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Ties that Bind:
How business connections affect mutual fund activism*

Dragana Cvijanović† Amil Dasgupta‡ Konstantinos Zachariadis§

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Abstract

We investigate how business ties with portfolio firms influence mutual funds' proxy voting using a comprehensive dataset spanning 2003 to 2011. In sharp contrast to the prior literature, we show that the proxy voting of mutual funds is significantly influenced by their business ties with portfolio firms. Our result holds at the level of individual proposals after robustly controlling for unobserved heterogeneity across firms and fund families and over time as well as for the effects of ISS recommendations and fund family holdings. We also show that the influence of business ties on proxy voting is strongest for highly contested shareholder proposals where proxy votes are most relevant for firm value. Finally, we show that the prominent class action lawsuits of 2006 against 401(K) sponsors and providers had differential effects on the voting of different fund families depending on whether they were sued, thus unearthing a potential link between investor attention and corporate governance.

1 Introduction

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 the pension portfolios of employees of companies through 401(K) plans. High returns on mutual

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fund holdings have the potential to deliver significant wealth effects for the economy. Mutual funds are simultaneously of significant importance in corporate governance: They collectively own 24% of US corporate equity[1] and large mutual fund families hold blocks of 10% or more in dozens of large US corporations (Davis and Yoo (2003)). Since the passage of shareholder proposals can significantly enhance firm value (Cunat, Gine, and Guadalupe (2012)) the suitable use of such proxy voting ability can be of significant importance to public corporations.

Since a large number of participants in 401(K) plans are investors in mutual funds and since funds have a fiduciary duty (under the Investment Company Act of 1940) to vote proxies in the interest of their investors, there is a direct link between these two potentially beneficial roles played by mutual funds. If mutual funds voted their proxies in a manner that enhanced the value of portfolio firms, they would not only play a beneficial role in corporate governance, but also enrich their large base of retail clients, including 401(K) plan participants. Thus, the proxy voting behaviour of mutual funds is of considerable importance.

Yet, mutual funds often have lucrative business relationships (centered around the management of the same 401(K) plans that enhance their importance to retail investors) with portfolio firms – in some cases deriving as much as a quarter of revenues from fees arising from such relationships (Davis and Kim (2007)). Since the choice of fiduciaries for 401(K) plans lie in the hands of executives in public corporations who may potentially 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:[2]

> "...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 the SEC adopted Rule 30b1-4 of the Investment Companies Act effective in April 2003 which required mutual funds to disclose their votes cast on portfolio shares annually. The implementation of this rule shines a spotlight on how mutual funds vote and enables researchers to investigate if and how business ties with portfolio firms affect

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

[2] 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*.

mutual fund proxy voting. We examine this relationship between 2003 and 2011 and present three main findings.

First, we unearth a key problem: The voting of mutual funds is significantly influenced by their business ties with portfolio firms. Our result holds at the level of individual proposals after controlling for ISS recommendations, holdings, and unobserved heterogeneity across firms and fund families and over time. This finding stands in sharp contrast to the prior literature (Davis and Kim (2007), Ashraf, Jayaraman, and Ryan (2012)) that finds that business ties with portfolio firms do not influence voting at the level of individual proposals after controlling for fund family heterogeneity. We discuss the connection to these papers in greater detail below.

Second, we show that the association between business ties and mutual fund voting is strongest exactly when such influence is most harmful to both firm shareholders and fund investors. We do this by focusing on "contested proposals", i.e., those that pass or fail by small margins. The potential passage of such proposals may not be anticipated by the market (Cunat, Gine, and Guadalupe (2012)). Thus it is for these proposals that proxy voting support is most likely to be instrumental in increasing the market value of the firm (Core, Guay, and Rusticus (2006)) and thus the value of the fund's portfolio. Our results are strongest in cases of proposals that pass or fail by 5% or 10%: The point estimates capturing the effect of business ties increase in significance and magnitude. For example, for proposals contested at the 5% level, the magnitude of the relationship between business ties and voting is ten times higher than for all shareholder proposals. Thus it is exactly for proposals where proxy voting is critical for corporate governance that business ties matter most, perhaps because these are the instances in which corporate managers actively try to use lucrative business ties to garner the support of their blockholding fund managers.

Finally, we present findings that suggest that investor attention may play a relevant role in corporate governance via its effect on institutional investors. We do so by studying the effect of prominent class action lawsuits involving 401(K) sponsors and providers that started in 2006 (half way through our sample period) on the management friendliness of fund families. Our hypothesis is that these lawsuits focused the investing public's attention on the cosy relationship between 401(K) sponsors and providers, particularly so for those sponsors and providers directly implicated. We find that fund families that were implicated in class action lawsuits starting in 2006 were significantly more likely (by almost 50% relative to the mean) to vote in favour of management prior to 2006 relative to those that were not. In contrast, following the initiations of the 2006 lawsuits, such families lost pensions business to families that were not implicated in lawsuits and became no more likely to vote in a management friendly manner than others. In contrast, however, families that were not implicated in

lawsuits (who also gained business ties following 2006) became somewhat more likely to vote in a pro-management manner in the second half of our sample. Thus, the cleansing spotlight of investor attention – while apparently effective as a deterrent for families on which it was shone – may also have been locally focussed: Away from the spotlight, other families may have become more management friendly.

The effect of "contestedness" of proposals and investor attention on mutual fund proxy voting have – to the best of our knowledge – never been investigated before.[3] However, the broader question of how business ties affect mutual fund proxy voting has been asked before. Since our results deviate significantly from the prior literature it is worth understanding the differences between prior approaches and ours.

In their empirical investigation of the effect of business ties on mutual fund activism, using the first available year of data on mutual fund proxy votes (June 2003 to July 2004), Davis and Kim (2007) find that for a given proposal, fund voting is not influenced by business ties though fund families with higher levels of business ties support management more 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 dataset. A recent study by Ashraf, Jayaraman, and Ryan (2012) uses data on executive compensation related proposals between January 2004 and June 2006 to support the findings of Davis and Kim (2007): While they find evidence that business ties influence voting at the level of individual proposals, such influence does not survive the inclusion of fund family fixed effects. This is in line with the family-level heterogeneity identified by Davis and Kim (2007), an effect also noted for director elections by Matvos and Ostrovsky (2010).

For our investigation, we combine three different databases over an nine-year period from 2003 to 2011: ISS Voting Analytics data, which contains votes cast by each mutual fund on each proposal of each firm held by mutual funds, recommendations for how to vote from both firm management and Institutional Shareholder Services (ISS); Department of Labor Form 5500 filings, which record business relationships between firms and funds and compensation information associated with such relationships; and SEC 13F fillings, which record institutional holdings at the family level. We estimate a linear probability model of pro-management voting on all shareholder proposals using as our main explanatory variable the logarithm of the total compensation paid by the firm to the fund family as a result of their business relationships. We take advantage of the rich panel structure of our data to control for unobserved firm-, fund-, proposal-, and time-level heterogeneity by using a wide array of fixed effects. This eliminates the need to take a view on the relevant set of firm,

[3]We briefly survey the broader literature on mutual fund proxy voting and investor attention in Section 1.1 below.

fund, and proposal characteristics that should be included in the regression. In addition, we control for the documented effect of business ties on holdings (Cohen and Schmidt (2009)) by including family level holdings as a control variable. Finally, given the importance of ISS recommendations on mutual fund voting, we control for such recommendations.

To summarize, our work differs from Davis and Kim (2007) and Ashraf, Jayaraman, and Ryan (2012) in several critical ways. First, we work with a much larger dataset spanning nine years, whereas they use one and two years of data respectively. Second, they focus on particular classes of proposals: Davis and Kim (2007) consider six governance-related proposals while Ashraf, Jayaraman, and Ryan (2012) consider proposals relating to executive compensation only. In contrast we consider all shareholder proposals. When we choose to focus on particular subsets of proposals, we let the data speak for itself by empirically identifying proposals where proxy voting is most relevant to corporate governance (Core, Guay, and Rusticus (2006), Cunat, Gine, and Guadalupe (2012)). Finally, it is worth noting, that we find a positive association between proxy voting and business ties despite the fact that we aggressively control for unobserved heterogeneity using an arsenal of fixed effects, which the prior literature cannot do in a similar manner due to date limitations.

In the next subsection, we proceed to discuss he broader literature that our paper relates to. The remainder of the paper is organized as follows. Section 2 describes the data and sample construction while Section 3 delineates our empirical strategy. We present and interpret our main findings in Section 4. Section 5 concludes.

1.1 Other related papers

Our paper relates to a large literature, both empirical and theoretical. Most directly, it relates to the recent empirical literature on the effect of business ties on mutual fund proxy voting. We have already discussed above in detail the connection to the most closely connected papers in that literature. More generally related papers within that literature include Cremers and Romano (2011), who consider the effect of mandatory disclosure of proxy votes on a class of EEIC proposals. Earlier analyses of mutual fund proxy voting in the presence of business ties include Rothberg and Lilien (2006).

A number of recent empirical papers have highlighted how business ties appear to affect aspects of mutual fund behaviour other than proxy voting. For example, Cohen and Schmidt (2009) persuasively document that trustee fund families overweight their holdings of sponsor firms and tend not to sell sponsor shares in responses to negative shocks. Duan, Hotchkiss, and Jiao (2011) argue that business ties provide valuable information to mutual fund managers, and thus influence the direction and profitability of their trades in the related firms' stocks. Our paper augments this literature by showing that business ties directly affect proxy

voting, a mechanism that has been shown to be of causal importance to corporate value by Cunat, Gine, and Guadalupe (2012). More generally, our paper relates to the influential literature on the benefits and costs of shareholder rights (e.g., Comment and Schwert (1995), Gompers, Ishii, and Metrick (2003), Bebchuk, Cohen, and Ferrell (2009), and Kadyrzhanova and Rhodes-Kropf (2011)) and to the role of institutional investors in such activism (see Gillan and Starks (2007) and Brav, Jiang, and Kim (2010) for relevant surveys). Our paper also bears a connetion to Matvos and Ostrovsky (2010), who analyze strategic considerations in mutual fund voting without being concerned with 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., Goldman and Strobl (2013), Dasgupta and Piacentino (2012)).

2 Data

Since 2003, the SEC has required all mutual funds registered in the US to file annually their proxy votes in all shareholder meetings of their portfolio companies using the N-PX filings. We obtain the 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 their N-PX filings by August 31st, and the votes cover the period beginning on July 1st of the previous year and ending on June 30th of the current year. For each proposal, funds report the firm, the meeting date, a short description of the proposal (i.e., declassify the board of directors, submit shareholder rights plan (poisson pill) to shareholder vote, reduce supermajority voting requirement, etc.), the sponsor of the proposal (management or shareholder), management's recommendation, the ISS recommendation and the vote of the fund.

We hand-collect data on 401(k) retirement plans sponsored by the publicly traded firms from Form 5500 filings filed with the Department of Labor (DOL). This data provides 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 a Form 5500 with the Department of Labor. Benefits provided by a firm's plan include pension and welfare benefits.[4]

Finally, we merge the mutual fund voting data from the ISS Voting Analytics with the Form 5500 data and mutual fund holdings data we obtained from the SEC Form 13F filings.

[4]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.

Due to the lack of a unique common mutual fund (or family) identifier across the three databases, we merge the three datasets using a name-matching algorithm. The details of this algorithm are available from the authors upon request.

2.1 Summary Statistics

Table 1 contains information on the general characteristics of our sample. As we can see from Panel A, our final merged dataset contains 808,892 votes cast by the 29 largest fund-families, which voted in 14,462 proposals (261 different proposal types) at the shareholder meetings of 2,448 firms. 66.9% of all proposals in our sample are sponsored by firm management and the remaining 33.1% are sponsored by the shareholders.[5] The unconditional probability that a fund family votes with the management recommendation is 67.4%.

Total compensation —received by fund families for the services rendered in relation to 401(k) plans— is defined as the sum of: *direct compensation*, *indirect compensation* and *assets under management/200*. Both direct and indirect compensation are reported in Schedule C of Form 5500. Direct compensation is defined as the plan service provider salary, while indirect compensation is defined as the plan service provider fees. The plan assets under management (AUM) is available from Schedule D; we divide it by 200 to produce the fund's management fees, so we posit a 0.5% expense ratio.[6,7] We see from Table 1 that the average total compensation is $6.49 million, while the median total compensation totals $540,000. The compensation data is very skewed with the interquartile range equal to $2.62 million and the maximum equal to $ 1.16 biilion. The average dollar amount on fund family holdings in their portfolio firms is $495 million, with the median being $59 million.

The summary statistics for the 2003-06 and 2007-10 subsamples are shown in columns 2 and 3 of Panel A. We have 155,765 vote-observations in 2003-06 and 425,564 vote-observations covering the 2007-10 period. This translates roughly into votes of 25 (26) fund families respectively, over 4,103 (6,094) proposals voted in 1,333 (1,673) firms in 2003-06 (07-10).

In Table 2 we show the summary statistics on the nature of business relationships between fund families and portfolio firms (Panel A), the most frequently voted proposals and the largest fund families (Panel B) and fund family voting characteristics (Panel C). The top 5 most frequent types of business relationship (totalling 87% of our sample) are: *contract administrator, record keeping, investment management, trustee* and *investment advisory.* Av-

[5]We exclude the most populous proposal type from our sample (i.e., director elections) as we think it is difficult to discern the value of the election of a particular director to the firm's shareholders. For more details on voting on director elections see Matvos and Ostrovsky (2010).

[6]Davis and Kim (2007) assume the same expense ratio, while Cohen and Schmidt (2009) consider actual expense ratios and take the average of 0.76%; our results are robust with respect to using either expense ratio.

[7]Given the potential complementarily between the terms encompassing total compensation we run our regressions also using each separately (the results are available upon request from the authors).

erage total compensation received for contract administration services is $5.58 million, for record keeping $2.01 million, for investment management $9.51 million, for plan trustee services $1.43 million and for investment advisory $22.4 million.

The top 5 most frequent shareholder sponsored proposal types in our sample are: Advisory vote to ratify named executive, Political contributions and lobbying, require independent board chairman, Amend articles/bylaws/charter (call special meeting) and Require a majority vote for the election of directions. The top most frequent management sponsored proposal types are: Amend omnibus stock plan, Advisory vote to ratify named executive, Advisory vote on say on pay frequency, Approve/amend executive incentive bonus and Increase authorized common stock. The top 5 most frequently appearing fund families in our sample are: Vanguard Group, Blackrock Advisors, Fidelity Investments, Dimensional Fund Advisors and T. Rowe Price Associates.

As we can see from Panel C, in 58.18% of all proposals management recommended a 'yes' vote. This figure increases to 86.69% in case of management sponsored proposals and decreases to 55% in case of shareholder sponsored proposals.[8] ISS recommended a 'yes' vote in 70.98% of all proposals, in 74.73% of management sponsored proposals and 63.38% shareholder sponsored proposals. Funds voted 'yes' in 57.91% of all proposals, in 71.90% of management sponsored proposals and 29.62% of shareholder sponsored proposals. Funds voted in line with the management recommendation in 67.42% of all proposals, in 71.82% of management sponsored proposals and 58.52% of shareholder sponsored proposals. Funds voted in line with the ISS recommendation in 69.35% of all proposals, in 75.23% of management sponsored proposals and 57.46% of shareholder sponsored proposals. ISS recommendation coincided with the management recommendation in 62.13% of all proposals, in 74.68% of management sponsored proposals and 36.74% of shareholder sponsored proposals.

3 Empirical Strategy

For each fund j from family f, voting in a shareholder meeting of portfolio firm i on a proposal p at time t we estimate a set of difference-in-difference specifications of linear probability

[8]The reason why management recommendations are not 100% in favor of management proposals is because we classify everything other than a 'yes' recommendation, e.g., 'withhold', as a negative recommendation. This classification has no real effect on our results.

models which take the following general form:

$$\begin{aligned}\texttt{VoteswithManagement}_{f,i,p,t} = \quad & \alpha + \beta_1 \texttt{LogTotalCompensation}_{f,i,t} + \beta_2 \texttt{ProposalCategory}_{i,p,t} + \\ & + \beta_3 \texttt{LogTotalCompensation}_{f,i,t} \times \texttt{ProposalCategory}_{i,p,t} + \\ & + \beta_4 \texttt{HoldingsResidual}_{f,i,t} + \beta_5 \texttt{ISSRecommendation}_{i,p,t} + \\ & + \text{Fixed Effects Terms} + \varepsilon_{f,i,p,t}. \end{aligned} \tag{$\star$}$$

For our baseline analysis, we estimate six different specifications (described below) which differ in the fixed effect terms included. We thus utilize the richness of our dataset by considering a significant number of ways to control for unobserved heterogeneity.

In each specification, the dependant variable is the proportion of mutual funds j belonging to a fund family f that voted in line with management's recommendation on a proposal put forward at the fund family portfolio firm i's shareholder meeting. Formally, our main dependent variable is defined as:

$$\texttt{VoteswithManagement}_{f,i,p,t} = \frac{\sum_{j=1}^{J} \left(\texttt{FundvotewithManagement}_{j,f,i,p,t} \right)}{J} \times 100,$$

where $\texttt{FundvotewithManagement}_{j,f,i,p,t} = 1$ if fund j from family f votes according to the management recommendation on a proposal p at its portfolio firm i's shareholder meeting at time t and J is the total number of funds per family f voting on that same proposal.

Our core measure of business ties is $\texttt{LogTotalCompensation}_{f,i,t}$, which is a continuous measure of the magnitude of business ties as obtained from the Form 5500 filings. This data is obtained at the individual fund level from the Form 5500 filings and then aggregated to produce a family-level measure of total compensation.

The differences-in-differences approach allows us to estimate the effect of business ties on fund family voting on different proposal categories. In particular, we consider the following proposal categories:

$$\texttt{ProposalCategory}_{i,p,t} \in \left\{ \begin{array}{c} \texttt{Shareholder}_{i,p,t}, \\ \texttt{Contested10\%}_{i,p,t}, \\ \texttt{Contested5\%}_{i,p,t} \end{array} \right\}.$$

For example, for shareholder sponsored proposals, we define $\texttt{Shareholder}_{i,p,t} = 1$ if the proposal is sponsored by shareholders and $\texttt{Shareholder}_{i,p,t} = 0$, otherwise. $\texttt{Contested10\%}_{i,p,t}$, and $\texttt{Contested5\%}_{i,p,t}$ are indicator variables defining shareholder proposals that are passed by 10% and 5% margin, as discussed in Section 4.1.

It is important to make a clear distinction between proposal *categories* (as defined above), proposal *types*, which we will denote by subscript z below, and actual *proposals* that are indexed by subscript p. Each p is a unique identifier for a proposal that arises in a shareholder meeting of firm i at time t.[9] Proposal p may belong to one or more proposal categories (as defined above) and has a proposal type, which is neither time nor firm specific.[10] To illustrate, consider the following example: Proposal $p = 6471494$ in firm *Hilton Hotels Corp.* voted on on *26th May 2005* (i.e., $t = 2005$) has proposal type $z = S0212$ (i.e., "*Require a Majority Vote for the Election of Directors*") and belongs to $\texttt{ProposalCategory}_{i,p,t} = \{\texttt{Shareholder}_{i,p,t}, \texttt{Contested10\%}_{i,p,t}\}$, so it is a shareholder proposal contested at the 10% level but not at the 5% level.[11]

In each specification, we control for two potentially important effects: The effect of holdings and that of ISS recommendations. Cohen and Schmidt (2009) have established that there is a positive correlation between the amounts of compensation received by mutual fund families and their stock holdings in their portfolio firms. In order to control for the size of the mutual fund family holdings in their portfolio firms and for this positive relationship between total compensation received and the size of the fund family holdings, we estimate an OLS regression below, whose residual yields a stock holdings component that is orthogonal to total compensation:

$$\begin{aligned} \texttt{LogHoldings}_{f,i,t} &= \alpha + \texttt{LogTotalCompensation}_{f,i,t} + \varepsilon_{f,i,t}, \\ \texttt{HoldingsResidual}_{f,i,t} &= \widehat{\varepsilon}_{f,i,t}. \end{aligned}$$

The residual of the first stage regression is used in the second stage (corresponding to $(\star)$) to control for the component of mutual fund family holdings in their portfolio firms that is not explained by the compensation received from their fiduciary duties towards 401(k) plans of those firms.

$\texttt{ISSRecommendation}_{i,p,t}$ is a dummy variable taking the value one if the voting recommendations of Institutional Shareholder Services(ISS), a popular proxy voting advisor, is in favour of management. Matvos and Ostrovsky (2010) have shown that including the ISS recommendation may control for a potentially important part of the mutual funds' information about the quality and type of proposals being voted on. In our sample of all proposals, mutual funds tend to vote with the ISS recommendation 69% of the time. For shareholder proposals, this figure drops to 57%. We describe our six core specifications below.

[9] Hence p already includes firm i and time t since a proposal appears at a particular firm at a specific point in time. Instead of being explicit of this dependence by writing $p(i,t)$ we opted for writing i, p, t.

[10] The most frequent proposal types per sponsor were mentioned in the previous section and appear in Panel B of Table 2.

[11] Of course many funds belonging to multiple families can vote at the same proposal p.

Specification 1:

$$\begin{aligned}\texttt{VoteswithManagement}_{f,i,p,t} &= \alpha + \beta_1 \texttt{LogTotalCompensation}_{f,i,t} + \beta_2 \texttt{ProposalCategory}_{i,p,t} + \\ &+ \beta_3 \texttt{LogTotalCompensation}_{f,i,t} \times \texttt{ProposalCategory}_{i,p,t} + \\ &+ \beta_4 \texttt{HoldingsResidual}_{f,i,t} + \beta_5 \texttt{ISSRecommendation}_{i,p,t} + \\ &+ \mu_f \times \delta_t + \gamma_i \times \mu_f + \varepsilon_{f,i,p,t}. \end{aligned} \tag{1}$$

The coefficient of interest is β_3, which measures the effect of business ties for a given firm-family pair on the voting over proposals of a certain category (e.g., for shareholder proposals if $\texttt{ProposalCategory}_{i,p,t} = \texttt{Shareholder}_{i,p,t}$) of a given fund family at a given time. Hence, $\mu_f \times \delta_t$ is a family×time fixed effect, and $\gamma_i \times \mu_f$ is a firm×family fixed effect.[12]

Specification 2:

$$\begin{aligned}\texttt{VoteswithManagement}_{f,i,p,t} &= \alpha + \beta_1 \texttt{LogTotalCompensation}_{f,i,t} + \beta_2 \texttt{ProposalCategory}_{i,p,t} + \\ &+ \beta_3 \texttt{LogTotalCompensation}_{f,i,t} \times \texttt{ProposalCategory}_{i,p,t} + \\ &+ \beta_4 \texttt{HoldingsResidual}_{f,i,t} + \beta_5 \texttt{ISSRecommendation}_{i,p,t} + \\ &+ \pi_z \times \delta_t + \gamma_i \times \mu_f + \varepsilon_{f,i,p,t}. \end{aligned} \tag{2}$$

The coefficient of interest is β_3, which measures the effect of business ties for a given firm-family pair on the voting over proposals of a certain category controlling for the proposal type×time fixed effect ($\pi_z \times \delta_t$). Hence, the effect is identified over two firm-family pairs voting over the same proposal type at the same time.

Specification 3:

$$\begin{aligned}\texttt{VoteswithManagement}_{f,i,p,t} &= \alpha + \beta_1 \texttt{LogTotalCompensation}_{f,i,t} + \beta_2 \texttt{ProposalCategory}_{i,p,t} + \\ &+ \beta_3 \texttt{LogTotalCompensation}_{f,i,t} \times \texttt{ProposalCategory}_{i,p,t} + \\ &+ \beta_4 \texttt{HoldingsResidual}_{f,i,t} + \beta_5 \texttt{ISSRecommendation}_{i,p,t} + \\ &\gamma_i \times \delta_t + \gamma_i \times \mu_f + \varepsilon_{f,i,p,t}. \end{aligned} \tag{3}$$

The coefficient of interest is β_3, which measures the effect of business ties for a given firm-family pair on the voting over proposals of a certain category in a given firm at a given time. Hence, $\gamma_i \times \delta_t$ is a firm×time fixed effect.

[12]Note that there is no economic relationship between business ties and proposal category and hence interpreting the interaction term is not problematic.

Specification 4:

$$\begin{aligned}\texttt{VoteswithManagement}_{f,i,p,t} &= \alpha + \beta_1 \texttt{LogTotalCompensation}_{f,i,t} + \beta_2 \texttt{ProposalCategory}_{i,p,t} + \\ &+\beta_3 \texttt{LogTotalCompensation}_{f,i,t} \times \texttt{ProposalCategory}_{i,p,t} + \\ &+\beta_4 \texttt{HoldingsResidual}_{f,i,t} + \beta_5 \texttt{ISSRecommendation}_{i,p,t} + \\ &\mu_f \times \delta_t + \gamma_i \times \delta_t + \gamma_i \times \mu_f + \varepsilon_{f,i,p,t}. \end{aligned} \tag{4}$$

The coefficient of interest is β_3, which measures the effect of business ties for a given firm-family pair on the voting over proposals of a certain category of a given fund family at a given time in a given firm at a given time.

Specification 5:

$$\begin{aligned}\texttt{VoteswithManagement}_{f,i,p,t} &= \alpha + \beta_1 \texttt{LogTotalCompensation}_{f,i,t} + \beta_2 \texttt{ProposalCategory}_{i,p,t} + \\ &+\beta_3 \texttt{LogTotalCompensation}_{f,i,t} \times \texttt{ProposalCategory}_{i,p,t} + \\ &+\beta_4 \texttt{HoldingsResidual}_{f,i,t} + \beta_5 \texttt{ISSRecommendation}_{i,p,t} + \\ &+\mu_f \times \delta_t + \pi_z \times \delta_t + \gamma_i \times \delta_t + \gamma_i \times \mu_f + \varepsilon_{f,i,p,t}. \end{aligned} \tag{5}$$

The coefficient of interest is β_3, which measures the effect of business ties for a given firm-family pair on the voting over proposals of a certain category of a given fund family at a given time in a given firm at a given time, over a given proposal type at a given time. Hence, the effect is identified over two firm-family pairs, voting over the same proposal type at the same time, controlling for the time-varying firm and fund family unobserved heterogeneity.

Specification 6.

$$\begin{aligned}\texttt{VoteswithManagement}_{f,i,p,t} &= \alpha + \beta_1 \texttt{LogTotalCompensation}_{f,i,t} + \beta_2 \texttt{ProposalCategory}_{i,p,t} + \\ &+\beta_3 \texttt{LogTotalCompensation}_{f,i,t} \times \texttt{ProposalCategory}_{i,p,t} + \\ &+\beta_4 \texttt{HoldingsResidual}_{f,i,t} + \beta_5 \texttt{ISSRecommendation}_{i,p,t} + \\ &+\mu_f \times \delta_t + \pi_p + \gamma_i \times \mu_f + \varepsilon_{f,z,i,p,t}. \end{aligned} \tag{6}$$

The coefficient of interest is β_3, which measures the effect of business ties for a given firm-family pair on the voting of a specific proposal of a certain category of a given fund at a given time. Hence, π_p is a proposal fixed effect, which as explained before supersedes $\gamma_i \times \pi_z \times \delta_t$, i.e., a firm×proposal type×time fixed effect, since at the same firm at the same time there can be a vote on more than one proposals of the same proposal type.

4 Results

In this section we discuss the results of estimating specifications 1-6 (corresponding to (1)-(6)) over the full sample from 2003 to 2011, on all proposals sponsored by shareholders (Table 3), on shareholder proposals which passed at the 10% (Table 4) and 5% (Table 5) margins. In all tables and specifications standard errors are adjusted for heteroscedasticity and they are clustered along the fund family dimension.

As we can see from Table 3, the coefficient on the interaction term $\texttt{LogTotalCompensation}_{f,i,t} \times \texttt{Shareholder}_{i,p,t}$ is positive and significant at least in the 90% level for all specifications, suggesting that the percentage of votes in line with portfolio firm's management's recommendation at the fund family level was positively related to the amount of total compensation they received from their pension plan related business ties with the firm in case of all shareholder proposals.[13] The estimated coefficient on $\texttt{LogTotalCompensation}_{f,i,t}$ is never significant in any specification, suggesting that this relationship is not present for management proposals. The estimated coefficient on $\texttt{HoldingsResidual}_{f,i,t}$ is positive and significant, in line with Cohen and Schmidt (2009), suggesting a positive relationship between the size of the fund family holdings that is orthogonal to total compensation and fund family voting. Of course also the coefficient on $\texttt{ISSRecommendation}_{i,p,t}$ 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.[14]

The results of Davis and Kim (2007) and Ashraf, Jayaraman, and Ryan (2012) suggest that any point estimates with fund family fixed effects should be insignificant, i.e., once we fix a fund family it should not vote differently depending on its business ties. This is in sharp contrast to our results since all our specification include — at the very minimum — fund family fixed effects. This clearly suggests pro management voting depending on business ties at the individual firm level and not only in the aggregate, as the aforementioned papers suggest. Hence, the issue is of a very different nature than was previously believed.

Our regressions capture a positive association of business ties between plan sponsors and plan providers with pro-management voting by the latter. The degree of saturation provided by our specifications leaves little room for omitted variables or endogeneity. Needless to say, our regressions are silent on whether business ties cause pro-management voting (i.e., fund families are averse to losing the benefits derived from business ties with plan sponsors and thus vote with management) or whether pro-management voting causes business ties (i.e., the corporate executives of plan sponsors reward funds that vote with management with

[13] The R^2 for specification 6 is not comparable to other specifications due to our algorithmic implementation.

[14] `ProposalCategory` and `ISSrecommendation` are proposal specific. So these coefficients are dropped in the regression corresponding to specification 6 of (6), which incorporates proposal fixed effects.

increased business ties). We are agnostic about the precise direction of causaility within sponsor-provider relationships: In our view, both manifestations have qualitatively similar negative economic consequences. One way to informally capture the direction of causality is encapsulated in Figure 1. This shows that in our sample the degree of pro-management voting by a plan provider is around 130% higher in the two years following the establishment of a business relationship with a plan sponsor than in the two previous years. Thus, it seems to be business ties that lead management friendliness, and not vice versa.

4.1 Monotonicity

Core, Guay, and Rusticus (2006) have emphasized that the passage of a shareholder proposal can enhance the value of a firm – and thus the value of the portfolio of a mutual fund – only when the passage of the proposal is unexpected by the market. In turn, Cunat, Gine, and Guadalupe (2012) have persuasively argued that focusing on shareholder proposals that pass or fail by a small margin can identifies exactly such unanticipated changes in firm value. Thus, it is exactly for those proposals which are highly contested (i.e., pass/fail by small margins) that the trade-off between value enhancement and business related compensation is likely to be most salient. To establish the importance of business ties in cases where funds may feel the full weight of the trade-offs inherent in conflicted voting, we refine our set of proposals by the degree to which they were contested. We select shareholder proposals that pass or fail by margins of 5% or 10% and repeat our panel regressions for such cases.

To define the subsets of contested proposals at the 5% and 10% margin, we use the following procedure. Due to the lack of data on the ultimate voting outcome and percentage votes with which a particular proposal passed or failed in the ISS Voting Analytics, we follow Cunat, Gine, and Guadalupe (2012) in using Riskmetrics data on shareholder proposals covering the same period as our base sample from 2003-11. The Riskmetrics sample includes all 9,406 shareholder proposals that are included in the proxy statements of all S&P 1,500 companies, plus an additional 500 widely held firms. Riskmetrics provides data on the company name, the date of the annual meeting, the percentage of votes in favor of the proposal, the description of the type of proposal, and the proponent. We then use the Riskmetrics sample to define the subsets of shareholder proposals that are contested at the 5% and 10%. First, we define a shareholder meeting to be contested at an x% margin (where x=5% or 10%) if more than 90% of the proposals that were put forward in that meeting passed or failed with an x% margin (for example, if the percentage of votes in favor was greater or equal to 45% but less than or equal to 55% for the x=5% margin). We then merge the Riskmetrics sample with our original data set using the firm and meeting date identifiers. All shareholder proposals in the final dataset that belong to a meeting that is contested at the x% margin

are classified as being contested at x%. Admittedly, this procedure classifies proposals as contested based on the classification of the meeting in which they were voted on and this may produce a potentially noisy measure of the level of "contestedness". As we can see from Table 1, this procedure classifies 2.93% of shareholder proposals as *Contested at the 10% margin* and 1.04% of shareholder proposals as *Contested at the 5% margin*.

In Table 4 we show the results of estimating specifications 1 to 6 for shareholder proposals that passed within a 10% margin. The point estimates on the interaction term are significant at the 99% level and their magnitudes increase with respect to the ones in Table 3. Moreover, as we move to shareholder proposals that passed within a 5% margin (Table 5), the point estimates increase further whilst maintaing their statistical significance. To make sure the effect is not present only for the 5% margin — and the other proposals simply add 'noise' — we also run our regressions in the 10% margin excluding the 5%. The effect is mitigated (as expected) but is still present, establishing that the effect is monotonically increasing as we move to more contested proposals.

An economic story consistent with these results is the following. Firms' managers use business ties to entice fund families to vote in a pro management way. This enticement is used only when it is needed the most. Most management proposals and some shareholder proposals pass with a very wide margin: For these, the corporate manager does not need to 'collude' with funds. Thus, funds' votes are valuable to management when there is a shareholder proposal which is very disputed and hence it is unknown ex ante whether it is going to pass or fail. Those proposals usually have to do with important corporate governance issues (e.g., poison pills), see Cunat, Gine, and Guadalupe (2012). Contested proposals have by definition the most effect on firm value since their passing or not is unanticipated by the market. Hence, mutual fund's behaviour hurts their underlying investors — as well as the other shareholders of the firms they have business ties with — exactly when the effect is the most harmful.

4.1.1 Economic significance

As previously mentioned, any firm that sponsors an employee benefit plan that qualifies under ERISA Sections 104 or 4065 must file a Form 5500 (Schedule A) with the Department of Labor. Firms are required to file Schedule C for plans with 100 or more participants in which the service provider was paid from the plan's assets and fees paid exceed $5,000. Schedule D has data on assets under management by investment company providers (i.e., mutual funds). In our dataset, 94% of observations (votes) have zero total compensation, as collected from the Form 5500 filings. To ensure that the high number of zero total compensation observations is not a result of a mechanical matching error, we manually inspect the data for firms which, in

addition to reporting Schedule A, report Schedules C and D. We find that, as expected, the firms which provide Schedule C and D also report strictly positive total compensation values, indicating that the reported zero compensation values come from firms filing *only* Schedule A. This suggests that any zero total compensation entry either comes from a firm which has a 'small' pension plan or corresponds to a firm-family pair for which there are no business ties.

In order to compute the economic significance of our results, having in mind the large number of zero total compensation observations and the skewness of our data, we restrict our sample only to the 6% of the sample for which we have full total compensation data. We restrict our estimation to shareholder proposals and estimate specifications 1-6. The results of this estimation are shown in Table 6. The coefficient of interest, on the interaction term, is positive and significant in most specifications, ranging from 0.272 in specification 6 to 1.466 in specification 4, although there is a very small number of firm-family pairs observed in this reduced sample on which the effect is identified.

In terms of economic magnitude, the estimated coefficient in specification 4, 1.466, suggests that increasing total compensation from the 25th percentile to the 75th percentile increases the propensity to vote with management at the fund-family level (expressed in percentage of votes with management) by 5.21% in absolute terms. Given that the unconditional probability that a fund-family votes with management is 59%, as we can see from Table 2, this translates into an increase of 8.82% relative to the mean.

4.1.2 Discrete measurement of business ties

To examine the robustness of our main finding, we re-run our specifications on shareholder proposals as described above using a discrete measure of business ties. In particular, we define a discrete variable $\texttt{BTDummy} = 1$ if $\texttt{TotalCompensation} > 0$ and $\texttt{BTDummy} = 0$ otherwise.[15] The results of estimating specifications 1 to 6 for $\texttt{BusinessTiesMeasure}_{f,i,t} = \texttt{BTDummy}_{f,i,t}$ and $\texttt{ProposalCategory}_{i,p,t} = \texttt{Shareholder}_{i,p,t}$ are shown in Table 7.

We can see that the estimated coefficient on the $\texttt{BTDummy}_{f,i,t} \times \texttt{Shareholder}_{i,p,t}$ interaction term is positive and statistically significant across all specifications. This is consistent with our findings obtained using `LogTotalCompensation`, as shown in Table 3. The point estimates range from 5.761 in specification 6 to 8.115 in specification 3. In terms of economic magnitudes, the point estimates suggest that fund families with business ties with their portfolio firms ($\texttt{BTDummy} = 1$) are from 5.761% to 8.115% more likely to vote with firm management on shareholder proposals (in absolute terms).

[15] We also tried other thresholds of `TotalCompensation` above which we set $\texttt{BTDummy} = 1$, and the results are qualitatively similar.

4.2 Class Action Lawsuits

The degree of public scrutiny of the relationship between sponsors and providers – and, more generally, of the lack of transparency in 401(K) management – increased dramatically in the middle of our sample period. In 2006, after a two-year process of privately investigating 401(K) management practices, the St Louis-based law attorney Jerome Schlichter of Schlichter, Bogard, and Denton launched a series of nine major class action lawsuits against a series of large corporations including Boeing, Caterpillar, Kraft Foods, and Lockheed Martin. Schlichter's lawsuits alleged that the relevant plan sponsors were involved in complex and undisclosed compensation arrangements with their plan providers which were in violation of Section 404(c) of ERISA. The lawsuits involved over 400,000 employees, and also spawned other lawsuits as plan sponsors sometimes responded by suing their plan provider, and thus brought into intense public scrutiny the relationship between publicly listed companies and the fund families who managed their employees' pensions. It seems plausible to entertain the hypothesis that this increased level of attention from investors (plan participants) who were also available litigants in potential future class action lawsuits may have affected the voting behaviour of mutual funds. Thus, our investigation of the relationship between business ties and proxy voting would not be complete without considering the impact of these events.

In order to empirically investigate the effect of the class action lawsuits, we identify those fund families which were involved in a class action lawsuit after 2006, and examine their voting behaviour pre and post 2006. We hand-collect data from news bulletins, class action litigation announcements and other reports available online about incidences of litigations and lawsuits associated with all individual family names from our mutual fund family sample. Out of a total of 29 mutual fund families in our sample, we identify 9 to have been involved in one or more class action lawsuits between 2006 and 2011.

To identify the effect of class action lawsuits on the voting behaviour of mutual funds, we estimate the following regression:

$$\begin{aligned} \texttt{VoteswithManagement}_{f,i,p,t} \;=\; & \alpha + \beta_1 \texttt{LogTotalCompensation}_{f,i,t} + \beta_2 \texttt{Shareholder}_{i,p,t} + \\ & + \beta_3 \texttt{Lawsuit}_f + \beta_4 \texttt{Shareholder} \times \texttt{Lawsuit}_{f,i,p,t} + \\ & + \beta_5 \texttt{HoldingsResidual}_{f,i,t} + \beta_6 \texttt{ISSRecommendation}_{i,p,t} + \\ & \text{Fixed Effect Terms} + \varepsilon_{f,i,p,t}. \end{aligned} \tag{7}$$

Here, $\texttt{Lawsuit}_f = 1$ if the mutual fund family is identified to have been involved in a lawsuit after 2006 and $\texttt{Lawsuit}_f = 0$ otherwise. We vary the Fixed Effect Terms in a number of ways as introduced earlier in the paper.

The coefficient of interest is β_4. If the class action lawsuits successfully targeted cases

of particularly cosy sponsor-provider relationships, we should expect β_4 to be positive and significant in the first subsample, 2003-06. In turn, if the initiation of class action lawsuits focused investor attention on the funds that were sued, we should expect β_4 to be negative or zero in the second subsample, 2007-10.

As we can see from Table 8, for the 2003–06 subsample the estimate for β_4 is positive and highly significant across all 6 specifications. The economic magnitudes are striking: for example, using the point estimate from specification 4 during the 2003-06 period, the fund families that were involved in a lawsuit (after 2006) had increased their propensity to vote with management by 27.55%, in absolute terms, or 47.08% relative to the mean. In contrast, the results shown in Table 9, estimated on the 2007-10 subsample show that estimate for β_4 is negative and statistically insignificant across all 6 specifications. This suggests that those fund families that ended up being involved in lawsuits after 2006 had indeed been the ones who had voted in a conflicted manner prior to 2006, and which – exposed to the spotlight of investor attention as a result of the class action lawsuits – became more cautious about their voting patterns post-2006.

Finally, we comment briefly on the voting pattern of families that did *not* face lawsuits. This is given by the coefficient on $\texttt{Shareholder}_{f,i,p,t}$, β_2, in both Tables 8 and 9. In those specifications in which this coefficient is not dropped due to co-linearity, it is significantly negative across both time sub-samples. For example, in Specification 4, a fund that did not face a lawsuit was voting (in absolute terms) 15.9% less with management on shareholder proposals in 2003-2006 and by 10.17% in 2007-2010. The drop in the absolute value of the estimate of β_2 suggests families that did not face lawsuits, became *more* management friendly in the second half of the sample. Thus, the spotlight of investor attention – while clearly cleansing for the families on which the spotlight was shone – may also have been locally focussed: Outside the spotlight, other families may have become more management friendly. In this sense, lawsuits were no panacea: The core problem may still remain. We return to this issue in Section 4.2.

Time variation in Compensation What led to the change of behaviour of families that faced lawsuits? Did the total amount of compensation they were receiving fall? And, can any drop in total compensation be attributed to lowered *rent extraction* (that is less compensation per contract) or to a reallocation of contracts, moving busines away from families who were involved in lawsuits to those who were not?

To pin down the answers to these questions we estimate the following specifications:

$$\texttt{BusinessTiesMeasure}_{f,i,t} = \alpha + \beta_1 \texttt{Post2006}_t + \gamma_i \times \mu_f + \varepsilon_{f,i,t}, \quad (8)$$

$$\texttt{BusinessTiesMeasure}_{f,i,t} = \alpha + \beta_1 \texttt{Post2006}_t + \beta_2 \texttt{Post2006} \times \texttt{Lawsuit}_{f,t} + \gamma_i \times \mu_f + \varepsilon_{f,i,t}, \quad (9)$$

where

$$\texttt{BusinessTiesMeasure}_{f,i,t} = \left\{ \begin{array}{l} \texttt{LogTotalCompensation}_{f,i,t}, \\ \texttt{Log}\left(\texttt{TotalCompensationperContract}\right)_{f,i,t}, \\ \texttt{NumberofContracts}_{f,i,t}. \end{array} \right\}.$$

The results are shown in Table 10. Columns 1, 3 & 5 correspond to (8), while 2, 4 & 6 correspond to (8) using a different way of measuring business ties between families and firms. In all columns we control for firm-family fixed effects, and run the regression only for families that report a business relationship and only for the top 5 relationships as those are listed in Panel A of Table 2.[16]

Our results show that total compensation fell post 2006 for all families (in column 1 our estimate on β_1 is negative and significant) but significantly so only for the ones that faced a lawsuit (in column 2 the estimate on β_1 is negative but not significant while the one on the interaction term β_2 is negative and significant). If we focus on rents, as measured by the amount of total compensation per contract, then we see again a fall for all families after 2006. Now the reduction is significant for both lawsuit and no-lawsuit facing families, but it is larger for families facing lawsuits (the estimates on β_1 in column 3, on β_1 and on β_2 in column 4 are all negative and significant). Finally, we look at the amount of business relationships as measured by the number of contracts. We find that while there is no significant decline in the overall number of contracts (the point estimate on β_1 is not significant in column 5), families that did not face a lawsuit had a substantial increase in the number of contracts post 2006 (as evidenced by the positive and significant estimate on β_1 in column 6), while families that did experienced a significant decline (in column 6 the estimate on the interaction term β_2 is negative and significant).

Our investigation of compensation in sponsor-provider business relationships thus suggests that both total compensation and rents declined following the initiation of the class action lawsuits, perhaps due to the increased public scrutiny. However, due to the ostensibly localized nature of investors attention (see the discussion above) it appears that the decreases fell disproportionately on those families that did experience lawsuits. In addition, the initia-

[16] Considering a larger class of business relationships does not change our qualitative results.

tion of the class action lawsuits saw a reallocation of business relationships away from plan providers who were involved in the lawsuits to those who were not.

It may be plausible to jointly interpret the findings of this section and the previous one as follows: Prior to 2006 some families were gaining significant rents through their business ties with firms in return for support in proxy voting. After those families faced lawsuits they lost some of those business ties (and so also their incentive to vote with management). Hence, contracts went to the hands of families that were less pro-management before. As we can in Table 9, more contracts for these families increased somewhat their support for management.

New entrants: 2007-2011 The results presented above suggest that the increased negative investor attention had a positive effect in tackling the conflicted voting problem for those families that were involved in lawsuits. However, the results also hinted at a potential increase in pro-management behaviour by fund families who were not subjected to class action lawsuits. Thus, the effect of investor attention may not have been universally positive. Motivated by this, in this section we augment our investigation of the extent to which management friendliness as a result of business ties persisted following the initiation of the class action lawsuits of 2006.

To do this, we investigate whether the funds that enter our sample only after 2006 still vote with their business ties. We run the same set of regressions on all shareholder sponsored proposals for a sample of 'new entrant' fund families, for which we have data from 2007-11 only. This sample contains four fund families. As we can see from Table 11, the estimated coefficient on the $\texttt{LogTotalCompensation}_{f,i,t} \times \texttt{Shareholder}_{i,p,t}$ is positive and statistically significant in most specifications, with point estimates ranging from 0.405 to 1.102 depending on the specification. Given the identification used in our specifications, these results suggest that after 2006 and the increased levels of public scrutiny, a 'newly entering' fund family with stronger business ties with its portfolio firms, all else equal, had a higher propensity to vote with management. Hence, although the increased negative investor attention may have mitigated the problem of pro-management voting, it did not eliminate it: Some funds still seem to prefer to vote with their business ties.

5 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. Yet, mutual funds also are engaged in business relationships with the management of firms in which they are blockholders. To what extent do 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. In contrast to the prior literature, our result holds at the level of individual proposals after controlling for ISS recommendations, fund family holdings, and unobserved heterogeneity across firms and fund families and over time. The influence of business ties on voting is significantly stronger for contested proposals. Furthermore, we show that the prominent class action lawsuits of 2006 against 401(K) sponsors and providers had differential effects on the voting of different fund families depending on whether they were sued, thus unearthing a new link between the corporate governance role of institutional blockholders and investor attention. Our paper thus highlights the agency frictions that may affect the stewardship activities of blockholders who are money managers and also points to the complementary role played by regulation and investor attention in ameliorating such frictions.

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Tables and Figures

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

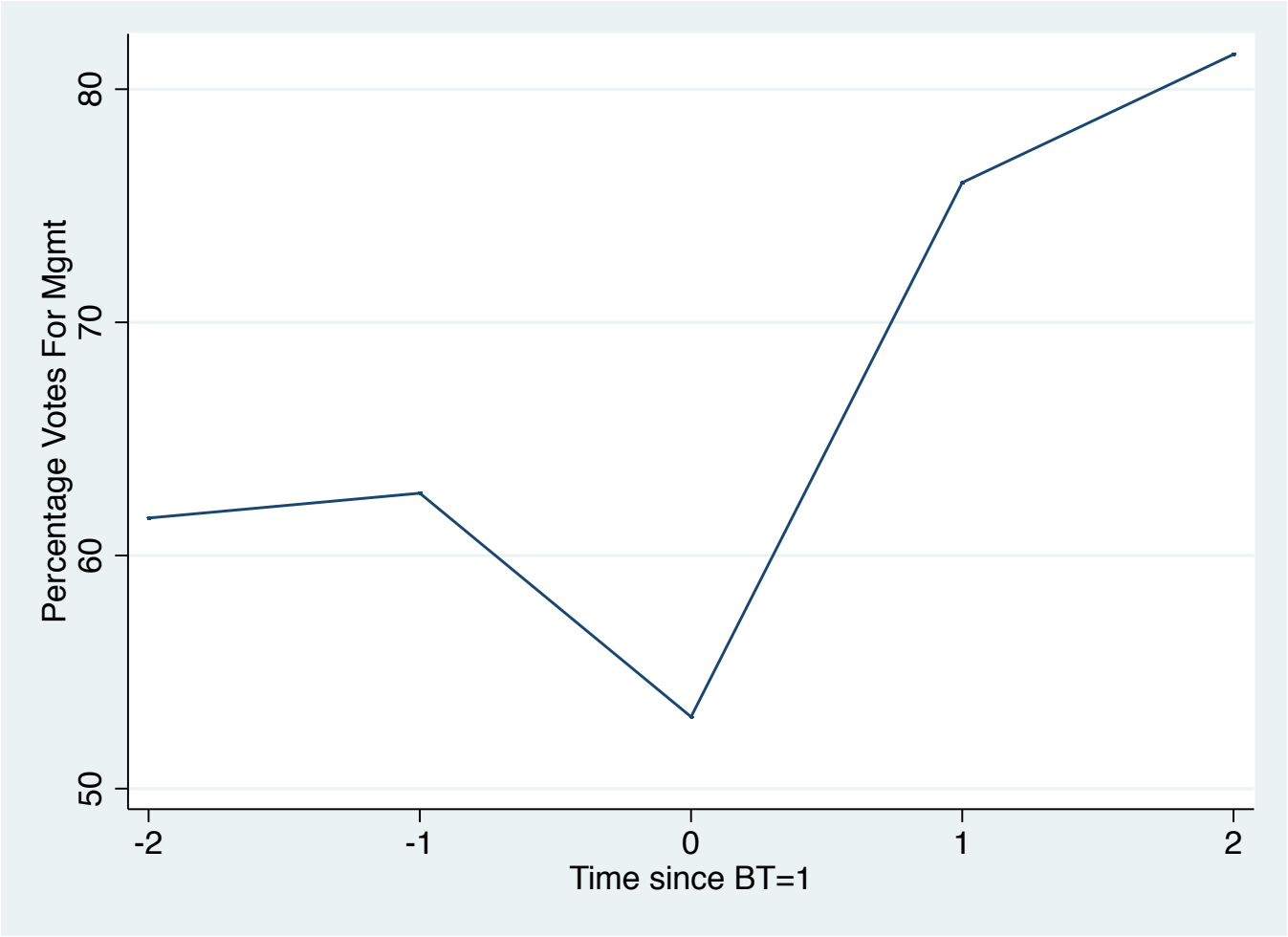

Table 1: **Summary Statistics I** —

All numbers are given for three time periods: our full sample (2003-2011) and the two sub-samples 2003-2006 & 2007-2010 that we analyze in Section 4.2. 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 dataset, including data on mutual fund votes reported in ISS Voting Analytics, business relationships of mutual funds with firms reported in DoL 5500 Forms and holdings data in the family level from Compustat. Panel B: Percentage of proposals by sponsor, management or shareholders. Panel C: Percentage of contested proposals within the shareholder proposals population, for different thresholds of contested-ness as explained in Section 3. In Panels D-G we report statistics for several variables of the data that we use in our analysis. All variables are aggregated in the fund family level. We opted for the interquartile range because our data is skewed. Panel D: Percentage of votes with management; this is our main dependent variable. So if all funds in a particular family vote with the management's recommendation at a particular proposal then this number is 100. These numbers are for votes pertaining to all proposals in our sample. Voting behaviour in the fund level across different proposal sub-categories appear at Panel C of Table 2. Panel E: Total compensation in the family level, which is our main independent variable, 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 over 200 for each fund in a family. For 94% of the observations in our data we do not have compensation data, which we set to zero. The numbers reported here are for the sample of non-missing compensation data. Panel F: Holdings of fund families in portfolio firms. Panel G: Plan sizes for fund families reported as assets under management (aum). Panel H: Total Compensation over Holdings. Both Panels G and H are again for the sample of non-missing compensation data.

Years	full sample (2003-2011)	2003-2006	2007-2010
Panel A: General Characteristics (no.)			
Observations (votes cast by funds)	808,892	155,765	425,564
Firms	2,448	1,333	1,673
Families	29	25	26
Proposals	14,462	4,103	6,094
Proposal Types	261	166	209
Panel B: Proposal by sponsor (%)			
Management	66.90	58.09	59.13
Shareholder	33.10	41.91	40.87
Panel C: Shareholder proposals by contested-ness (%)			
Contested 10%	2.93	3.76	2.34
Contested 5%	1.04	0.80	1.09
Panel D: Votes with management (%)			
mean	67.42	71.82	70.05
median	100	100	100
standard deviation	45.49	42.75	44.29
75%-25%	100	82.35	100
Panel E: Total Compensation (million $)			
mean	6.49	5.13	6.52

Continued on next page

Table 1: **Summary Statistics I** — *continued from previous page*

Years	full sample (2003-2011)	2003-2006	2007-2010
median	.54	.32	.54
standard deviation	24.6	34.5	21.4
75%-25%	2.62	1.81	2.30
Panel F: Holdings (million $)			
mean	495	699	550
median	59	108	81.6
standard deviation	1310	1500	1380
75%-25%	333.7	572.9	405.6
Panel G: Plan Size (AUM) (million $)			
mean	857	851	794
median	66.6	48.4	60.9
standard deviation	3530	6030	2340
75%-25%	245.7	255.7	218.5
Panel H: Total Compensation / Holdings ($\times$ 100)			
mean	1495.27	4990.71	107.48
median	0.22	0.16	0.18
standard deviation	104741.10	195375.70	3233.37
75%-25%	1.58	.70	1.60

Table 2: **Summary Statistics II** — Panels A & B include top 5 variables of interest in terms of frequency of appearance in our sample. In parentheses next to the variable name in the heading is the percentage of actual observations the top 5 in that variable correspond to. Panel A: The top 5 business relationships and their corresponding service code in parentheses, as reported in DoL Form 5500 - Schedule C. This is in 2003-2008 since reporting of business relationships has changed after that. For each business relationship we report the different 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 again from the non-missing sample. The numbers appearing in Panels B & C are for the full sample 2003-2011. Panel B: Columns 1 & 2 have the top 5 proposal types (in parentheses are the corresponding ISS codes) by proposal sponsor. Column 3 has the top 5 fund families in our sample. Panel C: Voting behaviour as percentage of appearance in the sample for different categories of proposals (all, management, shareholder, contested in the 10% level). Rows pertaining to funds are actual votes casted by funds in fund families. Rows pertaining to management and Institutional Shareholder Services (ISS) are (non-binding) recommendations on how shareholders should vote on proposals.

Panel A

Top 5 Business Relationships (87%)	Direct Compensation (th. $)	Indirect Compensation (mil. $)	AUM/200 (mil. $)	Total Compensation (mil. $)
Contract Administrator (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 Management (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

Top 5 Shareholder proposal types (34%)	**Top 5 Management proposal types (65%)**	**Top 5 Families (58%)**
Advisory Vote to Ratify Named Executive (S0517)	Amend Omnibus Stock Plan (M0524 & M0522)	Vanguard Group
Political Contributions and Lobbying (S0807)	Advisory Vote to Ratify Named Executive (M0550)	Blackrock Advisors
Require Independent Board Chairman (S0107)	Advisory Vote on Say on Pay Frequency (M0552)	Fidelity Investments
Amend Articles/Bylaws/Charter (Call Special Meeting) (S0235)	Approve/Amend Executive Incentive Bonus (M0535)	Dimensional Fund Advisors
Require a Majority Vote for the Election of Directions (S0212)	Increase Authorized Common Stock (M0304)	T. Rowe Price Associates

Panel C

Voting Behavior (%)	All	Management	Shareholder	Contested 10%
Management recommends yes	58.18	86.69	.55	0.00
ISS recommends yes	70.98	74.73	63.38	99.85
Fund votes yes	57.91	71.90	29.62	53.73
Fund votes with management recommendation	67.42	71.82	58.52	41.65
Fund votes with ISS recommendation	69.35	75.23	57.46	53.86
ISS agrees with management recommendation	62.13	74.68	36.74	.15

Table 3: **Effect of Business Ties on Voting (2003-2011, d-in-d shareholder proposals)** — The dependent variable is the percentage of votes with management at the fund family level on a 0 to a 100 scale. The regression is ran over the full time sample 2003-2011 and all proposals using a differences-in-differences (d-in-d) specification with respect to shareholder proposals. The dependent variables include the (natural) logarithm of the total compensation of a fund family ('Log Total Compensation') and a dummy variable indicating shareholder (sponsored) proposals ('Shareholder'). The interaction of the two, in boldface, is our main independent variable ('Shareholder×Log Total Compensation') that tells us the extent to which our business ties measure (i.e., 'Log Total Compensation') affects fund family voting with management in shareholder proposals. The two remaining dependent variables are the residual (with respect to 'Log Total Compensation') of the (natural) logarithm of holdings of fund families in portfolio firms ('Holdings Residual') and the ISS recommendation for a proposal ('ISS Recommendation'). Firm×year, family×year, firm×family, proposal type×year and proposal fixed effects are used where indicated. In particular, columns (1)-(6) correspond to specifications (1)-(6) as explained in Section 3. All regressions include an intercept, which is not reported.

	All proposals, 2003-2011					
Votes with management (out of 100)	(1)	(2)	(3)	(4)	(5)	(6)
Log Total Compensation	-0.038	0.041	-0.017	-0.074	-0.030	-0.041
	(-0.435)	(0.386)	(-0.099)	(-0.424)	(-0.247)	(-0.298)
Shareholder	7.957		11.725**	11.395**	-10.548	
	(1.627)		(2.399)	(2.228)	(-0.039)	
Shareholder×Log Total Compensation	0.409**	0.405***	0.461***	0.391*	0.315**	0.300*
	(2.374)	(2.604)	(2.765)	(1.881)	(2.133)	(1.895)
Holdings Residual	0.458***	1.283***	1.363***	0.587***	0.587***	0.569***
	(3.006)	(3.128)	(2.812)	(3.570)	(3.586)	(3.309)
ISS Recommendation	61.870***	38.707***	64.771***	64.769***	37.913***	
	(7.786)	(4.724)	(8.879)	(8.874)	(4.723)	
Fixed Effects						
Family×Year	Yes			Yes	Yes	Yes
Firm×Year			Yes	Yes	Yes	
Firm×Family	Yes	Yes	Yes	Yes	Yes	Yes
Proposal Type×Year		Yes			Yes	
Proposal						Yes
Observations	683,774	683,774	683,774	683,774	683,774	683,774
R-squared	0.557	0.658	0.583	0.595	0.692	0.308

Robust t-statistics in parentheses, clustered at the family level.
* Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 4: **Effect of Business Ties on Voting (2003-2011, 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 a 100 scale. The regression is ran over the full time sample 2003-2011 and shareholder proposals using a differences-in-differences (d-in-d) specification with respect to contested proposals at the 10% level. The dependent variables include the (natural) logarithm of the total compensation of a fund family ('Log Total Compensation') and a dummy variable indicating contested 10% proposals ('Contested 10%'). The interaction of the two, in boldface, is our main independent variable ('Contested 10%×Log Total Compensation') that tells us the extent to which our business ties measure (i.e., 'Log Total Compensation') affects fund family voting with management in contested 10% proposals. The two remaining dependent variables are the residual (with respect to 'Log Total Compensation') of the (natural) logarithm of holdings of fund families in portfolio firms ('Holdings Residual') and the ISS recommendation for a proposal ('ISS Recommendation'). Firm×year, family×year, firm×family, proposal type×year and proposal fixed effects are used where indicated. In particular, columns (1)-(6) correspond to specifications (1)-(6) as explained in Section 3. All regressions include an intercept, which is not reported.

	Shareholder proposals, 2003-2011					
Votes with management (out of 100)	(1)	(2)	(3)	(4)	(5)	(6)
Log Total Compensation	0.261***	0.470***	0.379**	0.095	0.095	0.100
	(3.094)	(7.784)	(2.558)	(0.805)	(0.802)	(1.085)
Contested 10%	7.716	11.982***				
	(1.232)	(6.357)				
Contested 10%×Log Total Compensation	1.801***	1.957***	2.420***	1.889***	1.889***	2.119***
	(4.214)	(5.612)	(5.697)	(4.137)	(4.124)	(4.285)
Holdings Residual	-0.159	1.414**	1.675**	0.184	0.183	0.184
	(-0.311)	(2.538)	(2.402)	(0.434)	(0.428)	(0.375)
ISS Recommendation	31.373***	31.900***	31.692***	31.683***	31.007***	
	(2.855)	(4.265)	(2.920)	(2.916)	(4.240)	
Fixed Effects						
Family×Year	Yes			Yes	Yes	Yes
Firm×Year			Yes	Yes	Yes	
Firm×Family	Yes	Yes	Yes	Yes	Yes	Yes
Proposal Type×Year		Yes			Yes	
Proposal						Yes
Observations	198,738	198,738	198,738	198,738	198,738	198,738
R-squared	0.502	0.520	0.483	0.524	0.572	0.416

Robust t-statistics in parentheses, clustered at the family level.
* Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 5: **Effect of Business Ties on Voting (2003-2011, d-in-d contested 5% proposals)** — The dependent variable is the percentage of votes with management at the fund family level on a 0 to a 100 scale. The regression is ran over the full time sample 2003-2011 and shareholder proposals using a differences-in-differences (d-in-d) specification with respect to contested proposals at the 5% level. The dependent variables include the (natural) logarithm of the total compensation of a fund family ('Log Total Compensation') and a dummy variable indicating contested 5% proposals ('Contested 5%'). The interaction of the two, in boldface, is our main independent variable ('Contested 5%×Log Total Compensation') that tells us the extent to which our business ties measure (i.e., 'Log Total Compensation') affects fund family voting with management in contested 5% proposals. The two remaining dependent variables are the residual (with respect to 'Log Total Compensation') of the (natural) logarithm of holdings of fund families in portfolio firms ('Holdings Residual') and the ISS recommendation for a proposal ('ISS Recommendation'). Firm×year, family×year, firm×family, proposal type×year and proposal fixed effects are used where indicated. In particular, columns (1)-(6) correspond to specifications (1)-(6) as explained in Section 3. All regressions include an intercept, which is not reported.

	Shareholder proposals, 2003-2011					
Votes with management (out of 100)	(1)	(2)	(3)	(4)	(5)	(6)
Log Total Compensation	0.258***	0.469***	0.374**	0.089	0.089	0.100
	(2.874)	(8.115)	(2.577)	(0.757)	(0.754)	(1.106)
Contested 5%	26.302***	20.213***				
	(4.535)	(6.648)				
Contested 5%×Log Total Compensation	3.952***	2.945***	4.885***	4.724***	4.724***	5.124***
	(8.686)	(4.623)	(5.941)	(4.994)	(4.980)	(4.758)
Holdings Residual	-0.141	1.429**	1.669**	0.187	0.187	0.182
	(-0.283)	(2.515)	(2.391)	(0.445)	(0.438)	(0.377)
ISS Recommendation	31.487***	31.939***	31.692***	31.683***	31.007***	
	(2.865)	(4.275)	(2.920)	(2.916)	(4.240)	
Fixed Effects						
Family×Year	Yes			Yes	Yes	Yes
Firm×Year			Yes	Yes	Yes	
Firm×Family	Yes	Yes	Yes	Yes	Yes	Yes
Proposal Type×Year		Yes			Yes	
Proposal						Yes
Observations	198,738	198,738	198,738	198,738	198,738	198,738
R-squared	0.502	0.520	0.483	0.524	0.572	0.416

Robust t-statistics in parentheses, clustered at the family level.
* Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6: **Economic effect of Business Ties on Voting (2003-2011, d-in-d shareholder proposals)** — The dependent variable is the percentage of votes with management at the fund family level on a 0 to a 100 scale. The regression is ran over the full time sample 2003-2011 and all proposals using a differences-in-differences (d-in-d) specification with respect to shareholder proposals. However, we restrict our sample to only those observations in our sample for which we had a reported total compensation number. The dependent variables include the (natural) logarithm of the total compensation of a fund family ('Log Total Compensation') and a dummy variable indicating shareholder (sponsored) proposals ('Shareholder'). The interaction of the two, in boldface, is our main independent variable ('Shareholder×Log Total Compensation') that tells us the extent to which our business ties measure (i.e., 'Log Total Compensation') affects fund family voting with management in shareholder proposals. The two remaining dependent variables are the residual (with respect to 'Log Total Compensation') of the (natural) logarithm of holdings of fund families in portfolio firms ('Holdings Residual') and the ISS recommendation for a proposal ('ISS Recommendation'). Firm×year, family×year, firm×family, proposal type×year and proposal fixed effects are used where indicated. In particular, columns (1)-(6) correspond to specifications (1)-(6) as explained in Section 3. All regressions include an intercept, which is not reported.

	All proposals, 2003-2011, Restricted Sample					
Votes with management (out of 100)	(1)	(2)	(3)	(4)	(5)	(6)
Log Total Compensation	-1.051***	-0.344	0.170	-0.576	-0.285	-0.890*
	(-7.218)	(-0.621)	(0.201)	(-0.887)	(-0.510)	(-1.662)
Shareholder	-9.767		-15.108	-15.970	-32.631	
	(-1.345)		(-1.331)	(-1.381)	(-0.121)	
Shareholder×Log Total Compensation	0.941***	0.550	1.406***	1.466***	0.705	0.272**
	(2.669)	(1.443)	(3.435)	(3.226)	(1.434)	(2.062)
Holdings Residual	1.589	1.886	0.297	-2.202*	-3.076***	0.891
	(0.960)	(1.372)	(0.310)	(-1.786)	(-3.969)	(0.797)
ISS Recommendation	42.361***	26.658***	43.381***	43.399***	31.820***	
	(4.632)	(5.173)	(4.600)	(4.596)	(6.485)	
Fixed Effects						
Family×Year	Yes			Yes	Yes	Yes
Firm×Year			Yes	Yes	Yes	
Firm×Family	Yes	Yes	Yes	Yes	Yes	Yes
Proposal Type×Year		Yes			Yes	
Proposal						Yes
Observations	33,384	33,384	33,384	33,384	33,384	33,384
R-squared	0.430	0.686	0.546	0.555	0.804	0.351

Robust t-statistics in parentheses, clustered at the family level.
Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7: **Effect of Business Ties dummy on Voting (2003-2011, d-in-d shareholder proposals)** — The dependent variable is the percentage of votes with management at the fund family level on a 0 to a 100 scale. The regression is ran over the full time sample 2003-2011 and all proposals using a differences-in-differences (d-in-d) specification with respect to shareholder proposals. The dependent variables include a business ties dummy ('BT Dummy') and another dummy variable indicating shareholder (sponsored) proposals ('Shareholder'). The interaction of the two, in boldface, is our main independent variable ('Shareholder×BT Dummy') that tells us the extent to which going from no business ties to some business relationship (i.e., 'BT Dummy') affects fund family voting with management in shareholder proposals. The two remaining dependent variables are the residual (with respect to 'BT Dummy') of holdings of fund families in portfolio firms ('Holdings Residual') and the ISS recommendation for a proposal ('ISS Recommendation'). Firm×year, family×year, firm×family, proposal type×year and proposal fixed effects are used where indicated. In particular, columns (1)-(6) correspond to specifications (1)-(6) as explained in Section 3, adapted in the case of the business ties dummy measure. All regressions include an intercept, which is not reported.

	All proposals, 2003-2011					
Votes with management (out of 100)	(1)	(2)	(3)	(4)	(5)	(6)
BT Dummy	-1.500	-0.995	-1.583	-1.943	-1.492	-1.659
	(-0.905)	(-0.498)	(-0.503)	(-0.597)	(-0.649)	(-0.661)
Shareholder	5.562		9.020*	9.092*	-12.430	
	(1.173)		(1.883)	(1.911)	(-0.046)	
Shareholder×BT Dummy	7.258**	7.801***	8.115**	7.018*	6.184**	5.761*
	(2.176)	(2.757)	(2.438)	(1.768)	(2.188)	(1.926)
Holdings Residual	-0.000	0.000	0.000**	0.000	0.000	0.000
	(-0.391)	(1.634)	(2.166)	(0.074)	(0.065)	(0.126)
ISS Recommendation	61.876***	38.733***	64.771***	64.768***	37.912***	
	(7.794)	(4.736)	(8.879)	(8.874)	(4.724)	
Fixed Effects						
Family×Year	Yes			Yes	Yes	Yes
Firm×Year			Yes	Yes	Yes	
Firm×Family	Yes	Yes	Yes	Yes	Yes	Yes
Proposal Type×Year		Yes			Yes	
Proposal						Yes
Observations	683,774	683,774	683,774	683,774	683,774	683,774
R-squared	0.557	0.657	0.583	0.595	0.692	0.308

Robust t-statistics in parentheses, clustered at the family level.
Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 8: **Effect of Lawsuit on Voting (2003-2006, d-in-d shareholder proposals)** — The dependent variable is the percentage of votes with management at the fund family level on a 0 to a 100 scale. The regression is ran over the time sub-sample 2003-2006 and all proposals using a differences-in-differences (d-in-d) specification with respect to shareholder proposals. The dependent variables include the (natural) logarithm of the total compensation of a fund family ('Log Total Compensation'), a dummy variable indicating shareholder (sponsored) proposals ('Shareholder'), and a dummy variable indicating whether a fund family has faced a lawsuit ('Lawsuit'). The interaction of the latter two, in boldface, is our main independent variable ('Shareholder×Lawsuit') that tells us the extent to which facing a lawsuit affects fund family voting with management in shareholder proposals. The two remaining dependent variables are the residual (with respect to 'Log Total Compensation') of the (natural) logarithm of holdings of fund families in portfolio firms ('Holdings Residual') and the ISS recommendation for a proposal ('ISS Recommendation'). Firm×year, family×year, firm×family, proposal type×year and proposal fixed effects are used where indicated. In particular, columns (1)-(6) correspond to specifications (1)-(6) as explained in Section 3, modified in the case of lawsuits, see Section 4.2. All regressions include an intercept, which is not reported.

	All proposals, 2003-2006					
Votes with management (out of 100)	(1)	(2)	(3)	(4)	(5)	(6)
Log Total Compensation	-0.458	-0.279	-0.165	-0.249	-0.254	-0.219
	(-1.230)	(-0.829)	(-0.536)	(-0.958)	(-0.983)	(-0.567)
Shareholder	-14.822***		-15.872***	-15.895***	-34.434	
	(-2.890)		(-3.125)	(-3.112)	(-0.011)	
Lawsuit		-21.326	6.803	21.207	16.722	-0.710
		(-0.002)	(0.002)	(0.006)	(0.005)	(-0.109)
Shareholder×Lawsuit	28.178**	26.741**	27.406**	27.547**	26.603**	26.576**
	(2.400)	(2.454)	(2.404)	(2.418)	(2.461)	(2.512)
Holdings Residual	0.204	0.840	0.765	0.244	0.191	0.286
	(0.292)	(1.383)	(1.048)	(0.492)	(0.383)	(0.682)
ISS Recommendation	39.744***	34.025***	40.074***	40.084***	34.702***	
	(4.014)	(3.425)	(4.115)	(4.114)	(3.589)	
Fixed Effects						
Family×Year	Yes			Yes	Yes	Yes
Firm×Year			Yes	Yes	Yes	
Firm×Family	Yes	Yes	Yes	Yes	Yes	Yes
Proposal Type×Year		Yes			Yes	
Proposal						Yes
Observations	155,765	155,765	155,765	155,765	155,765	155,765
R-squared	0.547	0.606	0.591	0.595	0.646	0.434

Robust t-statistics in parentheses, clustered at the family level.
Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 9: **Effect of Lawsuit on Voting (2007-2010, d-in-d shareholder proposals)** — The dependent variable is the percentage of votes with management at the fund family level on a 0 to a 100 scale. The regression is ran over the time sub-sample 2007-2010 and all proposals using a differences-in-differences (d-in-d) specification with respect to shareholder proposals. The dependent variables include the (natural) logarithm of the total compensation of a fund family ('Log Total Compensation'), a dummy variable indicating shareholder (sponsored) proposals ('Shareholder'), and a dummy variable indicating whether a fund family has faced a lawsuit ('Lawsuit'). The interaction of the latter two, in boldface, is our main independent variable ('Shareholder×Lawsuit') that tells us the extent to which facing a lawsuit affects fund family voting with management in shareholder proposals. The two remaining dependent variables are the residual (with respect to 'Log Total Compensation') of the (natural) logarithm of holdings of fund families in portfolio firms ('Holdings Residual') and the ISS recommendation for a proposal ('ISS Recommendation'). Firm×year, family×year, firm×family, proposal type×year and proposal fixed effects are used where indicated. In particular, columns (1)-(6) correspond to specifications (1)-(6) as explained in Section 3, modified in the case of lawsuits, see Section 4.2. All regressions include an intercept, which is not reported.

	All proposals, 2007-2010					
Votes with management (out of 100)	(1)	(2)	(3)	(4)	(5)	(6)
Log Total Compensation	0.232**	0.128	0.098	0.097	0.095	0.062
	(2.280)	(0.759)	(0.494)	(0.604)	(0.597)	(0.584)
Shareholder	-11.451**		-10.145**	-10.173**	4.004	
	(-2.315)		(-2.000)	(-2.007)	(0.003)	
Lawsuit		18.555	-22.041*	-18.012	-22.391	-14.985***
		(0.001)	(-1.731)	(-0.003)	(-0.004)	(-3.349)
Shareholder×Lawsuit	-1.544	-3.031	-2.190	-2.020	-3.041	-2.926
	(-0.252)	(-0.474)	(-0.350)	(-0.324)	(-0.472)	(-0.453)
Holdings Residual	0.234	0.850	0.762	0.112	0.082	0.131
	(0.807)	(1.595)	(1.134)	(0.358)	(0.303)	(0.462)
ISS Recommendation	42.648***	42.724***	42.679***	42.670***	43.685***	
	(4.231)	(4.891)	(4.262)	(4.259)	(5.199)	
Fixed Effects						
Family×Year	Yes			Yes	Yes	Yes
Firm×Year			Yes	Yes	Yes	
Firm×Family	Yes	Yes	Yes	Yes	Yes	Yes
Proposal Type×Year		Yes			Yes	
Proposal						Yes
Observations	300,446	300,446	300,446	300,446	300,446	300,446
R-squared	0.576	0.623	0.591	0.596	0.641	0.398

Robust t-statistics in parentheses, clustered at the family level.
Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 10: **Effect of time and lawsuits on Total Compensation, Total Compensation per Contract and Number of Contracts for the Top 5 Business Relationships (2003-2011)** — The dependent variable is three different business ties measures ('Business Ties Measure'). The business ties measure is the (natural) logarithm of total compensation ('Log Total Compensation') in Columns (1) & (2), the (natural) logarithm of total compensation per contract ('Log (Total Compensation per Contract)') in Columns (3) & (4), and the number of contracts per fund family ('Number of Contracts') in Columns (5) & (6). The regressions are ran over the full time sample 2003-2011. However, we restrict our sample to only those observations in our sample for which we had a reported total compensation number and for which we observe one of the Top 5 Business Relationships as those were reported in Table 2. Columns (1), (3) & (5) have as an independent variable just a time dummy identifying observations after 2006 ('Post 2006'). Columns (2), (4) & (6) also include another dummy variable indicating whether a fund family has faced a lawsuit or not. For those later columns the interaction of the two, in boldface, is our main independent variable ('Post 2006×Lawsuit') that tells us the extent to which our business ties measure (e.g., 'Log Total Compensation') was affected after 2006 for fund families that faced a lawsuit. Firm×family fixed effects are used in all columns. All regressions include an intercept, which is not reported.

	2003-2011, Restricted Sample & Top 5 Business Relationships					
	Log Total Compensation		**Log (Total Compensation per Contract)**		**Number of Contracts**	
Business Ties Measure	(1)	(2)	(3)	(4)	(5)	(6)
Post 2006	-0.835**	-0.262	-0.899***	-0.460***	-18.751	15.443***
	(-2.768)	(-0.709)	(-5.392)	(-4.278)	(-0.983)	(2.901)
Post 2006×Lawsuit		-0.778*		-0.594***		-46.407**
		(-1.826)		(-4.086)		(-2.557)
Fixed Effects						
Firm×Family	Yes	Yes	Yes	Yes	Yes	Yes
Observations	10,401	10,401	10,384	10,384	10,401	10,401
R-squared	0.904	0.907	0.909	0.910	0.832	0.838

Robust t-statistics in parentheses, clustered at the family level.
* Significant at 10%; ** significant at 5%; *** significant at 1%.

Table 11: **Effect of Business Ties on Voting for only 2007-2011 Funds (d-in-d shareholder proposals)** — The dependent variable is the percentage of votes with management at the fund family level on a 0 to a 100 scale. The regression is ran over the sub-sample of funds appearing in our data only in 2007-2011 and all proposals using a differences-in-differences (d-in-d) specification with respect to shareholder proposals. The dependent variables include the (natural) logarithm of the total compensation of a fund family ('Log Total Compensation') and a dummy variable indicating shareholder (sponsored) proposals ('Shareholder'). The interaction of the two, in boldface, is our main independent variable ('Shareholder×Log Total Compensation') that tells us the extent to which our business ties measure (i.e., 'Log Total Compensation') affects fund family voting with management in shareholder proposals. The two remaining dependent variables are the residual (with respect to 'Log Total Compensation') of the (natural) logarithm of holdings of fund families in portfolio firms ('Holdings Residual') and the ISS recommendation for a proposal ('ISS Recommendation'). Firm×year, family×year, firm×family, proposal type×year and proposal fixed effects are used where indicated. In particular, columns (1)-(6) correspond to specifications (1)-(6) as explained in Section 3. All regressions include an intercept, which is not reported.

	All proposals, 2007-2011 Funds Only					
Votes with management (out of 100)	(1)	(2)	(3)	(4)	(5)	(6)
Log Total Compensation	-0.219*	0.001	-0.462***	-0.422***	-0.211	-0.244
	(-1.756)	(0.003)	(-4.545)	(-4.182)	(-0.889)	(-1.175)
Shareholder	24.032***		27.217***	27.446***	-15.954	
	(12.243)		(11.989)	(13.430)	(-0.012)	
Shareholder×Log Total Compensation	0.815***	0.602*	1.056***	1.102***	0.716*	0.405
	(4.471)	(1.952)	(6.535)	(6.192)	(1.844)	(1.268)
Holdings Residual	1.080***	0.564**	0.035	0.577*	0.307	0.583***
	(7.159)	(2.509)	(0.027)	(1.758)	(0.936)	(6.654)
ISS Recommendation	87.617***	52.877**	87.664***	87.665***	49.033**	
	(15.953)	(2.239)	(16.391)	(16.391)	(2.018)	
Fixed Effects						
Family×Year	Yes			Yes	Yes	Yes
Firm×Year			Yes	Yes	Yes	
Firm×Family	Yes	Yes	Yes	Yes	Yes	Yes
Proposal Type×Year		Yes			Yes	
Proposal						Yes
Observations	153,598	153,598	153,598	153,598	153,598	153,598
R-squared	0.796	0.886	0.814	0.815	0.899	0.290

Robust t-statistics in parentheses, clustered at the family level.
Significant at 10%; ** significant at 5%; *** significant at 1%.