underlying fund preferences if the votes themselves reflect preferences. Our finding that fund votes are often influenced by proxy advisor recommendations (sometimes mechanically), in a way that is unconnected to their self-informed preferences, implies that the Bolton et al. (2020) and Bubb and Catan (2022) parameters should be understood as indicators of preferences induced by advice, not the true underlying preferences.

2. Framework and Data

A. Conceptual Framework

This section provides a conceptual framework to motivate the empirical analysis. We assume that funds have objectives that include financial returns and in some cases social goals. When voting, funds are not certain how the different outcomes will affect their objectives. To reduce uncertainty, they acquire information and/or advice.

Formally, on election item i (proposal or director election), fund j can vote yes ($v_{ij} = 1$) or no ($v_{ij} = 0$). There are two states $\omega \in \{0,1\}$ and it is optimal for a fund to vote yes if $\omega = 1$ and no if $\omega = 0$. A fund can acquire information or advice in the form of an “experiment” (informative signal) with distribution $\pi(\cdot | \omega)$ whose realization causes the fund to update its beliefs about the state of the world. The signal realizations could push a fund either toward support or opposition. Let $P_{ij}(\pi)$ be the probability that fund j supports proposal i given an informative signal π .

We focus on four potential signals: no information (π_0), collecting information from Edgar (π_E), and acquiring information from a proxy advisor (π_{ADV}), where $ADV \in \{ISS, Glass\ Lewis\}$. By “no information” we have in mind a fund’s baseline level of information that arrives at no cost, such as a preexisting view on the merits of classified boards. “Advice” could include a proxy

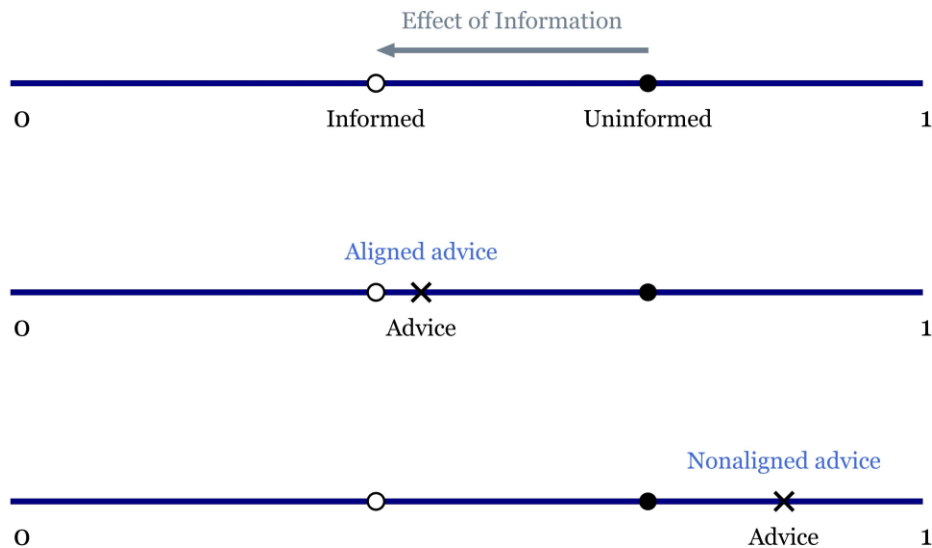
¹ See Larcker et al. (2013, 2015), Iliev and Lowry (2015), and Albuquerque et al. (2021) on the connection between ISS advice and value maximization; and Cabezón (2021) on the possibility that ISS recommendations have induced excessive standardization in executive compensation contracts.

advisor's bottom line voting recommendation as well as its reports and analysis. A fund can acquire more than one type of signal.

If fund j acquires information from Edgar, its probability of voting in favor shifts from $P_{ij}(\pi_0)$ to $P_{ij}(\pi_E)$. This shift is the effect of self-collecting information. If a fund acquires advice but not self-information, its probability of voting in favor shifts to $P_{ij}(\pi_{ADV})$. If advice functions as a perfect substitute for self-informing, then $P_{ij}(\pi_E) = P_{ij}(\pi_{ADV})$. This is the basic intuition for our analysis. Although $P_{ij}(\pi)$ cannot be observed for an individual fund, we can estimate it by aggregating votes by issue: $P_i(\pi) = \left(\frac{1}{J}\right) \sum_{j=1}^J v_{ij}$, where $j = 1 \dots J$ are funds with signal π and identical preferences.

Figure 1 illustrates our approach. The black circles show the percentage of uninformed funds that supported a proposal of a certain type, and the open circles show the percentage of self-informed funds that voted in support. We interpret the gap in the top line as the effect of information, $P_i(\pi_E) - P_i(\pi_0)$ in our notation. The \times markers in the other two lines show the fraction of favorable votes from funds that acquired proxy advice. If proxy advice replicates self-information, then $P_i(\pi_{ADV}) = P_i(\pi_E)$. The middle line is an example in which proxy advice causes votes to move toward the self-information probability, which we call aligned advice. In the bottom line, proxy advice causes votes to move in the opposite direction as self-information, which we call nonaligned or opposite advice. Our empirical strategy is to distinguish whether

Figure 1. Effect of Information and Advice



actual voting patterns look more like the aligned or nonaligned cases. Note that our approach does not make any assumptions about whether funds want to maximize value, pursue social objectives, etc. – we are letting their own votes reveal their preferences.²

An important conceptual issue is the interpretation of the nonaligned case, which does appear in the data. With rational actors, this case can emerge in two ways:

- *No updating by funds.* Nonalignment occurs because funds mechanically follow the recommendations of their advisor. That is, they do not use the advisor’s signal to update their own beliefs and then vote based on their posteriors, but simply turn over their votes to the advisor. As discussed above, this can be rational for some funds. In practice it is easy to do through the use of an automated voting platform, and is conventionally called “robo-voting.”
- *Updating by funds.* Nonalignment occurs because the advisor uses an informative signal that shifts fund posteriors in the opposite direction from the self-information signal. In this case, funds receive the advisor’s advice and update rationally. We illustrate with a setup adapted from the Bayesian persuasion literature that studies the strategic design of a public signal sent to voters (Kamenica and Gentzkow, 2011; Alonso and Camara, 2016).

We model information acquisition as taking place through a binary signal structure (experiment) π_i chosen by the fund itself ($i = E$), by the advisor ($i = ADV$), or through a default process ($i = 0$). The experiment produces a public signal $s \in \{s_L, s_H\}$ correlated with the state through a process with a commonly understood likelihood function. Funds process information according to Bayes’ rule when deciding how to vote, and share a common prior of p on $\omega = 1$.

An experiment produces a posterior of q_H if the realized signal is $s = s_H$, and a posterior q_L if the signal is $s = s_L$, where $q_H > q_L$.³ We focus on the case where a fund votes yes if $q_H > \mu$ and no if $q_L < \mu$, where μ is a cutoff induced by the fund’s (unspecified) objective

² Our approach is related to a literature in political science that attempts to determine if citizens in public sector elections are able to cast votes that reflect their preferences by relying on recommendations from advisors (Lupia, 1994; Lupia and McCubbins, 1998). From that literature, we draw the conceptual distinction between *being informed* and *casting an informed vote*.

³ That is, $\Pr(\omega = 1 | s = s_H) = q_H$ and $\Pr(\omega = 1 | s = s_L) = q_L$

function. By Bayes' rule, the posteriors must equal the prior on average: $\Pr(s = s_L) \cdot q_H + \Pr(s = s_H) \cdot q_L = p$. Therefore,

$$(1) \quad \Pr(s = s_H) = \frac{p - q_L}{q_H - q_L},$$

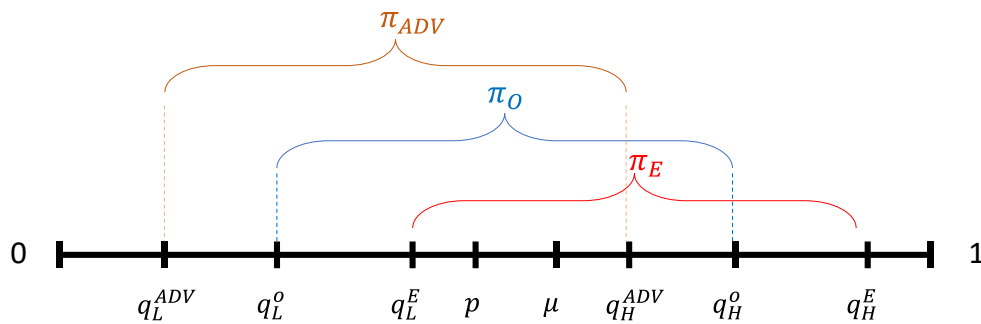
and

$$(2) \quad \Pr(s = s_L) = \frac{q_H - p}{q_H - q_L}.$$

These probabilities correspond to the percentage of votes in favor and against an election item. Together, (1) and (2) imply that as the posterior q_H increases, holding constant q_L , the probability of signal s_H decreases and the probability of signal s_L increases. Similarly, the probability of signal s_H increases as q_L increases, holding constant q_H .

A nonalignment case is illustrated in Figure 2. Here, the posterior q_H moves the most with π_E , the second most with π_0 , and the least with π_{ADV} , implying that $\Pr(s = s_H | \pi_E) < \Pr(s = s_H | \pi_0) < \Pr(s = s_H | \pi_{ADV})$. Then in terms of Figure 1, π_E and π_{ADV} would move votes in opposite directions relative to π_0 . In all three experiments (π_0, π_E, π_{ADV}), funds update rationally and information is valuable. Without more assumptions on preferences, we cannot say if a fund is better off under π_E or π_{ADV} . However, a natural assumption is that when a fund self-informs, it chooses a signal that maximizes its welfare, while ISS may choose an experiment that shifts votes toward SRI outcomes. If so, the advisor's information would be

Figure 2. Persuasive Advice



less valuable than a fund's self-information. Funds that purchase proxy advice are nevertheless better off updating based on the advisor's signal than ignoring the advice, even though it leads the fund to increase its likelihood of support while the optimal experiment would lead to reduced support. This idea – that an advisor can “distort” the vote of a rational advisee by careful design of the information environment – is of course a central theme of the Bayesian persuasion literature.

B. Data

Votes. Our analysis encompasses all election items, including proposals sponsored by shareholders, proposals sponsored by managers, advisory votes on executive compensation (say-on-pay), and director elections. Fund voting decisions were taken from Form N-PX filings over 2007-2017, as tabulated by ISS Voting Analytics.⁴ Our unit of observation is the vote choice of a particular fund on a particular voting item, which we call a “fund-vote” (each fund has one “fund-vote” in each election, regardless of the number of shares it holds). We exclude votes on routine or procedural matters, such as whether to adjourn, approve the financial statements, and ratify the auditors. We aggregated votes to the fund-family level, which is common in the literature (e.g., Bolton et al. (2020) and Iliev et al. (2021)): first, fund-level observations were aggregated to the level of CIK identifier; then using CIK × year as the identifier, CIK-level voting data were merged with the CRSP Mutual Fund dataset to recover each CIK's fund family and characteristics; finally, CIK-level observations were aggregated to the fund-family level using the CRSP identifier for fund families (mgmt_cd).⁵ A fund's vote on a proposal is either “in favor” or “against”; for director elections, withheld votes are classified as “against.”

Informed Funds. We classify a fund family as “self-informed” (or sometimes just “informed”) about a company if it visited and downloaded the company's proxy statement from the SEC's Edgar website before the meeting. Proxy statements are usually posted 2-3 months prior to the meeting.⁶ The visit data come from the Edgar server log file, a record of all activity on the

⁴ In some cases, funds reported votes back to 2004, but coverage was sparse before 2007.

⁵ We use CRSP identifiers instead of the fund identifiers in ISS Voting Analytics because the ISS identifiers appear to contain errors.

⁶ Proxy statements contain general information about the company, such as values, mission, strategy, and the like; a description of its governance structure and practices; audit and compensation committee reports; stock ownership by managers and others; and details about the annual meeting and voting. In

system, which includes each viewer’s partially anonymized IP address, the date/time of the view, and the accession number of the viewed file. To map partially anonymized IP addresses to fund families, we deanonymized IP addresses using the cipher provided by Chen et al. (2020) and then mapped the full IP addresses to organization names using linking datasets provided by MaxMind and American Registry of Internet Numbers (ARIN). To match a proxy statement’s accession number to an annual meeting, we scraped the proxy statement’s header file to get its CIK number and Period of Report.⁷ Then, we matched CIK-Period of Report with an annual meeting’s CUSIP-meeting date. If there was no record of a fund family in the Edgar log file in a given year, we omit it from the analysis for that year.⁸

Iliev et al. (2021) offers evidence that funds that visited Edgar were in fact more informed, such as showing that funds were more likely to visit Edgar before contentious elections. The Edgar visit measure is not perfect: it cannot be tied to a specific item in the election; and funds may access company information through other sources, such as Bloomberg or company websites.

Proxy Advice. Information about whether a fund received proxy advice, and if so, from which advisor, is not publicly available. We linked funds to proxy advisors using the method developed in Shu (2022), which is based on the format of a fund’s Form N-PX filed with the SEC. All funds must file Form N-PX, but they have discretion on how to tabulate, format, and characterize their votes. Most funds outsource the preparation of their filings to a voting platform provider. Shu (2022) observed that certain details of the formatting reveal the proxy advisor that helped to file the form, and verified that the format can be used to identify customers of ISS and Glass Lewis.⁹ The method would misclassify advisors if (i) a fund used a proxy advisor’s voting

terms of election items, proxy statements contain the full text of proposals, the sponsor’s argument, and the board’s recommendation; background information on each director candidate, including experience and qualifications; and a discussion related to each executive’s compensation plan for say-on-pay votes.

⁷ In a proxy statement, the “Period of Report” is the meeting date. See

<https://www.sec.gov/info/edgar/edgarfm-vol2-v5.pdf>.

⁸ This procedure is similar to Iliev et al. (2021), which dropped a fund-family in a given quarter if it did not visit Edgar for at least 1 percent of its portfolio in that quarter.

⁹ This method assigns a fund to at most one proxy advisor; it does not detect if a fund received advice from multiple proxy advisors. A small fraction of funds filed two N-PX forms for a given year using different proxy advisors. We deleted these observations.

platform without subscribing to its advice, or (ii) a fund subscribed to advice but did not use the voting platform.¹⁰

Table 1 reports the number of fund-votes by type of signal, π . About 10 percent of unadvised fund-votes were associated with visiting Edgar, giving 132,200 observations in our benchmark group. Most of the votes concerned director elections, about 86 percent of the total, compared to 6 percent on shareholder and management proposals and 8 percent on say-on-pay proposals.

Table 2 provides descriptive statistics on the type of funds that self-informed versus acquired advice, and the type of companies for which they self-informed. Funds that self-informed were larger on average and had larger holdings of the company, both as a fraction of the company's equity and as a share of the fund's portfolio. Funds were more likely to self-inform about large companies than small companies. These differences indicate, not surprisingly, that there is selection at work in funds' information and advice decisions, which we address in the empirical analysis.

Part of our analysis drills down into proposals on 10 common topics that were the subject of at least 10,000 fund-votes in our data. We manually assigned proposals to a topic based on proposal descriptions in the Voting Analytics database.¹¹ Table 3 defines and describes the 10 issue topics. The most common topic was board declassification (30,944 votes on 1,223 items), followed by independent chair (20,674 on 545 items), and removing supermajority provisions (21,263 on 636 items). Most proposals related to lobbying, sustainability, independent chair, and political contributions were sponsored by shareholders. Most proposals related to board declassification and supermajority provisions came from management. Board declassification and removal of supermajority provisions were the most popular, attracting 97 percent of fund-votes in support.

¹⁰ We also checked the advisor data against information scraped from fund prospectuses. The N-PX classifications are generally accurate, scenarios (i) and (ii) appear to be rare, and if we re-estimate our results using scraped data, the findings are essentially the same.

¹¹ Manual assignment allowed proposals that were similar but titled differently in the data to be combined, for example, "Require a Majority Vote" and "Company Specific – Majority Vote." Poison pill proposals were not included because often the data did not indicate if the proposal was to remove, adopt, or prohibit a poison pill. Sustainability proposals covered an array of specific topics, but were all concerned with reducing pollution, abating climate change, and generally minimizing impact on the environment.

Sustainability, lobbying, and political contributions were the least popular, with little more than 30 percent of fund-votes in support.

We classify funds as “socially responsible investors” (SRI) in two ways. One measure is based on fund preferences estimated in Bolton et al. (2020). Bolton et al. (2020) use institutional investors’ votes to recover their preferences in a two-dimensional issue space, which can be interpreted as social/environment-friendliness and corporate governance strictness. We use their estimate of a fund’s ideal point along the social/environment dimension as a measure of its SRI orientation. Another measure is constructed by classifying a fund as SRI if its name contains any of the following words or phrases: ESG, social, climate, environment, impact, responsible, carbon, and fossil. For each fund family, our measure is the percentage of total net assets managed by its SRI funds. The two classifications are correlated, and seem reasonable based on inspection of actual cases, for example, assigning a high score to Calvert and Domini Social Investment.

ISS’s recommendations were taken from the ISS Voting Analytics dataset. To identify Glass Lewis’s recommendations, we made a Freedom of Information Act request to a large public pension. This provided Glass Lewis’s recommendations for a little over half of the votes in our data, all of them during the period 2008-2017.

Intersecting the different data sources left a final data set with 6 million votes cast by 155 fund families.

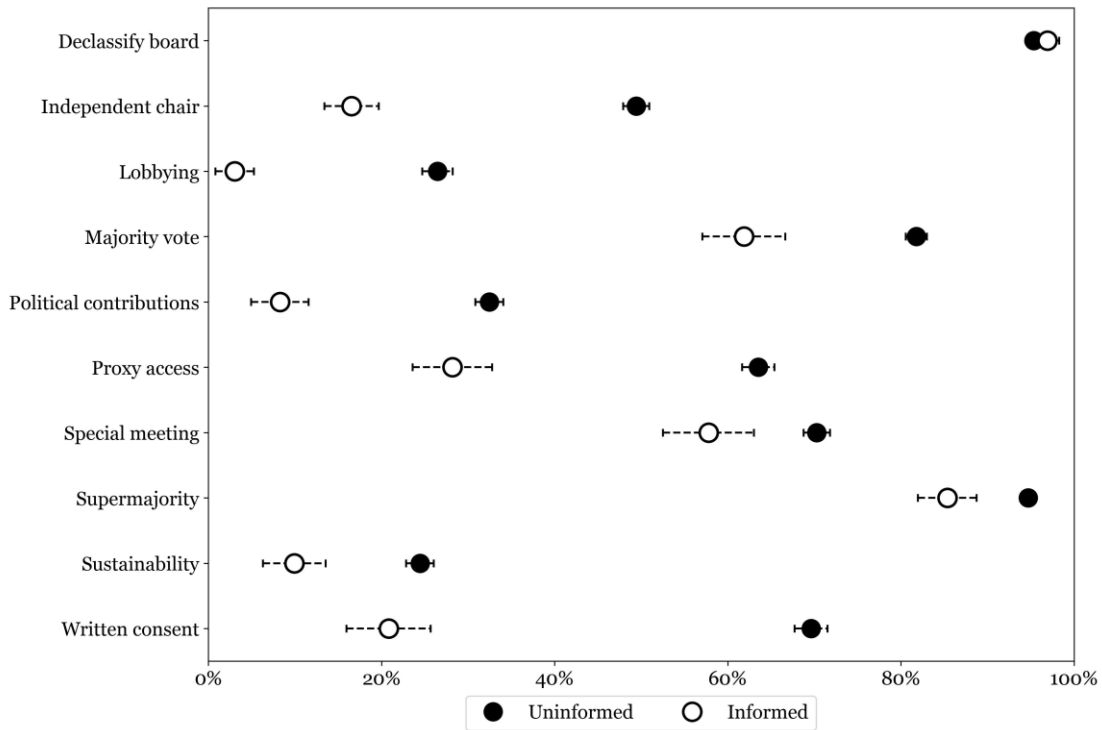
3. Evidence

A. *Basic Patterns*

We begin with descriptive evidence on the 10 common issues. Figure 3 shows the percentage of funds that voted in favor of each issue, with 95 percent confidence intervals. The solid circles show voting by funds that did not collect information from Edgar and did not receive advice from ISS or Glass Lewis, that is, “uninformed” funds with signal π_0 in our notation. Some proposals, such as board declassification and removal of supermajority provisions, were extremely popular, attracting over 95 percent of fund-votes in favor. On the other end of the spectrum, proposals related to sustainability and lobbying received less than 30 percent of votes in favor. The variation across issues indicates that although we refer to these funds as “uninformed,” they must have already acquired some information that guides their voting.

The hollow circles in Figure 3 show the proportion of self-informed (but not advised) funds – π_E in our notation – that voted in favor. Informed funds voted differently than

Figure 3. Votes in Favor by Self-Informed and Uninformed Funds

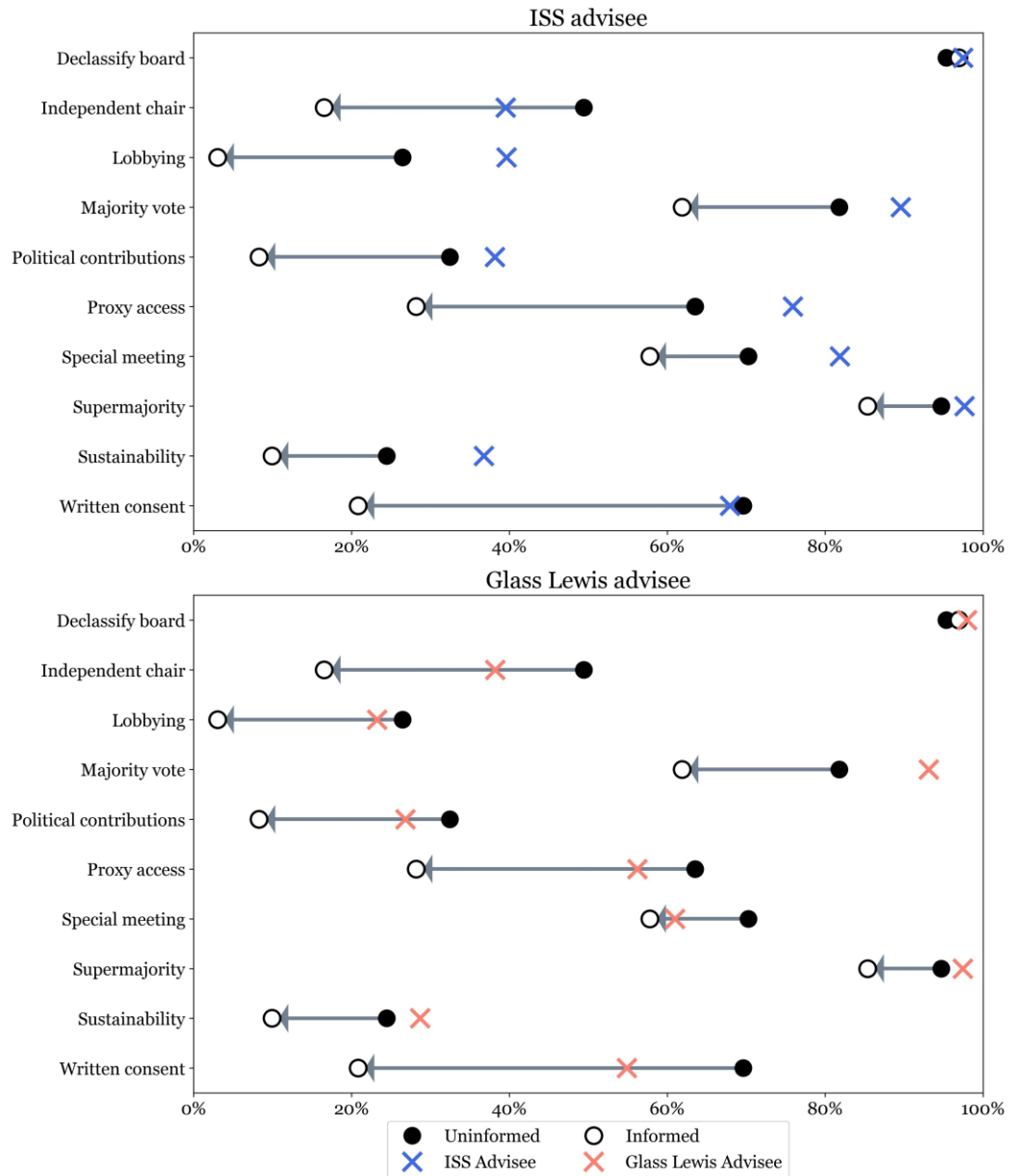


uninformed funds, and the difference was often sizeable. Except for board declassification, where the difference was negligible, informed funds were less likely than uninformed funds to support a proposal on any of these topics. Across the nine issues with a difference, the mean gap between informed and uninformed funds was 24.5 percent. The gaps are consistent with the notion that acquiring information led funds to become less supportive of proposals on these topics.

Figure 4 shows the voting patterns for funds that received advice from ISS and Glass Lewis but did not collect information (π_{ADV}), superimposed on voting patterns for unadvised funds. In the top panel, the striking finding is that ISS advice seemed to move voting in the opposite direction as self-informing on seven issues. If ISS advice was pure noise, then we would expect its customers to vote the same as uninformed funds. Glass Lewis advice, on the other hand, seemed to move voting in the same direction as informed funds on six issues, and for special meetings, its customers voted almost the same as self-informed funds.

With the patterns on these 10 common issues in mind, we now turn to the analysis of the full set of election items. In the preceding figures, by pooling proposals by topic, we implicitly assumed that funds' preferences on a given topic did not vary with the company's identity. This "one-size-fits-all" assumption could be restrictive – investors may consider an environmental

Figure 4. Votes in Favor by Informed, Uninformed, and Advised



proposal desirable at one company but not another, for example. For the next estimates, we employ a more flexible approach that allows a fund's preference to vary by issue and company. We estimate the following equation proposal-by-proposal:

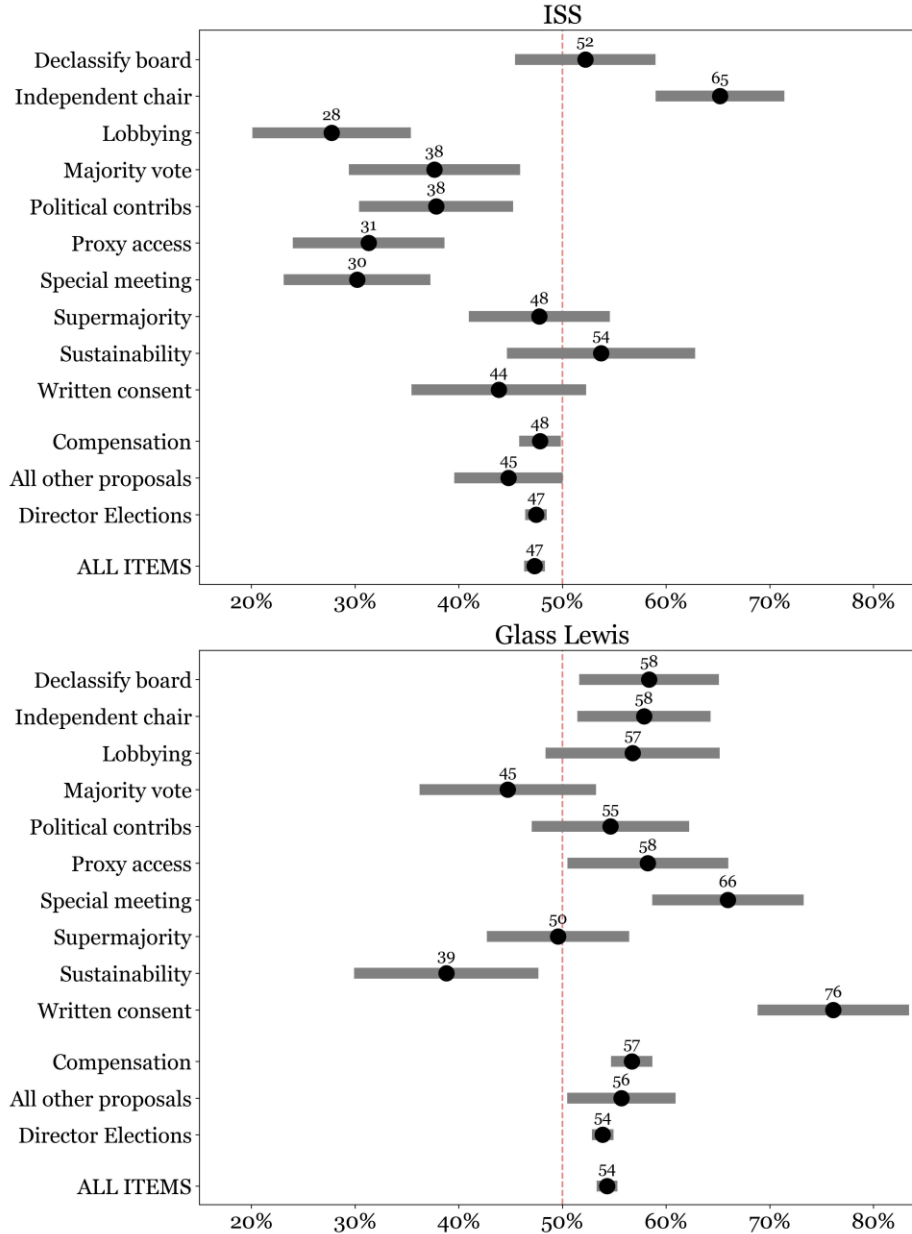
$$(3) \quad VoteYes_{fpt} = \beta_0 + \beta_1 \cdot (INF = 1)_{fpt} + \beta_2 \cdot (ISS = 1)_{fpt} + \beta_3 \cdot (GL = 1)_{fpt} + e_{fpt},$$

where f indexes a fund, p indexes a proposal, and t indexes a year, $VoteYes$ is a dummy equal to one if a fund voted in favor of a proposal, INF is a dummy equal to one if a fund visited a company's Edgar site, and ISS and GL are dummies for ISS and Glass Lewis customers.¹² The coefficients β_1 , β_2 , and β_3 capture the directional "effect" of information, ISS advice, and Glass Lewis advice, respectively, on voting for each proposal, analogous to the directional arrows in the figures. For each proposal, we compare the sign of the estimated coefficient on the Edgar dummy with the signs of the estimated coefficients on advice, and calculate the percentage of cases in which the estimated information ($\hat{\beta}_1$) and advice ($\hat{\beta}_2$ or $\hat{\beta}_3$) coefficients have the same sign. When the information and advice coefficients have the same sign, we say that "advice was aligned with information."

Figure 5 reports the percentage of proposals in which advice (ISS in top panel, Glass Lewis in bottom panel) was aligned with self-information, with 95 percent confidence intervals. A key finding is that ISS advice usually was *not* aligned with self-information while Glass Lewis advice usually was aligned with self-information. For the 10 common issues, ISS advice was not aligned with information on seven issues (five significantly different from 50 percent statistically), with the least alignment on lobbying proposals. In contrast, Glass Lewis advice was aligned with information on seven issues (statistically significant on five of them). Glass Lewis advice was statistically below 50 percent for only one issue, sustainability. On compensation-related proposals, ISS advice was aligned in 48 percent of cases while Glass Lewis advice was aligned in 57 percent of cases, both percentages statistically different from 50 percent. If we look at all other proposals, ISS advice was aligned 45 percent of the time while Glass Lewis advice was aligned 57 percent of the time. For director elections, ISS advice was aligned in 47 percent of cases while Glass Lewis advice was aligned in 54 percent of cases; both differences statistically different from 50 percent. Finally, across all items (proposals on all topics and director elections), ISS advice was aligned with information 47 percent of the time while Glass Lewis advice was aligned with information 54 percent of the time, both statistically different from 50 percent. In short, more often than not ISS advice shifted voting in the opposite direction from self-information, while Glass Lewis advice led in the same direction as self-information.

¹² We exclude proposals in which there were fewer than three votes from ISS customers, Glass Lewis customers, or informed investors, because their β coefficients are likely to be noisy.

Figure 5. Percent of Proposals in Which Advice Was Aligned with Information



B. Selection and Other Confounding Concerns

Information and advice are not randomly assigned and there are many potential sources of spurious correlation; we are particularly concerned with the possibility that funds select into the different information conditions based on pre-existing inclinations to vote one way or the other. In this section we report empirical exercises designed to remove selection and other confounds from our estimates and give us some confidence that we are capturing causal effects.

B.1 Edgar visits

To gain confidence in interpreting the differences between uninformed and self-informed funds as an information effect, we would like to rule out several potential confounds. The first possibility is that funds were more likely to visit Edgar on proposals that were inherently unpopular; the lower support from self-informed funds would then represent a predisposition on the issue rather than an information effect. We address this possibility in Table 4, which reports estimates of equation (1) on a pooled sample of votes on the 10 common issues.¹³ Column (1) of Table 4 establishes a baseline information estimate of -0.14 with only 10 topic fixed effects, essentially summarizing Figure 4. Column (2) reports estimates from a regression with election-item fixed effects. In this case, the information coefficient captures variation in voting within a given item between funds that did and did not visit Edgar. The coefficient drops in magnitude, indicating selection on proposals accounts for part of the information difference, but a difference remains and is statistically significant.

A second concern is that funds that visited Edgar had different preferences to begin with, in which case visiting Edgar is a proxy for a fund predisposition on an issue. We address this possibility by including fund-year fixed effects, although this specification runs the risk of stripping out substantive information.¹⁴ The information coefficient then captures variation in voting based on whether a given fund in a given year visited Edgar on one issue and not another. Column (3) of Table 4 reports the estimates. Because the proxy advisor is fixed for a fund in a given year, the advisor variables drop out. The information coefficient remains almost the same as in the baseline case. For completeness, column (4) includes both election item and fund-year fixed effects, with the usual caveat about the risk of stripping out substantive information. These

¹³ We report topic-by-topic regressions in the internet appendix. We cannot logically run these regressions for director elections because we would be pooling apples and oranges. Similarly we cannot pool compensation-related proposals because they are highly heterogeneous: proposed cuts to salaries, clawbacks, pay-performance sensitivity, severance payments, and so on. Conceivably, one could create issue categories on specific compensation topics, such as clawbacks, but the summary information in ISS Voting Analytics is not sufficiently detailed to do that, and extracting the information from the individual proxy statements is beyond our scope here.

¹⁴ For example, larger funds may be more informed than smaller funds. A fund-year fixed effect eliminates this variation.

fixed effects absorb much of the difference, but the information coefficient remains negative and statistically significant.

We also explore the issue of spurious correlation with instrumental variables. Table 5 reports regressions using three different instruments, two of them new to the literature. Instrument (1), advanced by Iliev et al. (2021), is a dummy for April, May, and June of each year, the busiest months for shareholder meetings. They argue that such a dummy functions like a shock to the cost of acquiring information: because so many votes must be cast during the busy season, the opportunity cost of acquiring information about any given item is higher, and a fund is less likely to download a specific company's information from Edgar. In our sample, 79 percent of fund-votes were cast in those three months.

Instrument (2) is an indicator for whether there was a contentious proposal to be decided at the meeting, other than the proposal in question. A proposal is defined as having been contentious if either ISS or Glass Lewis issued a recommendation at odds with management's recommendation. In our sample, 15 percent of proposals were contentious so defined. The idea is that if there was a contentious item on the agenda, a fund was more likely to visit Edgar to learn about it, and in the process was more likely to have learned about other election items. In the sample, 49 percent of proposals appeared in an annual meeting in which there was another contentious proposal. The exclusion restriction is that a fund visiting Edgar to learn about controversial issue #1 was not predisposed to vote for or against the unrelated issue #2.¹⁵

Instrument (3) is the number of proposals on the proxy statement, expressed as a logarithm. The number of proposals in our data ranged from 1 to 98, with a mean of 10.¹⁶ The idea is that with more proposals to be decided, a fund was more likely to visit Edgar because its demand for information is higher. The exclusion restriction is that the merits of any specific proposal in the eyes of a voting fund did not depend on the number of proposals.

The regressions in Table 5 pool votes across all 10 common issues, and include issue and year dummies. Pooling is motivated by our previous results suggesting that information worked

¹⁵ The estimates are robust to defining contentiousness as disagreement between ISS and management; between Glass Lewis and management; or between both ISS and Glass Lewis and management.

¹⁶ The instance of 98 items was from Enstar Group Limited in 2009, which asked shareholders to approve 90+ directors for subsidiaries. We use a log specification because the distribution is right-skewed. The findings are robust to a linear specification and winsorizing values in excess of 25. The findings are also robust to controlling for firm size in case the number of proposals proxies for firm size.

in the same direction on all of these issues. The top panel reports the first-stage estimates. All three instruments predict Edgar visits in the expected direction, and their F -statistic exceeds 10, the conventional threshold for weak instruments. The bottom panel reports the second-stage estimates. The coefficients on the information variable are negative and statistically different from zero for all three instruments.¹⁷ As with all IV estimates, the exclusion restrictions for the instruments are assumed to hold and cannot be empirically proven, and one can construct counterexamples in which the exclusion restriction does not hold. We believe the value of these three tests is not that any is determinative, but that they all point in the same direction despite relying on completely different identifying assumptions.

Another potential concern is that visiting Edgar is a proxy for business connections. Several studies have investigated whether funds adopt management-friendly voting positions with companies that are their clients (Davis and Kim, 2007; Ashraf et al., 2012; Cvijanović et al., 2016). An example of a business tie is a corporate pension managed by the fund. A conceivable story is that when it came to voting at companies that were clients, funds visited Edgar in order to ascertain and follow management's position on the issues. If this were happening, the Edgar variable would be a proxy for management friendliness.

We first note that at least the case of supermajority proposals in Figure 2 is inconsistent with this idea because visiting Edgar moved funds against such proposals on average even though management generally supported them. More formally, we create a dummy variable $VOTEM$ equal to one if a fund voted in accordance with management's recommendation and zero otherwise, and then estimate the following regressions:

$$(4) \quad VOTEM_{fpt} = \beta_0 + \beta_1 \cdot (INF = 1)_{fpt} + e_{fpt}.$$

To focus on the effect of information, we include only votes cast by unadvised funds. All regressions include election item fixed effects.

Table 6 reports the estimates. Column (1), which includes all proposals, shows that visiting Edgar was associated with a 2.8 percent greater likelihood of voting in alignment with management's recommendation. The coefficient is statistically significant, but the economic

¹⁷ The results were similar when the IV regressions included fund-year fixed effects or the control variables in Table 2.

magnitude is small. Columns (2) and (3) separate proposals according to whether they were sponsored by shareholders or management. Column (2) shows that funds were 8.7 percent more likely to agree with management's recommendation on shareholder proposals if they visited Edgar, while column (3) shows no connection between supporting management and visiting Edgar on management proposals. Perhaps the best way for a fund to signal support for a company's management would be to support re-election of its directors. Column (4), which includes only director elections, however, shows that visiting Edgar was not associated with a material change in the probability of supporting management's nominees. All of these findings indicate an Edgar visit did not ensure that a fund would follow management's recommendation, and for the vast majority of election items (management proposals and director elections), there was no detectable difference.

We thus have several pieces of evidence, coming at it from different angles, that what we have provisionally called an information "effect" is not a spurious proxy for election characteristics, fund preferences, or fund business ties with companies.

A final way to investigate the information interpretation is by noting that if visiting Edgar in fact provided information, then we would expect the Edgar coefficient to be qualitatively similar to coefficients on other proxies for being informed. We consider three other information variables used as information proxies in the literature (Iliev and Lowry, 2015; Gantchev and Giannetti 2021): fund size, number of years holding the stock, and portfolio weight on the stock. Table 7 reports regressions of fund votes on Edgar and each of these variables in turn, using the 10 common issues, considering only funds that did not receive advice, and including proposal fixed effects. Column (1) contains the baseline regression with the Edgar visit dummy. Column (2) replaces the Edgar dummy with fund size; column (3) uses the number of years that the fund had held the stock, and column (4) uses the weight of the stock in the fund's portfolio, all calculated in the first quarter of the annual meeting year. All three information proxies point in the same direction as the Edgar dummy and are significantly negative, consistent with the idea that Edgar visits provide information.

B.2 Advice

In terms of the proxy advice coefficients, one concern is that funds may self-select into receiving proxy advice based on their underlying preferences. That is, ISS customers might have leaned a certain way on their own and ISS advice itself had little or no effect on their votes.

A stark version of this hypothesis – that ISS and Glass Lewis coefficients are entirely due to pre-existing fund preferences – can be examined using variation in proxy advisor recommendations. We estimate a modification of equation (1) that includes fund-year fixed effects, and in addition dummy variables for whether ISS and Glass Lewis recommended voting in support. By including fund-year fixed effects, the regressions remove all voting tendencies that result from funds selecting into advisors. The coefficients on the recommendation variables reveal responsiveness to recommendations holding constant whether a fund received advice and if so, from which advisory firm.

Table 8 reports the estimates, again focusing on the 10 common issues. Both ISS and Glass Lewis recommendations carried weight with their customers. Pooled across all 10 issues, ISS customers were 36 percent more likely to vote in favor if ISS was in support, and Glass Lewis customers were 20 percent more likely to vote yes if Glass Lewis was in support. All of the support coefficients are positive and statistically significant, indicating that the vote differences of proxy advice customers are more than selection effect – the content of the recommendations they received matters. Interestingly, ISS recommendations were followed more assiduously by its customers than Glass Lewis recommendations were followed by its customers.

To provide additional insight into selection concerns, we examine the votes of individual funds that experienced a plausibly exogenous change in proxy advisor when they were acquired by another fund family and adopted the acquirer’s advisor. We identified acquired funds by searching the CRSP mutual fund database for funds that changed management, and confirmed acquisitions using Nexis-Lexis, SDC Platinum, and the internet. We found 19 funds that changed ownership during the sample period and subsequently switched to their acquirer’s proxy advisor. Because the sample is small, we view the results as only suggestive.

Table 9 reports regressions of the form:

$$(5) \quad VoteYes_{fpt} = \beta_0 + \beta_1 \cdot (ISS = 1)_{fpt} + \beta_2 \cdot (GL = 1) + e_{fpt},$$

including only funds that changed advisors after being acquired. The regressions include votes on the 10 common issues. Regression (1) includes fund and year fixed effects, implying a difference-in-difference specification, and regression (2) adds issue fixed effects. In both regressions, the proxy advice coefficients continue to be positive, and are statistically significant for ISS.

4. Explaining the Patterns

A. SRI Funds and Proxy Advisor Recommendations

The preceding evidence suggests, somewhat unexpectedly, that advice from Glass Lewis moved fund voting in the same direction as self-information, but advice from ISS moved funds in the opposite direction. What does this imply for the quality and effect of proxy advice? In order to answer this, it is useful to observe that ISS not only moved voting against a fund's self-information, it also moved voting toward the outcomes preferred by SRI funds. We establish this by showing that SRI funds had different preferences than non-SRI funds in our data, and ISS recommendations aligned with those preferences.

To infer the preferences of SRI funds on the 10 common issues, we pool the votes on these issues and estimate regressions that allow votes to vary for SRI versus non-SRI funds:

$$(6) \quad \text{VoteYes}_{fpt} = \beta_1 \cdot (\text{INF} = 1) \cdot (\text{SRI} = 0)_{fpt} + \beta_2 \cdot (\text{INF} = 0) \cdot (\text{SRI} = 1)_{fpt} + \beta_3 \cdot (\text{INF} = 1) \cdot (\text{SRI} = 1)_{fpt} + e_{fpt}.$$

The regressions include fixed effects for the meeting year and issue type. The omitted category is an uninformed non-SRI fund. To bring out preferences without the potentially confounding influence of proxy advice, we exclude funds that were advised by ISS or Glass Lewis.

Table 10 reports the estimates. In column (1), a fund family is classified as SRI if its first-dimension ideology score from Bolton et al. (2020) is less than -0.35 (the scores range from roughly -1 to 1). In column (2), a fund family is classified as SRI if at least 1 percent of its assets were in funds with SRI names, as discussed in the data section.¹⁸ Consistent with our previous findings, self-information reduced support by 21 percent for non-SRI funds (β_1) and by 7 to 8 percent for SRI funds ($\beta_3 - \beta_2$), both statistically significant. Self-information pushed both types of funds in the same direction. The relevant finding for the present purposes is that SRI funds had a higher intrinsic level of support for these proposals than non-SRI funds: when uninformed, SRI funds were 5 to 8 percent (β_2) more likely than non-SRI funds to vote in favor; and when informed, SRI funds were 18 to 22 percent ($\beta_3 - \beta_1$) more likely than non-SRI funds to vote in favor; both differences are statistically different from zero for both SRI definitions. The finding that SRI funds supported these issues more than non-SRI funds, together with earlier evidence

¹⁸ SRI funds cast about 5 percent of fund-votes according to both definitions.

that ISS advice moved voting in support, implies that ISS advice tended to shift voting in a direction preferred by SRI funds, while Glass Lewis advice did not typically shift support in the direction favored by SRI funds.

Turning to the full set of election items, for each item we estimate equation (3) augmented by a dummy for SRI funds (using the second definition). Then for each item we compare the sign of the coefficient on the advice dummy with the sign on the SRI fund dummy.¹⁹ Figure 6 reports the percentage of election items in which the coefficients have the same sign, meaning that proxy advice moved voting in the direction that SRI funds preferred. For the 10 common items, we see that ISS advice usually moved votes in the SRI direction while Glass Lewis advice usually moved votes in the opposite direction. To summarize, ISS advice did not simply lead funds to vote against their self-information – it led them to support outcomes favored by SRI funds.

B. Interpretations

The evidence shows that ISS's recommendations had the effect of increasing support for outcomes favored by SRI funds, compared to when funds self-informed or were uninformed. Here we explore potential interpretations of this finding, and introduce some descriptive and institutional information that seems pertinent.

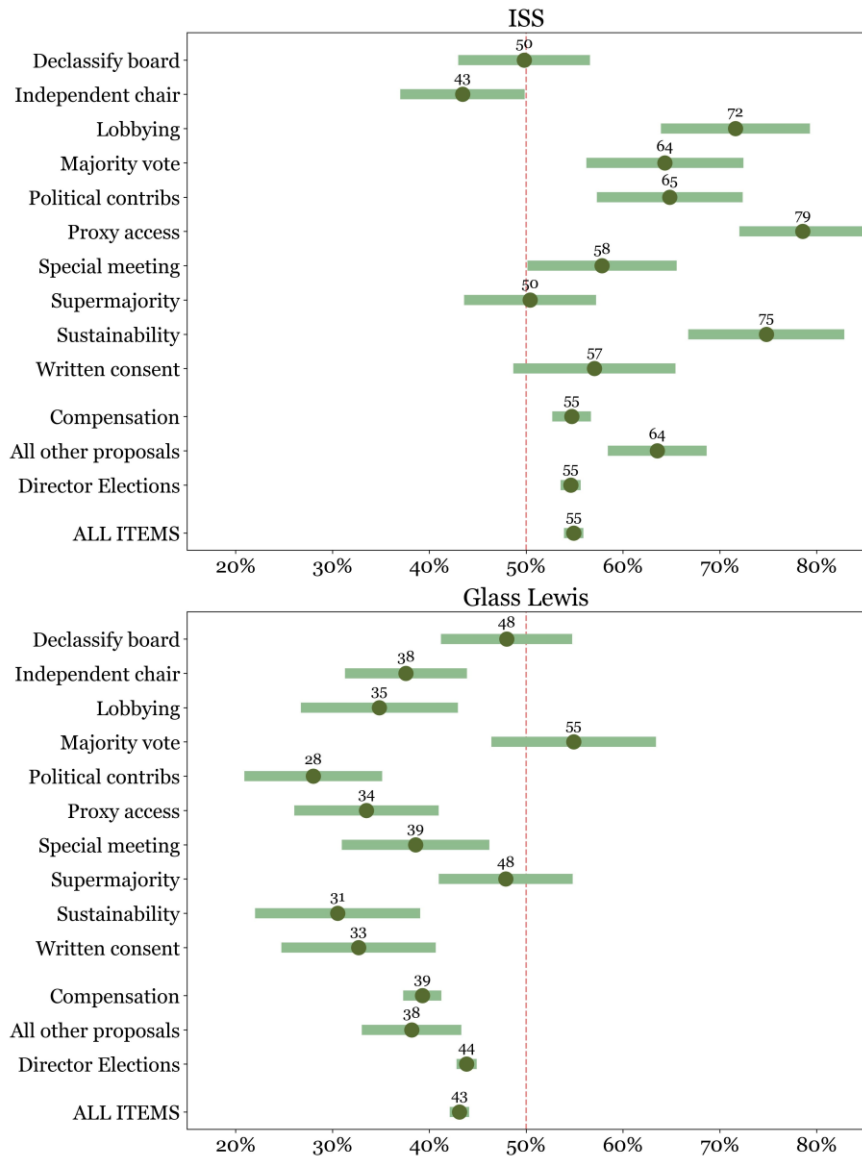
One possible interpretation is that ISS's advice was inferior to funds' self-information and distorted their voting from their preferred/optimal choices. In this view, ISS advice was informative, and funds used it to update rationally, but it induced ex-ante inferior outcomes compared to self-information.²⁰ For this hypothesis to make sense, we have to explain why funds would have purchased advice knowing that it would persuade them to vote against their interests with some probability, and why would ISS have chosen to offer such advice.

As to why a profit-maximizing fund would buy advice that is inferior to self-informing, a simple answer is that proxy advice may have been cheaper, and the distortion in voting an

¹⁹ We exclude proposals with fewer than three votes from ISS customers, Glass Lewis customers, or SRI funds, because their β coefficients are unreliable. The patterns are similar using the other definition of SRI.

²⁰ The idea that an advisor can provide information that is valuable but still causes voting to shift in a direction favored by the advisor (and not necessarily favored by the advisee), even when the advisee updates using Bayes rule, is an application of the central lesson from the Bayesian persuasion literature (Kamenica and Gentzkow, 2011).

Figure 6. Percent of Proposals in Which Advice and SRI Dummies Have Same Sign



acceptable consequence of a benefit-cost tradeoff. Theory suggests that the value of quality voting advice is negligible for many funds because their votes are not pivotal, and even if their votes somehow managed to change a company’s cash flow, the impact on a fund’s portfolio is tiny.²¹ The

²¹ This is especially true for index and other passive funds. The median funds held only 0.08 percent of a company in our sample. Bebchuk et al. (2017) argues that many institutional investors, especially passive funds, have “especially poor incentives to engage in stewardship activities [e.g., voting, nominating directors] that could improve governance and increase value” – because their private benefits from active stewardship are small compared to their costs. Matsusaka and Shu (2021) develop a related model. Heath et

analogy here is to voters in public sector elections, who have little incentive to pay for costly information because their votes are not pivotal, leading to so-called “rational ignorance” (Downs, 1957).

Why then would a fund buy any advice at all? One reason is that, based on SEC decisions, funds are required to vote in the best interest of their investors, and following proxy advice provides them a safe harbor that they have exercised their fiduciary responsibility. Another important reason for purchasing proxy advice is the vote execution services that are bundled with it. A typical fund has to cast thousands of votes each season – TIAA-CREF reported 80,000 unique items annually, and Vanguard voted on 169,000 items– the cost of executing those votes can be substantial.²² Because vote execution is a platform product, ISS’s scale allows it to offer execution services at a low cost – funds that cared little about advice quality may rationally choose ISS for low-cost vote execution alone. The value of vote execution services relative to advice can be seen in the prices: ISS charged an estimated \$69,000 on average for advice alone, compared to \$161,000 on average for vote execution services (Shu, 2022).

Presumably ISS adopted its advice strategy as a result of competitive conditions in the proxy advice market. As to why ISS would find it optimal to offer advice that persuades funds to support outcomes favored by SRI funds, it is possible that ISS was responding to pressure from SRI investors who wanted to influence the votes of ISS’s non-SRI customers. There are anecdotes of SRI activists pressuring proxy advisors to adjust their voting recommendations on high-profile issues. Because ISS and Glass Lewis together have over 90 percent of the advice market, influencing their recommendations can potentially swing an election. This is especially true for ISS with its dominant market share, and as we show in Table 11, its customers are more likely to follow its advice blindly. The table shows the fraction of fund-votes that advice customers cast in alignment with advisor recommendations (we are able to calculate these numbers, which have

al. (2022) show that passive funds are less effective monitors. Shu (2022) shows that passive funds are more likely to be robo-voters.

²² For a description of the services sold by proxy advisory firms, see U.S. Government Accountability Office (2016). On the importance of vote execution services, see Edelman et al. (2014), who quotes TIAA-CREF (p. 1398): “Though we dedicate a significant amount of resources to corporate governance research and the voting of proxies, we still would have difficulty processing the 80,000 plus unique agenda items voted by our staff annually without using [vote execution services].” Sharfman (2020) provides the number of votes cast by Vanguard.

been inaccessible previously, because we know the identity of each fund's advisor). Column (1) shows that over 90 percent of fund-votes followed the advice they purchased. Column (2) shows the fraction of robo-voters among the two advisory firms' customers, defined as funds that followed the advisor's recommendation 99 percent of the time in a given year. Robo-voters essentially delegated their votes entirely to their advisor. The table shows that 16.5 percent of ISS's customers were robo-voters, as were 8.3 percent of Glass Lewis's customers.²³

Still, if ISS was going to tailor its recommendations, why would it seek to please SRI funds, which comprise a minority of its potential customer base? One reason may be that SRI funds care about the nature of proxy advisor recommendations, unlike many traditional non-SRI funds for which voting correctly has little effect on their bottom line. Recommendations matter to SRI funds because their business model is predicated on pro-SRI voting and activism. Some post their votes on their websites, for example. It could have been profit-maximizing for ISS to slant its recommendations toward the preferences of SRI funds, knowing that this would not drive away the non-SRI funds.²⁴

A second interpretation of our findings is that ISS advice helped funds achieve superior voting outcomes than when they self-informed. According to this hypothesis, when funds self-informed, they utilized inferior signaling structures than the one provided by ISS. ISS has expertise in providing advice, according to this view, and offers superior outcomes than self-informing. Traditional funds, in this case, found it valuable to be persuaded to cast votes more aligned with SRI activists.

We find it challenging to construct a general picture of the proxy advice market grounded in this interpretation. One question it raises is why funds that self-informed moved in the opposite direction than those that received ISS advice? That is, why did they choose an inferior

²³ The actual percentage of votes cast robotically may be smaller than the number of robo-voters to the extent that robo-voters are smaller funds.

²⁴ Table 6 shows that the alignment of ISS and SRI funds was especially strong on issues that were of high importance to SRI funds during the study period, proxy access and sustainability. Conceivably, ISS could customize its advice to each customer, and its marketing materials emphasize this option, but market observers doubt that it happens to a significant degree (McCahery et al, 2016). As a practical matter, ISS lacks the staff to do significant customizing for the 250,000 elections over 40,000 shareholder meetings for which it issues recommendation each year (Sharfman, 2020), and as we have shown above, even if some advice was customized, ISS clients overwhelmingly voted according to ISS's standard recommendations.

information structure when self-informing rather than one that maximizes their return given their preferences? Perhaps ISS has access to superior signals or information structures that funds cannot access on their own. This has a surface plausibility since ISS has a dedicated research team, and engages with corporate managers on select issues. On the other hand, for the vast majority of its recommendations, ISS does not appear to engage directly with management or to access sources of information other than those that are publicly available, leading informed observers to believe that much of its advice is based on checking boxes (Larcker et al., 2013). This interpretation also raises the question of why ISS's allegedly superior advice led to greater support for outcomes favored by SRI activists. Is this merely a coincidence? How might we otherwise explain the overall slant in its advice?

It is beyond the scope of this paper to answer all of these questions. We find the first explanation is an easier fit with theory and institutional facts, but both hypotheses have merit and future research should provide more clarity.

5. Discussion

The purpose of proxy advice is to allow funds to cast their votes as if they were informed, without actually having to become informed. Given the importance of proxy advice in corporate elections, the effectiveness of shareholder democracy may hinge on the quality of proxy advice. While research on proxy advice often assumes that the purpose of proxy advice is to maximize value, this may not be the goal of proxy advice customers themselves, especially SRI funds. Our study attempts to assess the extent to which proxy advice allows funds to cast votes that advance their self-defined interests, as revealed by the votes they cast when independently informed. Our main finding is that while advice from Glass Lewis appears to have helped funds vote as if they had collected information themselves, advice from ISS – the dominant player in the advice market – induced funds to shift their votes toward outcomes favored by SRI activists.

To implement this study, we face two empirical challenges, determining the informed preferences of funds and identifying the proxy advice received by each fund. To measure the preferences of self-informed funds, we use the votes of funds that visited Edgar and downloaded information about a company before the election meeting, following Iliev et al. (2021). To identify which funds were advised by which proxy advisors, we use the formatting of a fund's N-PX form, following Shu (2022). Because visiting Edgar and purchasing proxy advice are not randomly assigned, we go to considerable lengths to chase down potential confounds, using a battery of

fixed effects, instrumental variables, and auxiliary tests. We provide evidence against the leading potential confounds and selection effects, including that visiting Edgar is a proxy for election-specific issues or fund preferences, or that the choice of advisor is driven by fund preferences.

The finding that ISS advice led funds to vote for SRI-preferred outcomes is unexpected. While ISS advice is often criticized for being coarse and overly standardized, that would only make voting based on its recommendations noisy and uncorrelated with underlying investor interests; our finding is that ISS advice systematically moved fund votes away from their self-informed behavior toward that preferred by SRI funds. Theoretically, research on Bayesian persuasion has shown how an advisor can shift the likelihood of rational voters supporting a given outcome by careful selection of the information environment. From this perspective, funds are better off considering ISS advice than ignoring it entirely – but they would be even better off by self-informing. This illustrates that there are some subtle issues involved in studying proxy advice: it is possible for advice to bring about more informed voting and at the same time to cause one outcome to become more likely than another.

Several recent studies offer theories of why proxy advisors might offer biased advice or advice that seeks to persuade (Li, 2018; Ma and Xiong, 2021; Malenko et al., 2021; Matsusaka and Shu, 2021). By showing that ISS advice does not just shift votes, but shifts them toward SRI outcomes, we raise a new possibility – that ISS’s recommendations are influenced by pressure from SRI investors that are seeking to swing the votes of ISS’s robo-voting customers.

Even if ISS recommendations are worse than self-informing (and this is not the only possible interpretation), the persuasive effects of its advice are not necessarily harmful in a normative sense. Influencing votes in a way that pushes companies away from profit maximization would reduce corporate profits, but in a world with externalities, it could be socially desirable, as argued by advocates of “stakeholder capitalism.” For example, if adopting green technology has external benefits for the population as a whole, then prodding companies to move in that direction even at the expense of profits could be a good thing. This underscores the importance of grappling with the idea that some investors want companies to move beyond value maximization (Hart and Zingales, 2017). Our evidence suggests that proxy advice may not be designed solely to promote value maximization – which squares with public statements by proxy advisors themselves.

Finally, from a policy perspective, our analysis supports the regulatory focus on proxy advice as a critical link in the shareholder voting chain. Because a growing number of funds

mechanically follow recommendations of their advisors (robo-voting), activists may be able to swing corporate elections by gaining control of ISS's or Glass Lewis's voting guidelines. For example, ISS has stated that it would generally recommend against the chair of the responsible committee if Climate Action 100+, an SRI activist group, flagged the company as a significant greenhouse gas emitter and selected it for engagement.²⁵ This may lend support to doubts that have been expressed about the wisdom of the SEC essentially requiring funds to vote (Lund, 2018; Bebchuk et al., 2017). If regulators are going to require funds to vote, how proxy advisors come up with their recommendations should be more transparent, and the idea of quality standards for advice seems worth consideration (Larcker et al., 2013; Sharfman, 2019).

²⁵ <https://www.issgovernance.com/file/policy/active/americas/US-Voting-Guidelines.pdf> (footnote 10).

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Table 1
Number of Funds Voting by Information and Advice

The table shows the number of fund-votes that were “informed” (the fund downloaded a company’s proxy statement from the SEC’s Edgar website before the election) and “uninformed,” and the number that received advice from ISS, Glass Lewis, or neither. A fund-vote is the voting decision of a particular fund family on a particular proxy item. Data cover 2004-2017.

	No advice	ISS advice	Glass Lewis advice
A. All Items			
Uninformed	1,231,180	3,708,798	738,951
Informed	132,200	228,603	40,768
B. Shareholder and Management Proposals			
Uninformed	67,212	198,225	36,690
Informed	6,518	17,695	3,546
C. Director Elections			
Uninformed	1,066,192	3,218,266	632,637
Informed	112,650	195,853	34,287
D. Say-on-Pay			
Uninformed	97,980	292,307	69,624
Informed	13,032	15,055	2,935

Table 2
Descriptive Statistics

This table reports fund and firm characteristics according to whether funds were informed and/or advised. Each observation represents a fund-vote. Standard deviations are in parentheses next to the means. Leverage is debt scaled by debt plus common equity.

	Uninformed		Self-informed		ISS advice		Glass Lewis advice		No advice	
<i>Fund characteristics</i>										
Fund size (log)	11.1	(1.94)	12.7	(1.93)	11.3	(1.76)	11.3	(1.45)	10.9	(2.66)
% of portfolio	0.12	(0.37)	0.20	(0.53)	0.12	(0.32)	0.13	(0.34)	0.15	(0.53)
% of firm equity	0.60	(1.48)	1.96	(2.77)	0.59	(1.37)	0.67	(1.78)	1.06	(2.17)
Index fund	0.73	(0.44)	0.77	(0.42)	0.79	(0.41)	0.60	(0.49)	0.67	(0.47)
<i>Firm characteristics</i>										
Assets (log)	8.48	(1.98)	9.19	(2.26)	8.54	(2.00)	8.51	(1.99)	8.52	(2.03)
Leverage	0.41	(0.81)	0.43	(0.69)	0.41	(0.80)	0.41	(0.96)	0.41	(0.73)
R&D/assets	0.05	(0.11)	0.05	(0.11)	0.05	(0.11)	0.05	(0.11)	0.05	(0.11)
Cash/assets	0.10	(0.12)	0.10	(0.12)	0.10	(0.12)	0.10	(0.13)	0.10	(0.12)
Market-to-book	3.15	(39.4)	3.61	(35.2)	3.16	(40.1)	3.27	(36.9)	3.21	(37.6)
PPE/assets	0.23	(0.25)	0.22	(0.24)	0.23	(0.25)	0.23	(0.25)	0.23	(0.25)

Table 3
Common Proposal Topics

An “item” is a proposal to be decided by shareholder vote. A “fund-vote” is the vote choice of a particular fund on a particular item. Proposals were sponsored by management or by shareholders. “% Yes” is the percentage of fund-votes in favor of the proposal.

	# Items	# Fund-Votes	% Sponsored by Shareholders	% Yes
Declassify board: require every director to be elected every year	1,223	30,944	37.8	97.1
Independent chair: require board chair to be an independent director	545	20,674	99.8	40.1
Lobbying: disclose company’s political lobbying activities	242	10,897	100.0	32.4
Majority vote: require directors to receive a majority of votes in uncontested elections in order to be elected	723	19,923	63.3	87.7
Political contributions: disclose and limit contributions	433	15,605	93.7	34.2
Proxy access: allow shareholders to nominate candidates for director	329	13,285	83.9	68.5
Special meeting: allow shareholders to call special meeting	438	16,506	63.7	76.0
Supermajority: remove supermajority provisions for shareholder actions such as takeovers and bylaw amendments	636	21,263	22.3	96.8
Sustainability: create and report policies and plans related to climate change, environmental impact, and sustainability	385	13,586	100.0	31.8
Written consent: allow shareholders to act by written consent in lieu of meeting	252	10,235	77.0	63.6

Table 4
Regressions of Voting on Information and Proxy Advice

Each column of each panel reports estimates from a regression in which the dependent variable is 1 if a fund voted in favor and 0 if it voted against. Informed is a dummy equal to 1 if the fund visited the company's proxy statement on Edgar prior to voting. ISS/Glass Lewis are dummies equal to 1 if the fund was an ISS or Glass Lewis customer, respectively. Standard errors clustered by fund-year are in parentheses. Fixed effects are indicated in the panel heading. Significance levels are indicated: * = 10 percent, ** = 5 percent, *** = 1 percent.

	(1)	(2)	(3)	(3)
Informed	-0.14 ^{***} (0.01)	-0.08 ^{***} (0.01)	-0.13 ^{***} (0.01)	-0.03 ^{***} (0.00)
ISS	0.07 ^{***} (0.02)	0.06 ^{***} (0.02)	0.69 ^{***} (0.00)	0.68 ^{***} (0.00)
Glass Lewis	-0.03 (0.02)	-0.02 (0.02)	...	...
Constant	0.65 ^{***} (0.02)	0.65 ^{***} (0.01)	...	...
<i>N</i>	171,743	171,468	171,729	171,454
Clusters	999	999	985	985
Fixed effects:				
10 topics	Yes	...	Yes	...
Election item	...	Yes	...	...
Fund × Year	...	...	Yes	...
Election item and Fund × Year	...	...	...	Yes

Table 5
Vote Regressions: Instrumental Variable Estimates

Each column reports estimates from a regression that pools fund-votes across the 10 common issues. Dependent variables are indicated in the panel headings. Three different instruments are employed, as indicated in the left column. ISS and Glass Lewis are dummies equal to 1 if a fund received advice from ISS or Glass Lewis, respectively. All regressions include issue and year dummies. Standard errors clustered at the fund-year level are in parentheses. Significance levels are indicated: * = 10 percent, ** = 5 percent, *** = 1 percent.

Panel A: First Stage: Dependent Variable = Dummy if fund visited Edgar			
	(1)	(2)	(3)
IV1: Busy proxy season	-0.01 ^{***} (0.00)		
IV2: Contentious proposal on proxy		0.02 ^{***} (0.00)	
IV3: # items on proxy (log)			0.04 ^{***} (0.00)
Constant	-0.01 ^{**} (0.00)	0.05 ^{***} (0.02)	-0.08 ^{***} (0.01)
R ²	0.012	0.013	0.015
F-statistic	13.60	12.94	12.56
Observations	171,743	45,217	171,743
Clusters	999	857	999
Panel B: Instrumented Regressions: Dependent Variable = Dummy if fund voted in favor			
	(1)	(2)	(3)
<i>Informed</i>	-1.11 ^{**} (0.45)	-0.88 ^{***} (0.20)	-1.14 ^{***} (0.12)
ISS	0.07 ^{***} (0.02)	0.01 (0.02)	0.07 ^{***} (0.02)
Glass Lewis	-0.02 (0.03)	0.02 (0.03)	-0.02 (0.03)
Constant	0.91 ^{***} (0.02)	1.02 ^{***} (0.03)	0.91 ^{***} (0.02)
Observations	171,743	45,217	171,743
Clusters	999	857	999

Table 6
Regressions of Voting in Agreement with Management on Information

Each column reports estimates from a regression in which the dependent variable is a 1 if a fund voted in agreement with management's recommendation and 0 otherwise. Informed is a dummy equal to 1 if the fund visited the company's proxy statement on Edgar prior to voting. Observations include votes cast by fund families that did not receive advice. Standard errors clustered by fund-year are in parentheses. All regressions include election item fixed effects. Significance levels are indicated: * = 10 percent, ** = 5 percent, *** = 1 percent.

	All proposals (excluding director elections) (1)	Shareholder proposals (2)	Management proposals (3)	Director elections (4)
Informed	0.028*** (0.007)	0.087*** (0.015)	0.007 (0.007)	0.003 (0.004)
Observations	1,398,768	232,928	1,165,840	5,166,039
Clusters	1,015	1,005	1,015	1,014

Table 7
Vote Regressions Using Alternative Information Proxies

Each column of each panel reports estimates from a regression in which the dependent variable is 1 if a fund voted in favor and 0 if it voted against. The regressions include observations for funds that did not receive proxy advice, cover the 10 common issues, and include issue fixed effects. Standard errors clustered by fund-year are in parentheses. Significance levels are indicated: * = 10 percent, ** = 5 percent, *** = 1 percent.

	(1)	(2)	(3)	(4)
Edgar visit dummy	-0.200 ^{***} (0.017)			
Fund assets (log)		-0.020 ^{***} (0.004)		
# years stock held			-0.019 ^{***} (0.004)	
% portfolio weight of stock				-0.016 ^{***} (0.008)
Constant	0.658 ^{***} (0.015)	0.847 ^{***} (0.045)	0.704 ^{***} (0.019)	0.620 ^{***} (0.019)
Observations	38,912	38,912	38,912	28,004
Clusters	301	301	301	249

Table 8
Regressions of Voting on Advisor Recommendations with Fund-Year Fixed Effects

Each column of each panel reports estimates from a regression in which the dependent variable is 1 if a fund voted in favor and 0 if it voted against. Informed is a dummy equal to 1 if the fund visited Edgar prior to voting. ISS/Glass Lewis recommendations are dummies equal to 1 if the fund was an ISS/Glass Lewis customer and ISS/Glass Lewis recommended voting in favor. Each regression includes fund-year fixed effects, and the regression pooling all 10 issues includes issue fixed effects. Standard errors, in parentheses, are clustered at the fund×year level. Fixed effects are at the fund×year level. Significance levels are indicated: * = 10 percent, ** = 5 percent, *** = 1 percent.

	All 10 issues	Declassify board	Indepen- dent chair	Lobbying	Majority vote	Political contribs	Proxy access	Special meeting	Super- majority	Sustain- ability	Written consent
Informed	-0.04 ^{***} (0.004)	0.00 (0.00)	-0.03 ^{***} (0.01)	-0.02 (0.01)	-0.02 ^{**} (0.01)	-0.01 (0.01)	-0.02 [*] (0.01)	-0.05 ^{***} (0.01)	-0.01 (0.01)	-0.03 ^{**} (0.01)	-0.04 ^{***} (0.01)
Proposal supported by ISS	0.36 ^{***} (0.02)	0.39 ^{***} (0.07)	0.36 ^{***} (0.02)	0.29 ^{***} (0.02)	0.61 ^{***} (0.05)	0.34 ^{***} (0.02)	0.24 ^{***} (0.04)	0.28 ^{***} (0.04)	0.60 ^{***} (0.05)	0.41 ^{***} (0.02)	0.40 ^{***} (0.03)
Proposal supported by Glass Lewis	0.20 ^{***} (0.01)	0.29 ^{***} (0.06)	0.11 ^{***} (0.01)	0.13 ^{***} (0.02)	0.15 ^{***} (0.05)	0.15 ^{***} (0.01)	0.43 ^{***} (0.03)	0.24 ^{***} (0.02)	0.27 ^{***} (0.03)	0.14 ^{***} (0.02)	0.19 ^{***} (0.03)
Constant	0.19 ^{***} (0.01)	0.30 ^{***} (0.06)	0.08 ^{***} (0.02)	0.04 ^{**} (0.02)	0.12 ^{***} (0.05)	0.03 ^{**} (0.01)	0.15 ^{***} (0.03)	0.29 ^{***} (0.04)	0.12 ^{**} (0.05)	0.02 [*] (0.01)	0.08 ^{**} (0.04)
<i>N</i> Clusters	131,219 868	19,328 723	16,857 748	9,735 504	12,121 717	12,848 735	11,200 471	13,452 711	15,132 737	10,667 691	9,193 560

Table 9
Vote Regressions for Funds that Changed Advisor after Being Acquired

Each column reports a regression in which the dependent variable is 1 if an individual fund voted in favor. The regressions include 19 funds that shifted advisors after being acquired (adopting the acquirer's advisor). The sample includes votes on the 10 common issues. ISS and Glass Lewis are dummies equal to 1 if a fund received advice from ISS or Glass Lewis, respectively, in the current year. Standard errors clustered at the individual fund level are in parentheses. Each regression has 2,805 observations and 17 clusters. Significance levels are indicated: * = 10 percent, ** = 5 percent, *** = 1 percent.

	(1)	(2)
ISS	0.07 ^{***} (0.02)	0.05 ^{**} (0.02)
Glass Lewis	0.06 (0.12)	0.04 (0.10)
Constant	0.64 ^{***} (0.02)	0.66 ^{***} (0.02)
Fixed effects	Fund, Year	Fund, Year, Issue
Observations	2,805	2,805
Clusters	17	17

Table 10
Vote Regressions for Unadvised SRI and non-SRI funds

Each column is a regression in which the dependent variable is a dummy equal to 1 if a fund-vote was cast in favor of a proposal. Each regression pools the 10 common issues and year and issue fixed effects. Funds advised by ISS or Glass Lewis are excluded. The regressions differ in the definition of an SRI fund: the definitions are (1) Bolton et al. (2020) parameter > .35 and (2) share of fund family assets labeled ESG > 0.01. Standard errors, clustered by fund-year, are in parentheses. Significance levels are indicated: * = 10 percent, ** = 5 percent, **** = 1 percent.

	SRI: Bolton et al. score > .35 (1)	SRI: assets in SRI funds > 1% (2)
Informed & Not SRI	-0.21 ^{***} (0.02)	-0.21 ^{***} (0.02)
Uninformed & SRI	0.08 ^{***} (0.03)	0.05 ^{**} (0.03)
Informed & SRI	0.01 (0.06)	-0.03 (0.04)
Observations	327,66	38,912
Clusters	236	301

Table 11
Voting, Robo-voting, and Advisor Recommendations

Column (1) shows the percentage of proxy advisor customers' votes that followed the advisor's recommendations. Column (2) shows the fraction of a proxy advisor's customers that were robo-voters in a given year. ISS and Glass Lewis customers were inferred from each mutual fund's N-PX format.

	% Votes that followed recommendations (1)	% Robo-voters: funds that followed 99 percent of recommendations (2)
ISS customers	94.0	16.5
Glass Lewis customers	91.4	8.3