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Patrick Bolton
Columbia University and ECGI

Tao Li
Universtiy of Florida

Enrichetta Ravina
Northwestern University

Howard Rosenthal
New York University

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Abstract

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Patrick Bolton*
Barbara and David Zalaznick Professor of Business
Columbia University, Columbia Business School
804 Uris Hall
New York NY 10027 , United States
phone: +1 212 854 9245
e-mail: pb2208@columbia.edu

Tao Li
Assistant Professor
University of Florida, Warrington College of Business
Bryan Hall 100
Gainesville, FL 32611-7150, United States
phone: +1 352 392 6654
e-mail: tao.li@warrington.ufl.edu

Enrichetta Ravina
Visiting Assistant Professor of Finance
Northwestern University, Kellogg School of Management
2211 Campus Drive
Evanston, IL 60208 , United States
phone: +1 847 467 6872
e-mail: enrichetta.ravina@kellogg.northwestern.edu

Howard Rosenthal
Professor of Politics
New York University, Department of Politics
19 W. 4th Street
New York, NY 10012, United States
phone: +1 212 998 8512
e-mail: hr31@nyu.edu

*Corresponding Author

Investor Ideology[1]

Patrick Bolton[§], Tao Li[#], Enrichetta Ravina[*], and Howard Rosenthal[φ]

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Abstract: This paper analyzes the voting patterns of institutional investors from their proxy voting records. It estimates a spatial model of voting, using the W-NOMINATE scaling for voting in legislatures. We find that institutional investors' ideology (or ideal points) can be mapped onto a left-right dimension, just as legislators' ideologies can be represented along a left-right spectrum. The far-left investors are socially responsible investors and the far-right investors are "greedy" investors, those opposed to proposals that could financially cost shareholders. There are significant ideological differences across institutional investors and there is no shareholder unanimity. The proxy adviser Institutional Shareholder Services (ISS) plays a role similar to a political party. A second adviser, Glass Lewis, has fewer followers. We find that the ideology of ISS is center-left, to the left of most institutional investors and Glass Lewis. Furthermore, Vanguard and Blackrock are center-right, and the ideology reflected in management proposals and voting recommendations is far to the right. Investors on the left support a more social orientation of the firm on environmental and other issues. They also support fewer executive compensation proposals.

§ Columbia University

Warrington College of Business, University of Florida

* Kellogg School of Management, Northwestern University

φ Politics Department, New York University

1 Introduction

We conduct an empirical analysis of proxy ballot voting by several hundred institutional investors and pension funds that exercise voting rights in publicly listed Russell 3000 firms. We follow a "political" approach pioneered by Poole and Rosenthal (1985), which seeks to estimate voters' ideal points based on their proxy voting records, along one, or possibly two, most salient policy dimensions. We can thus allow for a broad "ideological" interpretation of the diverse ideal points of the multiple institutional asset managers and owners that goes beyond pure shareholder value considerations. This political approach, which has also been adopted by Bubb and Catan (2018) in simultaneous and independent work, is in contrast to the economic and financial approaches taken in the existing proxy voting literature, that emphasize the financial and agency considerations in institutional investor proxy voting.

Kenneth J. Arrow explains that he was led to formulate his celebrated Impossibility Theorem by his attempts to generalize the theory of the firm to include multiple owners: "To be sure, it could be assumed that all were seeking to maximize profits; but suppose they had different expectations of the future? They would then have different preferences over investment projects. I first supposed that they would decide, as the legal framework would imply, by majority voting…It was immediately clear that majority voting did not necessarily lead to an ordering." He further recounts: "Sometime in the winter of 1947-48 my mind again turned involuntarily to voting. This time I happened to start with a political context and thought of parties arrayed in a natural left-right ordering." [pages 2-3, *Collected Papers of Kenneth J. Arrow*, Volume 1, 1984]

In this paper, we reverse the path that led Arrow from the theory of the firm to political science, and ask what light political science could shed on institutional shareholder voting. Could institutional investor ideology be uncovered from institutional shareholder votes just like congressmen's ideology has been uncovered from their roll calls (Poole and Rosenthal, 2007)? More tantalizingly, are institutional investors arrayed along a left-right ideological dimension? And if so, what substantive differences about corporate policy are represented by this dimension?

As Duncan Black (1948) notably established, majority voting does result in a well-defined social ordering if voters have single-peaked preferences, and if their ideal points are disposed along a single left-right dimension. Thus, if it turns out that institutional investors' ideological differences can be projected onto one dimension then Arrow's difficulty with majority voting by shareholders would be conveniently resolved.

Another convenient resolution of the majority voting problem is to observe that in a competitive economy with complete markets there is unanimity among shareholders on the objectives of the firm (Grossman and Stiglitz, 1976, and Grossman and Hart, 1979). A related argument is that only shareholder value maximization is compatible with the no-arbitrage equilibrium condition in financial markets. Any deviation from value maximization would expose the firm to a takeover. The most extreme form of this latter argument is that the firm has no choice but to maximize shareholder value even in an economy where financial markets are incomplete and firms cause externalities through their operations (Friedman, 1970).

However, even if a capital gain could be generated by taking over a non-value-maximizing firm and changing its policies, it is far from obvious that a takeover would succeed under such circumstances (Grossman and Hart, 1980). When a takeover is not an immediate threat, socially-minded shareholders may well prefer a non-value-maximizing policy that causes less negative externalities, all the more so if externalities are difficult to undo, and if the government cannot be relied on to internalize all socially harmful activities (Hart and Zingales, 2016).

When business operations cannot be entirely separated from their social and environmental effects, when economic forces do not completely shape a firm's policies, there is inevitably a political facet to the exercise of corporate control. But how does this political aspect manifest itself in practice?

A key institutional consideration absent from the literature on the objectives of firms is the fact that most shares of publicly traded corporations are managed by institutional investors. In practice the determining votes are cast by asset managers, not by retail investors. Hence, the politics of corporate voting is manifest in the way in which institutional investors exercise the voting rights of their clients. This paper is a first exploratory attempt to uncover institutional investor ideology based on how they vote.

In its (2017) *Annual Investment Stewardship Report*, Vanguard writes "This year, for the first time, our funds supported a number of climate-related shareholder resolutions opposed by company management." The report further states that Vanguard supports effective corporate governance practices that include advocacy, engagement and "voting proxies at company shareholder meetings across each of our portfolios and around the globe. Because of our ongoing advocacy and engagement efforts, companies should be aware of our governance principles and positions by the time we cast our funds' votes." Our estimation of investor ideal points allows us to identify Vanguard's ideology; where it stands relative to other investors. This may help guide companies' policies and coordinate shareholder governance actions.

Our approach closely tracks the ideal point estimation methodology pioneered by Poole and Rosenthal (1985, 2007) and by McCarty, Poole, and Rosenthal (1997) for legislative voting. They apply alternating estimation methods to a voting model where voters have random utility (McFadden, 1976) with a spatial single-peaked representation of preferences à la Black (1948), to determine the ideal points of legislators based on their roll calls. Their multidimensional scaling method is commonly referred to as NOMINATE; it has been widely applied to study legislative voting and other binary choice problems (see Poole, 2005, and Armstrong et al., 2014, pages 189-221).

Institutional investor voting data also represents binary choices where investors vote "For" or "Against" (Investors rarely "abstain" by failing to vote their shares). These choices can therefore be analyzed using the NOMINATE scaling methods. We frame our analysis by treating each fund family as a single investor with an ideal point in a latent strategy space. This is a simplifying assumption that reflects the reality that most fund families consolidate their voting guidelines across all member funds (Morningstar, 2017). As a first approximation we further assume that the strategy space has only one dimension and that investor ideal points are time invariant.

What do the institutional shareholder votes reveal about how political objectives are expressed and aggregated at the firm level? Just as legislators' ideological differences can be represented along a left-right spectrum, it turns out that institutional investors' ideal points can also be mapped onto a line where the far-left investors are best described as socially responsible investors, those that vote most consistently in favor of pro-social and pro-environment shareholder proposals, and the far-right investors' votes can be described as "greedy" investors, those who oppose again and again any proposal that could financially cost shareholders. In the conclusion to the paper, we provide more nuance to the social versus greedy distinction.

It is important to emphasize that the NOMINATE scaling method is agnostic as to where ideology comes from and what it represents. The one-dimensional representation of differences in investor ideology is a statistical representation, which best explains the voting behavior of investors. That being said, it would not be entirely surprising that the same ideological differences that are observed in Congress could also be reflected in shareholder votes.

Still, an important finding is that there actually are significant ideological differences across institutional investors. The votes are not unanimous. There is no shareholder unanimity. Institutional investors differ systematically in their ideology. This is all the more remarkable that unlike in the political realm institutional investors are not organized in sustained political coalitions that impose some form of voting discipline.

The closest to something resembling party organization in financial markets are the proxy advisers, Institutional Shareholder Services (ISS) and Glass, Lewis & Co. (Glass Lewis). The management of firms also makes recommendations about their proxy proposals. They always recommend supporting their own proposals (4,391 of 4,887 proposals in our basic data) but may recommend voting against shareholder proposals. If we treat ISS, Glass Lewis, and management voting recommendations as votes we find that the ideology of ISS is center-left, to the left of most institutional investors but to the right of most pension funds. Glass Lewis, Vanguard, Blackrock, are center-right, and the ideology reflected by management recommendations is far to the right. This far-right management ideal point reflects the reality that management is generally opposed to shareholder proposals.

Whether these ideological differences are a reflection of the differences in ideology of their client bases we cannot say. It is not even clear that clients are aware that the funds they invest in have systematic ideological biases. Another open question is whether ideological differences are reflected in different portfolio holdings.

Related Literature: The most closely related paper is by Bubb and Catan (2018), who take a similar approach to ours. The main methodological difference is that they undertake a principal components analysis following Heckman and Snyder (1997), where we use W-Nominate (McCarty, Poole, and Rosenthal, 1997), a later version of NOMINATE (Poole and Rosenthal, 1995), the standard scaling method in political science. Also, they treat mutual funds as the unit of analysis, whereas we take the fund family as the relevant unit. This is more reasonable because the overwhelming fraction of fund families coordinate the votes across their funds. As we do, they rely on data on mutual fund voting from ISS, but over a longer time interval (from fiscal years 2009-10 through 2014-15, while we only consider data from fiscal year 2011-12). Importantly, they do not consider public pension fund votes. Bubb and Catan emphasize the political party role of proxy advisers ISS and Glass-Lewis, whereas we highlight the ideological dimension of institutional investors revealed voting pattern, with socially oriented investors on the left and greedy investors on the right.

The first study of proxy voting is by Gillan and Starks (2000). They study over 2000 governance-related shareholder proposals at 452 companies between 1987 and 1994. Their main finding is that proposals sponsored by institutions gain significantly more support than those sponsored by individuals. The subsequent literature takes the perspective that shareholders seek to maximize shareholder value and that their voting is motivated by managerial agency problems. Deviations from shareholder value maximization are explained by conflicts of interest at some institutional investors and by the lack of coordination among institutional investors.

The proxy voting literature was significantly advanced by the change in disclosure requirements of proxy votes introduced by the SEC in 2003. Under its new rule 30b1-4, registered investment companies are now required to report to the SEC their complete proxy voting record on an annual basis. One of the first studies to rely on these data is by Davis and Kim (2007); they find that mutual fund family voting in support of management is more likely when the fund family is also a manager of the company's corporate pension plan. (Ashraf, Jayaraman, and Ryan, 2012, and Cvijanovic, Dasgupta, and Zachariadis, 2016, find additional support for this hypothesis). In a related study, Rothberg and Lilien (2006) also find that the largest funds are more likely to vote in support of management, except when proposals on executive compensation or takeover defenses are under consideration (see also Taub, 2009). Other explanations that have been proposed for the management-friendly voting behavior of mutual funds are governance failures at mutual funds (Chou, Ng and Wang, 2011), and that, although mutual funds tend to vote with management, their support is greater for proposals that increase shareholder wealth (Morgan, Poulsen, Wolf, and Yang, 2011). Cremers and Romano (2011) also find that the SEC rule change if anything has increased mutual fund support for management (see Ferri, 2012 for a review of this early literature).

More recently, the literature on proxy voting has explored other issues, in particular: i) whether mutual fund voting is driven by proxy advisers' recommendations, and if so why (Bethel and Gillan, 2002; Cai, Garner, and Walkling, 2009; Ertimur, Ferri, and Oesch, 2013; Larcker, McCall, and Ormazabal, 2014; Iliev and Lowry, 2015;

Malenko and Shen, 2016; and Li, 2018); ii) whether social networks—a common educational background between mutual fund managers and portfolio firms' CEOs—can explain mutual fund voting behavior (Butler and Gurun, 2012); whether index-investors are active in corporate governance (Appel, Gormley, and Keim, 2016); iv) whether cross-holdings in firms in the same industry affect the management-friendly stance of mutual funds (He, Huang, and Zhao, 2017), and; v) whether mutual funds vote in support of activist investor actions (He and Li, 2017; Brav, Jiang, and Li, 2017; Kedia, Starks, and Wang, 2017; and Jiang, Li and Mei, 2018). Finally, in a survey of mutual fund managers, McCahery, Sautner, and Starks (2016) find that voting against management is an important channel through which institutional investors exert their influence. They also find that proxy advisors' recommendations are important to guide their voting. However, Listokin (2008) observes that management can strategically time their proposals and avoid putting up a proposal for a vote if it expects that the proposal could be defeated. This is evidenced by the disproportionately high proportion of close votes that goes in favor of management. All these studies share the common perspective that institutional investor voting is mostly concerned with corporate governance issues and does not reflect a broader ideological premise.

The remainder of the paper is organized as follows. Section 2 describes the data and provides summary statistics. Section 3 explains the basic scaling methodology. Section 4 discusses the main results. Section 5 concludes.

2 Data and Sample Overview

Proxy Voting Rules

Shareholder Proposals

Under Rule 14a-8 of the Securities Exchange Act of 1934 qualifying shareholders can submit a proposal that will be included in the company's proxy statement and put forward to a vote at the shareholder meeting. To qualify a shareholder must have owned for at least one year $2,000 or 1% of voting shares, and must submit the proposal 120 days before the annual meeting. The proposer must also hold her shares until after the shareholder meeting. Importantly, a proposal cannot exceed 500 words and generally must be in the form of precatory petitions to the board of directors. In addition, proposals cannot touch on ordinary business matters.

Once a firm receives a shareholder proposal, it can choose to include the proposal in its proxy materials, work with the proposer toward a mutual agreement (which may include withdrawal of the proposal), or submit a No-Action request to the SEC to exclude the proposal from the company's proxy statement, if the proposal is deemed to fall outside the rules.

In effect, the proxy voting rules reflect a general delegation principle whereby shareholders have entrusted the management of the company to officers and directors, who consequently should be protected against subsequent interference and second-guessing by shareholders. Shareholder proposals are essentially restricted to be about broader governance and political issues, and exclude business operational issues. It is therefore natural to interpret shareholder proposals as reflecting the broader political will of shareholders.

Management Proposals

Since January 2011, all U.S. firms are required by the Dodd-Frank Act to sponsor an advisory vote on executive compensation ("Say-on-Pay" vote) at least once every three years, and an advisory vote on "golden parachutes" associated with a merger. These non-binding votes apply to top executives of a company. Binding equity-based compensation plans, such as executive incentive plans, usually are not voted every year (only once every 2-3 years). Management may also sponsor governance-related proposals, such as declassification of the board of directors, bylaw changes, cumulative voting, establishing/eliminating various committees, proxy access, and so on.

Capital-related proposals include dividend payment/increases, share repurchases, stock authorizations, and restructuring proposals are about M&A transactions, asset sales, spin-offs, and so on. Financial proposals are generally about approval of financial reports, and are routine proposals. Other routine or miscellaneous management proposals concern the adjournment of a meeting, or company name changes.

ISS Voting Analytics

Our primary data source is the ISS's Voting Analytics database. We focus on the Voting Results database between July 2011 and June 2012 (fiscal year 2012), which contains aggregate voting data covering the annual and special shareholder meetings. We chose this year because we were able to add votes of pension funds to the votes of institutional investors in the ISS database. The ISS database provides the identity of the company (name and CUSIP), description of the proposal, proposal number, shareholder meeting date, the identity of the sponsor, management and ISS recommendations, and the number of "For", "Withhold/Against" and "Abstain" votes, as well as the vote outcome (Pass/Fail).[2] All the Russell 3000 companies are included.

For now we exclude director elections for simplicity. Following ISS's Proxy Voting Guidelines, we end up with the following proposals: environment, product safety, diversity, employment rights, human rights, charitable giving, political, healthcare, animal rights, other social proposals, governance, compensation related proposals, and financial and investment policy proposals.

We use the proposal ID to merge the voting results with the ISS Mutual Fund Voting Record database, which provides voting records (For, Against, or Abstain) by individual mutual funds from major families on each proposal in our sample. The sources for this database are N-PX filings that mutual fund companies are required to file via the EDGAR website. We aggregate fund level voting information at the corresponding family level. According to Brav, Jiang, and Li (2017), a fund votes differently from other funds within the same family only 5.5% of the time.

Glass Lewis's voting recommendations

Glass Lewis's Proxy Paper database contains similar information to ISS's Voting Results database, covering both annual and special shareholder meetings. In addition, the database features Glass Lewis recommendations. We merge the Glass Lewis data with ISS Voting Analytics using CUSIP, meeting date and proposal number. As CUSIP and proposal number may differ between the two files, we manually check whether the unmatched proposals exist in ISS Voting Analytics.

In addition to the actual voters, we also treat ISS and Glass Lewis as two separate voters. Similarly, we treat management recommendations as votes by a generic "management" voter, ignoring heterogeneity in management across firms. These three "voters" are included primarily as a way of pinning down our scaling procedure. Our results are robust to excluding them. In the filtered dataset that is the basis of our main analysis, there are 3,318 proposals. Management made recommendations on 3,314, ISS on 3,313, but Glass Lewis only on 476 as our data on Glass Lewis recommendations end in December 2011.

Public Pension Fund Voting Records

To our knowledge, this is the first study that systematically examines public pension funds' voting records (Davis and Kim (2007) study only Calpers's voting records for a limited number of proposals). Since there is no centralized database for U.S. public pension funds (state or city), we have used state public records laws to

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request their proxy voting records.[3] Our list of 100 pension funds comes from *Pensions & Investments 1,000 largest retirement plans: 2016*. The data we received is similar in format to the ISS Mutual Fund Voting Record database. It provides the identity of the company (name and CUSIP), proposal number, description of proposal, shareholder meeting date, identity of sponsor, and vote cast. We merge this pension fund vote data with ISS Voting Analytics using CUSIP, meeting date, and proposal number. Again, when CUSIP and proposal number differ between the two files, we manually check whether the unmatched proposals in the pension fund data exist in ISS Voting Analytics.

Summary Statistics

Our sample consists of 4,887 proxy proposals in fiscal year 2012 originating from Russell 3000 firms. There are 2,621 shareholder meetings in the data, so the modal meeting generates only one proxy vote. This implies that meeting (company) fixed effects are unimportant.

As shown in Table 1, Panel A, there are votes by 284 institutional investors, of which 238 are mutual fund families and 46 are public pension funds. At least one mutual fund family voted on each of the 4,887 proposals. Shareholders sponsored 496 of these proposals, and the remainder were sponsored by management. A public pension fund in our sample participated in at least one of 2,057 meetings and voted on at least one of 3,756 proposals. (The 3,756 are a subset of the 4,887 voted on by mutual fund families.) Shareholders sponsored 459 of these proposals, and the remainder were sponsored by management. There are 80 unique shareholder sponsors. The Glass Lewis data for fiscal year 2012 covers only 428 meetings featuring 805 proposals, 31 of which are sponsored by shareholders.

Panel B shows the frequency of proposals by proposal type. One salient pattern is that social-related proposals, all of which are sponsored by shareholders, are concentrated at only several dozen firms. This suggests that shareholder proponents selectively target firms where social issues are most concerning. The vast majority of compensation proposals are sponsored by management, reflecting the fact that "Say-on-Pay" proposals have been mandatory since 2011. Almost half of governance-related proposals are put forth by shareholders, and they outnumber all social-related proposals combined. This suggests that shareholder proponents pay particular attention to corporate governance at selected firms. Almost all other proposals are sponsored by management.

In panel C, we report support rates for various shareholder-sponsored proposals broken down by the different categories of "investors." For each type of investor, their support rate for each proposal type is defined as the percentage of "For" votes cast. Note that public pension funds are more likely than mutual funds to support shareholder proposals. The difference in support rates for all shareholder proposals is 20.9% (t-statistic = 35.6), but this difference is particularly large for social proposals (50.4% vs. 27.7%), consistent with the notion that public pension fund votes may also have a broader political motive.

ISS recommended to vote "For" for 73.8% of the shareholder proposals. The top three categories that receive most ISS support are related to compensation, governance and diversity issues. Glass Lewis recommendations are available for only half of the proposal types. Governance related proposals attracted most Glass Lewis support, followed by animal rights. Management almost always recommended against shareholder proposals.

Panel D reports investors' support rates for seven management-sponsored proposal categories. For all the categories, mutual funds are more likely than pension funds to support the proposals, suggesting a management

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[3] All 50 states in the U.S. have public records laws that allow members of the public (including non-residents) to obtain public records from state and local government agencies.

friendly stance by mutual funds, potentially due to business ties (Davis and Kim, 2007, and Cvijanovic, Dasgupta, and Zachariadis, 2016). The difference in support rates for all management proposals is 9.8% (t-statistic = 44.2). The difference is especially large for compensation-related proposals (87.3% vs. 77.5%).

The correlation between mutual fund/pension fund votes and recommendations from both proxy advisors is high for most proposal types, suggesting that most investors, mutual funds in particular, tend to follow proxy advisors' recommendations. Glass Lewis is not only tougher on management than ISS on most proposal types, consistent with a key finding in Li (2018), but also shows greater opposition to shareholder proposals.

Panel E reports company characteristics. For our sample of firms holding meetings, the average (median) firm has assets worth $9.5 ($1.5) billion, and a market capitalization of $5.7 ($1.1) billion. The average return on assets is 9.9%, while the previous-year stock return is -1.4% on average. The average firm has a book-to-market ratio of 0.62, pays a 1.7% dividend, and has a leverage ratio of 0.33. The Amihud illiquidity measure for the average firm is 0.07.

We also keep track of various governance metrics. We classify companies by a governance indicator taking the value 1 if a company has both a classified board and a poison pill and zero otherwise (Bebchuk and Cohen, 2005). Data on classified boards and poison pill are from RiskMetrics. As shown in Panel D, 14.7% of the sample firms have both policies in place. We report information on board size and the percent of independent directors. The median board has 9.3 members and comprises 79.7% independent directors. These figures are consistent with the findings in the extant literature (e.g., Cai, Garner and Walkling, 2009; Li, 2018). Finally, we report two executive compensation metrics as in Hartzell, Ofek and Yermack (2004). Our source is Standard & Poor's ExecuComp database, which includes base salary, bonus and stock option data for the top five executive officers of companies in the S&P 1500 index. Our two measures are the year-to-year percentage change in total compensation and cash compensation as a percentage of total compensation. At the median company, annual growth in executive compensation is 20.3%, and the cash-to-total compensation ratio is 0.35.

Table 1: Summary Statistics

This table presents summary statistics for 2,621 meetings in which investors participated during fiscal year 2012. Panel A reports the number of each voter type, the number of meetings they participated in, and the number of proposals they voted on. Panel B provides the frequency of proposals by proposal type. Panels C and D show support rates by each investor type for shareholder- and management-sponsored proposals. Panel E provides the average, median, and standard deviation for firm characteristics. *Assets* are in billions of dollars. *MV* is market capitalization in billions of dollars. *ROA* is return on assets, defined as EBITDA/assets. *Prior-year stock return* is the buy-and-hold stock return during the 12 months prior to the contested meeting. *B/M* is the market-to-book ratio defined as (book value of equity)/(market value of equity). *Dividend yield* equals (common dividend + preferred dividend)/(market value of common stock + book value of preferred). *Leverage* is defined as the ratio of debt to the sum of debt and equity, all in book values. *Institutional ownership*, is the fraction of shares held by institutional investors, as reported by the Thomson Reuters Ownership Database. *Amihud illiquidity* is the yearly average (using daily data ending quarter t-1 from CRSP) of $1000\sqrt{|ret|/\text{dollar trading volume}}$. *Classified board & poison pill* is a dummy variable equal to 1 if the company has both a classified board and a poison pill, 0 otherwise. A classified board (or "staggered" board) is one in which the directors are placed into different classes and serve overlapping terms. A poison pill provides shareholders with special rights in the case of a triggering event such as a hostile takeover bid. Typical poison pills give the target's stockholders other than the bidder the right to purchase stock in the target or the bidder's company at a steep discount, making the target unattractive or diluting the acquirer's voting power. *Board size* is the number of board members. *Ratio of independent directors* is the number of independent directors divided by the total number of directors at the firm. Δ*Executive compensation YOY* is the percentage change in total executive compensation year-on-year. *Cash/total compensation* is the ratio of salary and cash bonus to total compensation.

Panel A: Investor participation in meetings and votes on proposals

	Number of voters	Number of meetings with at least one vote	Number of all proposals with at least one vote	Number of proposals by shareholders with at least one vote	Number of proposals by management with at least one vote
Mutual fund families	238	2,621	4,887	496	4,391
Public pension funds	46	2,057	3,756	459	3,297
ISS	1	2,619	4,878	496	4,382
Glass Lewis	1	428	805	31	774
Management	1	2,620	4,867	487	4,380

Panel B: Frequency of proposals by proposal type

Proposal type	Proposal category	Number of proposals (by shareholder)	Number of firms
Animal rights	Social	14 (14)	14
Charitable giving	Social	1 (1)	1
Diversity	Social	12 (12)	12
Employment and human rights	Social	16 (16)	16
Environment	Social	53 (53)	41
Healthcare	Social	1 (1)	1
Political	Social	77 (77)	69
Product safety	Social	4 (4)	4
Social – other	Social	1 (1)	1
Compensation	Governance and compensation	3627 (67)	2482
Governance	Governance and compensation	516 (248)	371
Capital	Financials and investment policy	229 (2)	174
Restructuring	Financials and investment policy	109 (0)	104
Financials	Financials and investment policy	23 (0)	17
Investment policy	Financials and investment policy	3 (0)	3
Other (management)	Routine/miscellaneous	201 (0)	189
Total		4,887 (496)	3,310

Panel C: Support rates for shareholder proposals

	Mutual fund families	Public pension funds	ISS	Glass Lewis	Management
Animal rights	6.2%	17.6%	0.0%	50.0%	0.0%
Capital	2.3%	5.0%	0.0%	0.0%	0.0%
Charitable giving	1.6%	9.5%	0.0%	--	0.0%
Compensation	43.9%	55.6%	89.6%	20.0%	1.5%
Diversity	42.2%	56.9%	83.3%	--	0.0%
Environment	26.1%	39.0%	54.7%	0.0%	0.0%
Governance	64.4%	87.0%	87.5%	85.7%	3.3%
Healthcare	2.9%	22.2%	0.0%	--	0.0%
Employment and Human rights	24.3%	25.0%	50.0%	--	0.0%
Political	27.7%	50.4%	54.5%	25.0%	0.0%
Product safety	5.2%	16.1%	0.0%	--	0.0%
Social – other	0.6%	0.0%	0.0%	--	0.0%
Total	46.4%	67.3%	73.8%	51.6%	1.8%

Panel D: Support rates for management proposals

	Mutual fund families	Public pension funds	Management	ISS	Glass Lewis
Capital	85.0%	69.4%	100%	82.2%	77.3%
Compensation	87.3%	77.6%	100%	86.1%	81.7%
Financials	99.6%	97.8%	100%	100.0%	100.0%
Governance	93.5%	92.1%	100%	91.0%	82.9%
Investment policy	91.2%	90.0%	100%	100.0%	--
Other (management)	69.3%	36.3%	100%	66.0%	79.0%
Restructuring	98.5%	97.4%	100%	98.2%	94.7%
Total	87.3%	77.5%	100%	85.7%	82.3%

Panel E: Company characteristics

	Average	Median	Std. Dev.
Firm characteristics			
Assets ($billion)	9.464	1.529	32.996
MV ($billion)	5.713	1.116	17.493
ROA	0.099	0.111	0.165
Prior-year stock return	-0.014	-0.026	0.349
B/M	0.621	0.531	0.655
Dividend yield	0.017	0.003	0.037
Leverage	0.328	0.254	0.745
Institutional ownership	0.720	0.765	0.222
Amihud illiquidity	0.073	0.043	0.087
Governance measures			
Classified board & poison pill	0.147	0.000	0.354
Board size	9.335	9.000	2.306
Ratio of independent directors	0.797	0.818	0.105
ΔExecutive compensation YOY	0.203	0.094	0.619
Cash/total compensation	0.346	0.302	0.189

3 Methodology

Overview

We scale the data using the Euclidean spatial model approach embedded in McCarty, Poole, and Rosenthal's (1997) W-NOMINATE. We use the publicly available R version of the program. W-NOMINATE and the closely related DW-NOMINATE (Poole and Rosenthal, 2007) have been widely used in the political science literature to determine the dimensions of ideological disagreements and legislators' ideal points. Although W-NOMINATE has been mostly applied to study decision-making in legislatures, this scaling algorithm can in principle be applied to any collective binary choice problem. To the best of our knowledge this paper is the first application of the W-NOMINATE scaling method to corporate voting. The basic idea behind W-NOMINATE is to project the choices shareholders face onto a low-dimensional Euclidean space. In this paper we only consider a one-dimensional space. In future work we plan to extend the analysis to two or possibly more dimensions should more explanatory power be obtained by expanding the dimensionality of the space. A central assumption is that institutional investors have single-peaked preferences and that on average they vote

in favor of the alternative that is closest to their ideal point. The estimation procedure assumes that voters on occasion do make mistakes and do not always vote for the alternative closest to their ideal point. Indeed, the estimation algorithm works best if votes are not perfectly predictable. More precisely, voter utility is a Gaussian function of the distance between the ideal point and the alternative plus a random component that leads to logit estimation. Voters who tend to vote similarly on most proposals will have ideal points that are closer together. For a comprehensive and detailed exposition of W-NOMINATE and other spatial scaling methods, see Poole (2005).

Characteristics of Proxy Voting that Impact Scaling

Excluding Investors with Few Votes

Our data is very sparse compared to roll call voting in Congress. In the fiscal year 2012 data, there are 1,783,755 proposal-institution pairs. The vast majority of these represents pairs where the institution did not vote because it did not own common stock in the firm with a proposal. In only 382,221 pairs was the median institution eligible to vote. Of these, 4,704, or 1.23 percent of the total, were cases of abstention. Because abstentions are rare, we treat them like non-ownership as missing data. Votes "Against" the proposal were 19.38% and votes "For" were 79.39%. The presence of substantial voting "Against" is a first indication that shareholders were far from unanimous.

As compared to the U.S. Senate where nearly 100 senators will vote on hundreds of roll calls in a year, and, a fortiori to the House of Representatives with 435 members, "turnout" of our investors is sparse, with many owning shares in only a few dozen companies. A parameter in W-NOMINATE allows us to exclude funds that vote infrequently. In their initial analysis of Congress, Poole and Rosenthal (1991) set a minimum of 20 votes for a legislator to be included in the estimation. This value has been carried forward as the default in W-NOMINATE. The analysis of Congress will be insensitive to this parameter, particularly since 1945, when, except in cases like death, all legislators vote on almost all roll calls. Here we find that results had more face validity when we set 50 as the minimum. We set the parameter *minvotes* to 50 to reduce noise in the estimation.

Excluding Lopsided Votes

Among included voters, W-NOMINATE discards lopsided votes that may be more subject to idiosyncratic behavior. In developing NOMINATE in the 1980s, Poole and Rosenthal discovered that many lopsided roll calls did not fit the spatial model. Model fit and external validity were improved if such roll calls were not included in the estimation. They excluded roll calls with fewer than 2.5% of the voters voting in the minority. The 2.5% threshold became a default that was not subject to systematic investigation. The default value of the *lop* (Armstrong et al., 2014) parameter in W-NOMINATE is 2.5% of those voting on the minority side. Although our votes are not unanimous, they are much less divisive than congressional voting. With our data, we find that 3% or *lop*=0.03 is more appropriate.

Although the data contains 284 institutions and 4,887 proposals, imposing the constraints illustrated above leads us to have at most 251 institutions and 3,318 proposals in our analysis, as shown in Table 2. The deleted institutions numbered 27 mutual funds and 6 pension funds. In sum, our main analysis includes 251 mutual funds and pension funds. We also report on analysis for mutual funds only, where we have 210 investors.

Finally, note that each institution is treated as having a single vote. Votes in this initial work are not weighted by the number of shares owned.

Table 2: Summary Statistics for Specifications

All voters voting fewer than 50 times are excluded. After excluding voters, proposals that have fewer than 3% of the remaining voters voting on the minority side are excluded. All specifications include the recommendations of management, ISS, and Glass Lewis as votes. APRE stands for the Aggregate Proportion Reduction in Error.

|	Number of Voters	Number of Proposals	% Correctly Classified	APRE	Beta
Mutual FundsOnly	210	3,057	88.88	0.357	21.40
Mutual Funds and Pension Funds	251	3,318	88.86	0.356	21.86

Few Voters Per Proposal

Another feature of our data that makes it quite distinct from legislative roll call voting is that there are many proposals with relatively few voters. In Figure 1, Panel A below, we graph the density of votes across the 3,318 proposals retained in the estimation. It can be seen that the modal proposal has about 60 votes and not 251. W-NOMINATE does not have a parameter that allows us to exclude proposals with few voters. The "small legislature" problem is probably concentrated in the smaller firms of the Russell 3000 and could be avoided by focusing the estimation on the largest firms in the S&P1500 or S&P500.

Panel B of Figure 1 further shows that the number of voters varies by proposal type. "Social" proposals, represented by the blue bars, appear more likely to have a high number of voters, with a median well above 100 voters. This could be due to the fact that such proposals attract more interest, or involve higher stakes, so that fewer voters are likely to abstain. Alternatively, this could be due to the fact that such social proposals are more common at large firms, which have a higher number of institutional shareholders and thus voters. Governance and Compensation proposals, represented by the orange bars, are next with a median number of voters of about 60, followed by financial and investment policy proposals, which have a median of around 50 voters.

Figure 1

Panel A. Distribution of Number of Voters on Proposals, Fiscal Year 2012
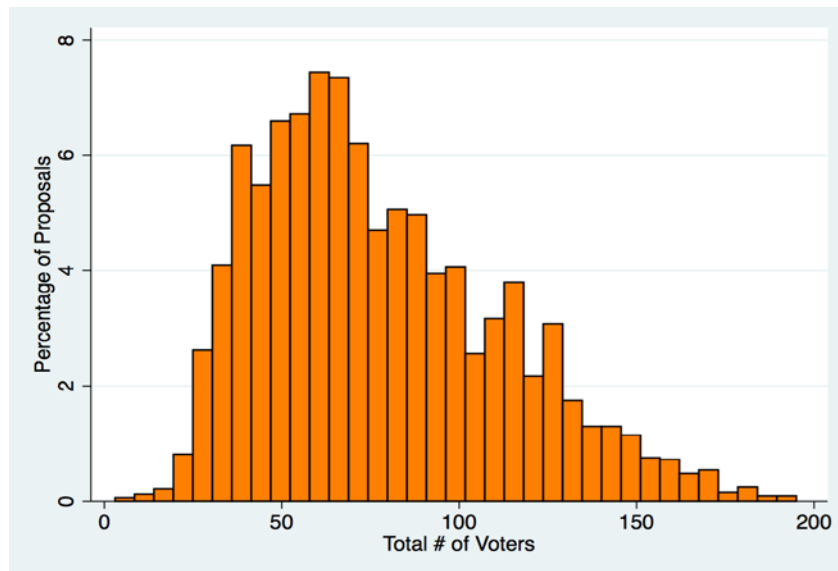
Panel B. Distribution of Number of Voters by Proposal Type, Fiscal Year 2012
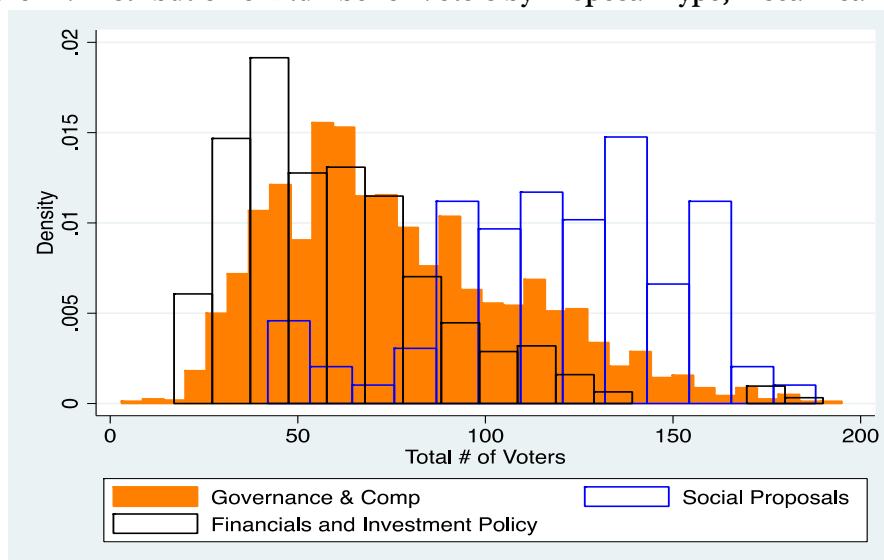
4 Results

We begin by discussing the overall fit of the W-NOMINATE estimation. Classification is equally good if we include or exclude pension funds. (Note that the set of proposals in the mutual funds only case is not a strict subset of those when pension funds are included. Because pensions funds typically vote with the minority, more proposals get included. But if the pension funds vote with the majority, the minority can fall below 2.5%). In both cases, as shown in table 2, we correctly classify just under 89% of the votes. Overall fit is assessed by the Average Proportionate Reduction in Error (APRE), which is simply:

1-(Total Classification Errors)/(Total Votes on Minority Side).

An observation is a classification error if its predicted probability is less than 0.5. The APREs of 0.356 and 0.357 are less than those for congressional roll calls, largely because votes are more one-sided. That is, minorities are smaller. In contrast, the Beta, or the signal-to-noise parameter, is estimated at approximately 21.5, considerably larger than those found for Congress (thus, the default starting value for Beta in W-NOMINATE is 16). The large Betas show that the ideological component of voting is large relative to the random error components.

Investor Ideology: Ideal Point Estimates

We start discussion of substantive results by reporting the estimated investor ideal points, which reflect the revealed ideology of institutional investors. Panel A of Figure 2 shows the ideal points when just mutual funds are included. Panel B includes the pension funds. The pension fund portion of each bar is shown in blue. W-NOMINATE constrains ideal points to [-1,+1]. The arbitrary (and inconsequential) polarity of the estimation was chosen such that socially oriented investors appear on the left. The two distributions are quite similar. The ideal points for mutual funds in both estimations correlate at r=0.976.

The first immediate observation is that institutional investor votes are far from reflecting shareholder unanimity. Institutional investors differ markedly in their ideologies, with funds like Domini Social Investments on the far left of our one-dimensional spectrum and Allied Asset Advisors on the far right. Consistent with its voting record, Domini Social Investments describes its investment philosophy as follows: "We believe that all

investments have social and environmental implications. We apply social, environmental and governance standards to all of our investments, believing they help identify opportunities to provide strong financial rewards to our fund shareholders while also helping to create a more just and sustainable economic system." In contrast and somewhat surprisingly Allied Asset Advisors describes itself as a sharia compliant investor pursuing an investment strategy that is consistent with Islamic principles. One would expect to see the ideal point of such a fund to be closer to that of other funds with social and environmental goals, and not at the far right spectrum together with value funds like Leuthold Weeden Capital Management, which "stresses quantitative measures of value combined with recognition of fundamental and technical trends, [and pursues] A policy of disciplined, unemotional, and strategic investing, backed by solid and comprehensive research," or Needham Asset Management, LLC, which focuses on investments with "an emphasis on tax-efficient capital appreciation and preservation," (see Table 3 below). Unlike Allied Asset Advisors none of the other far right extremist funds in Table 3 mention anything about ethical, environmental, or social concerns.[4]

The second salient observation is that the ideal point of management is close to the far right. Recall that we take management recommendations in support of or against shareholder proposals as votes by a generic "management" voter. The position of the management ideal point on the far right mostly indicates the near systematic opposition of management to shareholder proposals. The extremists on the right of management are in unison with management in opposing (other) shareholders' proposals. There are only 12 such extremists and their ideal points are not significantly different from that of the management recommendations.

The third main observation is that the distribution of ideal points is close to unimodal, quite distinct from the bimodal distribution in Congress where political party polarizes members. (Not much should be made of the small peaks on the left and right ends; these arise partly through the [-1,+1] constraint in W-NOMINATE). The highest peak in the center includes the ideal points of Invesco, J.P. Morgan, Prudential and Fidelity. There is a caveat to unimodality: the proxy adviser Institutional Shareholder Services (ISS) does appear to coordinate the votes of a significant number of institutional investors. Thus ISS has over 35 funds that have nearly the same ideal point. The coordinating effect appears as a distinct peak in both panels. Glass Lewis has just short of twenty investors with the same ideal point, but the histograms provide no hint of coordination. Interestingly, ISS's ideology is center-left, while Glass Lewis is center-right. A significant fraction of both institutional investors and pension funds are in between ISS and Glass Lewis, an indication they sometimes side with one or the other proxy adviser when the two advisers' recommendations differ.

The fourth observation is that the large passive asset managers Blackrock and Vanguard have different ideal points than the two proxy advisers. Both asset managers have communicated that while they rely on the recommendations of ISS and Glass Lewis to guide their votes, they do not slavishly follow these recommendations.[5] This voting policy is reflected in their different ideal points. Interestingly, their ideal points are to the right of the proxy advisers, which suggests that they are both less concerned about environmental and social issues and that they tend to side more with management. Note, however, that the data is for fiscal year 2012; in recent years both BlackRock and Vanguard may have moved to the left.

So far we have not distinguished between pension funds and mutual funds. But it is to be expected a priori that pension funds have different ideologies from mutual funds because they may have a duty to vote in line with their members' preferences. This difference in ideologies is reflected in Panel B of Figure 2. The white bars

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[4] This paragraph is based on a manual search of the web sites of the institutions.

[5] In its Proxy Voting and Shareholder Engagement FAQ document Blackrock states "We subscribe to a number of different research products which we take into consideration when deciding how to vote at U.S. company meetings. We do not follow the recommendations of any one provider but make our voting decision based on what we consider to be in the best long-term economic interests of fund investors." https://www.blackrock.com/corporate/en-lu/literature/fact-sheet/blk-responsible-investment-faq-global.pdf

represent the distribution of ideal points for fund families, management, ISS and Glass Lewis, while the blue bars reflect the ideal points for pension funds. As the figure shows, pension funds are more to the left than mutual funds and show greater concern for environmental and social issues. In particular, all pension funds, with the exception of the pension fund of Indiana, are to the left of Vanguard and Blackrock. There is a group of pension funds on the center left together with Fidelity, Prudential and Invesco.

The overall similarity of panels A and B largely reflects the fact that social investors like Domini continue to appear at the left end. This is perhaps surprising because state and union pension funds might have appeared to the left of all private investors. (There are slight differences between the two panels. These differences may reflect the different set of proposals and the influence of the pension fund votes on the estimated roll call parameters. As the roll call parameters shift, the ideal points will adjust. The fact that the changes are minor is an indication of robustness.)

In sum, the ideal point results show a clear spatial structure. The left represents relatively socially-oriented investors, while the right represents Management recommendations and exclusively profit-oriented investors.

Figure 2

Panel A. Ideal Points, One Dimension W-NOMINATE, Mutual Fund Only Estimation
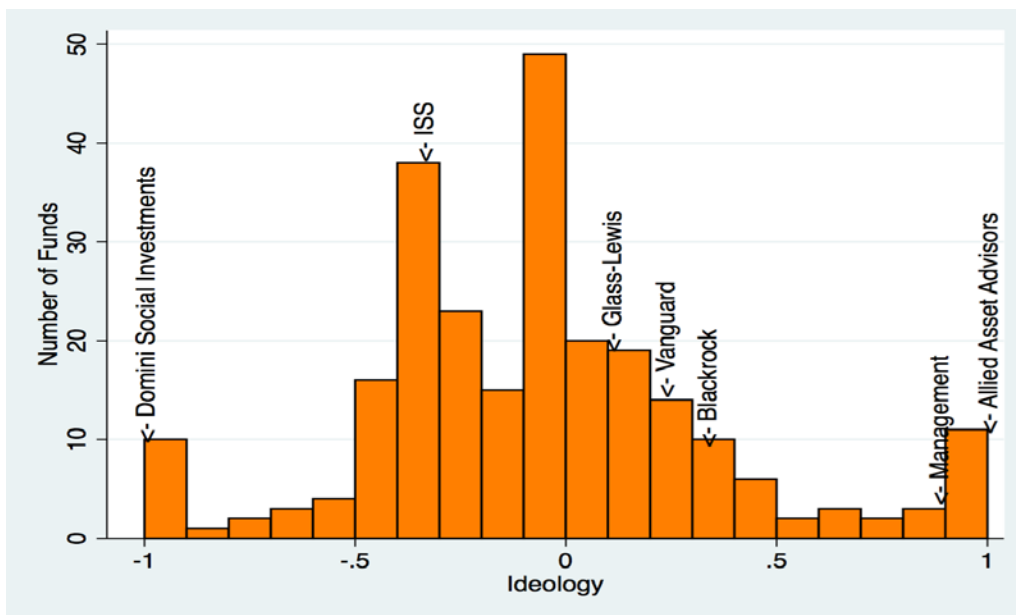
Panel B. Ideal Points, One Dimension W-NOMINATE, Mutual and Pension Fund Estimation
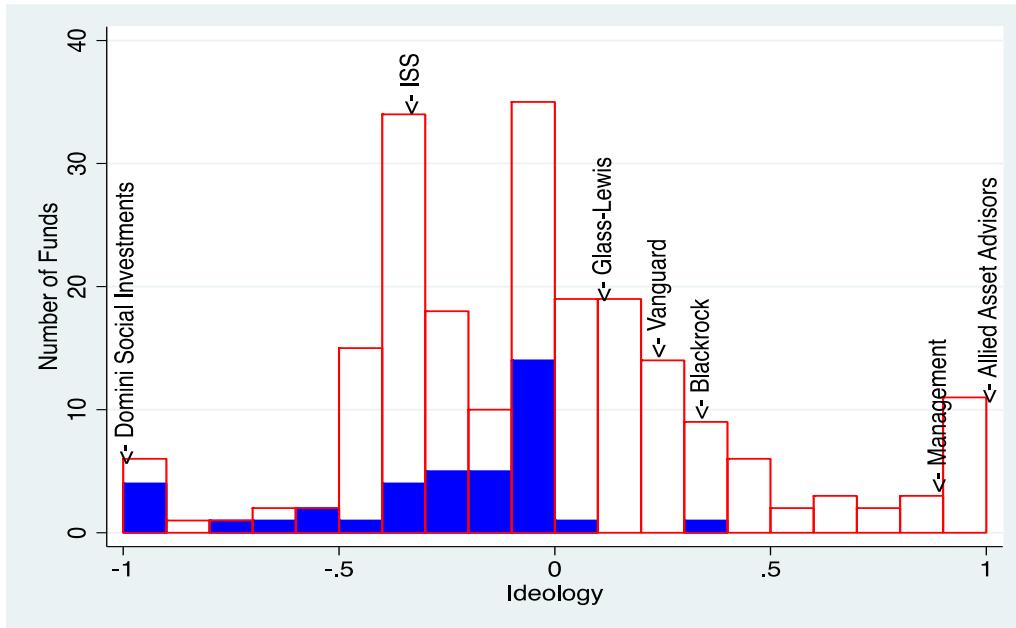
Note: Pension Funds Shown in Blue.

We now provide more context to our interpretation of the ideal point estimates by reporting, in Table 3, the identity of extremists on the left and the right, their ideal points, standard errors and correct classifications for the estimation with pension funds. All standard errors reported in this paper come from running 1000 parametric bootstraps in W-NOMINATE. Those in table 3 range from 0.04 to 0.17, showing that the ideological locations are estimated relatively precisely. Recall that the dimension is of length 2.

Knowing the identity of the extremists allows us to make a first simple exploration on whether their voting records, summarized by the estimated ideal points, correspond to the advertised investment philosophies of these funds. As noted above, this is by and large the case, with the possible exception of Allied Asset Advisors.

Both ends include six institutions that are constrained to be at -1. That is, without the constraint, ceteris paribus they would be moved further left, possibly to outer space. Half of the six constrained organizations on the left are public pension funds even though pension funds are less than one-fifth of our sample.

The constraint at the ends can induce a jump between the extremes and the first interior ideal point. This is not a problem on the right end. Moreover, the votes of the institutions on the right are either perfectly classified or nearly so. They are constrained because their location cannot be pinned down, just as a simple logit will "blow up" if the dependent variable is perfectly classified. On the left there is a jump, with the first interior institution being only at -0.937. Moreover, the percent of correct classifications, with the exception of the Ohio Pension Fund, are below the average for all voters. The difference between the results for left and right extremists suggests that proposal voting may exhibit considerable heteroscedasticity, contrary to the assumption underlying W-NOMINATE that all errors are i.i.d from the same distribution. Nonetheless, the results make substantive sense with socially oriented investors on the left and profit oriented ones on the right.

Table 3: Extremist Investors in the One-Dimensional W-NOMINATE Scaling

Institution Name	Ideology	Std. Error	Fraction Correctly Classified
Socially and Environmentally oriented			
AFSCME Employees Pension Plan	-1	0.065	0.835
Domini Social Investments LLC	-1	0.073	0.793
Empiric Advisors, Inc.	-1	0.044	0.765
Ohio Police & Fire Pension Fund	-1	0.166	0.925
State Universities Retirement System of Illinois (SURS)	-1	0.046	0.771
WisdomTree Asset Management	-1	0.044	0.767
Jackson National Asset Management, LLC	-0.937	0.056	0.771
Colorado Fire & Police Pension Association (FPPACO)	-0.932	0.071	0.793
Profit Oriented			
Leuthold Weeden Capital Management	0.984	0.103	0.981
Reynolds Capital Management	0.992	0.118	0.998
Allied Asset Advisors, Inc.	1	0.116	1
Bridges Investment Management, Inc.	1	0.107	1
Cooke & Bieler, L.P.,	1	0.136	1
Friess Associates, LLC	1	0.119	1
Jensen Investment Management, Inc.	1	0.135	1
Needham Investment Management L.L.C.	1	0.171	0.990

Table 4 below reports the identity of ISS and Glass Lewis followers, respectively. These are funds that may not apply any discretion in their proxy voting. They may simply follow the proxy adviser's recommendation. Note that ISS and the investors close to it all classify nearly perfectly, indicating that these investors almost exactly match ISS recommendations in their voting. These investors are consistently ideological voters. In contrast, Glass Lewis itself and investors close to it are more likely to make ideological "mistakes" in voting.

Table 4: Investors (almost) always following ISS or Glass Lewis

Institution Name	Ideology	Std. Error	Fraction Correctly Classified
Funds closest to ISS			
Illinois Municipal Retirement Fund	-0.352	0.143	0.999
IronBridge Capital Management, L.P.	-0.350	0.152	1
Denver Investment Advisors LLC	-0.350	0.148	0.998
SEI Investments Management Corporation	-0.344	0.148	0.997
1st Source Corporation Investment Advisers, Inc.	-0.339	0.165	0.958
ISS	-0.339	0.148	0.996
ProShare Advisors LLC	-0.339	0.147	0.997
Nuveen Asset Management	-0.339	0.148	0.996
ProFund Advisors LLC	-0.338	0.148	0.997
Nicholas Company, Inc.	-0.335	0.154	0.996
OppenheimerFunds, Inc.	-0.329	0.147	0.983
Funds closest to Glass Lewis			
AST Investment Services, Inc.	0.138	0.093	0.867
Duff & Phelps Investment	0.165	0.096	0.877
Litman/Gregory Fund Advisors, LLC	0.141	0.098	0.827
Artisan Partners LP	0.144	0.099	0.894
McCarthy Group Advisors, L.L.C.	0.139	0.105	0.826
Glass Lewis	0.141	0.107	0.767
ING Funds	0.136	0.108	0.894
AXA Rosenberg Investment Management LLC	0.135	0.124	0.900
Leader Capital Corporation	0.137	0.134	0.793
Aston Asset Management	0.137	0.140	0.844
MassMutual Financial Group	0.134	0.146	0.872

Precision and Classification

Besides the signal to noise parameter Beta, the fraction of correctly classified votes, and the APRE, another diagnostic is the scattergram of standard errors against ideal points plotted in Figure 3. This plot provides a succinct representation of the estimation precision of investors' ideal points. We can summarize the pattern with the regression in Table 5 where the standard error is regressed against the ideal point, the square of the ideal point, and the square root of the number of votes cast by the investor. This regression in the third column captures over half the variation in standard errors. Extremists are much more precisely estimated than moderates in the center. There is a small tendency for higher standard errors on the right. The standard error decreases sharply as more votes are cast. This observation is illustrated by the plotted points on the figure. At the left end, Wisdom Tree, which voted on 2,568 proposals is precisely estimated. The Ohio Pension Fund, which voted on only 53, much less so. On the right end, there is a large standard error for Needham Investment Management, which voted on only 99 proposals. The highest standard error in the sample is for Dalton, Grier, Hartman, Maher & Co. which voted on only 73 proposals.

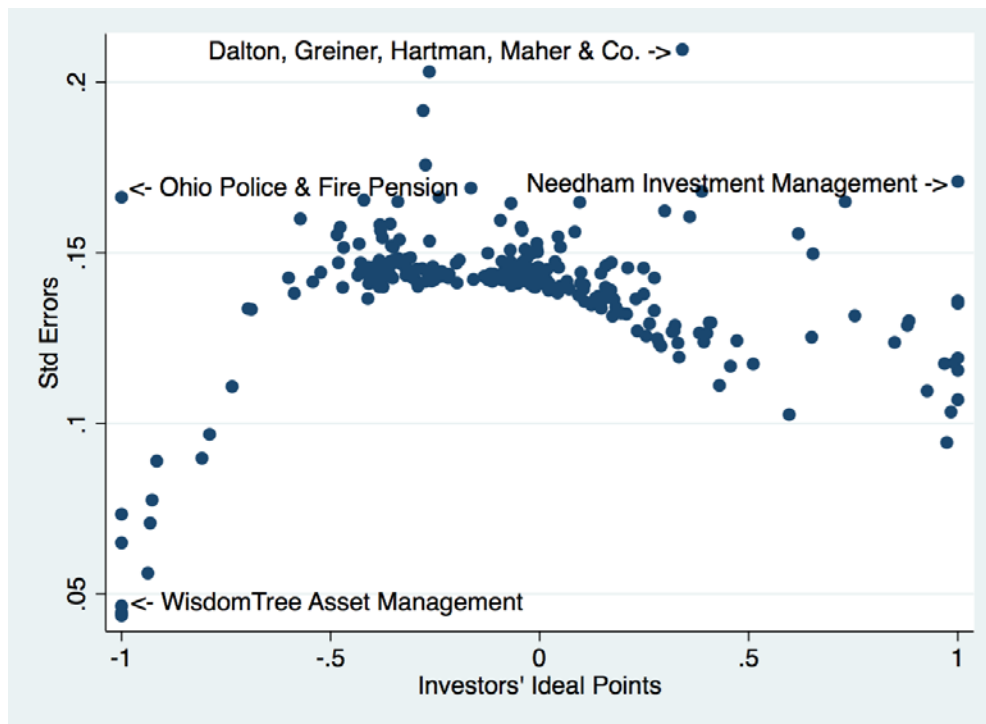**Figure 3: Standard Errors and Ideal Points, W-NOMINATE, One Dimension**

Table 5: Standard Errors against Ideal Points Regression

	(1) Std. Errors	(2) Std. Errors	(3) Std. Errors
Ideal Point	0.00393	0.00683***	0.00586***
	[1.246]	[2.744]	[2.675]
Ideal Point Squared		-0.0466***	-0.0503***
		[-12.48]	[-15.19]
Sqrt. of Total # of Votes			-0.000490***
			[-8.594]
Constant	0.140***	0.148***	0.162***
	[106.5]	[121.0]	[82.21]
Observations	251	251	251
Adjusted R²	0.002	0.385	0.524

*** indicates statistical significance at the 0.001 level.

Table 6 below reports the institutions that classify at 99.8% or better. Interestingly, these do not occur throughout the distribution but are mostly right extremists and institutions that are on the moderate left near, but far from identical to, the ISS position of -0.339. ISS and Management recommendations, while not in Table 3, also classify highly at 0.996 and 0.993, respectively, In contrast, Glass Lewis does not, classifying only at 0.767. Glass Lewis made recommendations for only 476 proposals in our W-NOMINATE estimation as the data ends in December 2011. Of some concern for the fit of the model is that classification appears correlated with the ideal points.

Table 6: Highest Classification Investors, W-NOMINATE, One Dimension

Institution Name	Fraction Correctly Classified	Ideology	Std. Error
Allied Asset Advisors, Inc.	1	1	0.116
Bridges Investment Management, Inc.	1	1	0.107
Cooke & Bieler, L.P.	1	1	0.136
Friess Associates, LLC	1	1	0.119
Jensen Investment Management, Inc.	1	1	0.135
Volumetric Advisers, Inc.	1	0.968	0.118
Third Avenue Management LLC	1	0.619	0.156
Stonebridge Capital Management, Inc.	1	-0.264	0.203
Holland & Company L.L.C.	1	-0.273	0.176
IronBridge Capital Management, L.P.	1	-0.350	0.152
Driehaus Capital Management LLC	1	-0.354	0.152
Meeder Asset Management, Inc.	1	-0.358	0.158
Kinetics Asset Management, Inc.	1	-0.381	0.157
Robert W. Baird & Co. Incorporated	1	-0.382	0.158
Value Line, Inc.	1	-0.401	0.143
Alpine Woods Capital Investors, LLC.	1	-0.409	0.146
Pacific Investment Management Company LLC	1	-0.420	0.165
Boyar Asset Management, Inc.	1	-0.432	0.153
Phoenix Investment Partners, Ltd.	1	-0.471	0.140
Lee Financial Group Inc.	1	-0.477	0.157
Matrix Asset Advisors, Inc.	1	-0.481	0.147
Mutuals Advisors, Inc.	1	-0.542	0.141
Illinois Municipal Retirement Fund	0.999	-0.352	0.143
Optique Capital Management, Inc.	0.999	-0.357	0.148
Huntington Asset Advisors, Inc.	0.999	-0.409	0.141
Glenmede Investment Management LP	0.998	-0.364	0.147
Reynolds Capital Management	0.998	0.992	0.118
Denver Investment Advisors LLC	0.998	-0.350	0.148

Another possible source of instability in the estimates is the lopsided nature of the voting on many proposals. Figure 4 below plots the distribution of majority percentages across proposals (If there are more "Against" than "For" votes, the "Against" becomes the majority, so the plot is bounded below by 0.5). Unlike for Congress, where one would see a mode around 0.65, here the mode is in the last bin, which could explain why our results are sensitive to the "lop" parameter. In sum, in our institutional investor context we have, in effect,

a "small legislature" with lots of lopsided votes and heteroscedastic legislators. These findings call for further robustness checks, the extension of our data to other fiscal years, and the restriction of the estimation to a set of larger firms, which we plan to undertake in future work.

Figure 4: Distribution of Majorities on Proposals with a 3% Lop
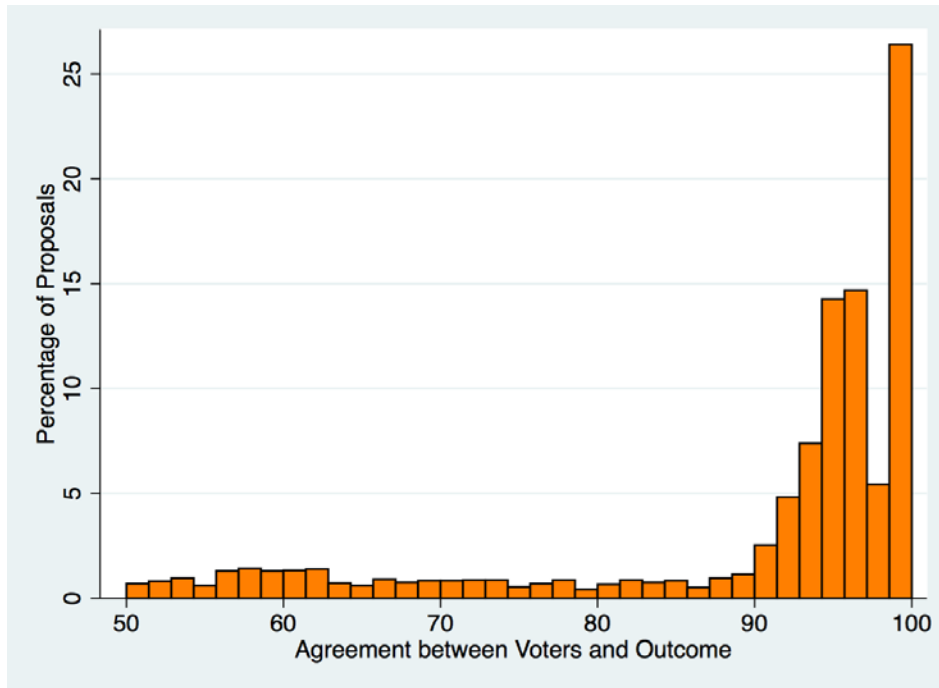
Midpoints

Figure 5 below reports the distribution of proposals' midpoints. At the midpoint, the probabilities of voting "For" and "Against" are both 0.5. The midpoint is the position on the line that separates the predicted "For" the proposal from the predicted "Against". Unlike Congress, where the midpoints are around 0.65, many midpoints here are at the extremes, especially on the left. Many proposals bump up against the constraint of having an ideal point at the edges of the space. There are 680 of the 3,318 proposals with midpoints at -1, and 199 at +1. These proposals are not informative. The estimated probability of a voter voting with the majority is always at least 0.5. The left end is chosen for the midpoint if left voters are more likely to go against the majority than voters on the right, and vice-versa for proposals at the right end, The proportional reduction of error (PRE) for these proposals is zero. For proposals with interior midpoints the average PRE (not to be confused with the aggregate proportion in error defined above) is 0.488. The non-informative proposals drag the average PRE for all proposals down to 0.327.

The distribution of midpoints varies by proposal type. The mid-points for the social proposals have a bi-modal distribution, with some on the far left and another big group just left of the center. The mid-points for the Governance and Compensation proposals tend to be more concentrated on the far left of the distribution, while ones of the Financial and Investment Policy are concentrated to the right and center-right. The modal interior financial proposals cut between BlackRock and Management; the modal interior social proposals cut between ISS and Glass Lewis; the modal interior management proposals cut between highly left investors and everyone else.

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Figure 5: Panel A. Distribution of Midpoints
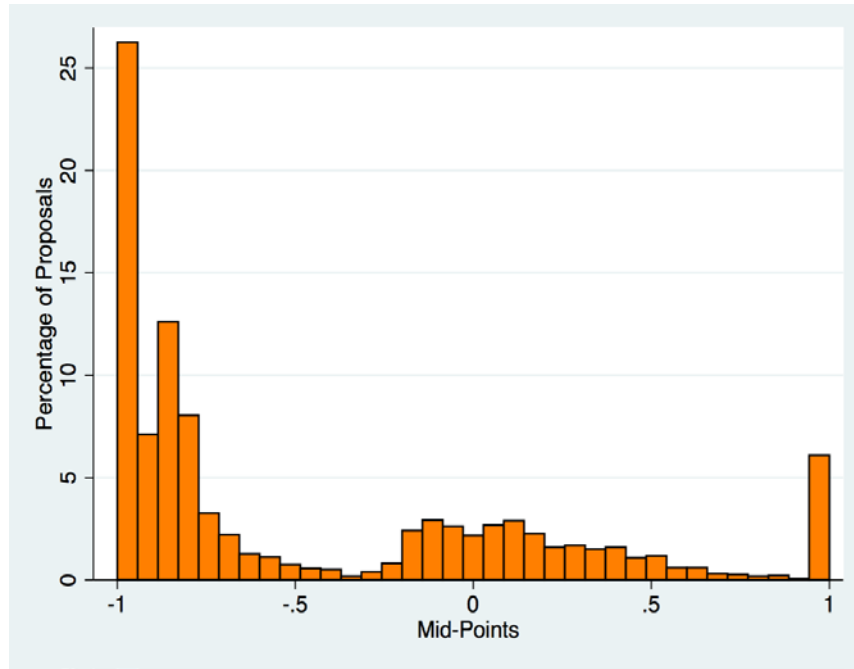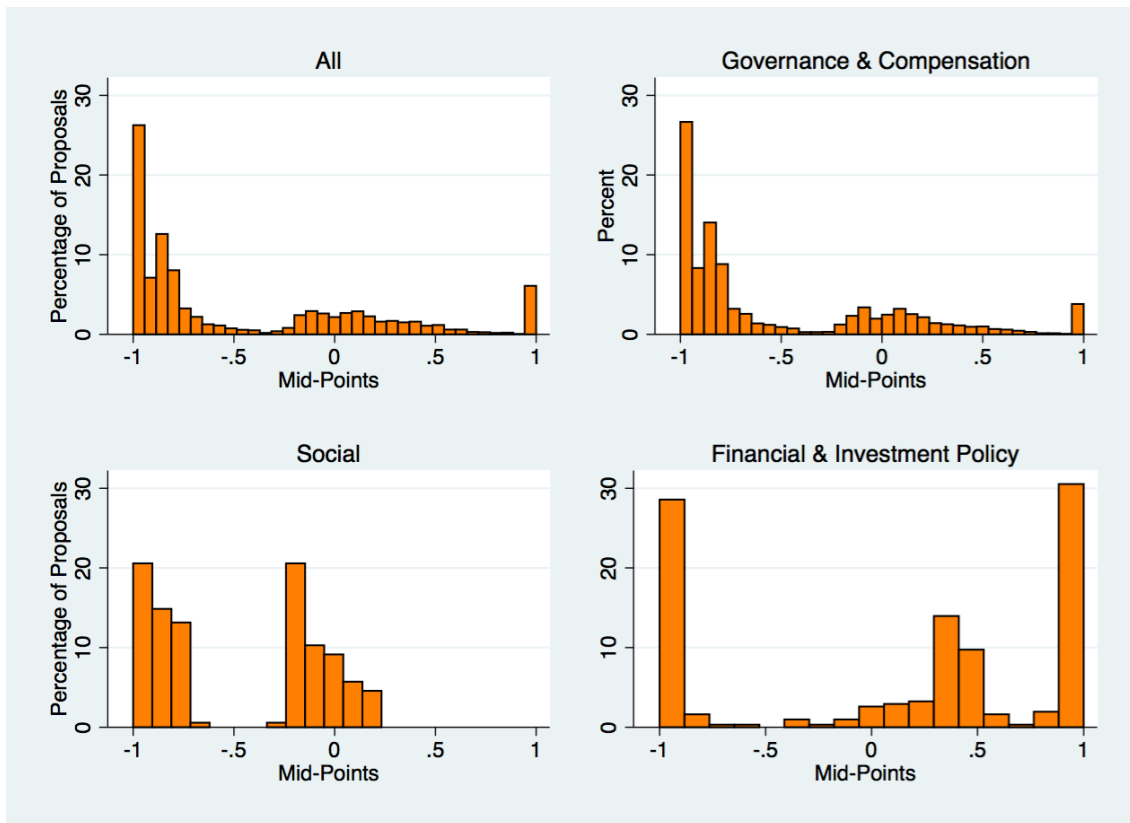

Figure 5: Panel B. Distribution of Midpoints by Proposal Type

Substantive Issues Dividing Institutional Investors

The final step in our analysis was to explore what the substantive issues were in the proposals that define the left-right dimension.

Proposals with High Classification

We first searched for proposals that had estimated midpoints between -0.9 and -0.4 that were perfectly classified and had at least 80 voters. These proposals would have always opposed the leftmost voters to ISS recommendations and a fortiori to Management recommendations. There were 30 such proposals. Interestingly, every such proposal was an "Advisory Vote to Ratify Named Executive Officers' Compensations". These are all "Say-on-Pay" votes that became mandatory with the Dodd-Frank Act. Those voting against these proposals were on the left. Their opposition may, we conjecture, incorporate considerations of inequality that blend with their votes on "social" proposals.

We next looked at midpoints between ISS and Glass Lewis. Between -0.2 and 0 we found no perfectly classified votes with at least 80 voters. We found 7 proposals that classified at 0.88 or better. One of these was a management proposal on executive compensation at LabCorp. It proved more divisive than the 30 proposals with midpoints further to the left. Of the remaining proposals, five were proposals sponsored by the AFL-CIO, one by the New York City Comptroller, and one by a private individual. They dealt with a variety of topics including stock retention and political contributions.

Moving to midpoints further to the right, we found 7 proposals with midpoints between 0.5 and 0.7 that classified at better than 0.97 with at least 80 voters. These proposals should have divided BlackRock from the Management recommendation. These proposals all involved corporate governance issues. Five were to declassify the Board of Directors. A sixth was to require a majority vote for election to the board, and a seventh to reduce the supermajority vote requirement. CalPERS, the Illinois Pension Board, and one private individual each sponsored one proposal. ISS did not list a sponsor for the other four.

Finally, there were only five votes with midpoints between 0.89 and 0.99, a range between Management and the investors constrained at the right end of the dimension. They had only between 10 and 80 voters. They classified poorly, between 78 percent and 87 percent.

Proposals by Agenda Type

Another way of describing institutional investors' ideological differences is to see how they voted on the different types of issues up for a vote.

Social

There were 20 environmental proposals that classified at better than 0.95 and had at least 80 voters. The midpoints of these proposals fell between -1 and -0.72. That is, they split the left from the majority of investors and from ISS recommendations. Similarly, 26 political proposals that met the same criteria also split toward the left, with midpoints ranging from -1 to -0.17. The four proposals we coded as human rights and that met the criteria had midpoints ranging from -1 to -.74. On the whole, social proposals divided, not surprisingly, at the left end of the continuum.

Corporate

The four most common categories of non-social proposals were compensation (2,551 proposals), governance (284), and capital (127). The respective numbers for proposals with over 80 voters and classifications above 0.95 were 401, 30, and 8.

Midpoints for this set of compensation and capital proposals were over the full -1, +1 range. For governance, they were between 0.36 and 1, indicating that ISS and Glass Lewis went against Management on governance issues that attracted substantial voting.

5 Conclusion

How do institutional investors vote? What is their ideology? In this paper we have applied the standard spatial model in political science to analyze institutional shareholder voting. We found that institutional investors' ideologies can be represented along a left-right spectrum just like legislators' ideologies. To be sure, there are important differences between the corporate governance settings and legislatures. The way proposals come to a vote is different, the effect of passing a shareholder proposal is different, the composition of institutional investors varies from firm to firm and over time. Yet, we have found that the W-NOMINATE scaling method and the spatial representation of investor ideal points succeeds.

We have found that a single dimension encompasses voting on a variety of issues, just as the main dimension in Congressional voting encompasses voting on taxes, reproductive rights, gun control, and other issues. The left on our dimension is distinguished not just by its votes on "Social" proposals but also by being a minority on many "Say-to-Pay" proposals on executive compensation. Even though compensation proposals are three-fourths of our data, other proposals map nicely onto the dimension. The ideological tenor of our results potentially goes against other views of investor heterogeneity, such as risk preferences.

Our results differ somewhat from the literature reviewed above in that we do not find that large institutions vote with management. True, Vanguard and BlackRock do not follow ISS and are closer to management, but there are 32 investors, mostly small, to the right of both. And other large investors, such as Fidelity, are to the left.

The interpretation of the dimension we found is open to discussion, much as is the meaning of liberal and conservative in politics. The sorting on "Say-to-Pay" may reflect different beliefs about how much executive compensation contributes to shareholder returns. On the other hand, there could be agreement about what compensation maximizes shareholder returns but that the left is open to lowering shareholder returns in ways that promote environmental and other social objectives.

As encouraging as our results are, the analysis we have conducted here is in many ways exploratory, and many open questions remain. We have only analyzed the proxy votes for fiscal year 2012. We have excluded director elections. In future work we plan to extend the analysis to a multi-year voting sample and to include director elections. This will allow us, in particular, to explore how stable the ideological differences of institutional investors are. Another direction we plan to pursue is to increase the dimensionality of the spatial model and to determine by how much classification is improved by introducing more dimensions along which investors' ideologies can differ. We also plan to explore how the estimated ideal points are reflected in the portfolio composition choices of institutional investors.

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