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The Party Structure of Mutual Funds

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We investigate the structure of mutual funds' corporate governance preferences as revealed by how they vote their shares in portfolio companies. We apply unsupervised learning tools from the machine learning literature to analyze mutual funds' votes and find that a parsimonious two-dimensional model can explain the bulk of mutual fund voting. The dimensions capture competing visions of corporate governance and are related to the leading proxy advisors' recommendations. Cluster analysis shows that mutual funds are organized into three "parties"—the Traditional Governance Party, Shareholder Reform Party, and Shareholder Protest Party—that follow distinctive philosophies of corporate governance and shareholders' role. (*JEL* G23, G30, G34, G38)

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To understand corporate governance in the United States, one must understand the voting behavior of mutual funds. Mutual funds have grown to hold about one-third of publicly traded stock and are subject to legal duties to vote that stock in the interest of their investors.[1] In tandem with the growth of mutual funds as corporate shareholders, corporate law and practice have evolved to elevate the role of the shareholder franchise. Shareholder votes today play a substantial role in setting issuer-level corporate governance policies and have become an important tool used by institutional investors to discipline corporate management.

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[1] See SEC, Proxy Voting by Investment Advisers, Release No. IA-2106 (January 31, 2003); 17 CFR 275.206(4)-6.

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Despite these trends that have made mutual funds central players in corporate governance, we know relatively little about their behavior as company owners. In this paper we develop the first systematic account of the structure of mutual fund preferences over corporate governance. We focus on two basic questions. First, what are the main ways in which mutual funds differ in their corporate governance preferences, as reflected in how they vote? Second, given that variation in voting behavior, what are the characteristic "types" of mutual funds in terms of their corporate governance philosophies?

We use a comprehensive sample of mutual funds' votes on 181,951 proposals from 5,774 portfolio companies by 4,656 mutual funds. The full data matrix of mutual fund votes, composed of funds as rows and proposals as columns, is massive, with 847,163,856 cells. But because most mutual funds own only several hundred portfolio companies, and hence vote on only a small fraction of all public companies' proposals, 96.7% of the cells in the data matrix are empty. This type of data analysis task—uncovering the underlying structure of a large but sparsely populated data set—is referred to as an "unsupervised learning" problem in the machine learning literature. We apply tools from that literature to develop a new window into the structure of mutual funds' corporate governance preferences that generates a range of insights into the broader system of corporate governance.

First, we hypothesize that mutual funds' corporate governance preferences can be organized or represented as positions along a small number of latent dimensions. To investigate this hypothesis, we use a type of iterative expectation maximization algorithm to both impute the missing data and extract the principal components of the completed data matrix in order to approximate our high dimensional data matrix using a rank-two matrix. We find that this parsimonious two-dimensional model of mutual fund preferences can indeed explain the bulk of mutual fund voting.

The first dimension of our estimated preference space primarily captures the tendency of funds to oppose (support) management when the leading proxy advisor, ISS, recommends against (in favor of) management but its main competitor, Glass Lewis, does not. It thus captures fund voting behavior for proposals on which the two proxy advisors *disagree*. In contrast, dimension 2 primarily captures funds' tendency to vote against management when Glass Lewis recommends to do so, irrespective of ISS's recommendations. These findings show that the corporate governance philosophies tracked by the recommendations of the two leading proxy advisors underlie the main ways mutual funds differ in their voting behavior.

The dramatic reduction in the dimensionality of the data we achieve in turn helps us to characterize the typology of mutual fund corporate governance preferences. We use model-based cluster analysis to identify three main groups of mutual funds in terms of their preference scores. We conceptualize these groups as mutual fund "parties" and show that they are a fundamental feature of mutual fund voting. For example, for most proposals with at least a minimal

Table 1
Summary of parties

Party	Largest advisors in party	Summary of voting behavior
Traditional Governance Party	Vanguard, Capital Research, Fidelity, BlackRock, T. Rowe Price, State Street	- Supports management at higher rates than the other two parties. - Most likely to break with management over proposals that implicate fundamental shareholder rights and proxy contests.
Shareholder Reform Party	Dimensional Fund Advisors, OppenheimerFunds, Principal Management, Wells Fargo, First Trust Advisors	- Focuses on opposing management on targeted requests for reforms to corporate governance.
Shareholder Protest Party	Franklin Advisers, Columbia Management, Charles Schwab, Neuberger Berman, Allianz Global Investors Fund Management	- Focuses on opposing management on uncontested director elections and on say-on-pay votes.

amount of disagreement among mutual funds, the majority of one party was opposed to the majority of the other two parties. Driving these disagreements between the parties are distinctive patterns in their voting behavior, on the basis of which we label them the Traditional Governance Party, the Shareholder Reform Party, and the Shareholder Protest Party. Table 1 summarizes the parties and their voting behavior.

Funds in the Traditional Governance Party—which is by far the largest party in terms of assets under management and includes the "Big Three" passive managers, BlackRock, Vanguard, and State Street—are distinctly deferential to management on issues that are traditionally understood as matters for the board, and not shareholders, to decide. But members of the Traditional Governance Party are most likely to break with management over proposals that implicate fundamental shareholder rights related to voting and takeovers (e.g., proposals about declassifying the board, eliminating dual class shares, and poison pills) and proxy contests for board seats, reflecting assertions of shareholder power in their traditional domain.

The Shareholder Reform Party, in contrast, opposes management at much higher rates than the other two parties over a range of proposal categories involving targeted requests for reforms to corporate governance. These include proposals on fundamental shareholder rights, CSR proposals, shareholder proposals on compensation, and proxy contests. The Shareholder Reform Party also casts withhold votes on uncontested director elections in a targeted manner to advance concrete governance reforms. For example, it does so when the board fails to implement a shareholder proposal that previously attracted majority shareholder support as well as when nonindependent directors sit on key board committees.

Finally, the Shareholder Protest Party opposes management at much greater rates than the other two parties on uncontested director elections and on say-on-pay votes. These votes amount to symbolic "protest" votes—they are effectively nonbinding—that voice general displeasure with management rather than

request specific reforms, hence our label for this party. Notably, the difference we document between the Shareholder Reform Party and the Shareholder Protest Party is not one of intensity of antimanagerial preferences. Rather, the two parties challenge management on distinctive corporate governance issues.

We then investigate the factors that shape mutual funds' party membership. We find that funds that have stronger incentives to do their own research for voting are more likely to be members of the Traditional Governance Party and less likely to be members of the Shareholder Reform Party. A proxy for whether the investment advisor takes a "compliance approach" to voting, based on the titles of the executives in charge of voting at the advisor, strongly predicts party membership, particularly for passive advisors. Most strikingly, almost all of the funds advised by the passive advisors in our three mutual fund parties that our proxy indicates follow a compliance approach are members of either the Shareholder Reform Party or the Shareholder Protest Party. In contrast, almost all funds advised by passive advisors that do not use compliance language in their proxy executives' titles are members of the Traditional Governance Party. This suggests that party membership among passive advisors in large part reflects advisors' decisions whether to outsource to proxy advisors in order to economize on the costs of voting.

Our characterization of the party structure of mutual funds provides a new perspective on institutional investors' voting behavior that sheds light on important corporate governance issues. Consider, for example, two key trends in the asset management industry that have raised concerns about corporate governance in recent years. First, the ongoing shift away from active management and toward passive management has led to concerns about institutional investors' incentives to monitor corporate management (Bebchuk and Hirst 2019; Brav et al. 2020). In one recent paper, for example, Heath et al. (2020) find that index funds "are more likely to cede power to a firm's management" by voting with management at greater rates. In response, some scholars have called for passive managers to be stripped of their right to vote corporate shares (Lund 2018). Second, commentators have expressed concern about the increasing influence of the proxy advisors on corporate governance, including with respect to the informational basis for their recommendations and to potential conflicts of interest (Larcker et al. 2015; Li 2018). The SEC recently finalized major reforms to the regulation of proxy advice intended to address these issues.[2]

Our findings on the party structure of mutual funds provides a useful lens through which to view these controversies. Consider first the concern that passive advisors support management at greater rates than active advisors. Our framework provides a richer and more nuanced account of this phenomenon: large passive advisors are more likely to be members of the Traditional

[2] Securities and Exchange Commission, *Exemptions From the Proxy Rules for Proxy Voting Advice*, Release No. 34-89372 (September 3, 2020).

Governance Party. While it is true that the Traditional Governance Party supports management at greater rates than the other two mutual fund parties, we characterize more specifically the corporate governance philosophy and voting behavior of the party. We show that the Traditional Governance Party is distinctly deferential to management on operational matters that are traditionally understood as within the province of the board, rather than shareholders. In contrast, the Traditional Governance Party commonly breaks with management on proposals related to fundamental shareholder rights—entailing efforts to change the company's basic corporate governance rules—and proxy contests. This suggests that the shift toward passive management does not portend a new era of managerial entrenchment through shifts in fundamental governance rules or unreflective opposition to shareholder dissidents' efforts to challenge corporate management.

In a similar way, we provide a much clearer account of the substantive views of corporate governance that the two leading proxy advisors represent. Our characterization is based on a comprehensive analysis of the actual patterns in voting behavior of mutual funds in each of the two parties that correspond to the recommendations of the proxy advisors—the Shareholder Reform Party and the Shareholder Protest Party. Examination of the stated policies of the proxy advisors reveals little by way of major differences. And yet we show that their apparently similar stated corporate governance policies are belied by large differences in voting behavior of these two groups of mutual funds.

Moreover, we show that there is a link between the shift toward passive investment management, on the one hand, and concerns about the influence of the proxy advisors, on the other hand. Our results show that the growth of the largest passive managers—like the Big Three—can be expected to *weaken* the influence of the proxy advisors, since these managers are typically members of the Traditional Governance Party. On the other hand, if smaller passive managers proliferate in response to shifts in investor preference toward passive management, then our results show that these types of institutional investors are the most likely to simply take a compliance approach to voting and outsource voting to proxy advisors.

Our main contribution is in using machine learning techniques to establish a set of key descriptive facts about institutional investors' voting behavior and corporate governance preferences. We build on a substantial literature on shareholder voting. One strand in this literature examines the substantive content of institutional investors' corporate governance preferences. Choi et al. (2013) shows substantial heterogeneity in the voting behavior on director elections of three of the very largest mutual fund investment advisors. Choi et al. (2008) and Ertimur et al. (2018) identify a range of firm- and director-level characteristics that shape the votes of mutual funds and the recommendations of proxy advisors. Our methodology advances this literature by characterizing

systematically and comprehensively the main ways mutual funds vary in their voting behavior.

Another strand of this literature focuses on the influence of the proxy advisors. Choi et al. (2010) estimate that an ISS recommendation can shift the vote of 6% to 10% of shares in uncontested director elections. Ertimur et al. (2013), Larcker et al. (2015), and Malenko and Shen (2016) focus on say-on-pay votes and find that the proxy advisors' recommendations affect both voting outcomes and companies' compensation practices. Our finding that the first two principal components of the voting matrix are closely associated with the recommendations of ISS and Glass Lewis, each of which are located in one of the three mutual fund parties, provides more evidence for how profoundly the proxy advisors shape the "politics" of shareholder voting. Importantly, our methodology is completely data driven. That is, rather than come to the data with any specific hypothesis in mind, we use unsupervised learning techniques to uncover the main ways funds differ in their voting behavior, revealing a latent structure to their preferences that, it turns out, is closely related to the recommendations of the proxy advisors.

A related set of papers look at the role of funds' incentives to invest in information. Morgan et al. (2011) find that large funds and funds with greater ownership stakes in the underlying issuer are less likely to support shareholder proposals. Iliev and Lowry (2014) focus on actively managed mutual funds and find that active funds that have higher benefits and lower costs from conducting their own research tend to vote more independently from ISS. We build on those findings by showing that investment advisors' incentives influence their funds' party membership, especially for passive advisors. We provide evidence that much of the variation in party membership of passive advisors stems from whether they approach voting as a compliance matter to be a performed at minimum cost.

The paper most closely related to ours is Bolton et al. (2020), which also estimates a spatial model of voting by institutional investors. Our paper differs from that paper in multiple ways. Most fundamentally, Bolton et al. (2020) interprets their first dimension of institutional investors' preferences as reflecting the extent to which investors weigh social responsibility when casting their votes. But as we discuss in Section 1.6.2 below, the dimensions of the preference spaces estimated in both papers track voting preferences on a wide range of corporate governance issues, not just proposals that implicate corporate social responsibility, which make up only a tiny fraction of the sample. Second, while Bolton et al. (2020) aggregate their voting data to the fund family level, it is the investment advisor, not the fund family, to which fund voting is generally delegated, and the two organizations are often not the same. Aggregating data to the fund family level discards important heterogeneity in voting behavior and moreover results in misestimation of the preferences of some fund organizations. Accordingly, we hand-code from fund disclosures the investment advisor to which voting authority is delegated at each fund, which

is often the subadvisor, and use those investment advisors as the aggregate fund organization of interest. Finally, our paper differs from Bolton et al. (2020) in that we perform cluster analysis to identify the main parties into which funds can be divided and characterize the way in which those parties vote, and we study which advisor-level characteristics are systematically associated with membership in each mutual fund party.

1. The Dimensions of Mutual Fund Preference

Corporate shareholders vote on a range of issues, including on the election of directors and on various corporate governance policy issues. Our goal is to uncover the structure of mutual funds' corporate governance preferences, as revealed through how they vote their shares in their portfolio companies. We investigate in this section the main ways in which mutual funds differ in their corporate governance preferences by applying principal components analysis (PCA) to estimate a parsimonious spatial model. The dramatic reduction in the dimensionality of the data we achieve then facilitates our characterization of the "party structure" of mutual funds—identifying clusters of funds that vote similarly—in the following section.

1.1 Voting data

Mutual funds and other registered investment companies—alone among institutional investors—are required to publicly disclose their votes. Our mutual fund voting data are from ISS Voting Analytics, which is drawn from public filings by mutual funds on Form N-PX. Our sample period is from 2010 to 2015. We treat the set of domestic equity and balanced mutual funds in the CRSP mutual funds database that hold U.S. common stock as the population of interest.[3] Hence, we only keep in our sample the mutual funds from ISS Voting Analytics that we can match to such a CRSP fund. We use ticker, fund name, and family name as well as data from EDGAR to link the two data sets. After excluding votes cast by funds that voted on fewer than 30 proposals, the full sample covers votes on 181,951 proposals from 5,774 portfolio companies by 4,656 mutual funds from 474 fund families. Table 2 compares the overall CRSP population of interest to those we were able to match to a fund in the ISS Voting Analytics data in that year that was included in our estimation sample. The estimation sample includes votes by funds representing about 55% of the funds in the CRSP population in each year, and about 80% of the value of U.S. common stock held by domestic equity and balanced funds in CRSP.

[3] More specifically, we select funds in CRSP with crsp_obj_cd equal to "ED**" or "M" (indicating domestic equity and balanced funds) and exclude any such funds that the CRSP portfolio data indicate do not hold U.S. common stock.

Table 2
CRSP coverage

Year	Number of CRSP funds	Number of merged funds	Fraction	TNA CRSP ($ millions)	TNA merged ($ millions)	Fraction
2010	5,507	2,968	0.54	5,462,796	4,274,650	0.78
2011	5,718	3,042	0.53	5,263,227	4,092,580	0.78
2012	5,708	2,980	0.52	5,863,155	4,527,865	0.77
2013	5,716	3,072	0.54	7,803,258	6,379,391	0.82
2014	5,821	3,446	0.59	8,668,008	7,466,128	0.86
2015	5,937	3,290	0.55	8,438,582	6,673,425	0.79

Number of CRSP funds is the number of domestic equity and balanced funds in CRSP in the respective year that hold U.S. common stock. *Number of merged funds* is the number of such funds that were merged with a fund from ISS Voting Analytics for which we estimate a preference score using data from the respective year. *TNA CRSP* and *TNA merged* are the sum of total net assets in the CRSP and merged samples, respectively.

We also include as "voters" in the data matrix rows for management, ISS, and Glass Lewis based on their respective recommendations.[4] This enables us to place these actors in the same preference space as the mutual funds, which aids in interpretation of the model.[5]

The resulting data matrix, formed by funds as rows and proposals as columns, has a total of 847,709,709 cells. However, because each individual mutual fund owns only a fraction of the portfolio companies covered in the data set, and therefore votes on only a small fraction of the proposals in the sample, the sample comprises only 28,318,233 votes. In other words, 96.7% of the cells in the data matrix are empty.

1.2 Estimating a low-dimensional model of mutual fund preference

Each of the 181,951 proposals represents a variable in the data set, and the sheer number of variables threatens to swamp attempts to use the data to systematically characterize mutual funds' voting behavior. Many of these variables, however, are highly correlated. Relatedly, we hypothesize that much of the variation in mutual funds' votes on these proposals is driven by preferences and other factors that can be well represented as positions in a much lower dimensional space.

To investigate this, we use PCA, which can be motivated and derived in a number of different ways. One way is in terms of finding the mutually orthogonal directions in the data having maximal variances (Joliffe 2002). This is an important sense in which PCA helps us identify the *main* ways

[4] The data on management recommendations and ISS recommendations come from ISS Voting Analytics. Following Larcker et al. (2015), we impute Glass Lewis's recommendations by identifying a set of mutual funds that follow Glass Lewis, based on information from the Proxy Insight website, and coding the Glass Lewis recommendation as the majority vote among the Glass Lewis followers for proposals on which at least two of the Glass Lewis followers voted, with more than two-thirds of the Glass Lewis followers voting in the same direction.

[5] Including these three actors as voters in the data matrix has a negligible effect on our estimates; all results are robust to excluding them.

mutual funds differ in their voting behavior. An alternative framing of PCA is that it finds a low rank approximation of the data that minimizes the squared approximation error. In particular, let X be the $n \times p$ matrix of votes of n funds on p proposals. To find the best (in a least squares sense) rank k approximation of X, we solve

$$\min_{Z,A,M} \|X - ZA - M\|^2,$$

where Z is an $n \times k$ matrix of principal component "scores," A is a $k \times p$ "coefficient" (or "loadings") matrix, and M is an $n \times p$ matrix with each row equal to a vector containing the means of each variable. Let z_i be the i-th row of Z, a_j be the j-th column of A, and m_j be the mean of the j-th column of X. Then the problem can be written element-by-element as

$$\min_{Z,A,M} \sum_{i=1}^{n} \sum_{j=1}^{p} (X_{ij} - z_i a_j - m_j)^2.$$

The solution to this complete-data problem can be calculated using the singular value decomposition of the centered data matrix $(X - M)$.

A challenge to performing PCA posed by our data, however, is that 96.7% of the entries in the data matrix are missing. Let $O \subset \{1, \ldots, n\} \times \{1, \ldots, p\}$ denote the set of (i, j) such that X_{ij} is *observed*. PCA can be generalized to this setting as

$$\min_{Z,A,M} \sum_{i,j \in O} (X_{ij} - z_i a_j - m_j)^2,$$

which lacks an analytic solution. We fit the model using a type of expectation maximization algorithm proposed by Kiers (1997) and further analyzed in Ilin and Raiko (2010) and Josse and Husson (2012). To estimate a k dimensional model, the algorithm proceeds as follows:

1. Impute missing observations in X using the mean of each variable.
2. Perform PCA on the completed data set to estimate $(\hat{Z}, \hat{A}, \hat{M})$. Retain k dimensions of $\hat{Z}$ and $\hat{A}$; denote the truncated matrices as $\hat{Z}^k$ and $\hat{A}^k$.
3. Reimpute the missing values of X using $\hat{M} + \hat{Z}^k \hat{A}^k$.
4. Repeat steps 2 and 3 until convergence.

The principal component scores z_i can be understood as the projection of the rows of X (each representing a fund) onto a k dimensional subspace. The fund preference scores also can be understood as estimates of funds' "ideal points" in a spatial model.[6] We will refer to these measures as "fund preference scores," but they do not capture "preference" in only a narrow attitudinal or ideological

[6] Heckman and Snyder (1997) develop a linear probability model approach to estimating a spatial model of preferences over discrete choices and show that the agents' preference parameters in such a model can be estimated using PCA.

sense. Rather, our estimated fund preference scores are best understood as descriptive summaries of the latent dimensions that best explain differences in funds' votes.

1.3 Filtering the sample

One challenge of applying our estimation approach to the data is that it is computationally expensive, given the enormous size of the data matrix. Many of the proposals in the full data set, however, contain little information. In particular, the vast majority of proposals are highly lopsided, with almost all funds voting the same way. The most numerous type of lopsided proposal is votes on management nominees in uncontested director elections. These lopsided votes contain little information about the relative preferences of mutual funds. To see the intuition, consider the extreme case of a unanimous vote—unanimous votes contain *no* information about mutual funds' relative preferences. To focus on informative votes, and to make the computation more manageable, we drop all proposals for which fewer than 5% of funds voted in the minority.[7] Similarly, for a proposal to be included in the estimation sample, we require that at least 20 mutual funds vote on it, and for a fund to be included it must have voted on at least 30 sample proposals.

The resulting estimation sample covers votes by 4,329 mutual funds on 43,871 proposals from 3,966 portfolio companies. Table 3 provides counts of proposal types for the estimation sample and the full sample. The prefixes "MP" and "SP" in the proposal categories refer to management proposals and shareholder proposals, respectively. Proposals to elect directors nominated by management are by far the most common type of proposal. Shareholder proposals are less numerous than management proposals and mostly focused on corporate governance issues.

With 4,332 voters (4,329 funds plus management, ISS, and Glass Lewis) and 43,871 proposals, there are a total of 190,049,172 potential votes in the estimation sample and therefore cells in our data matrix. The median fund, however, owns a total of only 498 unique portfolio companies over the sample period, and, as a consequence, the estimation sample comprises only 6,788,522 votes. In other words, 96.4% of the cells of the estimation sample data matrix are empty.

1.4 The number of dimensions

An initial question is how many dimensions of mutual fund preference are needed to provide a good model of mutual fund preferences. The eigenvalues of each principal component provide one perspective on the issue. The eigenvalue

[7] In unreported results, we experimented with smaller lopsidedness thresholds, down to the 3% lopsidedness threshold used in Bolton et al. (2020), and larger ones, up to 10%, and find qualitatively similar results.

Table 3
Distribution of proposal types in estimation and full samples

Proposal type	Estimation sample	Full sample
All MP	40,871	177,916
MP-Adopt Forum Selection Bylaws	46	54
MP-Approve Pill	97	141
MP-Authorize New Class of Stock	7	16
MP-Board Size	8	193
MP-Declassify Board	11	416
MP-Elect Director (Contested)	388	607
MP-Elect Directors	30,621	125,651
MP-Eliminate Cumulative Voting	22	37
MP-Increase Authorized Stock	388	925
MP-Majority Vote for Directors	10	143
MP-Merger / Acquisition Related	72	1,474
MP-Miscellaneous	1,299	3,579
MP-Other Compensation	3,934	8,946
MP-Other Corporate Finance	170	1,143
MP-Proxy Access	10	18
MP-Ratify Auditors	420	19,972
MP-Reduce Supermajority Reqs.	9	288
MP-Right to Act by Written Consent	13	46
MP-Right to Call Special Meeting	15	122
MP-Say On Pay	3,310	14,059
MP-Unspec. Charter/Bylaw Amend.	21	86
All SP	3,000	4,035
SP-Compensation	419	466
SP-Cumulative Voting	77	77
SP-Declassify Board	119	212
SP-Elect Directors (Contested)	371	592
SP-Eliminate Dual Class Shares	28	37
SP-Environmental	291	400
SP-Increase Board Diversity	16	17
SP-Indep. Chair/Lead Dir.	312	316
SP-Majority Vote for Directors	155	182
SP-Miscellaneous	208	455
SP-Political Contributions	343	426
SP-Proxy Access	107	127
SP-Reduce Supermajority Reqs.	91	111
SP-Social Proposal	138	279
SP-Special Meetings	140	146
SP-Subject Pill to Sh Approval	23	29
SP-Written Consent	162	163
Total	43,871	181,951

The table provides counts of proposals in each category in the estimation sample and in the full sample. The estimation sample is the set of proposals used to estimate funds' preference scores (see text for detailed sample selection criteria, the most significant of which is the requirement that at least 5% of funds voted against the majority of funds on the proposal). The full sample includes the entire set of proposals in the data set for the sample period. "MP" refers to management proposals; "SP" refers to shareholder proposals.

of the k-th principal component measures the variance in the voting data along that dimension. Figure A.1 in the Internet Appendix plots the eigenvalues of the first thirty principal components. Note that starting with the third component, the plot becomes linear. In what follows, we thus focus on the

first two dimensions as a parsimonious model of mutual fund preference.[8] A two-dimensional model performs well, correctly classifying 89% of the votes, with an average proportional reduction in error (APRE) of 47%.[9]

1.5 The distribution of mutual funds' preferences

Figure 1 shows the estimated preference scores of mutual funds. Also depicted with triangles are the average of the investment advisors' funds' preferences (weighted by each fund's TNA) for a subset of the mutual fund investment advisors in the data.[10]

The distribution of fund scores in this two-dimensional preference space takes a triangular shape, with a group of funds clustered around each of the three vertices of the triangle. Management is located near the lower-left vertex, and several of the very largest fund advisors—including Blackrock, Vanguard, State Street, and Fidelity—are located in the same cluster of funds. The leading proxy advisor, ISS, is located near the right vertex of the triangle, and the second leading proxy advisor, Glass Lewis, is likewise located near the upper-left vertex. By dramatically reducing the dimensionality of funds' voting behavior, from their votes on 43,871 proposals down to the two directions in that high-dimensional proposal space that capture the maximal variance in funds' voting choices, our preference estimates suggest that funds can be usefully classified into three main groups, those clustered at each of the three vertices that map out the distribution of fund's preference scores. We turn in Section 2 to describing the voting behaviors of these three clusters of funds.

It is noteworthy that the two leading proxy advisors are located in orthogonal directions from management in this space. That is, while one might imagine that management, mutual funds, and the proxy advisors sit on a single dimension that ranges from an extreme managerialist view on one end to an extreme "shareholder rights" view on the other, with each fund ordered according to the intensity of their shareholder rights views, a better representation of mutual fund preferences is that there are two orthogonal dimensions of shareholder preferences. A fund can be extreme on dimension 1 without being extreme on dimension 2, and vice versa.

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[8] The third principal component primary tracks a single investment advisor's voting behavior—Blackrock—and hence is of little general interest.

[9] A predicted value $\hat{M}_{ij} + \hat{z}_i^k \hat{a}_j^k > 0.5$ is classified as a "Yes" vote, and $\hat{M}_{ij} + \hat{z}_i^k \hat{a}_j^k < 0.5$ is classified as a "No" vote. APRE measures the reduction in error the model achieves in classifying votes relative to a simple benchmark model of predicting that all funds vote with the majority on the proposal. For each proposal, the proportional reduction in error (PRE) is equal to $\frac{\text{Number Minority Votes} - \text{Number Classification Errors}}{\text{Number Minority Votes}}$. The APRE sums over all of the proposals: $\frac{\sum_{j=1}^{m} \text{Number Minority Votes}_j - \text{Number Classification Errors}_j}{\sum_{j=1}^{m} \text{Number Minority Votes}_j}$.

[10] We discuss in some detail in Section 3 how we identify the investment advisor to which each fund delegates its voting authority.

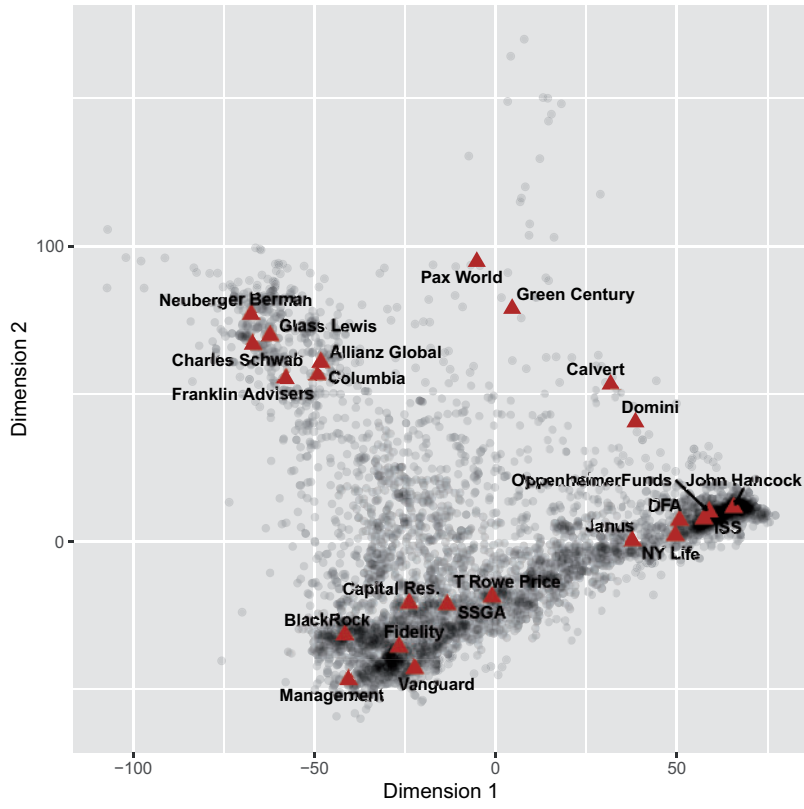

Figure 1
Dimension 1 versus dimension 2
This figure depicts the preference scores of the 4,329 funds in our estimation sample (circles) and the preference scores of a select set of prominent investment advisors (triangles), calculated as the asset-weighted average of the preference scores of all the funds under the advisor for which we have recovered preference estimates. In addition, for reference, the figure includes triangular markers reflecting the scores for management, ISS, and Glass Lewis.

1.6 The interpretation of the dimensions

We interpret the dimensions by studying the pattern of loadings a_j across proposals on the two dimensions. If a proposal loads positively on a dimension, then funds that score positively (negatively) on the dimension are predicted to be more (less) likely to vote affirmatively (and vice versa for proposals that load negatively). Figure 2 shows the distributions of proposals' loadings on the two dimensions. There is substantial variation across proposals in loadings on each dimension. To interpret the dimensions, we need to characterize the kinds of proposals that load heavily in either direction on each dimension. One challenge in our application of PCA is the sheer number of variables in the model, which prevents us from simply listing those key proposals and offering an intuitive interpretation of the principal components, as is

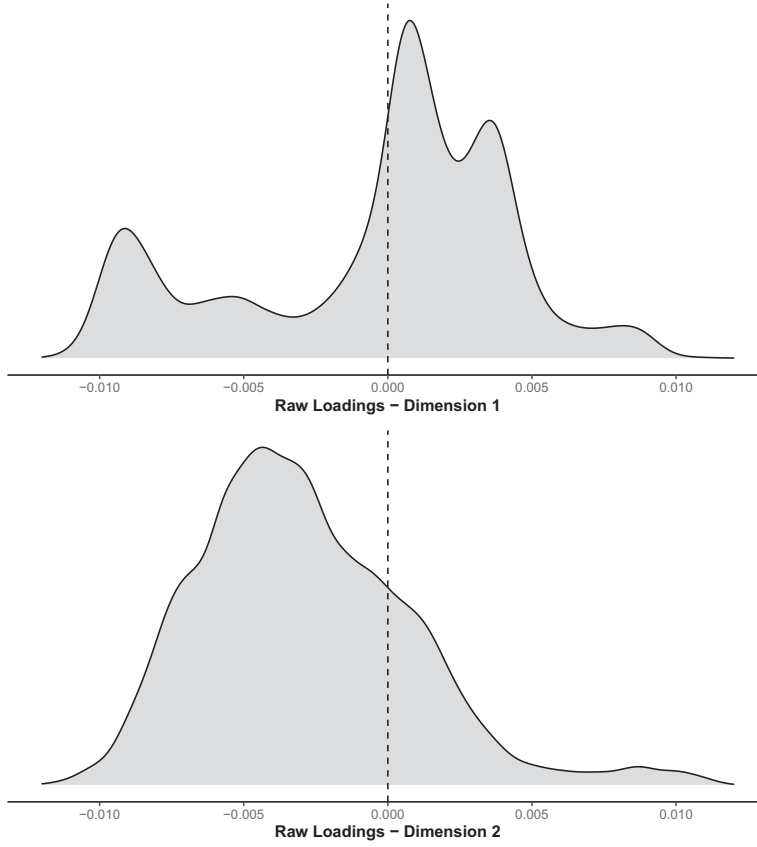

Figure 2
Distribution of loadings across proposals
This figure plots the univariate densities of the loadings of proposals on dimensions 1 and 2.

often done in PCA (see Joliffe, 2002, pp. 63-77, for a useful discussion). Rather, we must describe in meaningful ways the characteristics of proposals and identify which characteristics are associated with loadings on each dimension.

1.6.1 The recommendations of the proxy advisors and management. We begin by noting that the extreme locations of ISS, Glass Lewis, and management in the preference space imply that the loadings are associated with the recommendations of these three key actors. We also know institutionally that the recommendations of these three actors play important roles in the proxy voting process (Ertimur et al. 2013; Malenko and Shen 2016). Ertimur et al. (2018) argue in particular that ISS and Glass Lewis play an

"agenda-setting role" in the sense that many institutional investors will only seriously consider opposing management if a proxy advisor recommends against management. All of this suggests that the recommendations of the proxy advisors and management might be related to the interpretation of our estimated preference space.

To investigate this hypothesis, we split the set of proposals into the four categories mapped out by the four possible combinations of the proxy advisors' recommendations vis-à-vis management. To make the signs of loadings more comparable across proposals, we "polarize" each loading based on management's recommendation. In particular, if management recommends against a proposal, we multiply the raw proposal loading by -1 to calculate its "polarized loading." The signs of polarized loadings can be interpreted in terms of supporting or opposing corporate management on the substantive issue raised by the proposal.

Figure 3 reports the conditional densities of the polarized loadings for the same four groups of proposals. The signs of the polarized loadings on dimension 1 are strikingly uniform within each of the four groups. Moreover, the conditional densities for each of the four subgroups have little overlap, reflecting that the recommendations of management and the proxy advisors play important roles in determining the direction and magnitude of the loadings of each proposal on dimension 1.

A key driver of the variation in loadings on dimension 1 is *disagreement* between Glass Lewis and ISS. The conditional density on the far left of dimension 1 corresponds to proposals for which ISS opposes management and Glass Lewis supports management. Scoring highly positively (negatively) on dimension 1 is thus strongly predictive of voting against (with) management on these proposals. Similarly, the density on the far right corresponds to proposals for which ISS supports management and Glass Lewis opposes management. These include almost all of the proposals that load substantially positively on dimension 1, and the interpretation of these mirrors that of the left-most conditional density. To a lesser extent, dimension 1 also captures the tendency of funds to oppose management when ISS and Glass Lewis both oppose management (the second conditional density from the left). Finally, note that dimension 1 does not substantially track the variation in preferences over proposals for which neither proxy advisor opposes management; the bulk of the conditional density for this group is near zero.

Turning to dimension 2 in the bottom panel of Figure 3, the polarized loadings are overwhelmingly negative, indicating that, unlike dimension 1, dimension 2 measures a form of preference generally opposed to management's recommendations. This is consistent with management's extremely negative score on dimension 2. The conditional densities also show that recommendations from Glass Lewis in opposition to management are associated with a leftward shift in the polarized loadings, and that, in contrast,

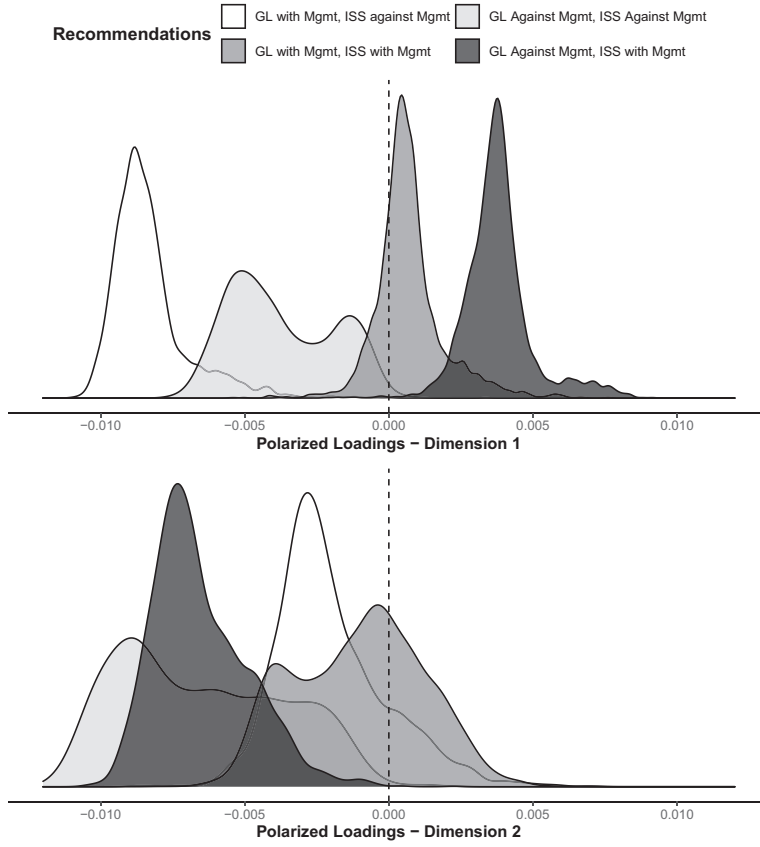

Figure 3
Conditional densities of polarized loadings
The top (bottom) panel shows the conditional densities of polarized loadings on dimension 1 (2) across four subsets of proposals defined by the recommendations of management, ISS, and Glass Lewis, as specified in the legend at the top of the figure. To polarize the loadings relative to management, we multiply the raw loadings on dimension 1 by -1 if management recommended against the proposal.

the ISS's recommendations play little role. This is consistent with ISS's score on dimension 2 near zero, depicted in Figure 1.

In summary, there are strong relationships between the loadings of proposals on the two dimensions of our preference space and the recommendations of the two leading proxy advisors and management. These associations between the proxy advisors' recommendations and the loadings of proposals presumably reflect both the causal influence of their recommendations on funds' voting choices (Malenko and Shen 2016) and the fact that the proxy advisors' recommendations themselves track important features of institutional investors' preferences (Choi et al. 2010). Ertimur et al. (2018) argue convincingly that a major reason for the correlation between ISS recommendations and institutional

investors' votes is that ISS aggregates institutional investors' preferences through regular meetings with and surveys of its clients and then synthesizes its clients' views into a set of proxy voting guidelines.

In the Internet Appendix, we provide further analysis of the substantive corporate governance preferences underlying these dimensions. We show that dimension 1 measures a strong preference to vote against management on range of proposal types, including those that implicate fundamental shareholder rights, shareholder proposals on compensation, CSR proposals, and proxy contests. In contrast, the most distinctive aspect of dimension 2 is that it captures a strong tendency to oppose management on the two most numerous proposal categories: uncontested director elections and say-on-pay proposals.

1.6.2 The role of corporate social responsibility versus profit seeking. Our analysis of the main dimensions of institutional investor voting preferences contrasts sharply with the interpretation of Bolton et al. (2020). To interpret the dimensions of their estimated preference space, they first identify the institutions located at extreme points in the space. They point out that the institutional investors located at the left-most extreme of their preference space are predominantly socially responsible investors, such as Calvert and Domini Social Investments, and public pension funds. They contrast this group with the more conventional, non-SRI investors at the right-most extreme. On that basis, they conclude that the main dimension of investor preference reflects an "ideology" based on how socially responsible versus "money conscious" investors are. As Bolton et al. (2020, p. 321) put it: "the issue that most separates institutional investors is the degree to which they weigh social responsibility." This would be a surprising conclusion and belies a large academic literature on corporate governance that focuses mostly on other issues, such as takeover defenses (Bebchuk et al. 2009), director independence (Ryan and Wiggins 2004), and the extent to which executive compensation is linked to corporate performance (Murphy 2013). Similarly, recent survey evidence on the corporate governance preferences of institutional investors shows that CSR is not a major focus. McCahery et al. (2016) reports the top corporate governance concerns cited by institutional investors, only two of which relate to CSR ("Socially irresponsible behavior," ranked 9 of 17, and "Financial contributions to political parties or politicians," ranked 16 of 17).

But while in both our estimated preference space and Bolton et al. (2020)'s model, the first dimension does indeed track voting behavior on CSR proposals, concerns about social responsibility are only a small part of an appropriate interpretation of the preference spaces estimated in both this paper and Bolton et al. (2020). In particular, the first dimensions of both preference spaces strongly predict voting across a wide range of corporate governance issues. Of the proposals that have an absolute value of loading on dimension 1 greater than the median absolute value loading in our model, only 3% are about CSR.

Bolton et. al (2020, Section 6) likewise shows that the first dimension of their estimated preference space predicts mutual funds' voting behavior across the full gamut of proposals, not just on the small subset that relate to CSR. CSR is in fact only a minor part of the main ways funds differ in their voting behavior.

It is useful to contrast the approach taken in Bolton et al. (2020) to interpreting the preference space with the approach taken to interpreting similar models applied to voting in Congress, for which the particular preference estimation methodology employed in Bolton et al. (2020) was developed. The main finding of that literature is that, for most of U.S. history, votes in Congress can be well explained based on a single dimension that represents a left-right ideological spectrum (Poole and Rosenthal 2007). A voluminous literature in political science has shown that locations of members of Congress in the left-right ideological space are highly predictive of their voting behavior on every major political issue. As Poole and Rosenthal (1991) puts it:

> A contemporary liberal, for example, is likely to support increasing the minimum wage, oppose aid to the Contras, oppose construction of MX missiles, support mandatory affirmative action programs, and support federal funding of health care programs. Indeed, this consistency is such that just knowing that a politician favors increasing the minimum wage is enough information to predict, with a fair degree of reliability, the politician's views on many seemingly unrelated issues.

If we applied Bolton et al. (2020)'s approach to interpret the Congressional preference space, it would entail selecting a single one of the many issues that legislators' locations on the left-right ideological space predicts voting on. But this would be a misreading of the nature of Congressional politics. For the same reason, we see no basis—in either our empirical findings or the empirical findings reported in Bolton et al. (2020)—for interpreting the main preference dimension of institutional investor voting behavior in terms of the degree to which the funds weigh social responsibility.

1.7 Robustness checks

We perform a range of robustness checks and report the results in the Internet Appendix. First, so far, we have estimated our principal components model using fund-level voting data. However, much of the decision-making about voting occurs at the investment advisor level, and most investment advisors manage many funds. In Section 2.1 of the Internet Appendix, we aggregate funds' votes up to the investment advisor level and reestimate the model, finding the same basic dimensions of fund preference and orientation of advisors as in our fund-level model.

Second, one concern about our estimates is the high degree of missingness in the data matrix: 96.4% of the cells of the estimation sample data matrix

are empty. Our finding that our scores are robust to estimation at the advisor level substantially mitigates this concern. To further investigate whether the amount of missing data distorts our estimates, in Section 2.2 of the Internet Appendix, we construct a new fund-level sample with far less missing data by restricting the proposals in the sample to those from S&P 500 companies and the funds to those that vote on a large fraction of those proposals. The resulting sample has far less missing data: only 37.2% of the cells in the data matrix are empty. Reestimating the model on this restricted sample reveals the same basic configuration of preferences as in the main estimation sample, giving greater confidence that our imputation approach can handle the high degree of missingness in the estimation sample.

Finally, in Section 2.3 of the Internet Appendix, we investigate the stability of the preference space by dividing the sample into three two-year cohorts and estimating the model separately for each cohort. We find that funds' preferences are highly stable over time.

2. The Party Structure of Mutual Funds

The scatter plot of mutual funds' preferences in Figure 1 reveals three distinct modes, or clusters, of mutual funds located near the boundaries of the preference space. In this section, we use cluster analysis—a standard unsupervised learning tool from the machine learning literature—to identify more formally three characteristic "types" of mutual funds in terms of their corporate governance philosophies that correspond to those three modes.

2.1 Empirical framework

We cluster mutual funds on the basis of their scores on the first two principal components of their voting data using a Gaussian mixture model. We model mutual funds' two-dimensional scores z as random vectors with density of the form:

$$f(z) = \sum_{m=1}^{M} \alpha_m \phi(x; \mu_m, \Sigma_m), \tag{1}$$

where M is the number of components of the mixture and α_m represents the mixing proportion of the m-th Gaussian component, which has mean μ_m and covariance matrix Σ_m. We put no restrictions on Σ_m and estimate the parameters using the expectation maximization algorithm as outlined in Celeux and Govaert (1995). We use a four component model to capture each of the three modes evident in the scatter plot in Figure 1 plus a component to capture the funds that lie between and far from each of the three modes. Each mutual fund i is then assigned to the component with the greatest conditional probability that z_i arises from it.

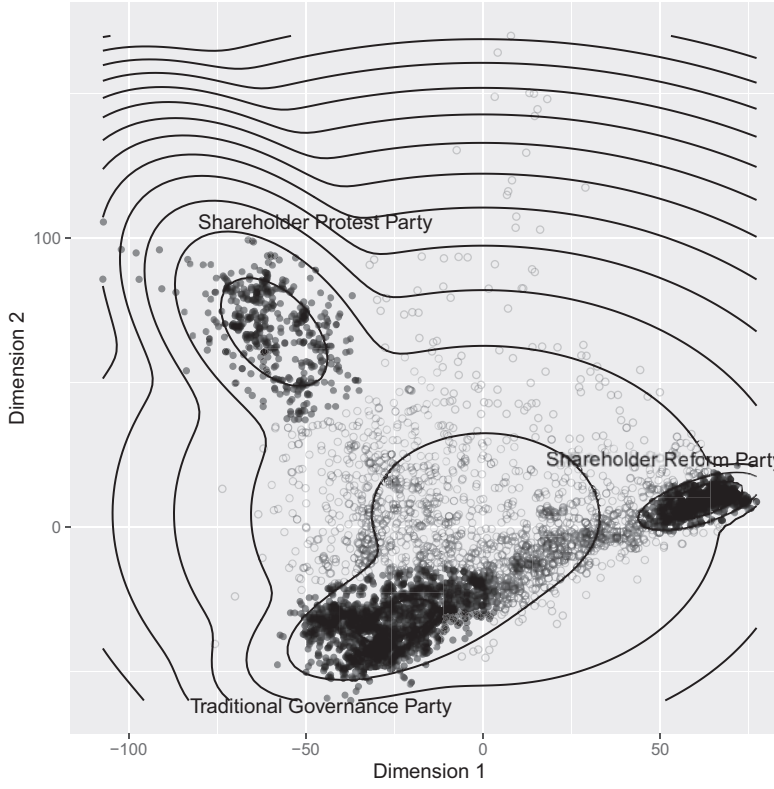

Figure 4
The parties
This figure identifies the three "mutual fund parties" as three of the four clusters of funds recovered from applying a four-component Gaussian mixture model to the vector of mutual fund scores on dimensions 1 and 2. Each circular marker corresponds to a mutual fund. The marker's location corresponds to the mutual fund's preference scores. The cluster corresponding to each of the three main parties—the Traditional Governance Party, the Shareholder Reform Party, and the Shareholder Protest Party—is labeled in the figure, and the markers corresponding funds belonging to that party are filled in dark gray. The figure also depicts the contour plots of the density of mutual fund preference scores estimated using the Gaussian mixture model (black lines).

2.2 The estimated party structure

Figure 4 plots the contours for the estimated Gaussian mixture density along with a scatter plot of the mutual fund preference scores. The scores of the mutual funds that were classified into one of the three components corresponding to the three extreme modes are plotted with dark shaded circles. The scores of mutual funds classified into the fourth component are plotted with lighter unshaded circles.

We interpret the three extreme clusters as mutual fund "parties" in the sense that each cluster is a group of funds with similar corporate governance preferences as reflected by their voting behavior. Much like members of a

Table 4
Fraction of votes cast in the party's minority

Proposal Category	All	TG Party	SR Party	SP Party
Board Supervision	0.31	0.10	0.04	0.32
Compensation	0.23	0.11	0.02	0.04
Corporate Finance	0.19	0.21	0.00	0.07
Corporate Malfeasance	0.11	0.02	0.01	0.13
CSR	0.34	0.08	0.07	0.07
Director Elections	0.18	0.12	0.01	0.08
Fundamental Shareholder Rights	0.29	0.20	0.02	0.10
Proxy Contest	0.26	0.25	0.03	0.09
All	0.21	0.12	0.01	0.08

For each proposal, we determine the majority vote among members of each party, counting each fund in the party as one vote. For each proposal category, we report the fraction of party member votes cast against the party's majority. The column labeled "All" reports the corresponding fractions for all mutual funds considered as a single party. We discuss the mapping of proposals into these proposal categories in the Internet Appendix.

political party generally vote together, so too do the members of a mutual fund party. For reasons discussed in our analysis below, we label the party in the lower-left of the preference space the "Traditional Governance Party," the one on the right the "Shareholder Reform Party," and the one in the upper-left the "Shareholder Protest Party."

2.3 Party coherence

Table 4 provides measures of the degree to which party members vote together. For each proposal, we calculate the outcome voted for by a majority of each party's members. We then report the fraction of party members' votes in each proposal category that were cast in the opposite direction of the party's majority. The column labeled "All" reports the corresponding fractions for all mutual funds considered as a single party, which serves as a useful benchmark. Considering mutual funds as a whole, 21% of mutual fund votes in the sample are cast in the opposite way from how a majority of mutual funds voted on the proposal. In contrast, for all proposals, only 12% of the votes of Traditional Governance Party members were cast against the majority of the party, and the corresponding figures for the Shareholder Reform Party and Shareholder Protest Party are 1% and 8%, respectively (the differences between the parties are all statistically significant at the 1% level). Perhaps one reason the latter two parties exhibit more coherence in their voting than the Traditional Governance Party is that those parties have a clear focal point in a proxy advisor's recommendations to coordinate their votes—ISS for the Shareholder Reform Party and Glass Lewis for the Shareholder Protest Party.

There is also variation in the degree to which party members vote together across proposal categories. Of particular note, the category with the highest level of disagreement for the Traditional Governance Party is proxy contests, at 25%. Proxy contests involve particularly information intensive business judgments. But on the other hand, on average 75% of party member votes are cast with the party majority on proxy contests.

2.4 Party corporate governance philosophies

Consider now the substantive visions of corporate governance that animate each of the three parties. To develop an interpretation of the corporate governance philosophies of the three parties, we investigate how they vote on particular types of proposals. Note that many of the 38 proposal categories in Table 3 are on closely related issues. To proceed, we group proposals into the eight main corporate governance issues implicated by these shareholder votes (see Table A.1 in the Internet Appendix for further details): (1) board supervision; (2) compensation; (3) corporate malfeasance; (4) corporate finance; (5) corporate social responsibility; (6) uncontested director elections; (7) fundamental shareholder rights; and (8) proxy contests. We also create a set of subcategories to explore variation within each category. Figure 5 provides the fraction of votes cast by each party according to management's recommendation for each corporate governance category and subcategory for the estimation sample.[11]

The most numerous of the eight proposal categories by far is uncontested director elections. To further investigate the patterns in the parties' votes on those proposals, we create a set of proxies for some of the substantive issues in corporate governance raised by director elections, following Ertimur et al. (2018). In particular, we construct indicator variables that proxy for whether a particular director election proposal raises concerns about five of the eight corporate governance issues in our taxonomy: (1) board supervision; (2) compensation; (3) corporate malfeasance; (4) board responsiveness; and (5) corporate performance. Tables A.2 and A.3 in the Internet Appendix provide details about the construction of these indicator variables and their summary statistics, respectively. Table 5 reports the results of regressions of whether funds in each party vote for management's nominees on these proxies.

2.4.1 The Traditional Governance Party. We begin with the Traditional Governance Party, which is at the lower left vertex of our preference space. Funds in this party have negative scores on both dimensions, so their voting behavior is inversely related to the loadings of proposals on both dimensions. Mutual funds in the Traditional Governance Party generally support management at higher rates than do members of the other two parties, but they are distinctly deferential on issues that are traditionally understood as matters for the board, rather than shareholders, to decide. These include proposals related to executive compensation and CSR proposals. In contrast, the Traditional Governance Party is most likely to break with management on

[11] In unreported analysis, we calculate the fraction of votes cast according to management's recommendation by each party by proposal category for the full sample of proposals. Since the proposals that did not pass the lopsidedness filter typically involve funds that overwhelmingly support management, the cross-party differences in support shrink. However, the ordering across parties in terms of how frequently they support management remains qualitatively identical to the one we recovered using the estimation sample.

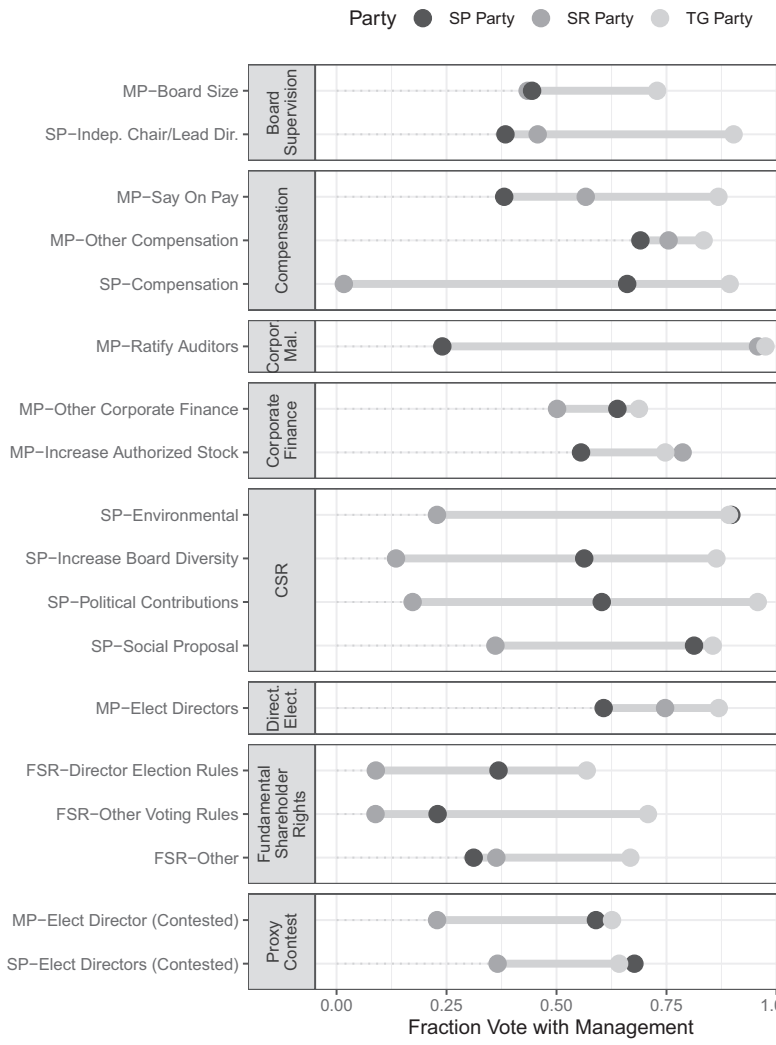

Figure 5
Fraction of funds in party voting with management
For each subcategory of proposals, we calculate what fraction of the votes cast on the category by the funds in each party followed management's recommendation.

proposals related to fundamental shareholder rights and on proxy contests. Fundamental shareholder rights proposals involve efforts to change the company's basic corporate governance rules, for example, by declassifying the board, removing poison pills, or eliminating dual-class common stock structures. Management typically recommends in the direction of limiting fundamental shareholder rights. Members of the Traditional Governance Party

Table 5
Association between director election features and votes for each party

	Vote with management		
	TG Party (1)	SR Party (2)	SP Party (3)
Board supervision	−0.135***	−0.594***	0.030
	(0.047)	(0.021)	(0.029)
Compensation	−0.061*	−0.088***	0.038
	(0.031)	(0.027)	(0.028)
Corporate malfeasance	0.007	−0.072	−0.208***
	(0.012)	(0.055)	(0.059)
Responsiveness	−0.178***	−0.635***	−0.263***
	(0.038)	(0.050)	(0.046)
Performance	0.017	−0.015	−0.031
	(0.011)	(0.023)	(0.024)
Constant	0.912***	0.904***	0.552***
	(0.029)	(0.009)	(0.019)
Observations	744,523	452,867	146,762
R^2	0.023	0.240	0.010

Regressions are at the fund-vote level with standard errors two-way clustered at the meeting and advisor level. The dependent variable is an indicator for whether the fund voted with management's recommendation. Table A.2 of the Internet Appendix provides the definitions of the independent variables. Each column is a separate regression using the subsample of funds in the respective party. * $p < .1$; ** $p < .05$; *** $p < .01$.

vote against management on almost half of fundamental shareholder rights proposals related to the rules governing director elections and somewhat less frequently for other types of fundamental shareholder rights proposals. This is in line with a traditional conception of corporate governance in which, while the board is in charge day-to-day, shareholders have a set of fundamental rights to, for example, replace the entire incumbent board by majority shareholder action at an annual meeting. The Traditional Governance Party also opposes management at a substantial rate in proxy contests, which is consistent with our interpretation of the party's underlying corporate governance philosophy. In sum, the Traditional Governance Party supports management prerogatives in their traditional domain but is not managerialist—the party frequently opposes management to defend shareholder rights.

In voting on uncontested director elections, Table 5 shows that, in the absence of an indication that the election raises any of the corporate governance issues we have proxies for, the Traditional Governance Party and the Shareholder Reform Party support management at similar rates; the constant is 0.91 for the former compared to 0.90 for the latter. But the Traditional Governance Party's support of management drops much less than the Shareholder Reform Party's does in response to our proxies for corporate governance issues. This suggests that the Traditional Governance Party is much less prone to using director election votes to further a corporate governance reform agenda.

2.4.2 The Shareholder Reform Party. The Shareholder Reform Party is located in the right vertex of the preference space and has extremely positive

scores on dimension 1 but scores near zero on dimension 2. This implies that the party's voting behavior is predicted by proposals' loading on dimension 1 rather than on dimension 2. Across a wide range of corporate governance issues, the Shareholder Reform Party opposes management at much higher rates than either of the other two parties. These include proposals on fundamental shareholder rights related to voting, CSR proposals, proxy contests, and shareholder proposals on compensation. The fact that funds in the Shareholder Reform Party are disproportionately supportive of these proposal categories reveals that the party engages in targeted requests for specific corporate governance reforms to a much greater extent than the other two parties (hence our label for the party). The party's substantive view of corporate governance, moreover, goes beyond the traditional view outlined above and includes shareholder intervention in matters that are traditionally within the purview of the board rather than shareholders, such as CSR and executive compensation.

The patterns in the party's votes on uncontested director elections, reflected in the regression results reported in Table 5, reinforce this interpretation. When a director election proposal implicates concerns about board supervision—for example, the nominee is a nonindependent member of a board committee—or about board responsiveness to shareholder demands, there is roughly a *sevenfold* increase in the Shareholder Reform Party's opposition to management, from about 10% of votes cast in opposition to about 70%. This suggests that funds in the Shareholder Reform Party use their votes on uncontested director election proposals to target discrete issues related to a company's corporate governance that funds in the party believe should be addressed. Given that ISS is located squarely in the center of the Shareholder Reform Party, our findings echo the results of Ertimur et al. (2018), who show that a set of specific corporate governance concerns, including concerns related to board supervision, responsiveness, and compensation, drive ISS's withhold recommendations on uncontested director elections.

2.4.3 The Shareholder Protest Party. The Shareholder Protest Party is located in the upper-left of the preference space, with negative scores on dimension 1 and highly positive scores on dimension 2. This means that its voting behavior is inversely related to proposals' loadings on dimension 1 and positively related to their loadings on dimension 2. For the proposal categories for which the Shareholder Reform Party most frequently opposes management, the Shareholder Protest Party's rate of opposition is intermediate between the other two parties'. What is most distinctive about the Shareholder Protest Party is how it votes on the two most numerous proposal categories: uncontested director election proposals and say-on-pay proposals. On these proposals—which together make up 77% of the sample—the Shareholder Protest Party opposes management at substantially greater rates than do the other two parties.

Table 6
Disagreement between the parties

	TG Party against management		TG Party for management	
	SP Party against management	SP Party for management	SP Party against management	SP Party for management
SR Party against management	0.06	0.02	0.10	0.18
SR Party for management	0.01	0.01	0.24	0.39

For each proposal in the estimation sample for which we observe votes by funds in each party, we determine the majority vote among members of each party, counting each fund in the party as one vote. We report the fraction of such proposals on which the majority in each party supports or opposes management as indicated in the row and column headings.

The Shareholder Protest Party's average rate of opposition to management on say-on-pay proposals is 43% higher than that of the Shareholder Reform Party and 470% higher than that of the Traditional Governance Party. For uncontested director election proposals, the Shareholder Protest Party opposes management at a rate 55% higher than that of the Shareholder Reform Party and 300% higher than that of the Traditional Governance Party. Both of these types of proposals are generally nonbinding and instead serve as signaling devices for shareholders to communicate their displeasure with management. The Shareholder Protest Party uses these "protest" votes at much higher rates than the other two parties, hence our label for the party.

Table 5 shows that our proxies for corporate governance issues explain little of the variation in the votes of the Shareholder Protest Party on uncontested director elections. The R^2 of the model for the Shareholder Protest Party is only 1%, compared to 24% in the case of the Shareholder Reform Party. This suggests that, for funds in the Shareholder Protest Party, their substantial fraction of withheld votes reflects general discontent with the way the company is being run rather than concerns related to the specific governance issues we have proxies for.

2.5 Disagreement among the parties

Table 6 breaks down the estimation sample proposals based on whether a majority of each party voted with management or against management. The majority of each of the three parties voted the same way on only 45% of proposals in the estimation sample. Put differently, on 55% of the proposals, the majority of one party was opposed to the majorities of the other two parties. The fact that the three parties disagree on most estimation sample proposals shows how salient the party structure is to mutual fund voting. The cleavages among institutional investors reflected by this party structure, moreover, manifest over all major corporate governance issues: in untabulated results, we find disagreement among the parties for a majority of the proposals in each of the eight corporate governance categories in Figure 5.

Disagreement among the parties only rarely takes the form of the TG Party opposing management while the SR Party and/or the SP Party supports

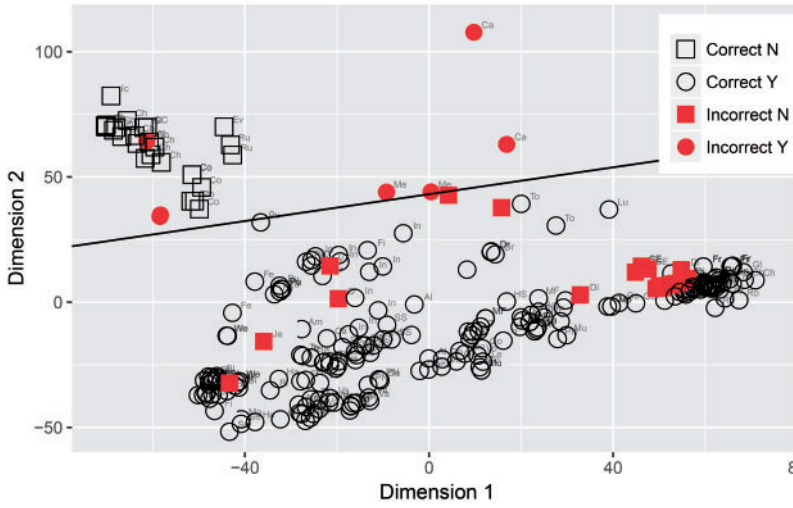

Figure 6
A say-on-pay proposal at PolyOne Corporation
This figure describes the votes cast on a Say-on-Pay management proposal at PolyOne Corporation by all the mutual funds in our database. The vote of each fund in the sample that voted on the proposal is plotted with a marker located at the fund's preference score. In the legend, "N" and "Y" refer to votes against and for the proposal, respectively, and "Correct" and "Incorrect" refer to whether the model's prediction for the fund's vote was correct. The two letters close to each marker indicate the corresponding fund's advisor. The upward-sloping line in the center of the figure reflects the "cutting line" generated by the principal component analysis for this proposal. That line separates the funds that the model predicted would support the proposal from those that the model predicted would oppose the proposal.

management (3% of proposals). Far more common is the case in which the TG Party supports management but the SR Party and/or the SP Party opposes management (52% of proposals). It is also noteworthy that the SR Party and the SP Party disagree about as often as they agree, reflecting their competing corporate governance philosophies.

2.6 Mapping the votes on specific proposals

To build further intuition about the window into mutual fund voting behavior our framework provides, Figure 6 depicts the spatial map of votes for a say-on-pay proposal at PolyOne Corporation from its 2015 annual shareholder meeting. We plot the "Yes" and "No" votes cast by each fund at the location of the fund's estimated preference scores, using different marker styles to identify "Yes" and "No" votes according to whether the model correctly classified the fund's vote. Also depicted is the "cutting line" that separates the areas of the preference space predicted to vote "Yes" and "No."

The voting on this proposal illustrates well the party structure of mutual funds. As shown in the figure, most funds in both the Shareholder Reform Party and Traditional Governance Party supported the proposal, whereas most funds

in the Shareholder Protest Party opposed it. This proposal thus illustrates one of the characteristic features of the Shareholder Protest Party, which opposes say-on-pay proposals at greater rates than the other two parties. Overall, the model correctly classifies the votes of 91% of funds. We provide spatial maps of the votes on several other proposals of a range of types in Section 3 of the Internet Appendix.

2.7 Party influence

Consider now the extent to which each party influences voting outcomes. The sizes of the parties, as measured by TNA, shape their degree of influence since more shares owned means more votes. The Traditional Governance Party is much larger than the others, at 66% of sample TNA as of 2013, compared to only 6.9% for the Shareholder Protest Party and 6.2% for the Shareholder Reform Party. But size is not all that matters for party influence. Also important is how they vote. A party that votes in a more coordinated manner, for example, will have more influence. Furthermore, whether a party's votes are *pivotal* on any given proposal depends on the entire distribution of votes for the proposal. A party that takes stands against management only when other shareholders overwhelmingly support management, for example, will have little influence on voting outcomes.

We measure each party's influence by asking: if the party did not exist, how would voting outcomes—in terms of the passage or failure of proposals—have changed? As a conservative estimate of each party's influence, we first exclude only the shares voted by mutual funds in the party in our sample. This is conservative because our sample includes only a fraction of the holdings of all institutional investors, and many other shares owned by institutional investors are voted in line with the behavior of one of our mutual fund parties.[12] We proxy for the number of shares voted by each fund on each proposal by using the fund's reported holdings in CRSP as of the quarter immediately preceding the meeting date. We exclude uncontested director elections governed by a plurality voting rule, which always pass. After also dropping a small number of proposals for which the voting outcomes data show fewer shareholder votes than the total mutual fund votes in our sample (indicating measurement error in our proxy for fund votes), the resulting sample includes 15,962 proposals. We assume that in the counterfactual in which a party did not exist, the shares voted by the party would instead have been voted to mirror the voting behavior of all other mutual funds in the data.

To get a rough sense of how large each party's influence in aggregate might be, including these additional institutional investor holdings for the party that

[12] For example, the investment advisors in our data also vote the shares they manage on behalf of clients other than mutual funds, and surely in many cases they do so in a similar way to how they vote the shares of the mutual funds they advise. Similarly, other types of institutional investors use proxy advisors much like mutual funds do, and presumably many vote in line with one of the three mutual fund parties.

Table 7
Influence of the parties on voting outcomes

Party Excluded (1)	Outcome Would Have Changed (2)	Mgmt Won Would Lose (3)	Mgmt Lost Would Win (4)
	A. Sample mutual funds only		
SR Party	0.4	0.1	6.5
SP Party	0.2	0.1	2.4
SR & SP Parties	0.5	0.1	9.0
TG Party	4.4	4.5	1.6
	B. All institutional investors		
SR Party	1.0	0.2	16.2
SP Party	0.5	0.2	6.4
SR & SP Parties	1.4	0.3	23.3
TG Party	15.4	16.0	4.3

This table reports the percentage of proposals in the column category for which the outcome would have been different had the party given in the row been excluded. We assume that the shares owned by the excluded party would have been instead voted to mirror the distribution of votes for funds that are not members of the excluded party. Panel A excludes only the holdings of mutual funds in our sample. Panel B excludes all shares held by institutional investors that belong to the party using the procedure described in the text.

are not in our sample, we also report estimates based on scaling up each mutual fund's holdings using the following procedure. First, we calculate the total holdings in each portfolio company's common stock held by all institutional investors.[13] We exclude any holdings by a single institution that are greater than 20% of the common stock outstanding of the issuer, since it is implausible that very large holders vote in a manner similar to diversified mutual funds. We then calculate a scaling factor for each proposal equal to the number of shares in the company owned by all institutional investors divided by the number of shares in the company owned by the mutual funds in our voting data. After winsorizing this scaling factor,[14] we use it to scale the number of votes cast by each mutual fund in the excluded party.

Panel A of Table 7 gives the lower-bound, mutual-fund-only estimates. Column 2 shows that excluding the Traditional Governance Party would result in the outcome of over 4% of proposals changing. In contrast, excluding either (or both) of the Shareholder Reform and Shareholder Protest parties would change the outcome of fewer than 1% of proposals. Columns 3 and 4 show that the Traditional Governance Party's influence is mostly in helping management win—4.5% of proposals for which the voting outcome followed management's recommendation would have come out the other way in the absence of the

[13] For the period prior to 2013 Q2, we use the Thomson-Reuters institutional ownership data. From 2013 Q2 on we use the WRDS 13F data, since the Thomson-Reuters data are incomplete in the more recent period (Ben-David et al. 2016).

[14] In some cases, this scaling factor is very large, because most institutional investor holdings in the issuer are not in our data. In those cases, our assumption that the distribution of votes of the institutional investor shares not in our data mirrors the distribution of votes of the mutual funds in our data becomes implausible. We thus winsorize the scaling factor at five. A further complication is that, if one scales the holdings of the mutual funds in our data by this scaling factor, in some cases the total number of scaled mutual fund votes exceeds the total number of votes cast on the proposal. Accordingly, in those cases, we use a scaling factor equal to the total votes cast on the proposal divided by the total votes cast on the proposal by mutual funds in our data.

Traditional Governance Party. But column 4 reveals a key role of the other two parties—9% of proposals that went against management's recommendation would have instead gone management's way in the absence of the Shareholder Reform Party and the Shareholder Protest Party. In contrast, only 1.6% of proposals that management lost would have turned out the other way had the Traditional Governance Party been excluded. This shows that the Shareholder Reform and Shareholder Protest parties play a distinctive and important role, belying their modest size in terms of assets, in producing pressure on management through shareholder votes. Interestingly, the Shareholder Reform Party plays a markedly larger role in this regard than the Shareholder Protest Party, despite the two parties' similar sizes. To be sure, management losses are rarer events than management wins, but on the other hand they are much more significant events for corporate governance.

The scaled results using all shares owned by institutional investors, shown in panel B, are qualitatively similar but with much larger magnitudes. Management would have lost 16% of proposals that they in fact won in the absence of the Traditional Governance Party. And management would have won a full 23% of proposals that they lost had the Shareholder Reform Party and Shareholder Protest Party been excluded.

3. The Determinants of Mutual Funds' Party Membership

What factors underlie the sorting of mutual funds into the three parties? In this section, we first look for systematic differences among the three parties in their mutual fund members' investment management characteristics. We then investigate the extent to which differences in investment managers' incentives to become informed about voting determines mutual funds' party membership.

3.1 Data

We use data on funds' investment management characteristics from CRSP. Table 8 provides a list of variable definitions, and Table 9 provides the summary statistics. We measure characteristics at both the individual fund level and at the investment advisor level. Each mutual fund (e.g., the Vanguard Total Stock Market Index Fund) is managed by an investment advisor (e.g., The Vanguard Group, Inc.), which typically manages multiple funds. Decision-making about voting funds' shares generally occurs at the investment advisor level. For active funds, but not passive funds, the fund's portfolio manager is sometimes consulted by the executives in charge of proxy voting at the advisor, although their influence in the voting outcome varies by advisor (Bew and Fields 2012; Morningstar 2017).

In many cases, a fund's investment advisor delegates portfolio management responsibilities to a different investment advisor as "subadvisor." In such cases,

Table 8
Investment management variable definitions

Variable	Description
Active$_f$	Indicator for whether fund is actively managed. If Active Share data is available for the fund: = 1 if CRSP indicates fund is not an index fund and fund has Active Share > 0.3, = 0 otherwise. If Active Share data is not available for the fund: = 1 if CRSP indicates fund is not an index fund, = 0 otherwise. For the small number of funds for which this indicator would not be the same in all years in the data (e.g., because Active Share changes), we set Active = 1 if the fund meets the criteria for a majority of years in the data and Active = 0 otherwise. Active Share data is from Cremers et al. (2009).
Number Stocks Held$_{ft}$	Total number of stocks held in the fund's portfolio as of the latest report available for the fund in the CRSP fund portfolio dataset for the corresponding year. Defined yearly between years 2011 and 2015.
Average Monthly Abnormal Return (bp)$_{ft}$	Average monthly abnormal return (in basis points) experienced by the fund (defined only for actively managed funds). Abnormal returns are calculated using a four-factor model on the basis of fund-level monthly portfolio returns obtained from CRSP. Defined yearly between years 2011 and 2015.
TNA$_{ft}$	Total market value of stocks held in the fund's portfolio as of the latest report available for the fund in the CRSP fund portfolio dataset for the corresponding year, in millions of dollars. Defined yearly between years 2011 and 2015.
Adv. Active$_a$	Indicator for whether the fund's investment advisor focuses on actively managed funds. Advisor Active = 1 if 50% of the advisor's funds under management are in active funds and = 0 otherwise. For the small number of advisors for which this indicator would not be the same in all years in the data, we set Adv. Active = 1 if the advisor meets the criteria for a majority of years in the data and Adv. Active = 0 otherwise.
Adv. Number Stocks Held$_{at}$	Number of different U.S. equity securities held by the advisor (derived from CRSP Mutual Fund portfolio-level data). Defined yearly between years 2011 and 2015.
Adv. TNA$_{at}$	Dollar value of the U.S. equity securities held by the advisor, in million dollars (derived from CRSP Mutual Fund portfolio-level data). Defined yearly between years 2011 and 2015.
Compliance Approach$_a$	Indicator for whether the titles of the fund's investment advisor's proxy voting executives listed on Proxy Insight website use compliance language (see text for details).

Table 9
Investment management summary statistics

	N	Mean	St. Dev.	Min	Median	Max
Active	14,923	0.77	0.42	0	1	1
TNA	14,923	1,437	7,302	0	223	354,003
Number Stocks Held	14,923	176	328	1	75	3,335
Average Monthly Abnormal Return (bp)	10,703	−11	59	−828	−10	998
Adv. Active	14,923	0.74	0.44	0	1	1
Adv. TNA	14,923	86,238	180,979	0	16,429	1,266,098
Adv. Number Stocks Held	14,923	1,365	1,064	1	1,136	3,481
Compliance Approach	13,569	0.35	0.48	0	0	1

Each observation is a fund-year.

typically the responsibility for determining how to vote the fund's shares is also delegated to the subadvisor (Morgan et al. 2011). Importantly, the "fund family" identified in both the CRSP and Voting Analytics data sets does not accurately capture the investment advisor organization that votes funds'

shares. For example, Fidelity Investments sponsors both actively managed funds and index funds. The active funds are generally advised by Fidelity Management and Research whereas the index funds are subadvised by Geode Capital Management, a separate company, which determines how those funds vote. Accordingly, we reviewed SEC filings to determine for each fund the investment advisor to which voting authority is delegated. In cases in which the fund uses a subadvisor, this is often the subadvisor.[15] We will use the term "investment advisor" to refer to the organization to which a fund delegates voting responsibility.[16]

An important distinction in the analysis that follows is between "active advisors" and "passive advisors." We define an advisor as active if more than 50% of the advisor's assets under management are in active funds, and as passive otherwise. Note that this means that active advisors manage some passive funds, and vice versa.

3.2 Party characteristics

Table 10 provides the average characteristics of the funds that populate the three parties (weighted by fund TNA). The main difference is that funds and advisors in the Traditional Governance Party are on average much larger than those in the other two parties. The Traditional Governance Party also has smaller fractions of active funds and of active advisors than the other two parties, as well as greater average number of stocks held per fund and per advisor (although these differences are not statistically significant). Active funds in the Traditional Governance Party also earn higher abnormal returns, calculated using a four-factor model, than active funds in the other two parties.

3.3 Advisors' incentives to generate information about voting

Many different factors in principle might play a role in determining mutual funds' party membership, including idiosyncratic preferences of the individual executives involved and conflicts of interest stemming from business ties (Davis and Kim 2007; Cvijanović et al. 2016). Here, we focus on one potential source of variation in mutual funds' party membership: the strength of investment managers' incentives to invest resources in generating information about how to vote. Iliev and Lowry (2014) find that proxies for such incentives are negatively related to funds' reliance on the recommendations of ISS. Relatedly, in recent

[15] In cases in which a fund delegates voting authority to multiple subadvisors, we set the advisor to missing.

[16] To give a sense for the importance of correctly tracking the voting investment advisor, rather than relying on the fund family reported in CRSP, 9.3% of family-proposal combinations in the sample involve cases in which funds in the family did not vote unanimously, compared to only 3% of advisor-proposal combinations. These statistics are calculated excluding cases in which only a single fund in the advisor/family voted on the proposal. The bulk of the cases of nonunanimous voting within families thus reflect delegation of voting responsibility to different investment advisors altogether.

Table 10
Fund characteristics by party

	TG Party	SR Party	SP Party	TG-SR	TG-SP	SR-SP
Active	0.6	0.73	0.87			
Total Value Holdings ($m)	51,253	3,006	6,035	**	**	
Number Stocks Held	553	478	176			
Avg. Monthly Abnormal Return (bp)	−2	−21	−17	***	***	
Adv. Active	0.5	0.69	0.87			
Adv. Total Value Holdings ($m)	516,997	25,274	47,694	***	***	
Adv. Number Stocks Held	2,140	1,341	1,255			
Compliance Approach	0.065	0.41	0.3	**		

Statistics reported in the first three columns are means taken over observations from 2013 for funds in each party, weighted by each fund's TNA. The final three columns report levels of statistical significance for pairwise differences between the parties (e.g., "TG-SR" refers to the difference between the Traditional Governance and Shareholder Reform parties). Statistical significance is calculated through F-tests on coefficients from a regression of the covariate of interest against the three party dummies (where standard errors are clustered at the advisor level and observations are weighted by the fund's TNA).

years concerns have been raised that many mutual funds approach voting as a "compliance function." Indeed, SEC Commissioner Michael Piwowar has suggested that the SEC's policies may have led to advisors taking such a compliance approach, stating:

> By requiring advisers to vote on every single matter—irrespective of whether such vote would impact the performance of investment portfolios—our previous actions may have unintentionally turned shareholding [sic] voting into a regulatory compliance issue, rather than one focused on the benefits for investors.[17]

To investigate the role of investment advisors' incentives to become informed in determining their mutual fund party membership, we focus on three determinants of advisor incentives.[18] First, we use the log of the advisor's total net assets (TNA) to capture scale economies in voting—larger advisors can spread the costs of becoming informed about voting on a larger asset base. Second, we use the log of the number of stocks held by the advisor's funds to capture diseconomies of scope—the more portfolio companies the advisor must follow, the greater are the costs of becoming informed about all of the votes the advisor must cast. Third, the existing literature argues that active advisors face different incentives from passive advisors to become informed about voting (Rock and Kahan 2019). On the one hand, passive advisors generally cannot simply divest from a position and hence must use "voice" (e.g., voting) rather than "exit" if they are unhappy with the company's governance or management. On the other hand, unlike active managers, passive managers lack incentives to use their voting rights to improve investment returns in order

[17] SEC Commissioner Michael Piwowar, Opening Statement at the Proxy Advisory Services Roundtable (December 5, 2013).

[18] We focus on advisor-level, rather than fund-level, characteristics because decision-making about how to vote funds' shares is generally made at the advisor level.

to attract investment flows away from competitors, since their competitors hold essentially the same portfolio. The investment selection process of active advisors, moreover, might generate information that is useful for voting. In summary, which form of investment management generates stronger incentives to become informed about voting is theoretically ambiguous.

We report in Table 11 the results of multinomial logit regressions predicting party membership on the basis of these determinants of advisors' incentives, first for the entire sample and then separately for active advisors and for passive advisors. Column 1 shows that membership in the Traditional Governance Party is strongly negatively associated with the number of firms held by the advisor and strongly positively associated with the advisor's TNA. Stronger incentives to become informed about voting is thus predictive of Traditional Governance Party membership. Furthermore, the marginal effect of having an active advisor is −0.22 and marginally statistically significant. Passive advisors are thus substantially more likely to be members of the Traditional Governance Party than are active advisors, *ceteris paribus*.

In contrast, column 2 shows that these patterns are reversed for the Shareholder Reform Party. Larger advisor TNA predicts that the fund is *less* likely to be a member of the party, and similarly greater number of stocks held by its advisor predicts the fund is *more* likely to be in the party. This indicates that having greater incentives to become informed about voting predicts that the fund is less likely to be a member of the Shareholder Reform Party. Since ISS is located in the Shareholder Reform Party, this echoes the findings of Iliev and Lowry (2014) that high net benefits of voting predict lower reliance on ISS's recommendations. In contrast, column 3 shows no significant relationships between our determinants of fund incentives and membership in the Shareholder Protest Party. We also report results from the multinomial logit model with the sample restricted to subgroups of active advisors in columns 4–6 and of passive advisors in 7–9 and find similar results.

In summary, greater incentives to invest in voting predict a higher likelihood of membership in the Traditional Governance Party, and a lower likelihood of membership in the Shareholder Reform Party. Recall that the Shareholder Reform Party's voting is closely associated with the recommendations of ISS whereas the Traditional Governance Party's voting behavior does not track either of the two leading proxy advisors. This suggests a potential explanation for this pattern of findings: that they are a result of investment managers' incentives to outsource voting to the proxy advisors in order to economize on the costs of voting. In an extreme form, this might be due to mutual funds taking a "compliance approach" to voting in which they attempt to comply with their legal obligations with respect to voting at the lowest cost possible.

To investigate this explanation further, we code a dummy for whether each investment advisor takes a "compliance approach" based on the titles of their proxy voting executives, as reported by Proxy Insight. The titles of these executives vary across investment advisors. The most common title listed is

Table 11
Determinants of party membership

	(1) TG Party	(2) SR Party	(3) SP Party	(4) TG Party	(5) SR Party	(6) SP Party	(7) TG Party	(8) SR Party	(9) SP Party
Active advisor	−0.215*	−0.036	0.025						
	(0.112)	(0.102)	(0.067)						
log(Adv. number of firms)	−0.140***	0.086**	0.002	−0.127***	0.080**	0.012	0.110	−0.050	−0.067*
	(0.031)	(0.037)	(0.023)	(0.035)	(0.037)	(0.024)	(0.208)	(0.143)	(0.041)
log(Adv. TNA)	0.110***	−0.072***	−0.005	0.087**	−0.062***	−0.005	0.122***	−0.081*	0.002
	(0.023)	(0.016)	(0.009)	(0.034)	(0.015)	(0.011)	(0.017)	(0.043)	(0.010)
N	17,717	17,717	17,717	13,297	13,297	13,297	4,420	4,420	4,420
Advisor type	All	All	All	Active	Active	Active	Passive	Passive	Passive

Notes: This table reports the results of three different multinomial logit estimations. The outcome variable has four possible values: TG Party, SR Party, SP Party, and no party (the omitted baseline). In each row, we report the marginal effects of the corresponding covariate on the likelihood that the fund will belong in the relevant party. In the case of covariates that are dummies, the marginal effect corresponds to the change in the variable from zero to one. Standard errors (in parenthesis) are clustered at the advisor level. In columns 1–3, the estimation sample consists of all fund-year observations. In columns 4–6 (7–9) the estimation sample consists only of fund-years under active (passive) advisors. * $p < .1$; ** $p < .05$ *** $p < .01$.

"Chief Compliance Officer"; investment advisors and mutual funds are required under SEC rules to appoint a Chief Compliance Officer, who is responsible for administering its compliance procedures.[19] Other titles used include "Head of Corporate Governance," "Chief Investment Officer," and "Director, Investment Proxy Research." We set *Compliance approach* to one if all of the advisors' proxy voting executives have titles that include compliance language and set it equal to zero otherwise.[20]

Our *Compliance approach* indicator is included in Table 10, which provides average characteristics of funds by party. It shows that only 6.5% of Traditional Governance Party members take a compliance approach, according to our proxy, as compared to 30% and 41% of the members of the Shareholder Protest Party and Shareholder Reform Party, respectively. This is consistent with the hypothesis that funds that take a compliance approach tend to outsource more to the proxy advisors.

To explore the "compliance approach" hypothesis further, we create a dummy variable *SR or SP* equal to one if the fund is a member of *either* the Shareholder Reform Party or the Shareholder Protest Party, since each of these two parties is associated with the recommendations of a major proxy advisor. Table 12 reports a series of logistic regressions estimated using the sample restricted to funds that belong to one of the three mutual fund parties (i.e., excluding funds that belong to no party). We begin in column 1 with a regression of *Compliance approach* on our proxies for advisors' incentives to become informed about voting. As expected, the advisors' TNA is strongly negatively related to *Compliance approach*. Column 2 of Table 12 shows that *Compliance approach* is strongly predictive of *SR or SP*, with a marginal effect of 0.41. In column 3 we report results from a regression of *SR or SP* on our determinants of fund incentives. The number of stocks held by the advisor is positively associated with *SR or SP*, whereas the advisor's TNA is strongly negatively associated with *SR or SP*, consistent with our basic hypothesis. Interestingly, these results persist after adding *Compliance approach* to the model, shown in column 4.

Columns 5–7 report the same models using just the active advisors in the sample and reveal that *Compliance approach* is much less predictive of being a member of the Shareholder Reform or Shareholder Protest parties instead of the Traditional Governance Party among active advisors. Comparing columns 5 and 6 shows that the addition of *Compliance approach* to the model actually increases the magnitude of the marginal effects of fund incentives on *SR or SP*.

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[19] 7 CFR §275.206(4)-7(c); 17 CFR §270.38a-1(a)(4).

[20] Titles that we consider as including "compliance" language are titles that include the term "compliance," "operations," or "administration." Examples of titles that do not include such compliance language, and hence trigger *Compliance approach* to equal zero, include "Vice President," "Managing Director," "Senior Proxy Analyst," "Corporate Governance Analyst," "ESG Analyst," "President", "Chief Executive Officer", "Vice President of Proxy Voting," "Head of Corporate Governance," "Chief Investment Officer," "Director, Investment Proxy Research," and "Assistant Portfolio Manager."

Table 12
Compliance approach and outsourcing to proxy advisors

	(1) Compliance approach	(2) SR or SP	(3) SR or SP	(4) SR or SP	(5) SR or SP	(6) SR or SP	(7) SR or SP	(8) SR or SP	(9) SR or SP	(10) SR or SP
Active advisor	−0.102		0.106	0.158						
	(0.124)		(0.132)	(0.120)						
log(Adv. number of firms)	−0.041		0.167***	0.200***		0.179***	0.218***		−0.162	0.032
	(0.045)		(0.046)	(0.046)		(0.049)	(0.051)		(0.219)	(0.027)
log(Adv. TNA)	−0.095***		−0.132***	−0.117***		−0.120***	−0.131***		−0.117***	−0.053***
	(0.026)		(0.018)	(0.018)		(0.025)	(0.023)		(0.020)	(0.019)
Compliance approach		0.412***		0.289***	0.230*		0.160*	0.837***		0.722***
		(0.109)		(0.088)	(0.134)		(0.097)	(0.099)		(0.104)
N	10,395	10,408	11,415	10,395	7,043	7,889	7,030	3,365	3,526	3,365
Advisor type	All	All	All	All	Active	Active	Active	Passive	Passive	Passive

Notes: For all models reported in the table, the sample is restricted to funds that belong to one of the three mutual fund parties (i.e., funds in no party are excluded). Column 1 reports the marginal effects from a logit model in which the dependent variable equals one if the fund's advisor follows a Compliance approach, and zero otherwise. Columns 2–11 report the results of logit models in which the dependent variable equals one if the fund belongs to either the Shareholder Reform or Shareholder Protest parties, and zero if it belongs to the Traditional Governance Party. In each row, we report the marginal effects of the corresponding covariate on the likelihood that the fund will belong to the Shareholder Reform or Shareholder Protest parties. For all specifications, in the case of covariates that are dummies, the marginal effect corresponds to the change in the variable from zero to one. Standard errors (in parentheses) are clustered at the advisor level. In Columns 5–7 (8–10) the estimation sample consists only of fund-years under active (passive) advisors.

In contrast, restricting the sample to just passive advisors, column 8 shows that the marginal effect of *Compliance approach* is 0.84. Passive advisors are members of either the Shareholder Reform Party or the Shareholder Protest Party if (and essentially only if) they follow a Compliance approach to voting. Comparing columns 9 and 10 shows that, for passive advisors, much of the relationship between our determinants of fund incentives and *SR or SP* disappears once we control for *Compliance approach*. These results thus provide strong support for the hypothesis that much of the variation in party membership of passive advisors in particular stems from whether they approach voting as a compliance matter and focus on simply minimizing the costs associated with complying with their voting obligations. Our findings thus provide some corroboration of the concerns that have been raised that mutual funds are treating their voting obligations as a compliance matter, to be met at minimal costs, particularly for smaller passive advisors.

4. Conclusion

In this paper we have systematically characterized the corporate governance preferences of mutual funds. We show that a model with just two latent dimensions of preference is highly predictive of mutual fund voting behavior. Our parsimonious measures of mutual funds' corporate governance preferences generate a number of descriptive insights about the broader system of corporate governance and moreover enable the quantitative testing of various hypotheses. In particular, we show that mutual funds are clustered into three parties, the Traditional Governance Party, the Shareholder Reform Party, and the Shareholder Protest Party. Members of the Traditional Governance Party vote in line with a traditional conception of corporate governance in which the board, and not shareholders, manages the business and affairs of the corporation. The Shareholder Reform Party, in contrast, actively pushes for specific corporate governance reforms, including intervention in matters related to operational decision-making that are traditionally the purview of the board. Finally, the Shareholder Protest Party focuses on monitoring corporate management and expressing its displeasure through largely symbolic "protest votes" in uncontested director elections and say-on-pay proposals. We furthermore document systematic relationships between funds' investment management characteristics and their party membership. We find that funds that have stronger incentives to generate their own information for voting are more likely to be members the Traditional Governance Party and less likely to be members of the Shareholder Reform Party. A proxy for whether the investment advisor takes a "compliance approach" to voting strongly predicts party membership, suggesting that party membership in part reflects advisors' decisions whether to outsource to proxy advisors to economize on the costs of voting. Most strikingly, funds advised by the passive advisors in our three mutual fund parties are

members of either the Shareholder Reform Party or Shareholder Protest Party essentially if and only if their advisor takes a compliance approach. We hope the introduction of our measures of mutual fund corporate governance preferences to the literature will enable other researchers to test quantitatively a range of theories and hypotheses about corporate governance.

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