# Ties that bind: how business connections affect mutual fund activism

# Ties that Bind: How Business Connections Affect Mutual Fund Activism

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**ABSTRACT**

We investigate whether business ties with portfolio firms influence mutual funds' proxy voting using a comprehensive data set spanning 2003 to 2011. In contrast to prior literature, we find that business ties significantly influence pro-management voting at the level of individual pairs of fund families and firms after controlling for ISS recommendations and holdings. The association is significant only for shareholder-sponsored proposals and stronger for those that pass or fail by relatively narrow margins. Our findings are consistent with a demand-driven model of biased voting in which company managers use existing business ties with funds to influence how they vote.

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Mutual funds are of great importance to both retail investors and corporations. They are the main investment vehicle for retail investors, not least via their role in managing pension portfolios through 401(K) plans. They are also highly relevant to corporate governance as they collectively own 24% of U.S. corporate equity[1] and large fund families hold blocks of 10% or more in dozens of large U.S. corporations (Davis and Yoo (2003)). Since the passage of shareholder proposals raises firm value (Cuñat, Gine, and Guadalupe (2012)), if mutual funds vote their proxies in a manner that enhances the value of portfolio firms,[2] they would not only play a beneficial role in corporate governance, but also enrich their vast base of retail clients. The proxy voting behavior of mutual funds is thus of considerable importance.

However, mutual funds often have lucrative business relationships with portfolio firms arising from the management of the same 401(K) plans that enhance their importance to retail investors. On average, earnings from 401(K)-related business equal 14% of the revenues that mutual fund families earn from their equity funds, and such income can represent as much as 25% of fund family revenues (Davis and Kim (2007)). Since the choice of fiduciaries for 401(K) plans lies in the hands of firm executives who may be opposed to shareholder activism, there has been widespread suspicion that mutual funds may vote their proxies in a conflicted manner. For example, according to the SEC:[3]

> "...in some situations the interests of a mutual fund's shareholders may conflict with those of its investment adviser with respect to proxy voting. This may occur, for example, when a fund's adviser also manages... the retirement plan assets of a company whose securities are held by the fund. In these situations, a fund's adviser may have an incentive to support management recommendations to further its business interests."

In response to such concerns, in 2003 the SEC adopted Rule 30b1-4 of the Investment Com-

panies Act, which requires mutual funds to annually disclose their votes cast for proposals arising in portfolio companies. As a result, it is now possible to investigate the extent to which business ties with portfolio firms affect mutual fund proxy voting. We examine this relationship over the 2003 to 2011 period.

We show that mutual funds' voting is significantly influenced by their business ties with portfolio firms. Since we control for unobserved heterogeneity using a rich set of fixed effects, our result holds for given pairs of fund families and firms, even at the level of individual proposals, and after controlling for Institutional Shareholder Services' (ISS) recommendations and holdings. Our finding stands in sharp contrast to prior literature (Davis and Kim (2007), Ashraf, Jayaraman, and Ryan (2012)) which finds that business ties with portfolio firms do not influence voting after controlling for fund family heterogeneity. We discuss the connection to these papers in greater detail below.

Proposals can be sponsored either by management (insiders) or by shareholders (outsiders). In the full sample, we find a robust incremental effect of business ties on pro-management voting for shareholder proposals relative to management proposals. When we split the sample by sponsorship, we find that the association between ties and voting only obtains for shareholder proposals. Viewed in light of canonical models of corporate governance, which hold that outsiders attempt to mitigate rent extraction by insiders, the possibility that management may use business ties to obstruct shareholder activism is of particular interest.

We develop a simple model that provides a theoretical foundation for the incremental effect identified above. In our model, shareholder and management proposals are distinguished by the degree to which company managers have control: managers can withdraw or modify problematic self-sponsored proposals (Listokin (2008)) but have less control over the specifics of shareholder proposals, which typically arise as the result of a breakdown in soft

engagement between managers and shareholders (Gantchev (2013), McCahery, Sautner, and Starks (2016)). Managers receive information on the anticipated support for each proposal. If a proposal is formally introduced, they have the option to try to influence the voting of institutional blockholders. Managers are best able to influence those institutions with which they have ongoing business relationships, but exerting influence is costly because it requires effort and credible threats of future punishment. Accordingly, managers exert influence only when doing so is worth paying this cost. The model predicts that managers influence voting more frequently for shareholder proposals than for management proposals, thus providing an explanation for the empirical finding above: the flexibility and control that managers have over self-sponsored proposals raises the bar for paying the cost of exerting influence.

Our model also sheds further light on the relationship between proxy voting and business ties. It predicts that managers are more likely to influence voting, ex ante, for shareholder proposals that pass or fail narrowly (i.e., that are contested), ex post. Since managers receive information on anticipated support, the fact that these proposals pass or fail narrowly ex post implies that managers can predict ex ante that these proposals are "in play." It is for precisely these proposals that it is worth paying the cost of exerting influence. We empirically examine the incremental effect of business ties on proxy voting on shareholder proposals that pass or fail by relatively narrow margins and find strong support for the model's prediction. The effect is also economically relevant: in our most saturated specification, we find that a shift from no business ties to some business ties leads to an increase in pro-management voting of over 12% for proposals that pass or fail by less than 20%.

Our analysis of contested proposals is of independent interest because it allows us to pinpoint the conflict of interest confronting mutual fund families with business ties. While individual fund families cannot be pivotal for proposals that pass or fail by wide margins,

the same may not be true for contested proposals. Further, the passage of a proposal is likely to enhance the market value of the firm on the day of the vote precisely when the proposal is contested, because in such cases the voting outcome may not be fully anticipated by the market (Core, Guay, and Rusticus (2006)). Thus, it is for contested proposals that the trade-off between value enhancement and business ties is salient: by voting for the proposal, the fund-family may be instrumental in raising firm (and, in turn, portfolio) value but displease management and be exposed to a reduction in business ties. The fact that we find an incremental effect of proposal contestedness on biased voting suggests that mutual fund families choose business ties over portfolio value when it matters.

Our model highlights the demand side of biased voting: managers wary of losing a vote use business ties as leverage to obtain support from institutional investors. But could the desirability of revenues from future business ties lead funds without business ties to voluntarily vote in a more pro-management manner? To investigate this question, we first show that pension management contracts are typically awarded to the largest fund families. This implies that small funds without business ties should be *less* inclined to voluntarily vote pro-management than large funds without business ties: even conditional on being pro-management, their chances of being rewarded with business ties is smaller than for large funds. We find that there is no such difference. Instead, conditional on the existence of business ties, larger fund families vote significantly more pro-management than smaller fund families. These results support the primacy of a demand-driven mechanism for biased proxy voting. To investigate further, we next run Granger causality tests and find that lagged business ties are significantly associated with future pro-management voting, but not vice versa. Clearly, our regressions cannot formally establish the direction of causality. At the broadest level, we are agnostic about the precise direction of causality for biased voting

within sponsor-provider relationships—in our view, both causal directions imply qualitatively similar negative economic consequences.

As noted above, our results stand in sharp contrast to prior literature. Davis and Kim (2007) use the first available year of data on mutual fund proxy votes (June 2003 to July 2004) and find that, for a given proposal, fund voting is not influenced by business ties although fund families with higher levels of business ties support management to a greater extent in all portfolio firms irrespective of business ties. Their analysis is restricted to six shareholder proposals, selected on the basis of the Bebchuk, Cohen, and Ferrell (2009) entrenchment index and the frequency of occurrence in their data set. In a recent study, Ashraf, Jayaraman, and Ryan (2012) use data on executive compensation proposals between January 2004 and June 2006 and confirm the findings of Davis and Kim (2007). In particular, they find that business ties do not influence voting at the level of individual proposals after controlling for fund family heterogeneity. The contrast between our conclusion and that of these earlier papers should be viewed in the context of several differences. First, we work with a much larger data set, combining over a nine-year period four databases containing (i) the votes cast by each mutual fund on each proposal of each portfolio firm, (ii) voting outcomes, (iii) business relationships between firms and funds, and (iv) fund family holdings. Second, while prior literature focuses on particular proposals, we consider a wide swathe of proposals.[4] Finally, the richness of our data set allows us to aggressively control for unobserved heterogeneity using a variety of fixed effects, which is not feasible in prior work due to data limitations.

Our paper also relates to a broader literature. Hamdani and Yafeh (2012) analyse Israeli data to study the governance role of institutional investors in settings in which ownership is concentrated and business groups are common. They find that institutions owned by a public

company are more likely to support company-sponsored proposals. Other papers examining business ties and proxy voting include Cremers and Romano (2011), who consider the effect of mandatory disclosure on mutual fund voting, and Rothberg and Lilien (2006). Our findings also complement papers that show how business ties affect aspects of mutual fund behavior other than proxy voting. For instance, Cohen and Schmidt (2009) show that trustee fund families overweight holdings of sponsor firms and do not sell in response to negative shocks, while Duan, Hotchkiss, and Jiao (2011) argue that business ties provide information to mutual funds and influence their trading profits in related stocks. Our paper also bears a connection to Matvos and Ostrovsky (2010), who analyze strategic considerations in mutual fund voting abstracting from business ties. At the most general level, our paper relates to the role of blockholders in corporate governance (see Edmans (2013) for a survey) and the emerging literature on how the incentives of institutional blockholders affect governance (e.g., Dasgupta and Piacentino (2015)).

The remainder of the paper is organized as follows. Section I describes the data and sample construction while Section II offers a first look at business ties and voting. Section III presents a model that is the basis for further hypothesis development. Sections IV and V test the model's main hypotheses. In Section VI we consider the possibility of management friendliness without business ties while Section VII discusses causality versus correlation. Section VIII concludes.

# I. Data

Since 2003 the SEC has required all mutual funds registered in the U.S. to report their proxy votes in all shareholder meetings of portfolio companies using Form N-PX. We obtain proxy voting data from the ISS Voting Analytics database. The full database contains votes

cast by mutual funds on all proposals for every Russell 3000 company from 2003 to 2011. Mutual funds are required to submit N-PX forms annually by August 31. The reported votes cover the period from July 1 of the previous year to June 30 of the current year. For each proposal, funds report the firm, the meeting date, a short description of the proposal (e.g., declassify the board of directors, reduce supermajority voting requirement, etc.), the sponsor of the proposal (management or shareholder), management's recommendation, the ISS recommendation, and the fund's vote. We supplement our voting data with ISS Voting Results, which includes the votes cast in favor, the shareholder base for the voting result, and the voting result for each proposal.

We hand-collect data on 401(k) retirement plans sponsored by publicly traded firms from Forms 5500 filed with the Department of Labor (DOL). These data provide us with detailed information on any business relationship between a firm and a fund pertaining to the firm's pension plan (e.g., investment advisor, trustee, investment manager, etc). Any firm that sponsors an employee benefit plan that qualifies under ERISA Sections 104 or 4065 must file Form 5500 with the DOL. Benefits provided by a firm's plan include pension and welfare benefits.[5]

Finally, we merge the mutual fund voting data from ISS Voting Analytics/Voting Results with the Form 5500 data and mutual fund family holdings data obtained from SEC Form 13F filings. Due to the lack of a unique common mutual fund (or family) identifier across the three databases, we merge the three data sets using a combination of a name-matching algorithm and proprietary fund family identifiers. In our final data set we aggregate votes at the fund family level and drop any individual fund level information, thus keeping only one fund family per proposal observation. Table I here

Table I summarizes the sample characteristics. Panel A shows that our merged data set

contains 1,131,240 votes cast by individual funds which results in 171,473 aggregated votes cast by the 29 largest fund families that voted in 17,618 proposals at the shareholder meetings of 3,121 firms from 2003 to 2011. In Panel B, we can see that of the sample proposals, 79% are sponsored by management and the rest are sponsored by shareholders.[6] Panel C shows that the proportion of funds within the average family that vote with management's recommendation on the average proposal in our sample is 77.12%. The corresponding median is 100% implying that most funds in a fund family vote in unison. Around 94% of our observations on the proportion of funds voting with management on a given proposal are either zero or a hundred.

Table I, Panel D reports compensation statistics. The DOL's Form 5500 has several components. While all firms sponsoring ERISA-qualifying employee benefit plans file Form 5500 Schedule A, they also file Schedules C or D if their plans have 100 or more participants in which the service provider was paid from the plan's assets and fees exceed $5,000. Schedule C reports both direct and indirect compensation, which are defined as plan service provider salary and fees, respectively. Schedule D reports plan assets under management. We define total compensation received by fund families for services rendered in relation to 401(k) plans as the sum of direct and indirect compensation and 0.5% of assets under management.[7] In our sample, 95.9% of firm×family×year triples have no compensation data. For these observations we set total compensation to zero. In the rest of our sample, the average (median) total compensation is $2.25 million ($220,000). To ensure that the high number of zero-compensation observations is not a result of matching error, we manually inspect the data for firms that, in addition to reporting Schedule A, report Schedule C or D. We find that the firms that file Schedule C or D also report strictly positive total compensation values. This suggests that the zero-compensation values come from firms filing *only* Schedule A, and

thus derive from firm×family×year triples characterized by small or nonexistent business ties.

Panel E of Table I reports that the average (median) dollar amount of fund family holdings in portfolio firms is $101.07 million ($11.5 million). In Panel F, we find that the average (median) fraction of equity fund revenue for fund families attributable to pensions-related compensation is 13.94% (4.17%). Table II here

Table II summarizes the nature of business relationships between fund families and firms in Panel A, management and ISS recommendations as well as fund voting choices in Panel B, and voting results in Panel C. The five most common types of business relationship are contract administrator (average total compensation $5.58 million), record keeping ($2.01 million), investment management ($9.51 million), and trustee and investment advisory ($22.4 million).

Panel B shows that management recommends in favor of 78.64% of all proposals, 99.86% of management-sponsored proposals ("withholding" in the remaining 0.14%), and 0.72% of shareholder-sponsored proposals. ISS recommends in favor of 80.13% of all proposals, 84.76% of management proposals, and 63.11% of shareholder proposals. The ISS recommendation coincides with management's in 74.61% of all proposals, 84.73% of management proposals, and 37.44% of shareholder proposals. Fund families vote with management's recommendation in 77.12% of all proposals, 82.94% of management proposals, and 64.09% of shareholder proposals, while they vote with the ISS recommendation in 82.16% of all proposals, 87.20% of management proposals, and 70.87% of shareholder proposals.

*Proposals, Proposal Categories, and Proposal Types:* Before proceeding to the main analysis, we introduce some useful terminology here. Given that our focus is on voting, a key object of interest is a proposal. In our formal analysis, we denote proposals by $p$. Each $p$ is a unique identifier for a proposal that arises in a shareholder meeting of firm $i$ at time $t$.[8] It

is also useful to attach two further descriptors to proposals.

First, each proposal can be described according to the nature of (ex ante) sponsorship or (ex post) support as belonging to some *category*. There are two categories by sponsorship: management proposals and shareholder proposals. In Section V and thereafter, we further refine the space of categories to include labels related to ex post support (contested or uncontested).

Second, each proposal can be characterized in terms of its function, which we refer to as the proposal's *type*. The ISS provides a list of 257 proposal types by function (e.g., "Approve/Amend Executive Incentive Bonus (M0535)" or "Declassify the Board of Directors (S0201)"). We refer to the ISS functional classification for each proposal as its "Proposal Type ISS," and label it in our formal analysis by $z_{ISS}$. Unlike proposals, which are indexed by firm and time, proposal categories and types are *not* firm and time specific. To illustrate, consider the following example. Proposal $p = 6471494$ in the firm Hilton Hotels Corporation, which was voted on at a meeeting held on May 26, 2005 (i.e., $t = 2005$), has proposal type ISS $z_{ISS} =$ S0212 (i.e., "Require a Majority Vote for the Election of Directors") and, as a shareholder-sponsored proposal, belongs to the category "shareholder proposals".[9]

# II. Business Ties and Proxy Voting: A First Look

We begin our empirical analysis as follows. For each fund family $f$ voting in a shareholder meeting of portfolio firm $i$ on proposal $p$ at time $t$, we estimate the following specification:

$$\begin{aligned} VoteswithManagement_{f,i,p,t} = \quad & \alpha + \beta_1 BusinessTiesMeasure_{f,i,t} + \\ & + \beta_2 LogHoldings_{f,i,t} + \beta_3 ISSRecommendation_{i,p,t} + \\ & + \gamma_i \times \mu_f + \underbrace{\begin{cases} \cdot & (1a) \\ \pi_{z_{ISS}} & (1b) \\ \pi_p & (1c) \end{cases}}_{\text{Fixed Effects Terms}} + \varepsilon_{f,i,p,t}. \end{aligned}$$

Our main dependent variable is the proportion of mutual funds $j$ belonging to fund family $f$ that voted in line with management's recommendation on proposal $p$ put forward at the date $t$ shareholder meeting of the fund family's portfolio firm $i$. This variable is defined as

$$VoteswithManagement_{f,i,p,t} = \frac{\sum_{j=1}^{J} \left( FundvotewithManagement_{j,f,i,p,t} \right)}{J} \times 100,$$

where $FundvotewithManagement_{j,f,i,p,t} = 1$ if fund $j$ from family $f$ votes in line with the management recommendation on proposal $p$ at the shareholder meeting of portfolio firm $i$ at time $t$ and $J$ is the total number of funds per family $f$ voting on that proposal.

Throughout our analysis we use two key measures of business ties. The first is $LogTotal-Compensation_{f,i,t}$, which is a continuous measure of the magnitude of business ties as obtained from the Form 5500 filings. These data are obtained at the individual fund level from the Form 5500 filings and then aggregated to produce a family-level measure of total compensation. Our second measure is the dummy variable $BTDummy_{f,i,t}$, which is equal to

one if total compensation is positive and zero otherwise.

We control for two potentially important effects. Cohen and Schmidt (2009) establish that there is a positive correlation between the compensation received by mutual fund families and their stock holdings in portfolio firms. To control for the size of mutual fund family holdings in their portfolio firms and for the positive relationship between total compensation received and the size of fund family holdings, we include the (natural) logarithm of holdings in our regression, $LogHoldings_{f,i,t}$. Our other control, $ISSRecommendation_{i,p,t}$, is a dummy variable that takes the value of one if the voting recommendation of ISS is in favor of management. Matvos and Ostrovsky (2010) show that including the ISS recommendation may control for a potentially important part of a mutual fund's information about the quality and type of the proposal being voted on.

The richness of our panel data allows us to control for unobserved heterogeneity along firm, fund family, and time dimensions using a variety of fixed effects. All three of our specifications have firm×family ($\gamma_i \times \mu_f$) fixed effects. Specification (1a) has no additional fixed effects, so that $\beta_1$ measures the effect of business ties for a given firm×family pair on voting across all proposals. Specification (1b) adds Proposal Type ISS fixed effects ($\pi_{z_{ISS}}$), so that $\beta_1$ measures the effect of business ties for a given firm×family pair on voting across proposals of the same Proposal Type ISS (e.g., S0212).[10] Specification (1c) instead adds proposal fixed effects, so that $\beta_1$ measures the effect of business ties for a given firm×family pair on voting on a particular proposal (e.g., 6471494).

The results are reported in Table III. Standard errors are adjusted for heteroskedasticity and clustered along the family×year dimension. Across our specifications, business ties significantly affect the degree of pro-management voting by mutual fund families on proxy proposals in portfolio firms. For example, our most saturated specification, reported in

Table III here

columns 3 and 6, produces a coefficient of 0.212 significant at the 5% level for the continuous measure of business ties and a coefficient of 2.214 significant at the 10% level for the discrete measure. Further, the coefficient on $LogHoldings_{f,i,t}$ is positive and significant in each specification, suggesting a positive relationship between the size of fund family holdings and voting, that is due in part to the positive association between holdings and compensation (Cohen and Schmidt (2009)). As expected, the coefficient on $ISSRecommendation_{i,p,t}$ is positive and significant as this is one of the main determinants of how fund families vote. However, our results show that business ties affect voting above and beyond that recommendation.[11]

The results of Davis and Kim (2007) and Ashraf, Jayaraman, and Ryan (2012) suggest that, controlling for heterogeneity across fund families, mutual fund proxy voting does *not* depend on business ties. This finding is in sharp contrast to our results since all our specifications include—at a minimum—fund family fixed effects. Hence, the issue is of a different nature than previously believed. To facilitate comparison, we replicate our analysis for the proposals used by Davis and Kim (2007) and Ashraf, Jayaraman, and Ryan (2012). This material can be found in Internet Appendix Section I.A.

Our results so far mask some significant heterogeneity. At the broadest level, proposals may be sponsored either by insiders (management) or by outsiders (shareholders), generating two mutually exclusive and exhaustive categories. When we split our analysis into these two categories, we find stark differences between the two. The results are reported in Table IV. For shareholder proposals, in our most saturated specification, namely, Specification (1c), the coefficient for the continuous measure is 0.353 (significant at the 5% level) and that for the discrete measure is 3.917 (significant at the 10% level). The corresponding coefficients for management proposals are -0.067 ( insignificant) and -0.739 (insignificant).[12] What drives such heterogeneity between management and shareholder proposals? In the next section,

Table IV here

we develop a simple model to examine this question. We then use the model to develop hypotheses for further empirical investigation.[13]

While our dependent variable is not binary, its realized distribution is bimodal. Thus, for completeness, we reestimate the main specifications above using conditional logit models. This analysis is reported in Internet Appendix Table IA.II and demonstrates the robustness of our key findings.[14]

# III. Shareholder and Management Proposals: Theory

Proposals for corporate change may affect the payoffs of both management and shareholders. To focus on actions taken by management to influence voting, we index proposals by their incremental effect on management payoffs.[15] In particular, we index proposals by the variable $v$, which is distributed on $[-V, V]$ via a continuous CDF $H$ with associated pdf $h$ that (for simplicity) is symmetric around zero. Proposals may be sponsored by managers or shareholders. Management-sponsored proposals are characterized by $v > 0$. Motivated by standard agency models of corporate governance (e.g., Holmstrom and Tirole (1997)) we assume that shareholder-sponsored proposals are characterized by $v < 0$.[16]

Once a proposal has been formulated, managers are able estimate its anticipated support among shareholders by canvassing them (Listokin (2008)). We model the anticipated support for a proposal by the random variable $S_A \in [0, 1]$, with CDF $G$ and associated pdf $g$. The variable $S_A$ is the proportion of voting shares, normalized by the required shareholder base for that proposal, that are expected to support the proposal. Since this initial information is noisy, the realized support is given by $S_R = S_A + \epsilon$, where $\epsilon$ is distributed on $[-\delta, \delta]$ according to some symmetric unimodal density $f$ with $f(-\delta) = f(\delta) = 0$.[17] The parameter $\delta > 0$ measures canvassing noise.[18] We assume that $\delta < \frac{1}{2}$, that is, canvassing is not radically

inaccurate. We then have that, *without loss of generality*, any proposal is (i) a "sure thing," that is, $S_A - \delta \geq \frac{1}{2}$, (ii) a "lost cause," that is, $S_A + \delta < \frac{1}{2}$, or (iii) "contestable," that is, $S_A - \delta < \frac{1}{2} \leq S_A + \delta$. To avoid a plethora of qualitatively similar cases, we make the following assumption.

ASSUMPTION 1: *Contestable proposals are characterized by* $S_A = \frac{1}{2}$.

Intuitively, Assumption 1 implies that managers treat all contestable proposals in the same way.[19] While this simplifies our analysis, it does not change the qualitative results.

Once a formal proposal has been introduced, managers may exert *influence* on blockholders with whom they have business connections to vote in line with the management recommendation. Business connections foster familiarity and thus provide a basis for credible communication between managers and institutional blockholders, enabling managers to meaningfully threaten to punish (or promise to reward) blockholders in the future. We therefore model the emergence of pro-management voting as a management-driven process. In Sections VI and VII we present evidence consistent with this view. The exertion of influence changes the voting of blockholders with business ties in favor of the management recommendation and results in a change in the distribution of the realized support. Managers can influence for ($\rho = 1$) or against ($\rho = -1$), generating (transformed) realized support:

$$\widehat{S}_R = S_A + \widehat{\epsilon},$$

$$\text{where} \begin{cases} \widehat{\epsilon} \text{ is distributed on } [0, \delta] \text{ according to density } \widehat{f} & \text{if } \rho = 1 \\ \widehat{\epsilon} \text{ is distributed on } [-\delta, 0] \text{ according to density } \widehat{f} & \text{if } \rho = -1 \end{cases},$$

and $\widehat{f}$ is symmetric unimodal and satisfies $\widehat{f}(-\delta) = \widehat{f}(0) = \widehat{f}(\delta) = 0$. In words, influence

shifts support in favor of management in a first-order stochastic dominance sense. Influence is costly for management because it requires effort and credible threats of future punishment. The cost, $k_p(S_A)$, may depend on anticipated support.[20] We assume that $k_p(S_A) > 0$ for all $S_A$. Thus, $k_p\left(\frac{1}{2}\right) > 0$ represents the cost of exerting influence on contestable proposals. Finally, management loses face when a vote goes against its recommendation, in which case it suffers cost $k_d$, some (unmodeled) reputational loss from defeat.

*Management-sponsored proposals:* For management proposals, we denote the noise parameter by $\delta^M$. Managers have latitude on self-sponsored proposals. Upon learning $S_A$ they can decide whether to present or withdraw the proposal. Even if they choose to present the proposal, they can modify it such that it is more palatable to investors. Modification is costly, however, particularly for proposals that are highly opposed and lucrative to management (i.e., extract the highest rents). We assume that it is impossible to recast lost causes (which can never be made to "look good" to shareholders) and that the cost of recasting a contestable proposal into a sure thing is proportionate to the rents that management extracts via the proposal, that is, a contestable proposal with value $v$ can be recast at cost $mv$ for $m \in (0, 1/2)$ into a sure thing that pays managers $(1-m)v$.

LEMMA 1: *Managers exert positive influence ($\rho = 1$) if and only if the proposal is contestable and $v > \frac{k_p(\frac{1}{2})}{m}$.*

All proofs are in the Appendix. Managers do not exert influence on sure things (unnecessary) or on lost causes (pointless). On contestable proposals, managers can modify the proposal (and convert it into a sure thing) or present an unmodified proposal. Valuable proposals are more costly to modify. For these proposals, managers find it optimal to forgo modification and exert influence to win instead. In line with this view, Listokin (2008) finds that of those rare management proposals that are contested, the majority are executive

compensation proposals and thus of direct value to managers.

*Shareholder sponsored proposals:* We envisage a two-stage process in the formation of a shareholder proposal. In the first stage, a shareholder may propose some change. Managers can then accept and implement the shareholder's suggestion (in which case a shareholder proposal is unnecessary) or reject it, in which case the shareholder brings the proposal forward. Thus the introduction of a shareholder proposal is usually a consequence of a failure of "behind the scenes" activism as documented by Karpoff (2001), Gantchev (2013), and McCahery, Sautner, and Starks (2016) among others. In our sample, management recommends in favor of only 0.72% of shareholder proposals (see Table II, Panel B). Given a shareholder proposal, managers obtain information on anticipated support. The noise in predicting support is given by $\delta^S \in \left[\delta^M, \frac{1}{2}\right)$. It is natural to assume that support is (weakly) less predictable for shareholder proposals than for management proposals.[21] Further, unlike self-sponsored proposals, managers do not have the option to withdraw or modify the proposal—their only choice is whether to exert influence to avoid defeat.

LEMMA 2: *Managers exert negative influence ($\rho = -1$) if and only if the proposal is contestable and $v < -\left(2k_p(\frac{1}{2}) - k_d\right)$.*

Exerting influence is only worthwhile for contestable proposals and then only if the cost to management of the proposal passing is high. Lemmas 1 and 2 jointly imply the following result.

PROPOSITION 1: *Managers choose to exert influence with higher probability for shareholder proposals than for management proposals.*

Since managers can avoid exerting influence by withdrawing or modifying their own proposals, the bar for paying the cost of influence is high. For shareholder proposals, however,

influence is management's only tool once a proposal is introduced. The bar for exerting influence is lower. Further, when support for shareholder proposals is less predictable than for management proposals ($\delta^S \geq \delta^M$), the former are more likely to be contestable than the latter. These ingredients (withdrawal, modification, and relative predictability) are mutually reinforcing, but *individually sufficient* for Proposition 1: even if management proposals were not modifiable, shareholder proposals could be withdrawn, or prediction errors were equal, the qualitative result would hold.

Under our management-driven model of influence, business ties influence the proxy voting of blockholders with business ties only when management chooses to exert influence. Proposition 1 implies that the frequency with which blockholders with business ties vote pro-management is higher among shareholder proposals than among management proposals, ceteris paribus.[22] The model therefore delivers the following hypothesis, which also provides a foundation for our findings in Section II.

HYPOTHESIS 1: *The association between business ties and proxy voting should be stronger for shareholder proposals than for management proposals.*

While our initial findings in Section II are consistent with this hypothesis, we provide a more robust and direct examination of this hypothesis in Section IV.

Our framework delivers an additional key implication. Managers exert influence only for contestable proposals, regardless of sponsorship. When combined with Proposition 1, we have that the class of proposals for which managers exert influence with the highest probability are contestable shareholder proposals. While it is difficult to observe ex ante contestability, our model links ex ante contestability and ex post outcomes: contestable proposals pass or fail by no more than the size of prediction noise. This leads to our second hypothesis.

HYPOTHESIS 2: *The association between business ties on proxy voting should be strongest for shareholder proposals that pass or fail by relatively small margins.*

In Section V, we extend the methodology of Section IV to examine this hypothesis.[23]

# IV. Shareholder and Management Proposals: Empirics

To test Hypothesis 1 directly, we use difference-in-difference (d-i-d) specifications:

$$\begin{aligned} VoteswithManagement_{f,i,p,t} = \; & \alpha + \beta_1 BusinessTiesMeasure_{f,i,t} + \beta_2 LogHoldings_{f,i,t} + \\ & + \beta_3 BusinessTiesMeasure_{f,i,t} \times Shareholder_{i,p,t} + \\ & + \beta_4 Shareholder_{i,p,t} + \beta_5 ISSRecommendation_{i,p,t} + \\ & + \underbrace{\gamma_i \times \mu_f \times \delta_t + \begin{cases} \cdot & (2a) \\ \pi_{z_{ISS}} & (2b) \\ \pi_p & (2c) \end{cases}}_{\text{Fixed Effects Terms}} + \varepsilon_{f,i,p,t}. \end{aligned}$$

Our main independent variable is now the interaction between our business ties measures and the dummy variable $Shareholder_{i,p,t}$, which is equal to one if proposal $p$ at firm $i$ at time $t$ is sponsored by a shareholder and zero if it is sponsored by management. The estimate of $\beta_3$ provides us with the differential effect of business ties on voting between shareholder and management proposals. In addition to using our full data set to investigate differences across proposal categories, a key benefit of our d-i-d approach is that it allows us to better control for unobserved heterogeneity. Within this framework, we can saturate the model maximally by including firm×family×year fixed effects ($\gamma_i \times \mu_f \times \delta_t$) in all specifications, which allows

us to focus directly on voting in a given firm×family pair in a given year. This is not feasible in our original model (specifications (1a) to (1c)) because our explanatory variables there ($BusinessTiesMeasure_{f,i,t}$) are defined within the firm×family×year space.[24] We use the same proposal fixed effects as in Section II. The interpretation of the $\beta_3$s in (2a) to (2c) is therefore similar to the $\beta_1$s in (1a) to (1c) except that we now compare across proposal categories. For example, in specification (2c), $\beta_3$ measures the difference in the effect of business ties between shareholder and management proposals for a given firm×family×year triple (e.g., Vanguard with holdings in Hilton Hotels Corporation in 2005) on voting over a particular proposal (e.g., 6471494). Table V here

The results are reported in Table V. The estimate of $\beta_3$ is positive and significant at the 1% level across all specifications and for both measures of business ties, providing robust evidence in favor of Hypothesis 1. The coefficient on $BusinessTiesMeasure_{f,i,t}$ is dropped due to collinearity with our firm×family×year fixed effects and hence is not reported. The coefficient on $LogHoldings_{f,i,t}$ is also insignificant, due to the fact that $LogHoldings_{f,i,t}$ is highly collinear with our fixed effects.[25] Again, the coefficient on *ISSRecommendation* is positive and significant, except in specification (2c), reported in columns 3 and 6, which includes proposal fixed effects. For this specification, a shift from no business ties to some business ties has a differential effect on shareholder proposals relative to management proposals of increasing votes in favor of management by approximately 9%. Given that the unconditional support of fund families for shareholder proposals is 64.09%, this represents an increase in management support of 14%.[26]

# V. Contested Shareholder Proposals

To test Hypothesis 2, we first identify proposals that pass or fail by small margins. The ISS Voting Results database provides us with the votes cast in favor of shareholder proposals and the corresponding shareholder base for determining the outcome (e.g., shares outstanding, votes cast, votes cast minus absentees). Using this information, we calculate at the individual proposal level whether the votes in favor of that proposal were within $50 \pm x\%$ of the corresponding base, for $x = \{10, 20\}$.[27] If this is the case we call the proposal contested at the $x\%$ level, effectively augmenting our set of proposal categories by two new entries, which we refer to as "contested 10%" and "contested 20%."

Prior literature has analysed contested 10% proposals (Listokin (2008)) as well as contested 5% and contested 2% proposals (Cuñat, Gine, and Guadalupe (2012)). Our contestedness levels overlap with this literature, but also broaden them. Tight bandwidths of contestedness are essential for Cuñat, Gine, and Guadalupe (2012) given their regression discontinuity approach. Our focus is different: to test Hypothesis 2, we only need to identify proposals that may appear contestable ex ante to management and thus on which managers may exert effort to influence institutional shareholders. The relevant set of ex post contested proposals therefore relies on the size of the prediction noise parameters $\left\{\delta^M, \delta^S\right\}$. If one or both of these is not too small, somewhat higher bandwidths are justified.

Table I, Panel E shows that contested 20% (10%) proposals constitute 9% (4%) of all proposals and 41% (21%) of shareholder proposals in our sample. Perhaps indicative of the importance of these proposals, in Panel B of Table II we see a stark contrast in the support for contested proposals across management, ISS, and fund families. Management supports almost no contested proposals (0.06% for contested 20% and 0% for contested 10%), ISS supports almost all of them (98.39% for contested 20% and 99.36% for contested 10%), and

fund families are ambivalent (44.28% for contested 20% and 41.22% for contested 10%). Not reported in the table is that the failure rate is 71% for contested 20% proposals and 66% for contested 10% proposals.

Using the methodology of Section IV, we test Hypothesis 2 via an approach similar to that in (2a) to (2c) in which our main dependent variable is now the interaction between our measure of business ties and a dummy variable that is equal to one if proposal $p$ at firm $i$ at time $t$ is a contested proposal in the relevant category and zero if it is sponsored by management. The results are reported in Table VI for contested 20% proposals and in Table VII for contested 10%. The effects are positive and significant at the 1% level in all tables and across all specifications. In specification (2c), reported in columns 3 and 6, for contested 20% proposals, the coefficient for the continuous measure is 0.970 and that for the discrete measure is 12.528. The latter number indicates that a move from no business ties to some business ties leads to an increase (relative to management proposals) in pro-management voting of over 12% for proposals that pass or fail by less than 20%. Recalling that the unconditional support for management in contested 20% proposals is 44.28%, it is plausible that a change of this magnitude can affect the final voting outcome.

Tables VI–VII here

There is some latitude in how to test Hypothesis 2, which also predicts that the association between business ties on proxy voting for contested shareholder proposals should be stronger than for noncontested shareholder proposals. While the approach above has the advantage of maintaining a constant control group throughout the paper, for completeness we also reexamine Hypothesis 2 using shareholder proposals as the control group. To do so, we restrict the sample to shareholder proposals and replace our previous interaction term by the interaction between our business ties measure and a dummy variable that is equal to one if proposal $p$ at firm $i$ at time $t$ is a contested proposal at the relevant bandwidth and

zero if it is not. This approach significantly reduces our sample size, but nevertheless we obtain significant results for contested 20% proposals. The results are reported in Internet Appendix Table IV.[28]

Analyzing contested proposals allows us to focus on the conflict of interest confronting mutual fund managers in the context of business ties and proxy voting. For a given fund family, the probability of being pivotal in voting is higher for proposals that do not pass or fail by a wide margin. Thus, for contested proposals, fund families may be aware that they can influence the outcome. Further, the passage of a shareholder proposal can enhance the value of a firm on the day of the vote, and in turn the value of the mutual fund's portfolio, only when the voting outcome is not fully anticipated by the market (Core, Guay, and Rusticus (2006)). Proposals that are contested 10% or 20% may be less likely to deliver outcomes fully anticipated by the market. In sum, it is for contested proposals that the trade-off between value enhancement and business compensation is likely to be salient for the mutual fund manager: voting to pass the proposal (against management's wishes) is relatively likely to enhance portfolio value (and thus benefit fund investors), but may also lead to a loss of favor with company managers (and thus hurt the fund family's future profits). The fact that we find an incremental effect of contestedness on biased voting suggests that mutual fund families choose business ties over portfolio value when it matters.

Our analysis of contested proposals also provides evidence against two potentially competing interpretations of the association between business ties and mutual fund proxy voting. First, while we already control for ISS recommendations, the analysis of contested proposals underscores that the association between voting and business ties cannot be attributed to biased *recommendations* due to *ISS'* business ties with corporations (Li (2013)): as mentioned Table II, Panel B shows that ISS uniformly recommended voting in favor of contested 20%

(10%) proposals, management uniformly recommended voting against, and funds voted in favor of roughly half of these proposals. This analysis also helps to sharpen the interpretation of our results. While we believe a natural interpretation of the association between business ties and pro-management voting is a "quid pro quo" between company executives and fund managers, an alternative interpretation may be that such ties provide enhanced information transfer between companies and funds, leading to *improved* voting. However, management's uniform opposition to contested proposals, combined with the fact that contested proposals are—on average—value enhancing (Cuñat, Gine, and Guadalupe (2012)), implies that any potential information imparted via business ties is not necessarily in the best interest of shareholders.[29]

# VI. Management Friendliness Without Business Ties?

In our conceptual framework and in motivating and interpreting the empirical analysis that followed, we focus on the management origins of biased proxy voting: managers in need of proxy voting support attempt to influence institutional investors to vote according to management's recommendation. In this context, the natural candidates to influence are institutional investors with which the firm has nontrivial business ties since the existence of such relationships enhances the potential for communication and creates opportunities to threaten credible punishment. But could the desirability of revenues from future business ties lead funds *without* business ties to vote in a more pro-management manner? In other words, is pro-management voting principally demand-driven (induced by management in need of voting support), supply-driven (generated by fund families voluntarily offering their services), or both?

One way to potentially identify fund families that are unlikely to engage in voluntary

Table VIII here

biased voting is to use their size. Business ties are principally awarded to the largest fund families. In Table VIII we document the association between a fund family's size and the total amount of business ties it receives. We use two measures of fund size: a continuous measure, $LogTotalAUM_{f,t} = Log \sum_i Holdings_{f,i,t}$, and a discrete measure, $LargeFamily_f$, which is set to one for an above-median-size family (according to $\sum_t LogTotalAUM_{f,t}$) and zero otherwise. For the total amount of business ties we use the logarithm of aggregate total compensation a fund family receives across all firms per year, $LogAggregateCompensation_{f,t} = Log \sum_i TotalCompensation_{f,i,t}$, the total number of business contracts a fund family has per year, $NumberofContracts_{f,t}$, and the logarithm of aggregate total compensation per contract and year, $Log \frac{AggregateCompensation_{f,t}}{NumberofContracts_{f,t}}$. Across all definitions, there is a strong association between fund family size and aggregate business ties. Table IX here

If smaller fund families are less likely to get contracts anyway, they should arguably have lower incentives to engage in gratuitous management appeasement. To investigate this

conjecture, we run:

$$
\begin{aligned}
VoteswithManagement_{f,i,p,t} = \; & \alpha + \beta_1 BTDummy_{f,i,t} + \beta_2 LogHoldings_{f,i,t} + \\
& + \beta_3 Shareholder_{i,p,t} + \beta_4 LargeFamily_f + \\
& + \beta_5 Shareholder_{i,p,t} \times BTDummy_{f,i,t} + \\
& + \beta_6 BTDummy_{f,i,t} \times LargeFamily_f + \\
& + \beta_7 Shareholder_{i,p.t} \times LargeFamily_f + \\
& + \beta_8 Shareholder_{i,p,t} \times BTDummy_{f,i,t} \times LargeFamily_f + \\
& + \beta_9 ISSRecommendation_{i,p,t} + \\
& + \underbrace{\gamma_i \times \mu_f \times \delta_t + \begin{cases} \cdot & (3a) \\ \pi_{z_{ISS}} & (3b) \\ \pi_p & (3c) \end{cases}}_{\text{Fixed Effects Terms}} + \varepsilon_{f,i,p,t}.
\end{aligned}
$$

This is similar to (2a) to (2c) in Section IV for the discrete business ties measure but we add an extra difference with respect to the size of the fund family. Fixed effects are exactly as in (2a) to (2c). The results are presented in Table IX.

The coefficient on the interaction between shareholder proposals, the presence of business ties, and above-median fund family size ($Shareholder_{i,p,t} \times BTDummy_{f,i,t} \times LargeFamily_f$) measures the effect of moving from no business ties to some business ties on the voting of a large family relative to a small family in voting on shareholder proposals relative to management proposals (for the same firm×family×year triple). Our estimates for this coefficient are significant (e.g., the specification in column 3 delivers an estimate of 11.9%, significant at the 5% level) and larger than the corresponding estimate for the average size fund in Table

V.[30]

This evidence is consistent with the association between size and business ties documented in Table VIII: if large fund families are more likely to be pro-management than small funds when they are endowed with business ties, corporations would find it in their interest to award business ties to large families. The evidence is also consistent with the demand-driven process for biased proxy voting built into our conceptual framework: if a corporation has business ties with multiple fund families, then assuming that larger families have higher holdings, managers are more likely to lean on the largest families to vote with the management recommendation. Finally, this evidence is also consistent with smaller families perceiving a lower level of benefit from signalling management friendliness, along the lines discussed above: if they are unlikely to get future business ties (from other corporations) anyway, it is less worthwhile for them to vote pro-management on a given proposal.[31]

A different way to examine the possibility of supply-driven pro-management voting is to compare the management friendliness of large and small fund families that do *not* have business ties, captured by the coefficient on the $Shareholder_{i,p.t} \times LargeFamily_f$ term. A positive and significant value for this coefficient would suggest that large fund families vote more pro-management even without business ties in comparison to small families because they are more likely to obtain business ties as future rewards. We find no statistically significant support for this hypothesis.

Our findings are consistent with the primacy of a demand-driven process for pro-management voting. This, in turn, suggests that there is something special about incumbency that makes it feasible to support biased voting. One possible explanation is simple: a fund family that *voluntarily* engages in pro-management voting even in the absence of business ties effectively adopts a risky strategy. Since its actions are voluntary, and therefore unilateral, it cannot

know how many other funds (including the incumbent holders of business ties) are doing the same. Thus, the rewards for management friendliness are quite uncertain. For an incumbent fund family, however, the risks are more to the downside: displeasing managers leaves it directly exposed to punishment. Indeed, management can directly and immediately punish *only* incumbent funds. The issue of demand-driven versus supply-driven pro-management voting is related to the issue of correlation versus causality, which we discuss next.

# VII. Correlation versus Causality

In Sections II, IV, and V, we document a significant association between pro-management voting and business ties. The degree of saturation provided by our specifications leaves little room for omitted variables. However, while we present suggestive evidence in Section VI consistent with a demand-driven process for biased proxy voting, it is clear that our regressions cannot formally separate whether business ties cause pro-management voting (i.e., fund families are averse to losing the rents derived from business ties with plan sponsors and thus vote with management) or pro-management voting causes business ties (i.e., firm executives reward funds that vote with management with increased business ties). At the broadest level, we are agnostic about the precise direction of causality: in our view, both manifestations have qualitatively similar negative economic consequences.

One way to informally capture the direction of causality is encapsulated in Figures 1 and 2. The figures show a sharp increase in pro-management voting by plan providers in the year following the establishment of business ties (Figure 1) and a measurable decline in the year following their termination (Figure 2).

To further examine the story suggested by Figures 1 and 2, we proceed as follows. First,

Figures 1–2 here

Table X here

we define a measure of "management friendliness" for fund families as follows:

$$AverageproManagementVoting_{f,i,t} = \frac{\sum_{p=1}^{P(i,t)} VoteswithManagement_{f,i,p,t}}{P(i,t)},$$

where $P(i,t)$ is the total number of shareholder proposals that fund family $f$ votes on at time $t$ in firm $i$.[32] We then estimate the following specification:

$$\begin{aligned} BusinessTiesMeasure_{f,i,t} = \quad & \alpha + \beta_1 AverageproManagementVoting_{f,i,t-1} \\ & + \beta_2 BusinessTiesMeasure_{f,i,t-1} + \beta_3 LogHoldings_{f,i,t-1} \\ & + \text{Fixed Effects Terms} + \varepsilon_{f,i,t}, \end{aligned}$$

where $BusinessTiesMeasure_{f,i,t}$ can be either the continuous $LogTotalCompensation_{f,i,t}$ or the discrete $BTDummy_{f,i,t}$. Since all these variables are in the firm×family×year dimension, we now collapse our data in this dimension. We use firm×family fixed effects to exploit only the heteregoneity in the time dimension as in our graphs. Further, we include the lagged version of the dependent variable as a control variable, together with the lagged version of our main independent variable, thus generating a (pseudo) Granger causality test.[33] The results are in Table X, Panel A. Across all specifications, the coefficient of interest $\beta_1$ is very small and insignificant. The results suggest that lagged average pro-management voting in shareholder proposals is not associated with increased business ties.

Using the same sample and the same fixed effects, we next run:

$$\begin{aligned} AverageproManagementVoting_{f,i,t} = \quad & \alpha + \beta_1 AverageproManagementVoting_{f,i,t-1} + \\ & + \beta_2 BusinessTiesMeasure_{f,i,t-1} + \\ & + \beta_3 LogHoldings_{f,i,t-1} + \\ & + \text{Fixed Effects Terms} + \varepsilon_{f,i,t}. \end{aligned}$$

The results are reported in Table X, Panel B. The coefficient of interest $\beta_2$ is now positive and significant, suggesting that lagged business ties are associated with higher pro-management voting.[34]

While we reiterate that without some exogenous event, the direction of causality cannot be well identified, these results are consistent with business ties leading management friendliness, and not vice versa. They are also consistent with the demand-driven story envisaged in our conceptual framework and supported by the suggestive evidence in Section VI.[35]

# VIII. Conclusion

The relevance of mutual funds to retail investors via their role in managing retirement accounts and to corporate governance via their role as blockholders in many major corporations makes their proxy voting an issue of significant importance. However, mutual funds also have business relationships with the firms in which they are blockholders. In this paper we examine the extent to which these business ties influence the proxy voting behavior of mutual funds.

Using data from 2003 to 2011, we provide evidence that the voting of mutual funds is significantly influenced by their business ties with portfolio firms. Our results stand in

contrast to prior literature and hold for arbitrary pairs of fund families and firms, even at the level of individual proposals, and after controlling for ISS recommendations and holdings. The association is insignificant for management proposals and significant for shareholder proposals. We explain this heterogeneity by developing a simple model of management influence over proxy voting that predicts that, as a result of the higher degree of control enjoyed by managers over self-sponsored proposals, business ties are likely to be less relevant for proxy voting on management proposals than for shareholder proposals. The model also predicts that the association between business ties and proxy voting will be more pronounced for proposals that pass or fail by a relatively narrow margin. These two key predictions are supported by an empirical examination via multiple difference-in-difference specifications that robustly control for unobserved heterogeneity by including fixed effects at the level of individual firm, family, and year triples.

Further, we find that large and small fund families without business ties vote similarly, whereas large fund families with business ties vote in a more management-friendly manner than small families with business ties. We also find that lagged business ties are associated with future pro-management voting, but not vice versa. Overall, our findings are consistent with a demand-driven mechanism for biased proxy voting in which firm managers use existing business ties with mutual funds to influence voting on proposals for which they fear defeat.

The importance of institutional investors as company stewards has steadily increased over time as an ever greater share of corporate equity has come to be held via money managers. This paper shines a spotlight on mutual funds, a particularly important class of money manager. Our findings suggest that agency conflicts arising out of the existence of business ties with portfolio firms, an important source of revenue for large mutual fund families, can reduce mutual funds' effectiveness as company stewards. At the broadest level, therefore,

our paper highlights how agency frictions arising in the asset management sector may affect the nature of corporate governance.

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# Appendix

*Proof of Lemma 1:* If $S_A > \frac{1}{2} + \delta$, and management goes forward with a proposal, their payoff from exerting influence is $v - k_p(S_A)$, the benefit of the proposal passing net of the cost of influence, while from not exerting influence is $v$ since the proposal is a sure thing, and passes anyway. If $S_A < \frac{1}{2} - \delta$, and management goes forward with a proposal, their payoff from exerting influence is $-k_d - k_p(S_A)$, since influence cannot alter the outcome on a lost cause, while from not exerting influence is $-k_d$, since the proposal is a lost cause. Thus, in neither of these cases will influence be exerted. If $S_A = \frac{1}{2}$, and management chooses to go ahead with an unmodified proposal, the payoff from exerting influence is $v - k_p\left(\frac{1}{2}\right)$, since exerting influence guarantees the passage of contestable proposals, whereas the payoff from not exerting influence is $\frac{1}{2}(v) + \frac{1}{2}(-k_d)$ corresponding to the events that $\epsilon > 0$ and $\epsilon < 0$ respectively. Thus, management will exert influence only if the proposal is sufficiently valuable, that is, $v \geq 2k_p\left(\frac{1}{2}\right) - k_d$. When $v \geq 2k_p\left(\frac{1}{2}\right) - k_d$, managers will sometimes find it in their interest to modify the proposal upon going forward. This is because, conditional on $v \geq 2k_p\left(\frac{1}{2}\right) - k_d$, the payoff from not modifying is (by backward induction) $v - k_p\left(\frac{1}{2}\right)$, whereas the payoff from modifying is $(1-m)v$. Thus, managers will prefer to modify (thus eliminating the need to persuade) whenever $(1-m)v > v - k_p\left(\frac{1}{2}\right)$, that is, $v < \frac{k_p\left(\frac{1}{2}\right)}{m}$. Note that since $m < \frac{1}{2}$,

$$\frac{k_p\left(\frac{1}{2}\right)}{m} > 2k_p\left(\frac{1}{2}\right) > \max\left(0, 2k_p\left(\frac{1}{2}\right) - k_d\right).$$

Thus, for $v > \frac{k_p\left(\frac{1}{2}\right)}{m}$, managers will take forward an unmodified proposal and exert influence. ■

*Proof of Lemma 2:* Exerting negative influence is without value in sure things or lost causes. For contestable proposals, if managers exert negative influence, they neutralize the share-

holder proposal, resulting in no reduction in payment but incurring the cost $k_p(\frac{1}{2})$. If they do not, then their expected payoff is $\frac{1}{2}(v - k_d) + \frac{1}{2}(0)$, reflecting respectively the case in which $\epsilon < 0$ (so the proposal passes and the managers receive payoff $v$, a *negative* number, and simultaneously lose face via defeat in a proposal they opposed, resulting in a further cost $k_d$) and the case in which $\epsilon > 0$, so that the proposal fails without the exertion of influence and the managers' payoffs are unchanged. Accordingly, they will exert negative influence on a proposal they oppose as long as $\frac{1}{2}(v - k_d) < -k_p(\frac{1}{2})$, that is, if $v < -\left(2k_p(\frac{1}{2}) - k_d\right)$. ■

*Proof of Proposition 1:* Influence is exerted on management-sponsored proposal with probability

$$\left(G\left(\frac{1}{2} + \delta^M\right) - G\left(\frac{1}{2} - \delta^M\right)\right)\left[1 - H\left(\frac{k_p(\frac{1}{2})}{m}\right)\right],$$

whereas for shareholder-sponsored proposals influence is exerted with probability

$$\left(G\left(\frac{1}{2} + \delta^S\right) - G\left(\frac{1}{2} - \delta^S\right)\right) H\left(-\left(2k_p(c) - k_d\right)\right).$$

Since $\delta^S \geq \delta^M$, it follows that $G\left(\frac{1}{2} + \delta^S\right) - G\left(\frac{1}{2} - \delta^S\right) \geq G\left(\frac{1}{2} + \delta^M\right) - G\left(\frac{1}{2} - \delta^M\right)$. The symmetry of $h(\cdot)$ implies that $H\left(-\left(2k_p(\frac{1}{2}) - k_d\right)\right) = 1 - H\left(2k_p(\frac{1}{2}) - k_d\right)$, whereas $m < \frac{1}{2}$ implies that $\frac{k_p(\frac{1}{2})}{m} > 2k_p(\frac{1}{2}) > 2k_p(\frac{1}{2}) - k_d$, so that $H\left(-\left(2k_p(c) - k_d\right)\right) > 1 - H\left(\frac{k_p(\frac{1}{2})}{m}\right)$. ■

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**Table I**
**Summary Statistics I**

All numbers are for our full sample (2003 to 2011). The units of the reported numbers in each panel are given in parentheses at the end of the panel's heading. Panel A: General characteristics of our merged data set, including data on mutual fund votes reported in ISS Voting Analytics, business relationships of mutual funds with firms reported in DOL Forms 5500, and holdings data at the family level from Forms 13F. Panel B: Number of proposals (and their percentage in parentheses) per category: management, shareholder, and contested as explained in Section VI. In Panels C to G we report statistics for several variables that we use for most of our analysis. Panel C: Percentage of votes with management. This is our main independent variable as defined in Section III. If all funds in a particular family vote with management's recommendation to a particular proposal, then this number is 100. Votes pertaining to all proposals in our sample are equally weighted, that is, these numbers are for one vote per fund family. Voting behavior at the fund family level across different proposal categories appears in Table II, Panel B. Panel D: Total compensation at the fund family level. This is our main independent variable, and is the sum of direct compensation (referred to as "salary" prior to 2009), indirect compensation (referred to as "fees" prior to 2009), and assets under management (AUM) divided by 200 for each fund in a family. As reported, for 96% of sample observations we do not have compensation data. The numbers reported here are for the observations with nonmissing compensation data. Panel E: Holdings of fund families in portfolio firms. Panels D & E are equally weighted, that is, one firm×family pair per year. Panel F: Contribution of business ties to a fund family's revenue per year defined as $\sum_i TotalCompensation_{f,i,t} / \sum_i \left(TotalCompensation_{f,i,t} + Holdings_{f,i,t}/200\right)$, where we posit a 0.5% expense ratio on the assets under management (AUM) of each fund family. Panel F employs only those fund family–year pairs in which a family had at least one business relationship in the corresponding year. Panel G: Number of funds per fund family voting for a particular proposal before we collapse the voting data along the fund family dimension.

| Panel A: General Characteristics (no.) | |
|---|---|
| Observations (votes cast by funds) | 1131240 |
| Observations (votes cast by fund families) | 171473 |
| Years | 9 |
| Firms | 3121 |
| Fund Families | 29 |
| Firms×Families | 39944 |
| Firms×Years | 10026 |

*Continued on next page*

**Table I. Summary Statistics I** — *continued from previous page*

| | |
|---|---|
| Families×Years | 191 |
| Firms×Families×Years | 89649 |
| Proposals | 17618 |
| Proposal Type ISS | 257 |
| Proposal Type MX | 12 |
| Proposal Type ISS×Years | 1136 |
| Proposal Type MX×Years | 93 |

Panel B: Proposal Categories (no.)

| | |
|---|---|
| Management (sponsored) Proposals | 13847 (79% of all proposals) |
| Shareholder (sponsored) Proposals | 3771 (21% of all proposals) |
| Contested 20% Shareholder Proposals | 1549 (41% of srh. proposals, 9% of all proposals) |
| Contested 10% Shareholder Proposals | 784 (21% of srh. proposals, 4% of all proposals) |

Panel C: Votes with Management (%)

| | |
|---|---|
| Mean | 77.12 |
| Median | 100 |
| Standard Deviation | 40.9 |
| Interquartile Range (75%-25%) | 14.29 |
| *Neither zero, nor 100* | *5.6%* |

Panel D: Total Compensation (million $)

| | |
|---|---|
| Mean | 2.25 |
| Median | 0.22 |
| Standard Deviation | 15.45 |
| Interquartile Range (75%-25%) | 0.84 |
| *Nonzero* | *4.1%* |

Panel E: Holdings (million $)

| | |
|---|---|
| Mean | 101.07 |

*Continued on next page*

**Table I. Summary Statistics I** — *continued from previous page*

| | |
|---|---|
| Median | 11.5 |
| Standard Deviation | 393.79 |
| Interquartile Range (75%-25%) | 48.53 |
| **Panel F: Business Ties / Total Revenue (%)** | |
| Mean | 13.94 |
| Median | 4.17 |
| Standard Deviation | 22.42 |
| Interquartile Range (75%-25%) | 13.91 |
| **Panel G: Funds per family (no.)** | |
| Mean | 14.94 |
| Median | 11 |
| Standard Deviation | 13.05 |
| Interquartile Range (75%-25%) | 14 |

**Table II**
**Summary Statistics II**

Panel A: The top 5 business relationships and their corresponding service codes in parentheses, as reported in DOL Form 5500 - Schedule C. This sample corresponds to the 2003 to 2008 period since reporting of business relationships changed in 2009. For each business relationship we report the constituents of total compensation (direct, indirect, AUM/200), as well as their sum (total compensation). Compensation data are reported in the form mean (variance). All compensation data are for the nonmissing sample. Panel B: Voting behavior as a percentage of appearance in the sample for different categories of proposals (all, management, shareholder, contested 20%, and contested 10%). Rows pertaining to fund families are averaged across all fund families. Rows pertaining to management and ISS are (nonbinding) recommendations on how shareholders should vote on proposals. Panel C: Distribution of voting results. Results in years pertain to the frequency of say-on-pay proposals.

Panel A

| Top 5 Business Relationships (87%) | Direct Comp. (th.$) | Indirect Comp. (mil.$) | AUM/200 (mil.$) | Tot. Comp. (mil.$) |
|---|---|---|---|---|
| Contract Admin. (12) | 7.42 ( 273.27) | 1.23 (25.2) | 4.34 (21.3) | 5.58 (35.9) |
| Recordkeeping (24) | 0 (0) | 6.40 (3.30) | 1.37 ( 13.2) | 2.01 (15.2) |
| Investment Mgmt. (21) | 13.35 (51.63) | 3.26 (7.07) | 6.23 (52.4) | 9.51 (58.5) |
| Trustee (corporate) (26) | 38.06 (443.38) | .65 (1.85) | .74 (1.43) | 1.43 (2.74) |
| Investment advisory (20) | 0 (0) | 7.17 (6.94) | 15.2 (16.4) | 22.4 (23.2) |

Panel B

| Voting Behavior (%) | All | Mgmt. | Srh. | Cont. 20% | Cont. 10% |
|---|---|---|---|---|---|
| Management recommends yes | 78.64 | 99.86 | 0.72 | 0.06 | 0 |
| ISS recommends yes | 80.13 | 84.76 | 63.11 | 98.39 | 99.36 |
| ISS agrees with mgmt. recommendation | 74.61 | 84.73 | 37.44 | 1.68 | 0.64 |
| Fund family votes yes | 68.58 | 82.97 | 36.32 | 55.76 | 58.79 |
| Fund family votes with mgmt. recommendation | 77.12 | 82.94 | 64.09 | 44.28 | 41.22 |
| Fund family votes with ISS recommendation | 82.16 | 87.20 | 70.87 | 56.49 | 58.94 |

Panel C

| Vote Result | Frequency | Percent | Cumulative |
|---|---|---|---|
| Pass | 14260 | 81.12 | 81.12 |
| Fail | 3310 | 18.83 | 99.95 |
| Not Disclosed | 3 | 0.02 | 99.97 |
| One Year | 3 | 0.02 | 99.99 |
| Three Years | 1 | 0.01 | 99.99 |
| Withdrawn | 1 | 0.01 | 100 |

**Table III**
**Effect of Business Ties on Voting (All Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. The regression is run over all proposals. The main independent variable is either the (natural) logarithm of the total compensation of a fund family ("Log Total Compensation"), which gives the extent to which business ties affect fund family voting with management in all proposals (columns 1 to 3) or a business ties dummy ("BT Dummy"), which gives the extent to which going from no business ties to some business relationship affects fund family voting with management in all proposals (columns 4 to 6). The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). Firm×family fixed effects are used in all specifications. Extra fixed effects are as reported. In particular, columns 1 to 3 and 4 to 6 correspond to specifications (1a) to (1c) as explained in Section II. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | All Proposals, 2003-2011 | | | | | |
|---|---|---|---|---|---|---|
| Votes with mgmt (0–100) | (1) | (2) | (3) | (4) | (5) | (6) |
| Log Total Compensation | 0.222** | 0.243** | 0.212** | | | |
| | (2.100) | (2.395) | (2.103) | | | |
| BT Dummy | | | | 2.342* | 2.621** | 2.214* |
| | | | | (1.831) | (2.135) | (1.829) |
| Log Holdings | 0.658*** | 0.633*** | 0.556** | 0.657*** | 0.632*** | 0.556** |
| | (2.761) | (2.815) | (2.432) | (2.756) | (2.809) | (2.428) |
| ISS Recommendation | 51.187*** | 47.542*** | | 51.185*** | 47.542*** | |
| | (15.626) | (13.340) | | (15.625) | (13.340) | |
| Firm×Family F.E. | Yes | Yes | Yes | Yes | Yes | Yes |
| Proposal Type ISS F.E. | No | Yes | No | No | Yes | No |
| Proposal F.E. | No | No | Yes | No | No | Yes |
| Observations | 171,473 | 171,473 | 171,473 | 171,473 | 171,473 | 171,473 |
| $R^2$ | 0.557 | 0.586 | 0.641 | 0.557 | 0.586 | 0.641 |

**Table IV**
**Effect of Business Ties on Voting (Management versus Shareholder Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. The regression is run over management (sponsored) proposals (columns 1 to 2) versus shareholder (sponsored) proposals (columns 3 to 4). The main independent variable is either the (natural) logarithm of the total compensation of a fund family ("Log Total Compensation"), which gives the extent to which business ties affect fund family voting with management in all proposals (columns 1 and 3), or a business ties dummy ("BT Dummy"), which gives the extent to which going from no business ties to some business relationship affects fund family voting with management in all proposals (columns 2 and 4). The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). Firm×family and proposal fixed effects are used in all specifications. The coefficient on "ISS Recommendation" is dropped due to collinearity and hence is not reported. In particular, all columns correspond to specification (1c) as explained in Section II. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Mgmt. Proposals, 2003-2011 | | Srh. Proposals, 2003-2011 | |
|---|---|---|---|---|
| Votes with mgmt (0–100) | (1) | (2) | (3) | (4) |
| Log Total Compensation | -0.067 | | 0.353** | |
| | (-0.702) | | (2.274) | |
| BT Dummy | | -0.739 | | 3.917* |
| | | (-0.629) | | (1.964) |
| Log Holdings | 0.713*** | 0.714*** | 0.304 | 0.306 |
| | (2.807) | (2.809) | (0.831) | (0.834) |
| Firm×Family F.E. | Yes | Yes | Yes | Yes |
| Proposal F.E. | Yes | Yes | Yes | Yes |
| Observations | 118,569 | 118,569 | 52,904 | 52,904 |
| $R^2$ | 0.698 | 0.698 | 0.670 | 0.670 |

**Table V**
**Effect of Business Ties on Voting (D-in-D Shareholder Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. The regression is run over management and shareholder proposals using a differences-in-differences (d-in-d) specification. The independent variables include a business ties measure ("Log Total Compensation" in columns 1 to 3 or "BT Dummy" in columns 4 to 6) and a dummy variable indicating shareholder (sponsored) proposals ("Shareholder"). The interaction of the two, "Shareholder×Log Total Compensation" or "Shareholder×BT Dummy," is our main independent variable and gives the extent to which business ties affect fund family voting with management in shareholder proposals relative to management proposals. The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). Firm×family×year fixed effects are used in all specifications. The coefficient on the business ties measure ("Log Total Compensation" or "BT Dummy") is dropped due to collinearity and hence is not reported. Extra fixed effects are as reported. In particular, columns 1 to 3 and 4 to 6 correspond to specifications (2a) to (2c) as explained in Section IV. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Mgmt. and Srh. proposals, 2003-2011 | | | | | |
|---|---|---|---|---|---|---|
| Votes with mgmt (0–100) | (1) | (2) | (3) | (4) | (5) | (6) |
| Srh.×Log Total Comp. | 0.782*** | 0.644*** | 0.710*** | | | |
| | (3.759) | (3.100) | (2.952) | | | |
| Srh.×BT Dummy | | | | 10.165*** | 8.441*** | 9.220*** |
| | | | | (3.693) | (3.060) | (2.902) |
| Shareholder | 3.819*** | -15.676 | -17.271 | 3.830*** | -15.687 | -16.864 |
| | (3.060) | (-0.000) | (-0.000) | (3.068) | (-0.000) | (-0.000) |
| ISS Recommendation | 52.477*** | 46.954*** | 32.720 | 52.477*** | 46.954*** | 32.703 |
| | (18.923) | (15.200) | (0.000) | (18.921) | (15.200) | (0.000) |
| Log Holdings | -0.222 | -0.127 | -0.118 | -0.222 | -0.126 | -0.115 |
| | (-0.216) | (-0.119) | (-0.105) | (-0.216) | (-0.119) | (-0.103) |
| Firm×Family×Year F.E. | Yes | Yes | Yes | Yes | Yes | Yes |
| Proposal Type F.E. | No | Yes | No | No | Yes | No |
| Proposal F.E. | No | No | Yes | No | No | Yes |
| Observations | 171,473 | 171,473 | 171,473 | 171,473 | 171,473 | 171,473 |
| $R^2$ | 0.743 | 0.762 | 0.788 | 0.743 | 0.762 | 0.788 |

**Table VI**
**Effect of Business Ties on Voting (D-in-D Contested 20% Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. The regression is run over management and shareholder proposals contested at the 20% level using a differences-in-differences (d-in-d) specification. The independent variables include a business ties measure ("Log Total Compensation" in columns 1 to 3 or "BT Dummy" in columns 4 to 6) and a dummy variable indicating contested 20% shareholder (sponsored) proposals ("Contested 20%"). The interaction of the two, "Contested 20%×Log Total Compensation" or "Contested 20%×BT Dummy," is our main independent variable and gives the extent to which business ties affect fund family voting with management in contested 20% shareholder proposals relative to management proposals. The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). Firm×family×year fixed effects are used in all specifications. The coefficient on the business ties measure ("Log Total Compensation" or "BT Dummy") is dropped due to collinearity and hence is not reported. Extra fixed effects are as reported. In particular, columns 1 to 3 and 4 to 6 correspond to specifications (2a) to (2c) as explained in Section IV. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Mgmt. and Cont. 20% Srh. Proposals, 2003-2011 | | | | | |
|---|---|---|---|---|---|---|
| Votes with mgmt (0–100) | (1) | (2) | (3) | (4) | (5) | (6) |
| Cont.20%×LogTot.Comp. | 1.000*** | 0.901*** | 0.970*** | | | |
| | (3.598) | (3.307) | (3.032) | | | |
| Cont.20%×BT Dummy | | | | 12.916*** | 11.663*** | 12.528*** |
| | | | | (3.455) | (3.180) | (2.931) |
| Contested 20% | 6.255** | -19.148 | -6.326 | 6.286** | -19.085 | -6.214 |
| | (2.473) | (-0.000) | (-0.000) | (2.484) | (-0.000) | (-0.000) |
| ISS Recommendation | 56.275*** | 52.508*** | 32.059 | 56.276*** | 52.510*** | 32.051 |
| | (16.644) | (14.353) | (0.000) | (16.643) | (14.354) | (0.000) |
| Log Holdings | -0.243 | -0.096 | -0.042 | -0.241 | -0.094 | -0.035 |
| | (-0.207) | (-0.078) | (-0.032) | (-0.206) | (-0.077) | (-0.027) |
| Firm×Family×Year F.E. | Yes | Yes | Yes | Yes | Yes | Yes |
| Proposal Type F.E. | No | Yes | No | No | Yes | No |
| Proposal F.E. | No | No | Yes | No | No | Yes |
| Observations | 140,842 | 140,842 | 140,842 | 140,842 | 140,842 | 140,842 |
| $R^2$ | 0.792 | 0.804 | 0.826 | 0.792 | 0.804 | 0.826 |

**Table VII**
**Effect of Business Ties on Voting (D-in-D Contested 10% Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. The regression is run over management and shareholder proposals contested at the 10% level using a differences-in-differences (d-in-d) specification. The independent variables include a business ties measure ("Log Total Compensation" in columns 1 to 3 or "BT Dummy" in columns 4 to 6) and a dummy variable indicating contested 10% shareholder (sponsored) proposals ("Contested 10%"). The interaction of the two, "Contested 10%×Log Total Compensation" or "Contested 10%×BT Dummy," is our main independent variable and gives the extent to which business ties affect fund family voting with management in contested 20% shareholder proposals relative to management proposals. The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). Firm×family×year fixed effects are used in all specifications. The coefficient on the business ties measure ("Log Total Compensation" or "BT Dummy") is dropped due to collinearity and hence is not reported. Extra fixed effects are as reported. In particular, columns 1 to 3 and 4 to 6 correspond to specifications (2a) to (2c) as explained in Section IV. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Mgmt. and Cont. 10% Srh. proposals, 2003-2011 | | | | | |
|---|---|---|---|---|---|---|
| Votes with mgmt (0–100) | (1) | (2) | (3) | (4) | (5) | (6) |
| Cont.10%×LogTot.Comp. | 0.908*** | 0.815** | 0.913** | | | |
| | (2.638) | (2.453) | (2.418) | | | |
| Cont.10%×BT Dummy | | | | 11.763*** | 10.521** | 11.856** |
| | | | | (2.606) | (2.405) | (2.385) |
| Contested 10% | 3.786 | -54.588 | -10.218 | 3.812 | -54.483 | -10.048 |
| | (1.323) | (-0.000) | (-0.000) | (1.330) | (-0.000) | (-0.000) |
| ISS Recommendation | 57.171*** | 53.267*** | 33.350 | 57.170*** | 53.267*** | 33.349 |
| | (16.604) | (14.319) | (0.000) | (16.604) | (14.319) | (0.000) |
| Log Holdings | -0.370 | -0.153 | 0.041 | -0.368 | -0.151 | 0.048 |
| | (-0.318) | (-0.126) | (0.032) | (-0.316) | (-0.124) | (0.037) |
| Firm×Family×Year F.E. | Yes | Yes | Yes | Yes | Yes | Yes |
| Proposal Type F.E. | No | Yes | No | No | Yes | No |
| Proposal F.E. | No | No | Yes | No | No | Yes |
| Observations | 129,982 | 129,982 | 129,982 | 129,982 | 129,982 | 129,982 |
| $R^2$ | 0.817 | 0.825 | 0.847 | 0.817 | 0.825 | 0.847 |

**Table VIII**
**Effect of Fund Family Size on Aggregate Business Ties**

The dependent variable is an aggregate, across all firms, business ties (BT) measure (e.g., "Log Aggregate Compensation"). The regression is run on the family×year sample. The main independent variables are a measure of family size (continuous "Log Total AUM" or discrete "Large Family") that gives the extent to which family size affects aggregate business ties. Year fixed effects are used in all specifications as explained in Section VI. All regressions include an intercept, which is not reported. Robust $t$-statistics in parentheses. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Family×Year Sample, 2003-2011 | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| BT Measure | Log Aggr. Comp. | No. of Contracts | Log Aggr. Comp. / Contract | Log Aggr. Comp. | No. of Contracts | Log Aggr. Comp. / Contract |
| Log Total AUM | 2.019*** | 7.482*** | 1.591*** | | | |
| | (10.479) | (4.799) | (9.612) | | | |
| Large Family | | | | 6.634*** | 27.857*** | 5.163*** |
| | | | | (7.291) | (5.477) | (6.521) |
| Observations | 191 | 191 | 191 | 191 | 191 | 191 |
| $R^2$ | 0.497 | 0.227 | 0.443 | 0.322 | 0.169 | 0.285 |

**Table IX**
**Effect of Business Ties Dummy and Size on Voting (D-in-D-in-D Shareholder Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. The regression is run over management and shareholder proposals using a differences-in-differences-in-differences (d-in-d-in-d) specification. The independent variables include a business ties dummy ("BT Dummy"), a dummy variable indicating shareholder (sponsored) proposals ("Shareholder"), and an additional fund family size dummy ("Large Family"). The interaction of the three, "Shareholder×BT Dummy×Large Family," is our main independent variable and gives the extent to which going from no business ties to some business relationship affects fund family voting with management in shareholder proposals relative to management proposals and in large fund families relative to small fund families. The relevant double interactions are also included. The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). Firm×family×year fixed effects are used in all specifications. The coefficients on "BT Dummy," "Large Family" and "BT Dummy×Large Family" are dropped due to collinearity and hence are not reported. Extra fixed effects are as reported. In particular, columns 1 to 3 correspond to specifications (3a) to (3c) as explained in Section VI. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Mgmt. and Srh. proposals, 2003-2011 | | |
|---|---|---|---|
| Votes with mgmt (0–100) | (1) | (2) | (3) |
| Shareholder×BT Dummy×Large Family | 10.735** | 10.889** | 11.913** |
| | (2.237) | (2.231) | (2.220) |
| Shareholder×Large Family | -2.739 | -2.190 | -2.262 |
| | (-0.525) | (-0.417) | (-0.411) |
| Shareholder×BT Dummy | 1.356 | -0.630 | -0.682 |
| | (0.340) | (-0.155) | (-0.152) |
| ISS Recommendation | 52.465*** | 46.944*** | 32.718 |
| | (18.890) | (15.192) | (0.000) |
| Shareholder | 5.577 | -14.148 | -15.751 |
| | (1.354) | (-0.000) | (-0.000) |
| Log Holdings | -0.214 | -0.117 | -0.101 |
| | (-0.207) | (-0.110) | (-0.090) |
| Firm×Family×Year F.E. | Yes | Yes | Yes |
| Proposal Type ISS F.E. | No | Yes | No |
| Proposal F.E. | No | No | Yes |
| Observations | 171,473 | 171,473 | 171,473 |
| $R^2$ | 0.743 | 0.762 | 0.788 |

**Table X**
**Granger Causality**

Panel A: The dependent variable is a business ties measure ("Log Total Compensation" in columns 1 and 3 or "BT Dummy" in columns 2 and 4). The regression is run on the firm×family×year sample. The main independent variable is the average, across firms, vote with management of a fund family on shareholder proposals, lagged by one year ("Lagged Avg. pro-mgmt voting (%)"), which gives the extent to which lagged average pro-management voting of a fund family affects its compensation. The other independent variables are the one-year lagged business ties measure ("Lagged Log Total Compensation" or "Lagged BT Dummy") and "Lagged Log Holdings." Panel B: The dependent variable is the average, across firms, vote with management of a fund family on shareholder proposals ("Avg. pro-mgmt voting (%)"). The main independent variable is the one-year lagged business ties measure ("Lagged Log Total Compensation" or "Lagged BT Dummy"), which gives the extent to which lagged business ties affect a fund family's average pro-management voting. The other independent variables are "Lagged Avg. pro-mgmt voting (%)" and "Log Holdings." In both panels, columns 1 and 2 have firm×family fixed effects, while columns 3 and 4 have additional firm×year fixed effects as explained in Section VII. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

Panel A: Effect of Lagged Voting on Compensation

| | Firm×Family×Year Sample, 2003-2011 | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| BT Measure | Log Tot. Comp | BT Dummy | Log Tot. Comp | BT Dummy |
| Lagged Avg. pro-mgmt voting (%) | -0.001 | -0.000 | -0.001 | -0.000 |
| | (-1.136) | (-1.051) | (-0.536) | (-0.527) |
| Lagged Log Total Compensation | 0.134*** | | 0.151*** | |
| | (3.331) | | (4.007) | |
| Lagged BT Dummy | | 0.116*** | | 0.128*** |
| | | (2.982) | | (3.513) |
| Lagged Log Holdings | 0.038 | 0.002 | 0.054** | 0.003* |
| | (1.579) | (1.298) | (2.193) | (1.848) |
| Firm×Family F.E. | Yes | Yes | Yes | Yes |
| Firm×Year F.E. | No | No | Yes | Yes |

*Continued on next page*

**Table X. Granger Causality** — *continued from previous page*

| | | | | |
|---|---|---|---|---|
| Observations | 14,653 | 14,653 | 14,653 | 14,653 |
| $R^2$ | 0.797 | 0.782 | 0.831 | 0.818 |

Panel B: Effect of Lagged Compensation on Voting

| | Firm×Family×Year Sample, 2003-2011 | | | |
|---|---|---|---|---|
| Avg. pro-mgmt voting (%) | (1) | (2) | (3) | (4) |
| Lagged Avg. pro-mgmt voting (%) | -0.134*** | -0.134*** | -0.119*** | -0.119*** |
| | (-9.639) | (-9.632) | (-7.793) | (-7.779) |
| Lagged Log Total Compensation | 0.339** | | 0.454*** | |
| | (1.977) | | (2.720) | |
| Lagged BT Dummy | | 3.736* | | 5.382** |
| | | (1.654) | | (2.443) |
| Lagged Log Holdings | 0.429 | 0.430 | 0.372 | 0.376 |
| | (1.530) | (1.534) | (1.389) | (1.404) |
| Firm×Family F.E. | Yes | Yes | Yes | Yes |
| Firm×Year F.E. | No | No | Yes | Yes |
| Observations | 14,653 | 14,653 | 14,653 | 14,653 |
| $R^2$ | 0.704 | 0.704 | 0.806 | 0.806 |

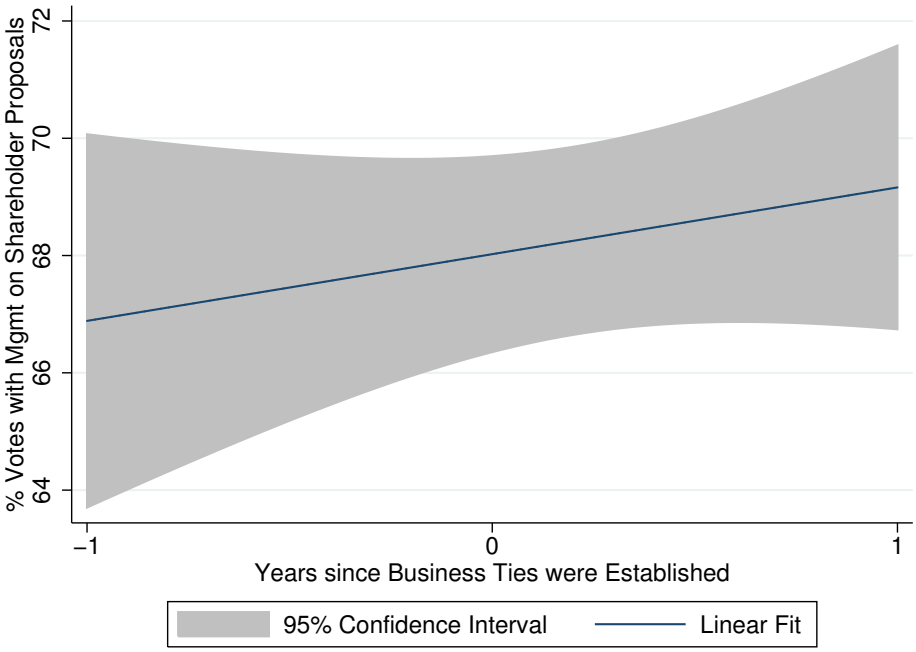


**Figure 1. Percentage of votes with management on shareholder proposals around the time a business relationship was established.**

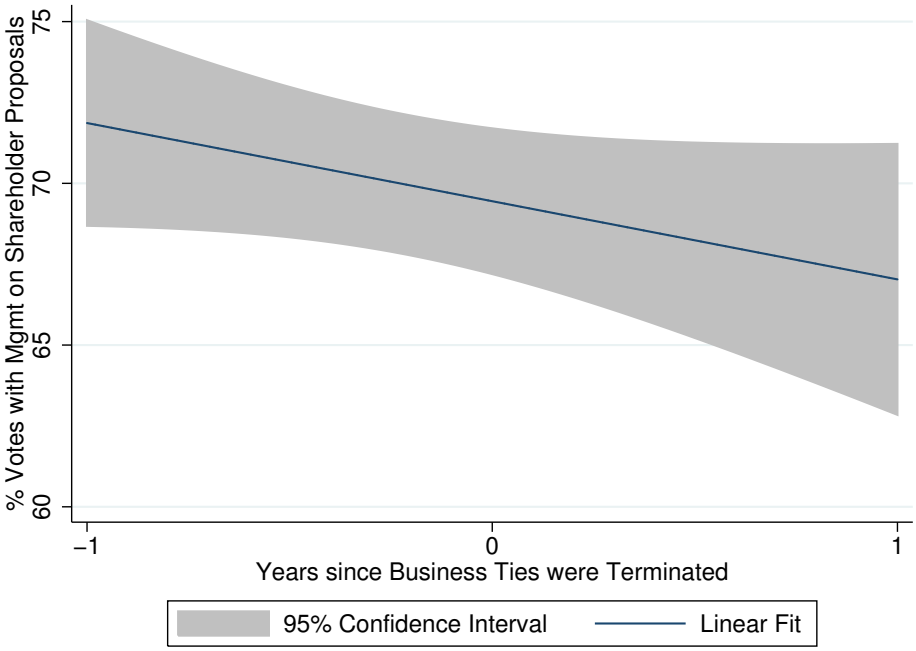


**Figure 2. Percentage of votes with management on shareholder proposals around the time a business relationship was terminated.**

# Notes

[1]See Investment Company Institute (for the full 2013 Investment Company Fact Book, visit http://www.ici.org/pdf/2013_factbook.pdf).

[2]Mutual funds have a fiduciary duty to vote proxies in the best interest of their investors (SEC Rule 206(4)-6; Securities & Exchange Commission, "Final Rule: Proxy Voting by Investment Advisers," available at https://www.sec.gov/rules/final/ia-2106.htm.)

[3]Securities & Exchange Commission, "Final Rule: Disclosure of Proxy Voting Policies and Proxy Voting Records by Registered Management Investment Companies," available at http://www.sec.gov/rules/final/33-8188.htm.

[4]We find that, even restricting attention to the proposals used by these two papers, there is some association between business ties and pro-management voting between 2003 and 2011, suggesting that data availability is a relevant factor in the difference between their results and ours. This analysis is reported in Internet Appendix Section I.A. The Internet Appendix is available on *The Journal of Finance* website.

[5]Pension benefits typically include defined benefit pension plans, defined contribution pension plans, and other plans. Welfare benefits typically include health/life insurance, long-term disability, severance pay, etc.

[6]We exclude director elections and the ratification of auditors as we think it is difficult to determine the value of the election of a particular director or auditor to firm shareholders. For more details on voting on director elections, see Matvos and Ostrovsky (2010).

[7]We thus effectively posit a 0.5% expense ratio. This is identical to the expense ratio used by Davis and Kim (2007). In contrast, Cohen and Schmidt (2009) compute the average of actual expense ratios, which turns out to be 0.76%. Our results are robust with respect to using either expense ratio.

[8]Hence, $p$ already includes firm $i$ and time $t$ since a proposal appears at a particular firm at a specific point in time. In our notation, we supress this dependence.

[9]We provide details on the distribution of proposal categories in Internet Appendix Table IA.I.

[10]We also run a variation in which we additionally control for time-heterogeneity by incorporating a Proposal Type ISS×year fixed effect. The results are similar. We do not report these results as specification (1c) uses a *proposal* fixed effect, which supersedes a Proposal Type ISS×year fixed effect, since in the same year there can be a vote on more than one proposal of the same proposal type, across multiple firms or even in the same firm.

[11]Note that $ISSrecommendation_{i,p,t}$ is proposal specific and so the coefficient is dropped from specification (1c), which incorporates proposal fixed effects.

[12]We also note that the coefficients are approximately 50% larger for shareholder proposals than for all proposals across comparable specifications. The results across specifications (1a) and (1b), when split across shareholder and management proposals, are qualitatively similar to those for specification (1c).

[13]Some discussion in a report from an anonymous referee helped us enrich and crystalize our thinking on the framework presented here. We very gratefully acknowledge the referee's input.

[14]In the body of the paper, we use OLS throughout. Apart from the fact that, as emphasized above, our main independent variable is not binary, our choice is informed by the simplicity and practicality of the linear model, which gives consistent and easily interpretable estimates under a broader set of conditions and requires less restrictive assumptions about the error term.

[15]Management payoffs should be understood to include the total payoffs enjoyed by firm insiders, including any potential component of payoffs that are actually aligned with those of outsiders through, for example, restricted stock grants.

[16]In standard models of corporate governance, outsiders can increase their payoffs (pledgeable income) by reducing managerial agency rents, thus reducing insider (management) payoffs.

[17]Though a wide variety of assumptions would be consistent with our analysis, we assume that if $S_A > 1-\delta$ or $S_A < \delta$, the realized vote share is truncated, with the residual probability mass accumulated at one or zero, respectively.

[18]We subsequently let this noise depend on the identity of the proposer—management or shareholders.

[19]Formally, this amounts to restricting the pdf $g$ to have a single mass point at $\frac{1}{2}$ for $S_A \in \left(\frac{1}{2}-\delta, \frac{1}{2}+\delta\right]$, with $g\left(\frac{1}{2}\right) = G(\frac{1}{2}+\delta) - G(\frac{1}{2}-\delta)$.

[20]It seems natural that it is more costly to influence institutional investors to vote with management in contestable issues than in sure winners, that is, $k_p(\frac{1}{2}) > k_p\left(S_A\right)$ for $S_A \geq \frac{1}{2}+\delta$.

[21]As per the deadlines set out in SEC Rule 14a-8, management typically becomes aware

of a specific shareholder proposal no more than 120 days before distributing proxy material (potentially less so in the case of a meeting date change) and may thus have less time to canvass carefully.

[22]For example, when $V \in \left(2k_p\left(\frac{1}{2}\right) - k_d, k_p\left(\frac{1}{2}\right)/m\right)$, managers never exert influence on management proposals (generating no association between ties and pro-management voting) but sometimes do so on shareholder proposals (generating an association). This is consistent with the findings in Section II.

[23]Though the assumption of bounded prediction noise simplifies our analysis, Hypothesis 2 would hold even without it.

[24]We also ran our regressions for specifications (2a) to (2c) with a series of two-dimensional fixed effects (e.g., firm×family, firm×year, and family×year). The results are similar.

[25]Holdings are reported quarterly and hence there is some, though limited, variation in the holdings of a fund family in a firm within a year.

[26]As in Section II, we report in Internet Appendix Table IA.III a conditional logit estimation of our main d-i-d specification, which again confirms the robustness of our findings.

[27]In our sample we only keep those proposals that require simple majority to pass.

[28]For robustness, in Internet Appendix Section IA.I.B, we also examine whether there is an incremental effect of contestedness on management-sponsored proposals.

[29]Our goal of characterizing the association between business ties and proxy voting is qualitative, but analyzing contested proposals allows us to provide a crude "back of the envelope" estimate of quantitative magnitude. For contested 20% proposals, the percentage

of pro-management voting by fund families with business ties is 56%, while for those without, it is 43.23%. Thus, replacing a business tied fund by one without enhances the probability of passage by 12.7%. Using the conservative estimate of Cuñat, Gine, and Guadalupe (2012) for value enhancement due to the passage of a contested proposal (130 basis points), eliminating business ties could enhance firm value by as much as 16.6 basis points per contested proposal.

[30]For completeness, we repeat the same set of specifications for contested 20% proposals and obtain similar qualitative results, which are reported in Internet Appendix Table IA.V.

[31]To complete the picture, we also check whether having large business ties (as large families are likely to have) leads to more pro-management voting. To do so, we split the $BTDummy_{f,i,t}$ into two dummy variables: (i) $BTMedianDummy_{f,i,t}$, which is equal to one if total compensation is greater than the median of positive total compensation, and (ii) $BTDummy_{f,i,t} - BTMedianDummy_{f,i,t}$. Using these measures, we show that most of the association between business ties and pro-management voting arises from the higher band of business ties. These results are reported in Internet Appendix Table IA.VI.

[32]Given the absence of any link between business ties and pro-management voting on management proposals, we restrict attention to shareholder proposals in defining our measure.

[33]The qualifier "pseudo" is inserted because Granger tests are formally defined for time-series data, whereas we work with a panel. However, as noted, we use fixed effects to ensure that we only exploit heterogeneity in the time dimension.

[34]The measure of management friendliness introduced in this section is defined in firm×family×year space. It is related to an analogous measure in Matvos and Ostrovsky (2010), which instead averages with respect to proposals *and* firms. Our measure appears to be mean-reverting

over time (Table X, Panel B), suggesting persistence in management friendliness within firm×family pairs, which provides a potential lens through which to view the time persistence in their measure.

[35]Note that even though the demand-driven story requires that managers are able to make credible threats to influence institutional investors with whom they have business ties, the empirical finding that lagged management friendliness does not predict business ties is *not* evidence against the demand-driven story. The reason is that in equilibrium credible threats do not usually have to be executed when they are effective.

# Internet Appendix for "Ties that Bind: How Business Connections Affect Mutual Fund Activism"

DRAGANA CVIJANOVIĆ, AMIL DASGUPTA, and KONSTANTINOS E. ZACHARIADIS*

This Internet Appendix contains further analysis and additional tables. In Section I we examine in greater detail the relationship between our work and prior literature, and we provide an analysis of contested management proposals. In Section II we present tables containing further detail and robustness checks to support the analysis in the main paper.

## I. Further Analysis

### A. Proposals Highlighted in Prior Literature

To reconcile our work with that of Davis and Kim (2007) and Ashraf, Jayaraman, and Ryan (2012), we run the sets of specifications as in (1a) to (1c) and (2a) to (2c) restricted to their set of proposals. The six proposals used by Davis and Kim (2007) (henceforth, Davis & Kim proposals) are listed in Table IA.I, Panel D.

Ashraf, Jayaraman, and Ryan (2012) study executive compensation proposals. We identify these via a combination of two methods. First, we include proposals classified as compensation in Cuñat, Gine, and Guadalupe (2012, Appendix A). For completeness, we also use a classification scheme for proposals developed by Moqi Xu (LSE) in a separate ongoing research project with two of the coauthors of this paper. We refer to this classification scheme

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as MX for short, and describe the classification scheme in Section I.C of this appendix. To complement the proposals identified by Cuñat, Gine, and Guadalupe (2012, Appendix A) we also include proposals classified by the MX scheme as "Compensation" and "Say on Pay". We list the 10 most common in Table IA.I, Panel E.

In Tables IA.VII and IA.VIII we report the subsample and difference-in-difference results (relevant proposals versus management proposals). The subsample results are positive but (marginally) insignificant at the 10% level, while the differences-in-differences results are positive and significant. Thus, even restricting attention to the proposals that Davis and Kim (2007) and Ashraf, Jayaraman, and Ryan (2012) use we find (some) evidence of pro-management voting when using data for the full set of years that we (now) have access to. In other words, data availability is a relevant factor in explaining the differences in results.

Finally, for completeness, we also consider the groups of proposals that are relevant to the popular G-Index as proposed by Gompers, Ishii, and Metrick (2003). Twenty-four provisions constitute the corporate governance index. To identify the proposals that lead to these provisions, we use proposals classified under the MX scheme as "Governance" and "Defence" as well as the G-Index proposals identified in Cuñat, Gine, and Guadalupe (2012, Appendix A). The final set of G-Index proposals are reported in Table IA.I, Panel F. In Table IA.IX we report subsample and difference-in-difference results. We find significant results across most specifications, suggesting that G-Index proposals are important to management and may induce them to exert influence on institutional investors.

## B. Contested 20% Management

The model in Section IV predicts that the association between business ties and proxy voting will be stronger for shareholder proposals than management proposals, and stronger still for shareholder proposals that pass or fail by relatively small margins. However, the model also makes a prediction *within* the class of management proposals. In particular, it predicts that managers will exert influence on self-sponsored proposals if and only if those

proposals are contestable ex ante (and therefore pass ex post by relatively small margins) and of sufficient value to management (in particular, $v > k_p\left(\frac{1}{2}\right)/m$). This implies that it may be possible to detect a difference in the association between business ties between (uncontested) management proposals and contested management proposals. We examine this conjecture using the same methodology as in Section VI of the paper.

In our sample, management proposals contested at the 20% (10%) level represent 14% (5%) of all management proposals, at least two times smaller than the corresponding figure for shareholder proposals contested at the 20% (10%) levels, which is 41% (21%). Management recommends in favor of 99.64% of contested 20% management proposals, ISS recommends in favor of 43.69% of them, and fund families (on average) vote in favor of 52.21%, which translates into a 52.02% agreement with management and a 71.73% agreement with the ISS. Finally, the failure rate for contested 20% management proposals is 10.5%.

To determine whether contested 20% management proposals are special relative to other management proposals, we run our d-in-d set of specifications (2a) to (2c). The results reported in Table IA.XI suggest that the answer is no, as all the coefficients on the interaction term $Contested20\%Management_{i,p,t} \times LogTotalCompensation_{f,i,t}$ are insignificant.

The fact that we find no effect for contested management proposals while we find a significant effect for contested shareholder proposals is perfectly consistent with the model. Interpreted literally, it requires that $V \in \left(2k_p\left(\frac{1}{2}\right) - k_d, k_p\left(\frac{1}{2}\right)/m\right)$. An alternative possibility is that the small number of contested management proposals make any existing difference empirically undetectable.

### C. A Coarser Scheme for Classifying Proposals by Function

The ISS functional classification of proposals into 257 types is fine enough to risk obscuring the economic meaning of each proposal type. For example, ISS assigns a different proposal type for "Amend Omnibus Stock Plan (M0524)" and "Approve Omnibus Stock Plan (M0522)" even though these two proposals address the same economic issue, executive

compensation. For this reason, it is useful to work with a coarser, more economically meaningful, classification. The MX classification groups proposals into 12 economically relevant types. We list these types along with their frequency in our sample in Table IA.X, Panel A. The set of types is chosen to reflect leading issues arising in the literature on voting and corporate governance (see for example Knoeber (1986), LaPorta et al. (1998), Grullon and Michaely (2002), Gompers, Ishii, and Metrick (2003), Bebchuk, Cohen, and Ferrell (2009), Becht et al. (2009), Bebchuk and Fried (2009), Ferri and Maber (2012)). Once the set of types is chosen, proposals are classified based on their description in a straightforward way, as illustrated in the example above on M0524 and M0522. In Table IA.X, Panel B we list the top 3 proposals per MX category. Needless to say, this classification is not unique. We use the MX classification to identify which proposals are related to executive compensation and corporate governance in Section I.A of this appendix.

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# II. Additional Tables

**Table IA.I**
**Summary Statistics III**

Panels A to F present information on the distribution of different proposal categories. For management, shareholder, and contested 20% proposals, in Panels A to C respectively, we report the 10 most frequent proposals in the corresponding categories. For Davis & Kim, executive compensation and G-index proposals, in Panels D to F respectively, we include all proposals in the corresponding category. In all panels we provide the proposal description and the corresponding ISS proposal type in parentheses.

| Description (Proposal Type ISS) | Freq. | % | Cum. |
|---|---|---|---|
| Panel A: Top 10 Management Proposals | | | |
| Amend Omnibus Stock Plan (M0524) | 2957 | 21.35 | 21.35 |
| Advisory Vote to Ratify Named Exec. Officers' Comp. (M0550) | 2293 | 16.56 | 37.91 |
| Approve Omnibus Stock Plan (M0522) | 1836 | 13.26 | 51.17 |
| Approve/Amend Executive Incentive Bonus (M0535) | 1328 | 9.59 | 60.76 |
| Increase Authorized Common Stock (M0304) | 775 | 5.6 | 66.36 |
| Amend Qualified Employee Stock Purchase (M0512) | 622 | 4.49 | 70.85 |
| Approve Qualified Employee Stock Purchase (M0510) | 314 | 2.27 | 73.12 |
| Amend Stock Option Plan (M0503) | 276 | 1.99 | 75.11 |
| Amend Articles/Bylaws/Charter-Non-Routine (M0126) | 189 | 1.36 | 76.48 |
| Approve Merger Agreement (M0405) | 187 | 1.35 | 77.83 |
| Panel B: Top 10 Shareholder Proposals | | | |
| Require a Majority Vote for the Election of Directors (S0212) | 282 | 7.48 | 7.48 |
| Declassify the Board of Directors (S0201) | 270 | 7.16 | 14.64 |
| Political Contributions and Lobbying (S0807) | 235 | 6.23 | 20.87 |
| Require Independent Board Chairman (S0107) | 219 | 5.81 | 26.68 |
| Advisory Vote to Ratify Named Exec. Officers' Comp. (S0517) | 215 | 5.7 | 32.38 |
| Social Proposal (S0999) | 158 | 4.19 | 36.57 |
| Amend Articles/Bylaws/Charter – Call Special Meetings (S0235) | 155 | 4.11 | 40.68 |
| Restore or Provide for Cumulative Voting (S0207) | 147 | 3.9 | 44.58 |
| Company-Specific – Shareholder Miscellaneous (S0810) | 119 | 3.16 | 47.73 |
| Performance-Based and/or Time-Based Equity Awards (S0512) | 115 | 3.05 | 50.78 |
| Panel C: Top 10 Contested 20% | | | |
| Require a Majority Vote for the Election of Directors (S0212) | 233 | 15.04 | 15.04 |
| Advisory Vote to Ratify Named Exec. Officers' Comp. (S0517) | 194 | 12.52 | 27.57 |
| Amend Articles/Bylaws/Charter – Call Special Meetings (S0235) | 138 | 8.91 | 36.48 |
| Declassify the Board of Directors (S0201) | 128 | 8.26 | 44.74 |
| Require Independent Board Chairman (S0107) | 108 | 6.97 | 51.71 |

*Continued on next page*

**Table IA.I. Summary Statistics III** — *continued from previous page*

| Description (Proposal Type ISS) | Freq. | % | Cum. |
|---|---|---|---|
| Restore or Provide for Cumulative Voting (S0207) | 104 | 6.71 | 58.42 |
| Performance-Based and/or Time-Based Equity Awards (S0512) | 75 | 4.84 | 63.27 |
| Political Contributions and Lobbying (S0807) | 49 | 3.16 | 66.43 |
| Provide Right to Act by Written Consent (S0238) | 41 | 2.65 | 69.08 |
| Expense Stock Options (INACTIVE) (S0514) | 38 | 2.45 | 71.53 |
| Panel D: Davis & Kim Proposals | | | |
| Declassify the Board of Directors (S0201) | 270 | 34.22 | 34.22 |
| Require Independent Board Chairman (S0107) | 219 | 27.76 | 61.98 |
| Restore or Provide for Cumulative Voting (S0207) | 147 | 18.63 | 80.61 |
| Submit Shareholder Rights Plan (Poison Pill) to Srh. Vote (S0302) | 65 | 8.24 | 88.85 |
| Submit Severance Agreement (Change-in-Control) to Srh. Vote (S0321) | 47 | 5.96 | 94.8 |
| Expense Stock Options (INACTIVE) (S0514) | 41 | 5.2 | 100 |
| Panel E: Executive Compensation Proposals | | | |
| Advisory Vote to Ratify Named Exec. Officers' Comp. (S0212) | 215 | 28.07 | 28.07 |
| Performance-Based and/or Time-Based Equity Awards (S0512) | 115 | 15.01 | 43.08 |
| Review Executive Compensation (INACTIVE) (S0508) | 75 | 9.79 | 52.87 |
| Limit/Prohibit Executive Stock-Based Awards (S0501) | 55 | 7.18 | 60.05 |
| Pay For Superior Performance (S0520) | 54 | 7.05 | 67.10 |
| Submit Severance Agreement (Change-in-Control) to Srh. Vote (S0321) | 47 | 6.14 | 73.24 |
| Expense Stock Options (INACTIVE) (S0514) | 41 | 5.35 | 78.59 |
| Report on Pay Disparity (S0507) | 37 | 4.83 | 83.42 |
| Eliminate or Restrict Severance Agreements (Change-in-Control) (S0318) | 24 | 3.13 | 86.55 |
| Limit Executive Compensation (S0504) | 24 | 3.13 | 89.69 |
| Increase Disclosure of Executive Compensation (S0503) | 22 | 2.87 | 92.56 |
| Submit SERP to Shareholder Vote (S0506) | 18 | 2.35 | 94.91 |
| Death Benefits/Golden Coffins (S0502) | 15 | 1.96 | 96.87 |
| Non-Employee Director Compensation (S0515) | 8 | 1.04 | 97.91 |
| Disclose Information on Compensation Consultant (S0521) | 6 | 0.78 | 98.69 |
| Put Repricing of Stock Options to Shareholder Vote (S0513) | 3 | 0.39 | 99.09 |
| TARP Related Compensation (S0526) | 3 | 0.39 | 99.48 |
| Employment Contract (S0525) | 2 | 0.26 | 99.74 |
| Adopt Policy on 10b5-1 Plans (S0522) | 1 | 0.13 | 99.87 |
| Establish a Compensation Committee (S0204) | 1 | 0.13 | 100.00 |
| Panel F: G-Index Proposals | | | |
| Require a Majority Vote for the Election of Directors (S0212) | 282 | 26.60 | 26.60 |
| Declassify the Board of Directors (S0201) | 270 | 25.47 | 52.08 |
| Amend Articles/Bylaws/Charter – Call Special Meetings (S0235) | 155 | 14.62 | 66.70 |
| Restore or Provide for Cumulative Voting (S0207) | 147 | 13.87 | 80.57 |

*Continued on next page*

**Table IA.I. Summary Statistics III** — *continued from previous page*

| Description (Proposal Type ISS) | Freq. | % | Cum. |
|---|---|---|---|
| Submit Shareholder Rights Plan (Poison Pill to Shareholder Vote) (S0302) | 65 | 6.13 | 86.70 |
| Reduce Supermajority Vote Requirement (S0311) | 55 | 5.19 | 91.89 |
| Submit Severance Agreement (Change-in-Control) to Srh. Vote (S0321) | 47 | 4.43 | 96.32 |
| Eliminate or Restrict Severance Agreements (Change-in-Control) (S0318) | 24 | 2.26 | 98.58 |
| Approve/Amend Terms of Existing Poison Pill (S0332) | 10 | 0.94 | 99.53 |
| Amend Articles/Bylaws/Charter to Remove Antitakeover Prov. (S0326) | 3 | 0.28 | 99.81 |
| Provide for Confidential Voting (INACTIVE) (S0304) | 2 | 0.19 | 100.00 |

**Table IA.II**
**Effect of Business Ties on Voting (Conditional Logit, Subsamples)**

The dependent variable is zero if the percentage of votes with management at the fund family level is less than 50%, and it is one otherwise. The regression is run over different proposals categories using a conditional logit approach. The main independent variable is a business ties measure ("Log Total Compensation" in columns 1, 3, 5, 7, and 9 or "BT Dummy" in columns 2, 4, 6, 8, and 10) that gives the extent to which business ties affect the probability of a fund family voting with management in the corresponding proposal category. The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). All specifications include firm× family and year fixed effects as explained in Section II. All regressions include an intercept, which is not reported. *Note*: In a conditional logistic regression, if the dependent variable does not vary within a group (i.e., firm×family), then the maximum likelihood estimate of the coefficient of that group's fixed effect is infinite in magnitude and those observations are dropped. In OLS, this does not result in observations being dropped (the group fixed effect estimates are set to zero). This explains the difference in the number of observations between the OLS in Tables III and IV of the paper and here. Robust $z$-statistics are in parentheses, clustered at the family level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | All Proposals | | Mgmt. Proposals | | Srh. Proposals | |
|---|---|---|---|---|---|---|
| Votes with mgmt (0 or 1) | (1) | (2) | (3) | (4) | (5) | (6) |
| Log Total Comp. | 0.016*** | | -0.012 | | 0.025*** | |
| | (2.587) | | (-1.275) | | (3.246) | |
| BT Dummy | | 0.141* | | -0.144 | | 0.269*** |
| | | (1.699) | | (-1.376) | | (2.844) |
| Log Holdings | 0.058** | 0.058** | 0.103*** | 0.103*** | 0.018 | 0.018 |
| | (2.143) | (2.141) | (3.550) | (3.552) | (0.488) | (0.491) |
| ISS Recommendation | 3.367*** | 3.367*** | 3.179*** | 3.179*** | 4.506*** | 4.506*** |
| | (7.565) | (7.565) | (7.655) | (7.656) | (9.594) | (9.590) |
| Firm×Family F.E. | Yes | Yes | Yes | Yes | Yes | Yes |
| Year F.E. | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 107,666 | 107,666 | 45,451 | 45,451 | 37,913 | 37,913 |

| | Contested 20% Proposals | | Contested 10% proposals | |
|---|---|---|---|---|
| Votes with mgmt. (0 or 1) | (7) | (8) | (9) | (10) |
| Log Total Comp. | 0.030*** | | 0.010 | |
| | (2.990) | | (0.878) | |
| BT Dummy | | 0.315** | | 0.040 |
| | | (2.501) | | (0.264) |
| Log Holdings | 0.060 | 0.061 | 0.072 | 0.073 |
| | (1.374) | (1.378) | (1.337) | (1.339) |
| ISS Recommendation | 1.659*** | 1.659*** | 0.921 | 0.912 |
| | (3.105) | (3.112) | (1.038) | (1.030) |
| Firm×Family F.E. | Yes | Yes | Yes | Yes |
| Year F.E. | Yes | Yes | Yes | Yes |
| Observations | 11,136 | 11,136 | 4,167 | 4,167 |

**Table IA.III**
**Effect of Business Ties on Voting (Conditional Logit, D-in-D)**

The dependent variable is zero if the percentage of votes with management at the fund-family level is less than 50%, and it is one otherwise. The regression is run over management and different shareholder (sponsored) proposal categories using a differences-in-differences (d-in-d) specification. The independent variables include a business ties measure ("Log Total Compensation" in columns 1, 3, 5, 7, and 9 or "BT Dummy" in columns 2, 4, 6, 8, and 10), and a dummy variable indicating a proposal category (e.g., "Shareholder"). The interaction of the two is our main independent variable (e.g., "Shareholder×Log Total Compensation" or "Shareholder×BT Dummy") and gives the extent to which business ties affect the probability of a fund family voting with management in the corresponding proposal category relative to management proposals. The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). There are firm×family×year fixed effects in all specifications as explained in Section IV. The coefficient on the business ties measure ("Log Total Compensation" or "BT Dummy") is dropped due to collinearity and hence is not reported. All regressions include an intercept, which is not reported. *Note*: In a conditional logistic regression, if the dependent variable does not vary within a group (i.e., firm×family×year), then the maximum likelihood estimate of the coefficient of that group's fixed effect is infinite in magnitude and those observations are dropped. In OLS, this does not result in observations being dropped (the group fixed effect estimates are set to zero). This explains the difference in the number of observations between the OLS in Tables V to VII in the paper and here. Robust $z$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Srh. Proposals | | Cont. 20% Props. | | Cont. 10% Props. | |
|---|---|---|---|---|---|---|
| Votes with mgmt. (0 or 1) | (1) | (2) | (3) | (4) | (5) | (6) |
| Srh.×Log Total Comp. | 0.049** | | | | | |
| | (2.286) | | | | | |
| Srh.×BT Dummy | | 0.626** | | | | |
| | | (2.295) | | | | |
| Shareholder | 0.838*** | 0.839*** | | | | |
| | (5.876) | (5.869) | | | | |
| Cont.20%×Log Total Comp. | | | 0.044* | | | |
| | | | (1.915) | | | |
| Cont.20%×BT Dummy | | | | 0.563* | | |
| | | | | (1.872) | | |
| Contested 20% | | | 0.376** | 0.377** | | |
| | | | (2.444) | (2.446) | | |
| Cont.10%×Log Total Comp. | | | | | 0.039 | |
| | | | | | (1.299) | |
| Cont.10%×BT Dummy | | | | | | 0.506 |
| | | | | | | (1.306) |
| Contested 10% | | | | | 0.272 | 0.273 |
| | | | | | (1.427) | (1.428) |
| Log Holdings | -0.024 | -0.024 | -0.029 | -0.028 | -0.021 | -0.021 |
| | (-0.237) | (-0.235) | (-0.289) | (-0.286) | (-0.205) | (-0.202) |
| ISS Recommendation | 3.626*** | 3.626*** | 3.107*** | 3.107*** | 3.178*** | 3.178*** |
| | (23.298) | (23.305) | (19.655) | (19.662) | (20.080) | (20.091) |
| Firm×Family×Year F.E. | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 54,580 | 54,580 | 33,526 | 33,526 | 25,435 | 25,435 |

**Table IA.IV**
**Effect of Business Ties on Voting (D-in-D Contested 20% Proposals vs. Other Shareholder Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. The regression is run over all shareholder proposals using a differences-in-differences (d-in-d) specification. The independent variables is a business ties measure ("Log Total Compensation" in columns 1to 3 or "BT Dummy" in columns 4 to 6) and a dummy variable indicating contested 20% shareholder (sponsored) proposals ("Contested 20%"). The interaction of the two is our main independent variable ("Contested 20%×Log Total Compensation" or "Contested 20%×BT Dummy") and gives the extent to which business ties affect fund family voting with management in contested 20% shareholder proposals relative to other shareholder proposals. The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). Firm×family×year fixed effects are used in all specifications. The coefficient on "Log Total Compensation" is dropped due to collinearity and hence it is not reported. Extra fixed effects are as reported. In particular, columns 1 to 3 and 4 to 6 correspond to specifications (2a) to (2c) as explained in Section IV. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Srh. Proposals, 2003-2011 | | | | | |
|---|---|---|---|---|---|---|
| Votes with mgmt. (0–100) | (1) | (2) | (3) | (4) | (5) | (6) |
| Cont.20%×Log Tot.Comp. | 0.445** | 0.625*** | 0.732*** | | | |
| | (2.243) | (3.265) | (3.336) | | | |
| Cont.20%×BT Dummy | | | | 5.334* | 7.981*** | 9.306*** |
| | | | | (1.917) | (2.970) | (2.989) |
| Contested 20% | - | - | -18.476 | - | - | -18.476 |
| | 7.951*** | 2.782*** | | 7.878*** | 2.728*** | |
| | (-5.846) | (-2.887) | (-0.000) | (-5.800) | (-2.833) | (-0.000) |
| ISS Recommendation | 42.959*** | 38.738*** | 79.008 | 42.952*** | 38.736*** | 79.008 |
| | (14.324) | (12.223) | (0.000) | (14.320) | (12.220) | (0.000) |
| Log Holdings | 7.287 | -2.783 | -2.807 | 7.289 | -2.783 | -2.807 |
| | (1.295) | (-0.337) | (-0.325) | (1.296) | (-0.337) | (-0.325) |
| Firm×Family×Year F.E. | Yes | Yes | Yes | Yes | Yes | Yes |
| Proposal Type ISS F.E. | No | Yes | No | No | Yes | No |
| Proposal F.E. | No | No | Yes | No | No | Yes |
| Observations | 52,904 | 52,904 | 52,904 | 52,904 | 52,904 | 52,904 |
| $R^2$ | 0.769 | 0.791 | 0.806 | 0.769 | 0.791 | 0.806 |

**Table IA.V**
**Effect of Business Ties Dummy and Size on Voting (D-in-D-in-D Contested 20% Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. The regression is run over management and shareholder proposals contested at the 20% level using a differences-in-differences-in-differences (d-in-d-in-d) specification. The independent variables include a business ties dummy ("BT Dummy"), a dummy variable indicating contested 20% shareholder (sponsored) proposals ("Contested 20%") and an additional fund family size dummy ("Large Family"). The interaction of the three is our main independent variable ("Contested 20%×BT Dummy×Large Family") and gives the extent to which going from no business ties to some business relationship affects fund family voting with management in contested 20% shareholder proposals relative to management proposals and in large fund families relative to small fund families. The relevant double interactions are also included. The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). Firm×family×year fixed effects are used in all specifications. The coefficients on "BT Dummy," "Large Family" and "BT Dummy×Large Family," are dropped due to collinearity and hence are not reported. Extra fixed effects are as reported. In particular, columns 1 to 3 correspond to specifications (3a) to (3c) as explained in Section VI. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Mgmt. and Cont. 20% Srh. Proposals, 2003-2011 | | |
|---|---|---|---|
| Votes with mgmt. (0–100) | (1) | (2) | (3) |
| Cont.20%×BT Dummy×Large Family | 14.842** | 14.909** | 15.554* |
| | (1.977) | (2.027) | (1.916) |
| Cont.20%×Large Family | -2.321 | -1.876 | -1.802 |
| | (-0.322) | (-0.257) | (-0.235) |
| Cont.20%×BT Dummy | 0.352 | -1.061 | -0.788 |
| | (0.054) | (-0.165) | (-0.108) |
| ISS Recommendation | 56.282*** | 52.515*** | 32.050 |
| | (16.647) | (14.356) | (0.000) |
| Contested 20% | 7.778 | -17.880 | -4.923 |
| | (1.260) | (-0.000) | (-0.000) |
| Log Holdings | -0.240 | -0.093 | -0.035 |
| | (-0.204) | (-0.076) | (-0.026) |
| Firm×Family×Year F.E. | Yes | Yes | Yes |
| Proposal Type ISS F.E. | No | Yes | No |
| Proposal F.E. | No | No | Yes |
| Observations | 140,842 | 140,842 | 140,842 |
| $R^2$ | 0.792 | 0.804 | 0.826 |

**Table IA.VI**
**Effect of Business Ties Split dummies on Voting (D-in-D Shareholder Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. The regression is run over management and shareholder proposals using a differences-in-differences (d-in-d) specification. The independent variables include a business ties median dummy ("BT Median Dummy"), a business ties dummy difference ("BT Dummy - BT Median Dummy"), and another dummy variable indicating shareholder (sponsored) proposals ("Shareholder"). The interactions of the two business ties dummies with the proposal category are our main independent variables and give the extent to which going from one business ties band to the next affects fund family voting with management in shareholder proposals relative to management proposals. The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). Firm×family×year fixed effects are used in all specifications. The coefficients on "BT Dummy" and "BT Dummy - BT Median Dummy" are dropped due to collinearity and hence are not reported. Extra fixed effects are as reported. In particular, columns 1 to 3 correspond to specifications (3a) to (3c) as explained in Section VI. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Management and Shareholder Proposals, 2003-2011 | | |
|---|---|---|---|
| Votes with mgmt. (0–100) | (1) | (2) | (3) |
| Srh.×(BT Dummy-BT Med. Dummy) | 8.794*** | 8.121*** | 8.069** |
| | (2.841) | (2.704) | (2.537) |
| Shareholder×BT Median Dummy | 10.750*** | 8.578** | 9.725** |
| | (3.245) | (2.587) | (2.559) |
| Shareholder | 3.830*** | -15.950 | -16.965 |
| | (3.068) | (-0.000) | (-0.000) |
| ISS Recommendation | 52.478*** | 46.954*** | 32.696 |
| | (18.921) | (15.199) | (0.000) |
| Log Holdings | -0.222 | -0.126 | -0.117 |
| | (-0.217) | (-0.119) | (-0.105) |
| Firm×Family×Year F.E. | Yes | Yes | Yes |
| Proposal Type ISS F.E. | No | Yes | No |
| Proposal F.E. | No | No | Yes |
| Observations | 171,473 | 171,473 | 171,473 |
| $R^2$ | 0.743 | 0.762 | 0.788 |

**Table IA.VII**
**Effect of Business Ties on Voting (Davis & Kim Proposals)**

In all columns the dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. Columns 1 to 3: The regression is run over Davis & Kim proposals (see Table IA.I, Panel D). The main independent variable is the (natural) logarithm of the total compensation of a fund family ("Log Total Compensation") and gives the extent to which business ties affects fund family voting with management in Davis & Kim proposals. Firm×family fixed effects are used in all specifications. Extra fixed effects are as reported. Columns 4 to 6: The regression is run over management and Davis & Kim proposals using a differences-in-differences (d-in-d) specification. The independent variables include the (natural) logarithm of the total compensation of a fund family ("Log Total Compensation") and a dummy variable indicating Davis & Kim proposals ("DK"). The interaction of the two ("DK×Log Total Compensation") is our main independent variable and gives the extent to which business ties affect fund family voting with management in Davis & Kim proposals relative to management proposals. Firm×family×year fixed effects are used in all specifications. Extra fixed effects are as reported. The coefficient on "Log Total Compensation" is dropped due to collinearity and hence is not reported. In all columns the two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). In particular, columns 1 to 3 correspond to specifications (1a) to (1c) as explained in Section II, and columns 4 to 6 correspond to specifications (2a) to (2c) as explained in Section IV. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Davis & Kim Proposals, 2003-2011 | | | Mgmt. and Davis & Kim Proposals, 2003-2011 | | |
|---|---|---|---|---|---|---|
| Votes with mgmt (0–100) | (1) | (2) | (3) | (4) | (5) | (6) |
| Log Total Comp. | 0.675 | 0.581 | 0.452 | | | |
| | (1.606) | (1.497) | (1.159) | | | |
| DK×Log Total Comp. | | | | 1.396*** | 0.922*** | 0.941*** |
| | | | | (5.651) | (3.776) | (3.278) |
| DK | | | | -0.455 | -50.484 | -12.565 |
| | | | | (-0.194) | (-0.000) | (-0.000) |
| Log Holdings | -0.705 | -0.442 | -0.094 | -0.202 | -0.111 | 0.353 |
| | (-1.024) | (-0.752) | (-0.157) | (-0.207) | (-0.109) | (0.346) |
| ISS Recommendation | 39.328*** | 38.916*** | | 56.474*** | 51.906*** | |
| | (7.283) | (7.547) | | (17.430) | (14.750) | |
| Firm×Family F.E. | Yes | Yes | Yes | No | No | No |
| Firm×Family×Year F.E. | No | No | No | Yes | Yes | Yes |
| Proposal Type ISS F.E. | No | Yes | No | No | Yes | No |
| Proposal F.E. | No | No | Yes | No | No | Yes |
| Observations | 9,730 | 9,730 | 9,730 | 128,299 | 128,299 | 128,299 |
| $R^2$ | 0.709 | 0.744 | 0.771 | 0.819 | 0.831 | 0.855 |

**Table IA.VIII**
**Effect of Business Ties on Voting (Executive Compensation Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. Columns 1 to 3: The regression is run over executive compensation proposals (see Table IA.I, Panel E). The main independent variable is the (natural) logarithm of the total compensation of a fund family ("Log Total Compensation") and gives the extent to which business ties affects fund family voting with management in executive compensation proposals. Firm×family fixed effects are used in all specifications. Extra fixed effects are as reported. Columns 4 to 6: The regression is run over management and executive compensation proposals using a differences-in-differences (d-in-d) specification. The independent variables include the (natural) logarithm of the total compensation of a fund family ("Log Total Compensation") and a dummy variable indicating executive compensation proposals ("EC"). The interaction of the two ("EC×Log Total Compensation") is our main independent variable and gives the extent to which business ties affect fund family voting with management in executive compensation proposals relative to management proposals. Firm×family×year fixed effects are used in all specifications. Extra fixed effects are as reported. The coefficient on "Log Total Compensation" is dropped due to collinearity and hence is not reported. In all columns the two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). In particular, columns 1 to 3 correspond to specifications (1a) to (1c) as explained in Section II, and columns 4 to 6 correspond to specifications (2a) to (2c) as explained in Section IV. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Executive Comp. Proposals, 2003-2011 | | | Mgmt. and Executive Comp. Proposals, 2003-2011 | | |
|---|---|---|---|---|---|---|
| Votes with mgmt. (0–100) | (1) | (2) | (3) | (4) | (5) | (6) |
| Log Tot. Comp. | 0.358 | 0.369 | 0.448 | | | |
| | (1.128) | (1.185) | (1.405) | | | |
| EC×Log Total Compensation | | | | 0.854*** | 0.862*** | 0.878** |
| | | | | (2.757) | (2.875) | (2.538) |
| EC | | | | 8.804*** | -42.433 | -9.811 |
| | | | | (3.784) | (-0.000) | (-0.000) |
| Log Holdings | 1.355** | 1.334** | 1.202* | -0.560 | -0.359 | 0.204 |
| | (2.147) | (2.206) | (1.825) | (-0.505) | (-0.309) | (0.183) |
| ISS Recommendation | 46.961*** | 46.439*** | | 56.502*** | 52.614*** | |
| | (10.719) | (9.002) | | (18.089) | (14.818) | |
| Firm×Family F.E. | Yes | Yes | Yes | No | No | No |
| Firm×Family×Year F.E. | No | No | No | Yes | Yes | Yes |
| Proposal Type ISS F.E. | No | Yes | No | No | Yes | No |
| Proposal F.E. | No | No | Yes | No | No | Yes |
| Observations | 11,016 | 11,016 | 11,016 | 129,585 | 129,585 | 129,585 |
| $R^2$ | 0.722 | 0.731 | 0.748 | 0.815 | 0.822 | 0.845 |

**Table IA.IX**
**Effect of Business Ties on Voting (G-Index Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. Columns 1 to 3: The regression is run over G-index proposals (see Table IA.I, Panel F). The main independent variable is the (natural) logarithm of the total compensation of a fund family ("Log Total Compensation") and gives the extent to which business ties affects fund family voting with management in G-index proposals. Firm×family fixed effects are used in all specifications. Extra fixed effects are as reported. Columns 4 to 6: The regression is run over management and G-index proposals using a differences-in-differences (d-in-d) specification. The independent variables include the (natural) logarithm of the total compensation of a fund family ("Log Total Compensation") and a dummy variable indicating G-index proposals ("G-Index"). The interaction of the two ("G-Index×Log Total Compensation") is our main independent variable and gives the extent to which business ties affect fund family voting with management in G-index proposals relative to management proposals. Firm×family×year fixed effects are used in all specifications. Extra fixed effects are as reported. The coefficient on "Log Total Compensation" is dropped due to collinearity and hence is not reported. In all columns the two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). In particular, columns 1 to 3 correspond to specifications (1a) to (1c) as explained in Section II, and columns 4 to 6 correspond to specifications (2a) to (2c) as explained in Section IV. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | G-Index Proposals, 2003-2011 | | | Mgmt. and G-Index Proposals, 2003-2011 | | |
|---|---|---|---|---|---|---|
| Votes with mgmt. (0–100) | (1) | (2) | (3) | (4) | (5) | (6) |
| Log Tot. Comp. | 0.586 | 0.620 | 0.707* | | | |
| | (1.509) | (1.625) | (1.884) | | | |
| G-Index×Log Tot. Comp. | | | | 0.877*** | 0.593** | 0.640* |
| | | | | (3.232) | (2.108) | (1.970) |
| G-Index | | | | -3.830 | -42.140 | 10.870 |
| | | | | (-1.442) | (-0.000) | (0.000) |
| Log Holdings | -0.166 | -0.039 | 0.044 | 0.026 | 0.182 | 0.421 |
| | (-0.289) | (-0.072) | (0.078) | (0.026) | (0.172) | (0.382) |
| ISS Recommendation | 38.816*** | 47.134*** | | 57.076*** | 53.284*** | |
| | (6.388) | (9.347) | | (16.878) | (14.611) | |
| Firm×Family F.E. | Yes | Yes | Yes | No | No | No |
| Firm×Family×Year F.E. | No | No | No | Yes | Yes | Yes |
| Proposal Type ISS F.E. | No | Yes | No | No | Yes | No |
| Proposal F.E. | No | No | Yes | No | No | Yes |
| Observations | 13,965 | 13,965 | 13,965 | 132,534 | 132,534 | 132,534 |
| $R^2$ | 0.683 | 0.710 | 0.739 | 0.820 | 0.831 | 0.853 |

**Table IA.X**
**The MX Classification**

| Panel A: Distribution of Proposal Type MX | | | |
|---|---|---|---|
| Proposal Type MX | Frequency | Percent | Cumulative |
| Compensation | 11697 | 66.39 | 66.39 |
| Restructuring | 1323 | 7.51 | 73.9 |
| CSR | 1168 | 6.63 | 80.53 |
| Board | 1137 | 6.45 | 86.98 |
| Governance | 729 | 4.14 | 91.12 |
| Defence | 658 | 3.73 | 94.86 |
| Merger | 310 | 1.76 | 96.62 |
| Business | 206 | 1.17 | 97.79 |
| Standard | 203 | 1.15 | 98.94 |
| Other | 175 | 0.99 | 99.93 |
| Dividends | 7 | 0.04 | 99.97 |
| Say On Pay | 5 | 0.03 | 100 |

| Panel B: Top 3 Proposals per Proposal Type MX | |
|---|---|
| Proposal Type MX | Proposal Descriptions |
| Compensation | Amend Omnibus Stock Plan, Advisory Vote to Ratify Named Exec. Officers' Comp., Approve Omnibus Stock Plan |
| Restructuring | Increase Authorized Common Stock, Company Specific-Equity-Related, Approve Reverse Stock Split |
| CSR | Political Contributions and Lobbying, Social Proposal, Improve Human Rights Standards or Policy |
| Board | Require a Majority Vote for the Election of Board, Require Independent Board Chairman, Restore or Provide for Cumulative Voting |
| Governance | Amend Articles/Bylaws/Charter-Non-Routine, Amend Articles/Bylaws/Charter–Call Special Meetings, Company Specific-Gov. Related |
| Defence | Declassify the Board of Directors, Reduce Supermajority Vote Requirement, Submit Shareholder Rights Plan (Poison Pill) |
| Merger | Approve Merger Agreement, Approve Acquisition OR Issue Shares in Connection with Acquisition, Approve Sale of Company Assets |
| Business | Change Company Name, Claw-back of Payments under Restatement, Company-Specific–Organization-Related |
| Standard | Adjourn Meeting, Accept Financial Statements and Statutory Reports, Limit Auditor from Providing Non-Audit Services |
| Other | Company-Specific–Shareholder Miscellaneous, Other Business, Company-Specific–Miscellaneous |
| Dividends | Approve Allocation of Income and Divide, Approve Dividends, Initiate Payment of Cash Dividend (INACTIVE) |
| Say On Pay | Advisory Vote on Say on Pay Frequency, Bundled Say on Pay/Golden Parachute Advisory |

**Table IA.XI**
**Effect of Business Ties on Voting (D-in-D Contested 20% Management Proposals)**

The dependent variable is the percentage of votes with management at the fund family level on a 0 to 100 scale. The regression is run over management proposals using a differences-in-differences (d-in-d) specification. The dependent variables include the (natural) logarithm of the total compensation of a fund family ("Log Total Compensation") and a dummy variable indicating contested 20% management (sponsored) proposals ("Contested 20% Management"). The interaction of the two ('Contested 20% Management×Log Total Compensation') is our main independent variable and gives the extent to which business ties affect fund family voting with management in contested 20% management proposals relative to non-contested management proposals. The two remaining independent variables are the (natural) logarithm of holdings of fund families in portfolio firms ("Log Holdings") and the ISS recommendation for a proposal ("ISS Recommendation"). Firm×family×year fixed effects are used in all specifications. The coefficient on "Log Total Compensation" is dropped due to collinearity and hence is not reported. Extra fixed effects are as reported. In particular, columns 1 to 3 correspond to specifications (1a) to (1c) as explained in Section II. All regressions include an intercept, which is not reported. Robust $t$-statistics are in parentheses, clustered at the family×year level. * Significant at 10%; ** significant at 5%; *** significant at 1%.

| | Management Proposals, 2003-2011 | | |
|---|---|---|---|
| Votes with mgmt. (0–100) | (1) | (2) | (3) |
| Cont. 20% Mgmt.×Log Total Compensation | -0.103 | -0.020 | -0.033 |
| | (-0.369) | (-0.074) | (-0.110) |
| Contested 20% Management | -7.655*** | -4.578*** | -26.901 |
| | (-7.011) | (-5.189) | (-0.000) |
| ISS Recommendation | 53.742*** | 50.904*** | 8.887 |
| | (14.087) | (12.810) | (0.000) |
| Log Holdings | -0.347 | -0.235 | 0.411 |
| | (-0.307) | (-0.197) | (0.366) |
| Firm×Family×Year F.E. | Yes | Yes | Yes |
| Proposal Type ISS F.E. | No | Yes | No |
| Proposal F.E. | No | No | Yes |
| Observations | 118,569 | 118,569 | 118,569 |
| $R^2$ | 0.835 | 0.841 | 0.865 |