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Institutional Debt Holdings and Governance

Finance Working Paper N° 613/2019
June 2019

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Abstract

Using data on the universe of US-based mutual funds, we find that two out of five fund families hold corporate bonds of firms in which they also own an equity stake. We show that the greater the fraction of debt a fund family holds in a given firm, the greater its propensity to vote in line with the interests of firm debt holders at shareholder meetings. In addition, portfolio firms tend to make corporate decisions that appear more in the interests of debt holders than shareholders when mutual fund companies hold more of their debt as compared to their equity.

Keywords: corporate governance, institutional investors, agency costs of debt

JEL Classifications: G23, G34

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Abstract

Using data on the universe of US-based mutual funds, we find that two out of five fund families hold corporate bonds of firms in which they also own an equity stake. We show that the greater the fraction of debt a fund family holds in a given firm, the greater its propensity to vote in line with the interests of firm debt holders at shareholder meetings. In addition, portfolio firms tend to make corporate decisions that appear more in the interests of debt holders than shareholders when mutual fund companies hold more of their debt as compared to their equity.

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1. Introduction

Institutional investors own more than two thirds of equity traded on the US stock market (Pensions and Investments, 2017) and play an important role in the governance of public corporations. Besides trading their stakes, shareholders can influence firms via a combination of public and private engagement, often labeled as shareholder activism. Public engagement may involve submitting a shareholder proposal, initiating a proxy fight, starting a "just say no" campaign and it critically centers on the power to vote at shareholder meetings. Private engagement instead relies on private meetings with directors and executives to persuade the management to act in shareholders' interests, often using public engagement or share divestment as a threat.

Institutional investors also own a large fraction of US corporate bonds. However, we know very little about the impact of debt holding on the governance role of institutional investors. In this paper, we try and fill this knowledge gap, and look at the effect of holding bonds as well as equity on institutional investors' engagement with a corporation. To identify the potential conflict of interest between debt and equity, as suggested by Becker and Strömberg (2012), we look at companies that are close to financial distress and thus face a wedge between the interests of shareholders and debt holders.[1]

We consider first the voting behavior of mutual fund families. If a mutual fund family holds none of the corporate debt of a firm, we would expect its funds to vote so as to maximize the value of their equity stake. When the family debt fraction is positive, we would expect its funds to pay some consideration to the value of their debt stake, and therefore to vote considering the consequences for the value of both their equity and debt stakes in the firm. So, our first hypothesis is that a fund management company will be more likely to vote in the interests of debt holders in firms in which they own relatively more debt.

To test whether debt holding by fund families affects the way they vote on corporate proposals we focus on proposals on five corporate decisions where debt and equity have conflicted interests: dividend policy; equity issues and share repurchases; anti-takeover provisions; executive compensation; and restructuring activities. For each of these corporate decisions, the interests of shareholders and debt holders may be in conflict with each other. As they increase the cash that is available within the firm, reductions in cash dividends and equity issues are likely to be more in the interests of creditors than shareholders. Takeovers are generally

[1] Becker and Strömberg (2012) find that debt-equity conflicts can be affected by changes in managerial fiduciary duties and that the resulting changes in corporate behavior should only be visible for firms in financial distress.

good for target shareholders but could lead to increases in leverage and thus may be less good for creditors. Therefore, any proposal that seeks to introduce (remove) anti-takeover provisions can be viewed as in the interests of creditors (shareholders). When executive compensation becomes more closely linked to stock returns, this is likely to benefit shareholders but may be against the interests of creditors, particularly when the firm is close to financial distress as it can lead to risk shifting. According to the positive stock price reaction associated with the announcement of these events, asset sales and spinoffs are beneficial to shareholders. Conversely, they may be against the interests of creditors, as they reduce the amount of assets available as collateral. Acquisition of assets increase the amount of assets available for creditors but are typically associated with negative or neutral stock price reaction, suggesting that they are relatively more in the interests of creditors rather than shareholders.

Similar arguments should extend beyond voting behavior and apply to private engagement as well. If institutional investors hold only equity, we would expect them to use their influence on firm management to push firm policy towards the interests of equity. Conversely, if institutional investors hold a mix of debt and equity, we would expect them to influence firm policy relatively more towards the interests of debt holders. We test this hypothesis by looking at the correlation between a firm's policies and the average exposure of mutual funds to the debt relative to the equity of such a firm. We would expect that, as mutual funds' exposure to the debt of a firm increases, the firm would be increasingly under pressure to act in the interests of debt holders rather than shareholders. This should be reflected in corporate policies that are more in line with the interests of debt holders. We examine five corporate decisions: capital expenditures; research and development; seasoned equity offerings; diversifying acquisitions; cash dividends and share repurchases.

Our dataset covers the universe of US fund families investing in US listed firms over the 2009-2013 period and has 17,300 firm-year observations containing 571 fund families. It is obtained by combining three datasets: the Morningstar Direct database, which contains data on the holdings of both debt and equity of all funds sold in the US; the data on fund voting from Institutional Shareholder Services (ISS); and the balance sheet information on all publicly traded firms with a positive level of debt from Compustat.

In the analysis of the voting behavior of mutual funds, the dependent variable is an indicator whether the mutual fund votes in alignment with creditors on a specific proposal. The key independent variable is the fraction of debt held by the fund's family. As traditionally done, we include a number of control variables: a dummy variable that is set to one if ISS supports

creditors for the proposal concerned; a set of firm characteristics (size, leverage, market-to-book ratio and return on assets); the equity stake owned by the fund family; and the log of the number of funds in the fund family. We also include proposal type-year fixed effects.

The basic result shows a positive correlation between family debt fraction and the propensity to vote with creditors. However, the economic effect is small. Intuitively, there is limited conflict between debt and equity when a firm is far from financial distress: what is in the interests of creditors is likely also to be in the interests of shareholders and changes in firm policy have a very small effect on the value of debt holders' stakes. Conversely, this conflict is magnified close to financial distress, when corporate policies are likely to have a large effect on the market value of debt. Therefore, we augment the analysis by including an indicator of financial distress. We follow Opler and Titman (1994) and classify a firm as in financial distress when – within its three digit SIC code industry – the median sales growth is negative and the median stock return is below -30%. We interact the family debt fraction with the financial distress indicator and find that the interaction term is statistically significant, positive and large in magnitude.

The correlation is stronger when the vote is in alignment with management and/or the ISS recommendation but is still statistically significant even when creditors' interests are in conflict with these recommendations. As a placebo test, we also look at proposals in which we do not expect much conflict between debt and equity, such as director elections. In those instances we would not expect to find any effect of family debt fraction on voting policy. Our results confirm this prediction. Therefore, overall, the analysis of voting suggests that fund family debt holdings affect how fund families vote on these firms, particularly when firms are in financial distress.

In the analysis of the impact of mutual fund debt exposure on corporate policies, we include the logarithm of the market value of assets of the firm, the firm's Q ratio, and the firm's leverage ratio as control variables. We also control for *institutional block ownership*, which is defined as the fraction of the firm that is held by block holders that hold more than 5% of the firm each, and may affect the power of institutional investors to influence the firm. In the regressions we include industry times year fixed effects.

We find support for the hypothesis that in firms where mutual funds hold a stake in both the debt and the equity, the debt overhang problems are alleviated. When a firm is in financial distress, the average exposure to debt by the mutual funds is positively correlated with the propensity to undertake major capital expenditure, R&D, and seasoned equity offerings. We also find support for the hypothesis that there is less risk shifting in firms where mutual funds hold a stake in both the debt and the equity. When a firm is in financial distress, the average exposure

to debt by the mutual funds is negatively correlated with diversifying acquisitions, increases in major cash dividends payment and share repurchases.

As a note of caution, the results described so far should be interpreted as simple correlations: mutual fund families with a long position in both corporate debt and equity tend to vote more in line with the interests of debt holders rather than shareholders, compared with families with only equity positions. In an attempt to move closer to the identification of a causality link between institutional debt holdings and corporate governance, we use an instrumental variable approach, a quasi-natural experiment, and a propensity score matching procedure.

For our instrumental variable approach, we use the introduction of a new debt fund by a fund family as an instrument in our first stage models. Opening a new debt fund is likely to be driven by the desire to satisfy market demand rather than because a fund family wants to hold more debt in a particular firm. The creation of a new debt fund mechanically increases the fraction of debt that the fund family holds and leads to an increase in the value weighted debt fraction held by the fund family in the firms they own. Furthermore, we show that the choice of debt securities by fund families when they introduce a new debt fund is virtually "passive" as on average of 86% of the time fund families invest in firms in which they already hold either debt or equity. When we instrument the family debt fraction and its interaction with distress using the new debt fund indicator, we confirm our basic findings: family debt fraction has a significant effect on the propensity to vote with creditors on proposals and the value weighted debt fraction affects firms' investment and payout policy when firms are in financial distress.

We also use mergers between fund families for a difference-in-differences test. For identification purposes, we rely on cases in which the acquirer fund family holds no debt in the firm concerned but the target fund family does. The effect of such merger is an increase in the debt equity ratio of the fund family in the firm concerned. As these mergers are likely to be the result of strategic considerations at the fund family level, these serve as quasi-exogenous shocks to the debt equity ratio of fund families and to the value weighted debt fractions of firms. When we take this approach, our basic results remain unchanged.

Furthermore, we also employ propensity score matching. Our findings are confirmed independently of whether the matching is done at the fund-family level (by matching fund families with the same propensity to hold both debt and equity in a given firm) or at the firm level (by matching firms with the same propensity to have investors that hold both their debt and their equity). While these results cannot alleviate all concerns of endogeneity, they offer some reassurance about the robustness of our findings.

We conduct several further robustness checks. First, we consider alternative measures of financial distress. Our main measure of financial distress is at the industry level. We show that the results extend to the case in which financial distress is measured at the firm level, either as distance to default or as poor debt rating. Second, in our main analysis we compute the fraction of corporate debt held by mutual fund families as the total value of debt held by a fund family over the total value of debt and equity held by the family. We obtain similar results if we use the number of debt funds over the total number of funds held by a mutual fund family. Third, we show that our results do not depend on the weights used to compute the average debt fraction or on the use of a logistic rather than a linear model. Fourth, we demonstrate that when we exclude funds that use credit default swap (CDS) contracts to hedge the credit risk of the debt securities they hold, that our results are unaffected.

With one exception, the literature has so far focused exclusively on the equity holdings of institutional investors. Our key contribution is to look at the governance impact of the *debt holdings* of mutual funds. Our findings suggest that debt holdings change the way institutional investors vote and generally engage with portfolio firms and thus should not be ignored when examining the governance role of institutional investors. The exception is Bodnaruk and Rossi (2016), who look at the effect of institutional investors holding both debt and equity in M&A targets. They examine the implications for the takeover premium, the returns that bondholders receive and the propensity of dual holders to vote in favor of the takeover bid. The scope of our paper is broader as it looks at the effects of financial institutions holding both debt and equity on all types of firm policies not just M&A decisions. Therefore, it extends and complements their contribution.[2]

Our paper has the following structure. Section 2 develops our hypotheses and reviews the related literature. In Section 3 we introduce our data and discuss our sample's descriptive statistics. In Section 4 we present our empirical results. Section 5 and 6 present our additional analyses and robustness tests, respectively. Section 7 concludes.

2. Hypotheses

Institutional investors that hold equity in a firm can influence its corporate policy in two ways. They can publicly engage with the target firm, initiating a proxy fight and voting for their proposals

[2] Jiang, Li, and Shao (2010) examine the effect on loan interest rate when banks also hold equity in a given firm. While the paper does deal with the topic of joint debt and equity ownership, it focuses on a special institution (banks) and does not look at the impact of dual holding on target firm behavior nor governance; and therefore has little overlap with our paper.

at the shareholder meetings. Alternatively, they can privately persuade the management to act in their interests, using the possibility of public engagement or sale of their shares as a threat.

The literature on institutional investor activism seems to indicate a large heterogeneity in activity and effectiveness across investors and over time. Wahal (1996) studies 356 public engagements by 9 pension funds between 1987 and 1993 and shows that pension funds are successful in changing the governance structure of targeted firms but their activity is not associated with a significant short-term or long-term improvement in either stock price or accounting measures of performance. Smith (1996) studies a comprehensive set of 51 public activism targets of CalPERS from 1987 to 1993 and finds more promising results: CalPERS seems to target underperforming companies and it has a high success rate (72%) of adopting governance structure changes. The paper shows that shareholder wealth increases for firms that adopt/settle and decreases for firms that resist.

Becht, Franks, Mayer, and Rossi (2010) examine the activity of the activist fund Hermes UK Focus Fund, which was part of the British Telecom pension fund, over the period 1998-2004. The engagement of this fund tends to take a private rather than public form and seeks to restructure firms, focusing their activities, limiting acquisitions and capital expenditure, changing boards and altering financial policy. While there is no positive market reaction to public notification of HUKFF's stake, there is a substantial share price reaction to engagement outcomes between 3 and 4%.[3]

The papers mentioned so far focus on the performance of very special funds. More recently, attention has shifted towards the general category of institutional investors. Aggarwal, Erel, Ferreira, and Matos (2011) show that international institutional investors are positively associated with firm-level corporate governance in a large sample of firms from 23 countries during the 2003–2008 period. They find that firms with higher institutional ownership are more likely to terminate poorly performing CEOs and exhibit improvements in valuation over time. Iliev and Lowry (2015) emphasize that there is a large heterogeneity across mutual funds and find that over a quarter of the funds rely almost entirely on Institutional Shareholder Services (ISS) recommendations, while other funds place little weight on them.

[3] These strategies are also adopted by hedge funds. For instance, Brav, Jiang, Partnoy, and Thomas (2008) use hand-collected data on 888 events launched by 131 activist hedge funds in 2001-2005 period to find that the announcement of hedge fund activism results in 5-7% abnormal return during the announcement window with no apparent reversal in the subsequent year. Klein and Zur (2009) compare the investment strategies of hedge and non-hedge funds.

We extend this literature by focusing not only on the equity holdings of institutional investors but also on their debt holdings. As a matter of fact, mutual fund companies often also hold debt in the same firms in which they hold equity. This may be through their debt only funds or their mixed funds that hold both debt and equity. What is the governance role (if any) of these debt holdings?

First consider the public channel, the voting decisions. To measure the extent to which fund families hold debt as a share of the total holdings we define the variable *family debt fraction* as:

$$Family\ debt\ fraction_{i,j,t} = \frac{Total\ value\ family\ (i) debt\ holdings\ in\ firm\ (j) at\ (t)}{Total\ value\ family\ (i) debt\ and\ equity\ holdings\ in\ firm\ (j) at\ (t)} \quad (1)$$

If mutual fund companies have no debt in a firm, and their family debt fraction is zero we would expect them to vote so as to maximize the value of their equity share. However, when the family debt fraction is positive we would expect the mutual fund family to take into consideration the interests of their debt stake in the same firm and therefore to vote, thus evaluating not only the consequences for the value of their equity stake in the firm but also the consequences for their debt stake. From this we get our first hypothesis:

Hypothesis 1: The greater the family debt fraction held by a given fund management company in a given firm, the greater the tendency of that fund management company to vote according to the interests of debt holders.

Consider next the private engagement channel. If institutional investors hold only equity, we would expect them to not only vote in the interests of equity but to also push firm policy in the interests of equity through the direct communication channel. However, if institutional investors hold both a mix of debt and equity, then we would expect them to take the interests of debt into account to a greater extent when voting on firm policy and also directly communicating with firms.

To test this hypothesis we need a firm-level variable that captures the extent to which the equity of a firm is jointly held with debt by institutional investors. We define the *value weighted debt fraction* of firm (j) in year (t) as the following:

$$Value\ weighted\ debt\ fraction_{j,t} = \sum_i \frac{Value\ of\ family\ (i)\ debt\ and\ equity\ holdings\ in\ firm\ (j)\ at\ (t)}{Total\ value\ of\ all\ families' debt\ and\ equity\ holdings\ in\ firm\ (j)\ at\ (t)} \times Family\ debt\ fraction_{i,j,t} \quad (2)$$

We would expect that as the value weighted debt fraction of a given firm goes up the more pressure the firm would come under to act in the interests of debt holders either through the voting channel or through the direct communication channel. This should lead firm policy to be more in line with the interests of debt holders. Therefore, our second hypothesis is:[4]

Hypothesis 2: The greater the value weighted debt fraction of a given firm, the more the firm will be managed in the interests of debt holders.

3. Data

To conduct our analysis we join together datasets from various sources. The first dataset consists of the holdings of U.S. fund families in U.S. listed firms, which allow us to calculate fund family debt fractions and the value weighted debt fractions by all families in each firm. We gather data on the holdings of both debt and equity of all funds sold in the U.S. between 2009 and 2013 from the Morningstar Direct database, which includes not only funds that hold domestic securities but also global funds that hold a mixture of domestic and international assets.

As we wish to relate fund family debt fractions to how fund families vote, the second set of data consists of how mutual funds vote. U.S. mutual fund companies have been required by law to make public how they vote on proposals at the annual meetings of U.S. companies since 2003. We obtain data on fund voting from 2009 to 2013 from Institutional Shareholder Services (ISS). As we wish to relate the value weighted debt fraction of firms to firm investment policy, we require investment data at the firm level. We gather this data on all publicly traded firms alive with any outstanding debt between 2009 and 2013 from Compustat. We only include firms with a positive amount of debt as these are the only firms that can possibly have a positive debt fraction and therefore allow us to test our hypotheses.

We then match these three datasets together for the period 2009 to 2013 to give us a sample of 17,300 firm-year observations containing 571 fund families.[5] Table 1 Panel A contains data on the fund family debt-equity holdings mix. Of the 571 fund families in our dataset, 8 families hold only debt, 315 families hold only equity, and 248 families hold both debt and equity.

[4] At first pass, it might seem that the value weighted debt fraction is simply an alternative representation of the leverage ratio of firms. We find that this is not borne out by the data, which show that the correlation between these two variables is only 0.23 across the 17,300 firm year observations in our dataset.

[5] Fund families have to hold equity to be able to vote on firm proposals at the annual meetings. We exclude 18 firm-year observations in which fund families do not own equity but only hold debt in the firm. Including these observations does not qualitatively change our results.

Conditional on fund families holding both debt and equity in a given firm, the average value of (debt and equity) holdings in each firm are $38.4 million and the average family debt fraction is 35%. Table 1 Panel B presents the firm characteristics that serve as control variables when we analyze the relation between a fund family's debt fraction and its voting policy and also when analyzing the relation between the value weighted debt fraction by all families in a given firm and firm investment policy.

To test whether the *family debt fraction* held by fund families affects the way they vote on corporate proposals we need to examine proposals where creditors and equity holders have conflicted interests. Otherwise there would be no relation between the family debt fraction and how fund families vote. We therefore use this criterion to select proposals that we examine. We read each proposal's description to determine if the proposal is for or against the interests of creditors and categorize the proposals into five groups.

The first group consists of proposals linked with dividend and share repurchases. We would expect that any proposal to increase special dividends or share repurchases is in the interests of shareholders but is against the interests of debt holders as there is now less cash in the firm which reduces the likelihood that debt holders will be paid. Likewise any proposal to decrease dividends or share purchases is classified as being in the interests of debt holders but against the interests of equity holders.

The second group of proposals concerns equity issuance. Equity issues bring more cash into the firm, which is good for debt holders as there is more money to pay them while at the same time it dilutes the holdings of equity holders and therefore may be contrary to the interests of equity holders.

The third group of proposals concerns anti-takeover provisions. Takeovers are generally good for target shareholders. Takeovers however often involve the acquirer borrowing heavily to buy the target particularly in the case that the acquirer is a private equity company. Therefore, takeovers may be bad for debt holders. Seen from this perspective, any proposal that seeks to introduce anti-takeover provisions will reduce the likelihood of takeovers and therefore be bad for shareholders and good for creditors. In contrast, any proposal that seeks to remove anti-takeover provisions will increase the likelihood of takeovers and therefore will be in the interests of shareholders and against the interests of debt holders.

The fourth category of proposals concerns executive compensation. If a given proposal increases the sensitivity of management pay to firm performance then this is in the interests of equity holders as it aligns executive interests with shareholder interests. For this same reason,

greater pay to firm performance sensitivity may be against the interests of creditors: for instance, management with an executive compensation that is fully aligned with equity may engage in risk shifting when close to financial distress.

The fifth category of proposals concerns restructuring activities. Whether a particular restructuring activity is in the interests of debt holders or equity holders depends on the type of restructuring activity concerned and can be gauged by the stock market reaction to their announcement. The positive equity market reaction to asset sales and spin-offs tells us that these are typically good for shareholders and bad for creditors. The negative market reaction to acquisitions of assets, indicates that the market interprets these as being bad for shareholders if there is overpayment or equity issuance. Lastly, in the case of liquidations of assets, these are generally good for creditors and bad for shareholders as they get little or nothing.

Table 2 presents statistics on the set of proposals that we analyze grouped into the five categories discussed above. Our voting sample consists of 2,468 proposals. The average number of families voting within each of these categories of proposals is between 15.7 and 33.9 families. As whether ISS supports management or not may affect how fund families vote on a given policy, we calculate the proportion of proposals for which ISS supports management and this varies between 81% and 96% for our different proposal groups.

4. Empirical results

This section contains our main results. First, we examine whether the fraction of debt held in a given company by fund management companies affects the way they vote on corporate policies. We then look at the effect of the *value weighted debt fraction* of firms on four different firm investment policies: capital expenditures, research and development, seasoned equity offerings, and non-core acquisitions. We conclude by examining the effect of the *value weighted debt fraction* of firms on two different firm payout policies: dividends and share repurchases.

4.1. Voting policy

For each of the proposals subject to a vote, we calculate a dummy variable *vote with creditors*, which is set equal to one if a given fund family casts more than 50% of the votes of its funds in favor of creditors for the given proposal and zero otherwise. To analyze whether the fraction of debt held by fund families affects their propensity to vote with creditors we regress our vote with creditors dummy on the fraction of debt held by fund families.

In our regressions we include a number of control variables. First, we include a dummy variable that is set to one if ISS supports creditors for the proposal concerned. Second, we control for the characteristics of the firm being voted on. In particular, we control for the logarithm of its total assets, its leverage ratio, its market-to-book ratio, and its return on assets.[6] Third, motivated by Fich, Harford, and Tran (2015), we control for whether the fund family has a large stake in the company concerned. We would expect that if the fund family has a trivial stake in the firm concerned it might not be worthwhile for the fund family to think much on the direction it wishes to vote; whereas, if its stake is large, it might be more compelled to reflect further on these issues. We therefore include a dummy variable, which we label *big holding (0,1)* that is one if the investment of the fund family in the firm concerned is above the size of its 75th percentile investment in the year concerned and zero otherwise. Fourth, we also include the log of the number of funds in the fund family as a control, as the size of the fund family may have a bearing on the propensity to vote with creditors.

Table 3 Panel A shows the results of using logistic regression to regress *vote with creditors* on *debt fraction* plus the controls defined above. We include proposal type x year fixed effects and our standard errors are clustered by firm-year. Consistent with our expectations, Model 1 shows that as the family debt fraction goes up the propensity to vote with creditors goes up as well. A one standard deviation increase (0.146) in the family debt fraction is associated with an increase of 0.2% in the probability of voting in the interests of creditors. This economic effect is small given that the unconditional probability of voting with creditors is 31%.

If firms are in financial distress then small changes in firm policy may have serious consequences for the value of debt holders' stakes in the firm. However, if firms are away from the bankruptcy threshold, changes in firm policy should have a much more muted effect on the value of debt holders' stakes. As a result if fund families are voting on a firm in which they hold both debt and equity we would expect that the closer the firm is to financial distress the more the fund family would care about the value of their debt holdings in that firm. This discussion suggests that whether or not the firm being voted on is in financial distress may be material in determining the extent to which fund families vote with the interests of debt holders. We therefore augment the analysis of Model 1 by including the influence of financial distress. We follow Gopalan and Xie (2011) in using the methodology outlined by Opler and Titman (1994) to define distress. Specifically, for each year, a three digit SIC code industry is in financial distress if

[6] In unreported regressions, we also control for the firm's cash holding (cash/assets) and the results are qualitatively similar.

the median sales growth is negative and the median stock return is below -30%. We define a firm as being in financial distress if the three digit SIC industry, to which it belongs, is experiencing financial distress in that year.

To see whether considering financial distress affects the impact of debt fraction on voting, we interact *family debt fraction* with a dummy variable that equals one if the target firm is in financial distress in that year and zero otherwise. The results of our analysis are presented in Model 2. The interaction between financial distress and *family debt fraction* has a statistically significant and positive effect on the propensity to vote with creditors. A one standard deviation increase (0.146) in the family debt fraction is associated with an increase of 3% in the probability of voting in the interests of creditors when the firm is in financial distress (which represents an increase of 10 percentage points from the 31% unconditional probability of voting with creditors). If we compare Model 1 with Model 2, it is clear that the impact of *family debt fraction* is greater when a given firm is in financial distress. This is consistent with the idea that, the closer fund families are to financial distress, the more they care about the interests of their debt holdings in firms.

It might be argued that fund families would find it easier to vote with creditors on proposals where creditor interests align with management interests or ISS interests but find it harder to vote with creditors on proposals where voting with creditors involves voting against management or ISS. To test this idea we separate out proposals where creditors interests are either (a) aligned with the management interests or (b) creditors interests are opposite to the interests of management. Panel B presents the analysis of Panel A Model 2 except that we now separately analyze in Panel B Model 1 only proposals where management interests are aligned with creditors interests and in Panel B Model 2 we separately analyze proposals where management interests are contrary to creditor interests. In Model 1, a one standard deviation increase in the family debt fraction is associated with an increase of 8% in the probability of voting in the interests of creditors when the firm is in financial distress (which represents an increase of 9 percentage points from the 90.2% unconditional probability of voting with creditors). In Model 2, the same increase is associated with an increase of 1% in the probability of voting in the interests of creditors when the firm is in financial distress (which represents an increase of 28 percentage points from the 3.6% unconditional probability of voting with creditors).

Likewise, we then separate out proposals depending on whether creditors interests line up with ISS or not and these are presented in Panel C. In Model 1, a one standard deviation increase in the family debt fraction is associated with an increase of 2% in the probability of voting

in the interests of creditors when the firm is in financial distress (which represents an increase of 2 percentage points from the 97% unconditional probability of voting with creditors/ISS). In Model 2, the same increase is associated with an increase of 2% in the probability of voting in the interests of creditors when the firm is in financial distress (which represents an increase of 25 percentage points from the 3.6% unconditional probability of voting with creditors).

Overall, the results in Panels B and C show that fund families find it easier to vote with creditors on proposals where creditors interests align with management interests or ISS interests but find it harder to vote with creditors on proposals where voting with creditors involves voting against management or ISS in which the economic effects are much larger. What is noteworthy when we look at our results is that there is still a statistically significant effect of the interaction of debt fraction with financial distress on the propensity to vote with creditors – even if voting with creditors requires fund families to vote against management or ISS. Therefore, overall, when firms are in financial distress, family debt fraction affects how fund families vote on these firms.

Table 3 Panel D performs a placebo test. If our intuition concerning the impact of family debt fraction on voting policy is correct then we would expect that for proposals where debt and equity holders have no conflict that there will be no effect of family debt fraction on voting policy. To test this we take all proposals and remove all "conflict" proposals that have been used to perform the tests in Table 3 Panel A, B and C. Panel D shows that for all non-conflict proposals there is no link between voting propensities and family debt fraction, as one would expect. It might be argued that director elections are the non-conflict proposals where there is most clearly no conflict of interest between debt and equity holders. We therefore conduct further test using director election proposals alone (and for completeness we also run our analysis for the remaining non-conflict but non-director election proposals). Our results confirm that however we split our sample of non-conflict proposals that family debt fraction interacted with financial distress remains insignificant.

Our tests in Table 3 assume that fund families make their voting decisions at the family level as most fund families have centralized governance offices that handle the voting and engagement functions for all of their funds.[7] To examine the validity of this assumption we examine the average fraction of votes within a fund family that are different for the same proposal. Panel E of the same table shows that the percentage of funds that vote differently

[7] See for example BlackRock Investment Stewardship (July 2017). Alternatively Vanguard, Statement of Additional Information, (April 27, 2017), http://www.vanguard.com/pub/Pdf/sai040.pdf (describing Vanguard's Proxy Oversight Committee).

within a given fund family across all proposals is on average very small and typically under 2% which justifies our assumption. This is consistent with Keswani, Stolin, and Tran (2017), who find that funds within a family vote in the same direction almost 99% of the time. The same panel also shows that when we focus on less clear-cut proposals where ISS recommends voting against management, we find that the level of disagreement within fund families increases. This evidence is consistent with Illiev and Lowry (2015) who find that disagreement within fund families goes up for more contentious proposals. Table 3 Panel E also breaks down the percentage of funds that vote differently within a family according to whether families hold only equity or both debt and equity. As fund families that hold both debt and equity are likely to have funds with a greater number of viewpoints, we might expect these fund families to vote more differently across their funds than pure equity fund families and it confirms that this is indeed the case.

4.2. Corporate investment

Now, we turn to the analysis of the corporate investment decisions and we consider first capital expenditure policy. The corporate finance literature argues that firms that are close to financial distress may experience debt overhang, which may dissuade them from taking positive NPV investments when the firm is close to financial distress. We would expect that firms that are held by fund families with a higher *value weighted debt fraction* will act more in the interests of debt holders. This should mean that such firms are less constrained by the debt overhang problem and will therefore invest relatively more when in financial distress.

The second policy we examine is research and development. Like capital expenditure we would expect firms with a higher value weighted debt fraction to have R&D that is less prey to financial distress and therefore we would expect such firms to invest more in R&D in financial distress.

The third policy we examine is seasoned equity offerings. If firms are close to financial distress we would expect them to not want to issue equity because of the debt overhang problem. However if firms are held by funds that have a higher *value weighted debt fraction* then they will be compelled to act more in the interests of debt holders and to be more prepared to issue equity in financial distress. As a result we expect to see more equity issuance in financial distress for firms with a higher value weighted debt fraction.

The fourth policy we examine is non-core acquisitions. If firms are close to financial distress then we would expect them to be affected by the asset substitution problem. This involves equity holders pushing for investment in risky projects that might allow them to recoup

something from the firm if the risky project pays off. If firms have a greater value weighted debt fraction one would expect these firms to be less affected in financial distress by the asset substitution effect as they care not only about the payoff to equity but also the payoff to debt.

When we relate the value-weighted debt fraction of a firm to its policies we use a number of control variables. These include the log of the market value of assets of the firm, the firm's Q ratio, and the firm's leverage ratio.

If the holdings of fund families in a firm are more concentrated then we might expect those fund families to be able to exert more pressure on the firm than if the holdings of fund families in the firm concerned are more thinly spread. To control for this we include a control variable in our tests known as *institutional block ownership*, which is defined as the fraction of the firm that is held by block holders that hold more than 5% of the firm each.

The first policy we examine is capital expenditure. Our prior is that if firms are in financial distress that if their value weighted debt fraction goes up that firms will do major capital expenditure projects. Our focus here is on large capital investment outlays where there are major investment injections as opposed to small investments that are likely to occur on a daily basis. This is for two reasons. First, large investments are more deliberate than small investments and second because these sizeable investments are more likely to drive corporate growth and therefore be most influential for value. We measure large capital expenditure spending using a dummy variable approach and the variable *high CAPEX (0,1)* for a firm is set to one if the ratio of CAPEX to assets of the firm is above the 50th percentile of CAPEX to assets across all companies with positive CAPEX spending in the year concerned.

Table 4 Panel A presents the results of regressing the *high CAPEX (0,1)* on the value weighted debt fraction interacted with the financial distress dummy which is defined in the same way as in the previous section. In our regressions we include industry times year fixed effects and we cluster our standard errors by firm and year. We see that when a firm is in financial distress that the value weighted debt fraction of the firm increases the propensity to undertake major capital expenditure. A one standard deviation increase (0.088) in the value weighted debt fraction of the firm is associated with an increase of 2% in the probability of undertaking more capital expenditure when the firm is in financial distress. This represents an increase of 4 percentage points from the unconditional probability of being an above median CAPEX spender in a given year.

The second policy that we look at is research and development. Our prior is that if firms are in financial distress and that if their value weighted debt fraction goes up, firms will do more

research and development. We measure major research and development using a dummy variable approach and the variable *high R&D (0,1)* for a firm is set to one if the ratio of research and development to assets of the firm is above the 50th percentile of the ratio of research and development to assets across all companies in the year concerned.

Table 4 Panel B present the results of regressing the *high R&D (0,1)* on the value weighted debt fraction interacted with the financial distress dummy which is defined in the same way as in the previous section. In our regressions we include industry times year fixed effects and we cluster our standard errors by firm and year. We see that when a firm is in financial distress that the value weighted debt fraction of the firm increases the amount of R&D that firms undertake. A one standard deviation increase in the value weighted debt fraction of the firm is associated with an increase of 3% in the probability of undertaking major R&D projects when the firm is in financial distress (which represents an increase of 20 percentage points from the unconditional probability of making a major R&D expenditure in a given year).

The third policy variable we look at is seasoned equity offerings and as these are in the interests of debt holders and we would expect that as the value weighted debt fraction goes up that the amount of seasoned equity offerings goes up particularly in financial distress. We use a dummy variable approach and define *high SEO (0,1)* as being equal to one if the value of SEO proceeds/assets is greater than the 50th percentile company in the year concerned. When we regress *high SEO (0,1)* on the value weighted debt fraction interacted with financial distress, we see that firms that are in financial distress with a higher value weighted debt fraction tend to undertake more seasoned equity offerings. A one standard deviation increase in the value weighted debt fraction of the firm is associated with an increase of 1.5% in the probability of undertaking a major SEO when the firm is in financial distress (which represents an increase of 50 percentage points from the unconditional probability of making a major SEO in a given year).

The fourth policy variable we look at is non-core acquisitions. If non-core acquisitions are seen as being risky particularly at the times of financial distress then these are in the interests of equity holders and are not in the interests of debt holders. We therefore relate whether firms have undertaken non-core acquisitions or not in a given year to the value weighted debt fraction interacted with financial distress. The results show that as firms' value weighted debt fraction goes up they are less likely to undertake non-core acquisitions particularly in financial distress, which is consistent with our priors. A one standard deviation increase in the value weighted debt fraction of the firm is associated with a decrease of 0.5% in the probability of making a non-core

acquisition when the firm is in financial distress (which represents a decrease of 25 percentage points from the unconditional probability of making non-core acquisitions in a given year).

4.3. Corporate payout

The payment of dividends involves a direct transfer of cash to equity holders. By doing so, taking substantial cash out of the firm also reduces the likelihood that debt holders will be paid. Dividends while beneficial to equity holders are therefore not in the interests of bondholders. Likewise as share repurchases use cash to buy back equity, they reduce the available cash in the firm and therefore are to the detriment of bondholders. As share repurchases boost the current value of equity they are in the interests of equity holders.

To model payout policy we follow a similar approach to our analysis of investment policy in that we include the same control variables and measure our major payout variables using a dummy variable approach. The *high dividends* dummy variable is one if the dividend payout ratio of the firm is above the 50th percentile of firms in the year concerned. The *high repurchases* dummy is calculated analogously based on the repurchase to asset ratio of the firm concerned. Model 1 in both panels of Table 5 show that payout policy is decreasing in the *value weighted debt fraction* which we would expect while Model 2 shows that the effect is much stronger when we condition on financial distress. In Model 2 of Panel A, a one standard deviation increase in the value weighted debt fraction of the firm is associated with a decrease of 4% in the probability of paying out more dividends than the median firm when the firm is in financial distress. This represents a decrease of 15 percentage points from the unconditional probability of being a high dividend payout firm in a given year. In Model 2 of Panel B, a one standard deviation increase in the value weighted debt fraction of the firm is associated with a decrease of 4% in the probability of repurchasing more shares than the median firm, when the firm is in financial distress. This is a decrease of 20 percentage points from the unconditional probability of being a high share repurchase firm in a given year.

5. Additional analyses

In this section, we present additional analysis to help understand the governance role of debt holdings by institutional investors. First, we try to measure the impact of voting on corporate policies. Second, we distinguish between active and passive investors to find out which type of investor is more active in governance by debt holders. Third, we consider whether the maturity of the debt holdings matters. Fourth, we adopt both instrumental variable and difference

indifferences tests to alleviate endogeneity concerns. Finally, we perform a propensity score matching.

5.1. Voting channel effects

In section 4 we have shown that the greater the *value weighted debt fraction* of firms the more likely it is that they will act in the interests of debt holders. What explains this link? We hypothesize that this is because firms with higher debt fractions are influenced more by institutional investors either through the direct communication channel or through the voting channel. While we cannot observe the direct communication channel we can observe the voting channel. If this is the case then firms that have a greater fraction of their proposals voted in the interests of debt holders should see their policy tilted more in favor of debt holders overall.

Table 6 relates the overall voting policy by fund families on all conflict proposals to firm investment policy or payout policy. We use the same controls as in Tables 4 and 5 except that we now include an additional dummy to measure if the firm has any conflict proposals that are voted on in the given year. To measure the fraction of votes in the interest of creditors on all conflict proposals, we calculate first the fraction of votes in the interest of creditors for each fund family across each conflict proposal category. We then average the fraction of votes in the interest of creditors for each fund family across all conflict proposal categories. After calculating the fraction voted in the interest of creditors for a given fund family in a firm in a given year, we calculate an equity-value weighted average fraction of votes in the interest of creditors across fund families in a firm in a given year. This measure can then be related to the different types of firm investment policy in Panel A and firm payout policy in Panel B. In Models 1-4 of Panel A and Models 1-2 of Panel B, a one standard deviation increase in the average fraction of votes in the interest of creditors is associated with an increase of 8% in the probability of making a major capital expenditure, an increase of 1% in the probability of making a major R&D expenditure, an increase of 1% in the probability of making a major SEO, a decrease of 0.3% in the probability of making a non-core acquisition, a decrease of 0.3% in the probability of making a major dividend payout, and a decrease of 2% in the probability of making a major repurchase, respectively. Overall the results show that the greater the fraction of votes in the interests of creditors in a given firm, the greater the extent to which it acts in the interests of debt holders in both its investment and payout policies. This clearly highlights that the voting channel plays an economically important role in the governance of firms.

Comparing these findings with the results in Tables 4 and 5 offers a rough estimate of the relative importance of public versus private engagement in the governance of firms. The economic significance of voting on corporate investment is about half of the one uncovered in Table 4. This suggests that corporate investment is significantly affected by voting, i.e. public engagement. Conversely, the economic significance of voting on payout policy is one tenth of the one uncovered in Table 5. This suggests that payout policy is mostly the result of institutional investors' private rather than public engagement.

5.2. Active vs. passive funds

It might be argued that the fraction of stock owned by passive rather than active funds may significantly affect the governance of the firms concerned. To test whether this is the case in our dataset, we first use the names of each of the 6,874 funds in our database to manually classify them into passive versus active funds. We find that in our sample 6,096 (88.68%) of the funds are active while 778 (11.32%) are passive. For each family we calculate the value weighted debt fraction separately for the active funds and for the passive funds alone. The results of this analysis are presented in Table 7. Panel A shows that the mean fraction of debt held by active funds in fund families that hold any debt is 21.2% while the mean debt fraction of passive funds (for fund families that hold some debt) is 4.9%. When we look at whether the fraction of debt held by active or passive funds has any effect on voting policy, Panel B shows that while the debt fraction of active funds plays a significant role, in contrast the debt fraction of passive funds plays no significant role at all. When it comes to firm policies the tenor of our results is similar to our voting results and we find in Panel C that the debt fraction of active funds has a significant effect on all our measures of firm investment and payout policy while the debt fraction of passive funds has no significant effect on firm policy. These two sets of results suggest that the channel through which the debt holdings of institutional investors affect voting policy and firm policy is through active rather than passive funds.

5.3. Debt maturity

Funds may hold debt of a range of maturities. If funds hold more short-term debt in a given firm then they may feel less compelled to influence that firm’s policy particularly if the effects of changes in firm policy are only likely to be manifest in the longer term. To examine this we define bonds of less than five years to maturity as being short-term bonds and the remainder as medium and long-term debt. This allows us to calculate a family debt fraction and a value weighted debt

fraction using either just short-term debt or just the combined total of medium and long-term debt. Table 8 presents the results of this analysis. In Panel A, we find that fund families hold significantly more mid and long-term debt rather than short-term debt with the in mid and long term debt fraction among families being 18.1% while the short-term debt fraction is only 11.6%. In Panels B and C when we examine the effect of the short-term debt fraction on voting policy and firm policy, respectively, we find that it is insignificant while the effect of the fraction of mid and long-term debt does play a significant role. Therefore our prior beliefs that the short-term debt fraction is less likely to be significant are confirmed in the data.

5.4. Instrumental variable analysis

The results so far should be interpreted as simple correlations: mutual fund families with a long position in both corporate debt and equity tend to vote according to the interests of debt holders rather than shareholders. This correlation cannot be interpreted as causality because it could well be driven by omitted factors: for instance, higher degree of risk aversion by the fund management may lead to both joint investment in debt and equity, and conservative choice of voting. To move closer to the identification of a causal link between institutional debt holdings and corporate governance, we adopt an instrumental variable approach.

If a fund family decides to launch a new debt fund, this may affect the debt-to-equity fraction that this family holds in its portfolio firms.[8] Opening a new debt fund is likely to be driven by the desire to satisfy market demand rather than because a fund family wants to hold more debt in a particular firm. Therefore, it might be argued that the opening of a debt fund is a valid instrument to estimate the effect of changes in the family debt fraction on voting and the effect of changes in the value weighted debt fraction on firm policy. We check our database each year to see when a fund family creates a new debt fund under its management. We are able to find 197 incidents when this happens. We then create our instrument, *new debt fund (0,1)*, which equals one if a given fund family with an ownership stake in the firm opens a new debt fund in the year concerned for the family level test, and zero otherwise. The choice of the firms in which the new fund invests is virtually "passive", as on average 86% of the new investment happens in firms in which the fund family already owns debt or equity. For the firm level test, the same variable equals one if at least one fund family with an ownership stake in the firm opens a new

[8] When a fund family opens a new debt fund, typically (in 58% of the cases) they do not close any other funds at the same time. In the other cases they close either a debt or an equity fund.

debt fund in the year concerned, and zero otherwise. We then use this instrument in our first stage models.

To test whether the introduction of new debt funds significantly affects the family debt fraction and the value weighted debt fraction of firms, we regress both the family debt fraction and the value weighted debt fraction of firms on a set of control variables and a new debt fund dummy and its interaction with distress. As suggested by Wooldridge (2002, p.236), we instrument for both debt fraction and its interaction with distress (0,1) in two separate first stage models.[9] The results of doing so are presented in Table 9 Panel A. Our first stage results show that *new debt fund (0,1)* interacted with distress has a statistically significant positive effect on both the interaction of the family debt fraction with distress and also on the value weighted debt fraction of firms interacted with distress. To gauge the strength of our new debt fund instrument, the F statistic of the excluded instrument (against the null that the excluded instrument is irrelevant in the first-stage regression) is clearly above the critical value for the Stock-Yogo weak identification test. We employ the methods outlined by Stock and Watson (2010) and by Hall and Peixe (2003) to test the validity of our instrument and ensure that the relevance condition is satisfied.

We then use the family debt fraction and its interaction with distress instrumented as in Panel A Models 1 and 2 to determine whether there is a significant effect of *family debt fraction* on voting policy when firms are in financial distress. Table 9 Panel B shows that whether we include all proposals together or separate out proposals conditional on if creditor interests are aligned with management interests or not, that family debt fraction has a significant effect on the propensity to vote with creditors on proposals.

In Table 9 Panel C we present the second stage regressions of firm investment and payout policy using the value weighted debt fraction and its interaction with distress instrumented from the first stage in Panel A Models 3 and 4. The table shows that there is a significant effect of the value weighted debt fraction on firms' investment and payout policy when firms are in financial distress.

5.5. Using fund family mergers as a quasi-natural experiment

In this section we discuss a further identification test based on He and Huang (2017), which involves conducting a quasi-natural experiment using fund family mergers. As these

[9] Gopalan and Xie (2011) study conglomerates and industry distress and they instrument for conglomerate and conglomerate x distress separately in the first stage models.

mergers are unlikely to be motivated by fund family voting considerations or by the desire of a fund family to alter the value weighted debt fraction of a given firm, it might be argued that these mergers provide a quasi- exogenous change in the debt fraction of fund companies and the value weighted debt fraction of firms. We therefore conduct a difference-in-differences (DiD) regression analysis on how changes in debt fraction as a result of exogenous shocks from fund family mergers affect voting and firm policies. We identify fund family mergers completed during 2009-2012 from SDC's M&A database in which both the acquirer and the target own debt and/or equity stakes in our sample firms and can be matched to fund families in Morningstar. To identify exogenous changes to debt holdings as a result of the merger, we require that the acquirer does not hold debt while the target holds some debt in the firm concerned in the year before merger completion. We are able to find four fund family mergers: Invesco acquiring Van Kampen in 2009, Affiliated Managers Group acquiring Highbury Financial in 2010, PNC Funds acquiring Allegiant in 2010, and Wells Fargo Funds acquiring Evergreen Funds in 2010. We construct *affected (0,1)* to be one for observations in which the fund family is the acquirer having stakes in the firm and the year is after the merger. We then interact the *affected (0,1)* variable with debt fraction and distress. The effect given by *affected (0,1)* is a DiD of being in a treatment group (families affected by acquiring another family vs families not engaging in any M&As) and being affected by the merger (acquiring families assuming debt and equity holding from the target after vs. holding no debt before the merger).

Figure 1 plots the value weighted debt fraction of fund families around fund family mergers. To identify the timing of the effect cleanly, we construct cohorts of treated and control firms around the year of the fund family merger. We then pool the data across cohorts and regress the value weighted debt fraction variable on the treatment indicator (treatment vs control) using industry x year fixed effects. The treatment group includes all firms in which the fund families involved in the merger have a stake *and* the acquirer family in the merger does not hold debt while the target family holds some debt in the firm concerned in the year before merger completion. The control group is populated by the remaining firms. The plot shows that there is a clear visual change in the trend of the value weighted debt fraction variable around fund family mergers.

Our voting results which are presented in Table 10 Panel A show that *affected (0,1)* interacted with debt fraction and distress are statistically significant. This indicates that the instrumented family debt fraction interacted with financial distress has a significant effect on voting policy. In addition, Table 10 Panel B indicates that *affected (0,1)* interacted with the value

weighted debt fraction and distress also have a significant effect on both investment and payout policy.

5.6. Propensity score matching

Apart from their debt holdings, differences in the characteristics of fund families that hold debt and equity versus simply equity could explain the significance of debt holdings in explaining our voting results. Likewise, differences in the characteristics of firms in which fund companies hold both debt and equity as opposed to only equity might also be the reason for the link we find between the value-weighted debt fraction of firms and their policy. To investigate these possibilities and to assess the overall robustness of our results we use a propensity score matching approach. This gives us an average treatment effect (ATE) of the family debt fraction on voting policy in financial distress and the ATE of the value weighted debt fraction in financial distress on firm policy decisions.

Our method involves two steps. In step one we use a logit model to estimate the probability of being in the treated group (either having a positive family debt fraction in the case of our voting analysis or a positive value weighted debt fraction in the case of our firm policy analysis).[10] In the second step we use these prior probabilities of being in the treated group to generate matched pairs of observations with similar probabilities of being in the treated group but with different eventual realizations of the treatment. To match pairs of observations we use the bias corrected nearest neighborhood nonparametric matching method of Abadie and Imbens (2006 and 2011) which uses no explicit functional form for either the outcome model or the treatment model. Our model uses standard Mahalanobis distance with one match per observation, large-sample bias adjustment on all of our continuous covariates, and an exact match on the distress dummy.

Table 11 Panel A presents the results of our propensity score matching at the vote (family-proposal) level while Panel B presents those at the firm-year level. In each panel, we show the logit model of a firm being in the treatment group in which the dependent variable equals one if fund families hold both debt and equity in the firm (specifically if the family debt fraction is positive in Panel A and if the value weighted debt fraction is positive in Panel B). We then present

[10] In unreported regressions, we show that the results in Tables 3, 4 and 5 are robust to the use of a dummy variable approach for our key explanatory variable. In the regressions reported in Table 3, this means replacing family debt fraction with a dummy variable equal to one when there is a positive value of family debt fraction within a family and zero otherwise. In the regressions reported in Tables 4 and 5, this means replacing the value weighted debt fraction with a dummy variable equal to one when there is a positive value-weighted debt fraction within a firm and zero otherwise.

the ATEs for the treatment versus control subsamples depending on whether firms are in distress in the year concerned.

The first stage logit results show that both firm characteristics and fund family characteristics play a significant role in whether fund families choose to hold both debt and equity in a given firm and whether a given firm is held by firms that hold both debt and equity or not. This suggests that the characteristics of the debt and equity versus equity only fund families and their respective portfolio firms may be different, which highlights the importance of propensity score matching.

The ATEs on voting results presented in Panel A show that if firms are in financial distress there is a significant effect of families holding both debt and equity on voting policy. Panel B, which contains the ATEs for firm policy decisions shows that the average treatment effects of families holding both debt and equity as opposed to simply equity on firm policy are statistically significant.[11]

6. Robustness tests

In this section, we provide a number of robustness checks and present their results in Table 12. First, we adopt alternative measures of financial distress. Then, we try different measures of debt holdings and different weights to construct these measures at the fund family level. Next, we exclude funds that only hold debt or only hold equity, which may be different from the others. Then, we consider whether the heterogeneity of holdings within a fund matters. Finally, we replace the logit model with a linear model.

6.1. Alternative measures of financial distress

Our results show that the debt fraction of institutional investors influences voting and firm policy to a greater extent when the firm is in financial distress. For this purpose, the definition of financial distress is important. We currently classify firms as being in financial distress according to the Opler and Titman (1994) definition, which labels firms as being in financial distress if they are from industries where the median sales growth is negative and the median stock return worse than -30%. Using this definition, we have 0.61% of the 17,300 firm-years or 106 observations that are in distress. As argued by Gopalan and Xie (2011), an advantage of using this distress measure is

[11] The reported ATEs could be affected by hidden bias due to unobservable characteristics. We also assess the sensitivity to hidden bias of our treatment effect on the outcomes using the Rosenbaum bounds (Rosenbaum, 2002). We find that the relative odds of treatment or control range between 1.5 and 2, which indicates that our findings are not likely to be driven by hidden bias due to unobservable characteristics.

that these distress episodes are unexpected. However, it is interesting to examine whether our results are robust to the inclusion of alternative measures of financial distress.

Our first alternative definition of distress is based on the Bharath and Shumway (2008) distance to default measure and we define distress (0,1) in this case to be one if the firm's default probability is at least 75% in the year concerned. For the 12,327 firm-year observations for which we can calculate distance to default, 1.89% of the observations are in distress. For our second alternative method of measuring financial distress, we define distress (0,1) to be one if the firm's debt rating is CCC and below in the year concerned. For the 6,287 firm-year observations for which we can obtain ratings data, 1.48% are in distress. Panel A of Table 12 presents the effect of our alternative definitions of financial distress on our results. It shows that when we interact debt fraction with our alternative definitions of financial distress, we still get a significant effect of this interaction on voting policy and on firm policy, which suggests that our findings are robust to varying our definitions of financial distress.

6.2. Alternative measures of family debt fraction

We currently calculate the family debt fraction as the total value of debt held by a fund family divided by the total value of debt and equity that it holds. An alternative way to understand the importance of the interests of debt for the fund family concerned is to calculate the fraction of funds that are not pure equity funds in a fund family but are either pure debt funds or are mixed equity and debt funds as these will be the funds that care about the interests of debt. We calculate the value of equity and debt owned by each fund in each year across all firms to categorize each fund into debt, equity or mixed. We classify a pure equity (debt) fund as having at least 95% of its holdings in equity (debt); while we consider all other funds as mixed. In the database of 21,630 fund year observations, we have 4,413 pure debt funds (20.54%), 15,164 pure equity funds (70.11%) and 2,023 (9.35%) mixed funds. Panel B of Table 12 presents our results where we use the proportion of debt funds in the family as the debt fraction, with this proportion being either the proportion of debt and mixed funds or the proportion of pure debt funds. We find that voting policy is still significantly affected by the debt fraction interacted with financial distress as was the case in our main voting results. When we use this alternative definition of the family debt fraction to calculate the value weighted debt fraction of the firms in our sample, we find that consistent with our previous results, the value weighted debt fraction has a significant effect on firm policy. These findings tell us that our results are robust to the way we calculate the family debt fraction.

6.3. Alternative weighting method for value weighted debt fraction across families

To calculate the average debt fraction by firm we currently weight the family debt fraction of each fund family by the value of debt and equity the family has in the firm concerned divided by the value of all families' debt and equity in that firm. It might be argued that what is driving the link between debt fractions and firm policy is the voting channel and that if this is the case we should equity weight the family debt fractions rather than weighting these using the combined holdings of debt and equity. Panel C of Table 12 presents the results of doing this. Using the equity that a given family owns in the firm concerned divided by the fund families total holdings of equity as weights we find that the value weighted debt fraction using this alternative weighting procedure remains statistically significant. Interestingly when we compare the coefficients on the debt fraction that is equity weighted (interacted with financial distress) with our previous findings we find that the effect on policy is stronger for all policy channels when we use this equity weighting approach. This highlights the importance of the voting channel as a means through which pressure is exerted by institutional investors on policy.

6.4. Families holding both debt and equity

It might be argued that our results are driven by fund families with no debt. For example if these fund families exhibit voting behavior that is strongly in the interests of equity this may help to validate our findings. To test this we exclude these fund families from our sample. The results are reported in Panel D of Table 12. We find that the value weighted debt fraction interacted with distress still has a significant effect on voting policy and firm policy even if we focus on fund families that hold both debt and equity.

6.5. Heterogeneity of family debt fraction

When we calculate the value weighted debt fraction of firms and relate them to firm policy, we value weight the family debt fractions of different fund families. This creates the possibility that two firms have very similar value-weighted debt fractions but have altogether different distributions of the family debt fractions across fund families. It might be argued that if fund families have similar exposures to the debt and equity of a given firm that they may not feel compelled to push that firm either in the direction of the interests of equity or the interests of debt because their interests in the debt and equity of that firm are well balanced. However if fund families have more extreme family debt fractions then they may feel more compelled to push firms to act more in the interests of debt or equity. To test whether this is the case, we

calculate the family debt fraction heterogeneity in a firm during the year concerned using the standard deviation of the family debt fraction by each family in that year, conditional on the family holding debt in the firm. We then relate various firm policy measures to the value weighted debt fraction of the firm interacted with financial distress in both subsamples of above median and below median family debt fraction heterogeneity. Our results reported in Panel E of Table 12 confirm our expectations which are that in cases where family debt fraction heterogeneity is greater, fund families push firm policy to a greater extent which results in a greater effect of the value weighted debt fraction of fund families on firm policy.

6.6. Debt holding concentration

Those fund families that have more concentrated debt holdings have greater leverage over the firms in which they invest as if they dump their debt holdings this will be more damaging to the target firm concerned. Therefore we would expect holding the debt fraction constant, fund families that have more concentrated debt holdings will have a greater effect on firm policy. To examine this, we calculate the Herfindahl index of fund family debt concentration each year to determine how concentrated fund families' debt holdings are and investigate the link between the value weighted debt fraction of fund families and firm policy for less and more concentrated debt holding fund families. Table 12 Panel F shows that fund families with more concentrated debt holdings have a stronger link between their value weighted debt fractions and firm policy as we might expect.

6.7. Excluding financial companies

As financial companies operate in different ways to non-financial companies we examine the effect of excluding financial companies from our analysis and the results of doing so are presented in Table 12 Panel G. We find that there is no material effect of excluding financial companies on the link between the debt fraction of fund families and voting policy indicating that our voting analysis is unaffected by making this change. In addition when we look at the effect of excluding financial companies on the firm policy results, it seems that this simply strengthens the effect of the value weighted debt fraction on all the types of firm policy we examine.

6.8. Excluding funds that hold CDS contracts

If fund families hold CDS contracts that hedge the credit risk in their debt positions they may be less likely to vote in the interests of debt and to push firms to act in a manner that favors creditors.

The fact that our main results remain despite the inclusion of holdings of CDS contracts, suggests that we may be underestimating the role of debt holdings in influencing voting and firm behavior. As a further check to if removing these CDS holdings have any influence on our results, in Panel H of Table 12 we exclude fund-years where funds hold CDS contracts from our results and there is little noticeable effect.[12]

6.9. Using a linear probability model

Instead of using a logit model to estimate the impact of institutional debt holdings on voting policy and the effect of the value weighted debt fraction of firms on their investment and payout policy, we also examine the effect of using a linear probability model instead. We do so in Panel I of Table 12. The advantage of using a linear probability model is that the coefficients can be easily interpreted from the table. For example the voting results presented in the table tell us that if the family debt fraction in a given firm rises by 0.1 in financial distress then this will increase the probability that a fund family votes in favor of creditors by 1.9%.

7. Conclusion

Focusing on the debt holding of mutual funds is the key contribution of this paper. This is an important extension to the existing literature, which has focused so far on the equity holdings of these investors.

Using data on the universe of US-based mutual funds, we find that it is common for mutual fund families to hold also the corporate debt of firms in which they have equity stakes. In these cases the fund family is more likely to vote in the interests of debt holders when considering a proposal in which there is a conflict between debt and equity, such as dividend policy, equity issues and share repurchases, anti-takeover provisions, executive compensation, and restructuring activities. Interestingly, we find no significant difference in voting patterns across mutual fund families when examining proposals that are associated to no conflict of interest, like director elections.

We also show that, the greater the exposure to the firm's debt among the mutual funds investing in a given firm, the more likely is the firm to act in the interests of debt rather than equity. We look at five corporate decisions: capital expenditures; research and development;

[12] We have 285 funds holding CDS positions in our database. It should be recognized that despite excluding fund-years where funds hold CDS contracts that we still have the same number of fund family-firm-year observations without this exclusion, because this does not cause any fund families to drop out.

seasoned equity offerings; diversifying acquisitions; cash dividends and share repurchases. To emphasize the potential conflict of interest between debt and equity, we look at these decisions when companies are close to financial distress. We find that firms in which mutual funds have a greater stake in the debt tend to face lower agency costs of debt: they seems to suffer less from debt overhang and risk shifting problems.

Our findings indicate that debt holdings change the way institutional investors vote and generally engage with portfolio firms. Hence, they should not be ignored when examining the governance role of institutional investors.

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Figure 1: The effect of fund family mergers on the firm's the value weighted debt fraction

This figure plots OLS point estimates of the effect of fund family mergers on the value weighted debt fraction. To cleanly identify the timing of the effect, we construct cohorts of treated and control firms around the year of the fund family merger. We then pool the data across cohorts and regress the value weighted debt fraction variable on the treatment indicator (treatment vs control) using industry x year fixed effects. The treatment group includes all firms in which the fund families involved in the merger have a stake. The acquirer family in the merger does not hold debt while the target family holds some debt in the firm concerned in the year before merger completion. The control group is populated by the remaining firms. We exclude the indicator for the merger year (year 0) so that the OLS point estimates map out the effect relative to year 0. The goal of this plot is to determine whether there is a clear visual change in the trend of the value weighted debt fraction variable around fund family mergers. The gray shading represents 90% confidence intervals using heteroskedasticity-consistent standard errors clustered by firm.

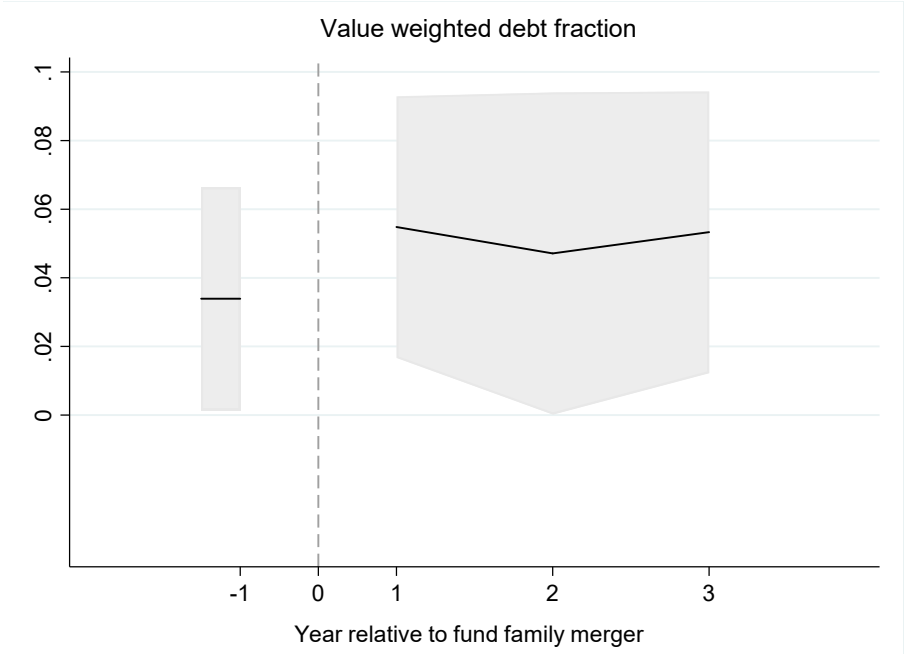

Table 1: Sample statistics

This table presents summary statistics for the sample of 17,300 firm-year observations during the 2009-2013 period. For all U.S. publicly traded firms in Compustat with positive leverage, we collect from Morningstar Direct the debt and equity holdings of all U.S. funds on U.S. publicly traded companies. Panel A presents summary statistics of debt and equity holdings of fund families. We report the mean and median of the time-series average holding across mutual fund families in individual firms. Panel B reports summary statistics on the portfolio firms. All variables are defined in Appendix A.

Panel A: Fund family characteristics			
	Number of families	Mean	Median
Value of debt and equity holding in each firm (mil $US)	571	22.808	1.644
Debt fraction in each firm	571	0.077	0.000
Conditional on family holding both debt and equity in the firm			
Value of debt and equity holding in each firm (mil $US)	248	38.360	8.234
Debt fraction in each firm	248	0.352	0.351
Panel B: Firm characteristics			
	N	Mean	Median
Market value of equity	17,300	5.9931	0.8007
Market-to-book	17,300	1.6316	1.2587
Leverage	17,300	0.1918	0.1419
ROA	17,300	0.1045	0.0913
Firm age	17,300	19.0466	14.8548
Institutional block ownership	17,300	0.1880	0.1580
Value weighted debt fraction held by fund families	17,300	0.0583	0.0000
Conditional on family holding debt in the firm-year			
Value weighted debt fraction conditional on family debt holding	5,133	0.1965	0.0986

Table 2: Voting proposal statistics

This table presents statistics on the full sample of proposals we examine. We break down proposals into those that are less likely to result in a conflict of interest between debt holders and equity holders (non-conflict proposals) and those that are more likely to entail a conflict of interest between debt holders and equity holders (conflict proposals). We further breakup the category of conflict proposals by proposal type. We calculate for each type of proposal, the number of proposals, the average number of fund families voting within this proposal type and the fraction of proposals for which ISS agrees with management's recommendation.

Proposal types	Number of proposals	Average number of fund families voting	Proportion of proposals for which ISS = management
1. Conflict proposals	2,468	24.86	0.83
1.1. Dividends and share repurchases	23	34.22	0.96
1.2. Equity issuance	464	19.57	0.86
1.3. Anti-takeover provisions	516	33.94	0.82
1.4. Executive compensation	1,229	24.61	0.81
1.5. Restructuring activities	236	15.72	0.90
2. Non-conflict proposals	86,196	25.77	0.88
2.1. Director election proposals	61,197	25.80	0.89
2.2. Other non-conflict proposals	24,999	25.70	0.86
Total	88,664	25.74	0.88

Table 3: Voting policy

In this table, we report logistic regressions modelling the probability of fund families voting in favor of proposals that are in the interest of creditors. The dependent variable equals one if a given fund family casts more than 50% of the votes of its funds in favor of creditors for the given proposal concerned and zero otherwise. In Panel A we use all proposals. In Panel B we separate all proposals into those where creditor interests are aligned with the interests of management or not. In Panel C we separate all proposals into those where creditor interests are aligned with the interests of ISS or not. In Panel D we perform placebo tests by using proposals that are less likely to exhibit a conflict of interests between debt holders and equity holders. The key independent variable *family debt fraction* is the sum of investment in bonds across all funds of the family in a firm in a year divided by the sum of investment in bonds and equity across all funds of the family in the firm in the year. All other variables are defined in Appendix A. All regressions control for (proposal type × year) fixed effects except for Panel D Model 1 in which we control only for year fixed effects as there is only one proposal type "director election". Standard errors are clustered by firm and year. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: All proposals

	Model 1		Model 2	
	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-1.9987***	0.0001	-1.9793***	0.0001
ISS voting in the interest of creditors (0,1)	2.9528***	0.0001	2.9630***	0.0001
Firm size	0.0282*	0.0906	0.0284*	0.0675
Market-to-book	-0.0498**	0.0123	-0.0519***	0.0096
Leverage	0.1666*	0.0977	0.1507	0.1397
ROA	0.4650**	0.0218	0.4124**	0.0447
Firm age	-0.0285	0.2797	-0.0295	0.2586
Institutional block ownership	0.0264	0.7827	0.0329	0.7466
Big holding (0,1)	-0.0242	0.4215	-0.0305	0.3037
Number of funds in the family	-0.1530***	0.0001	-0.1522***	0.0001
Family debt fraction	0.2125*	0.0597	0.1028	0.3207
Financial distress (0,1)			-0.2073**	0.0395
Family debt fraction × financial distress (0,1)			**1.1367*** **	**0.0014**
N	61,345		61,345	
Regression's *p*-value	0.0001		0.0001	

Panel B: Proposals grouped by whether creditor interests are aligned with management's

	Creditor interests = Management interests Model 1		*Creditor interests ≠ Management interests* Model 2	
	Coefficient	*p*-value	Coefficient	*p*-value
Family debt fraction × distress (0,1)	**2.6344*****	**0.0075**	**0.5912*****	**0.0089**
Other controls as in Panel A	Yes		Yes	
N	15,754		45,591	
Regression's *p*-value	0.0001		0.0001	

Panel C: Proposals grouped by whether creditor interests are aligned with ISS's

	Creditor interests = ISS interests Model 1		*Creditor interests ≠ ISS interests* Model 2	
	Coefficient	*p*-value	Coefficient	*p*-value
Family debt fraction × distress (0,1)	**1.8289*****	**0.0001**	**0.5490*****	**0.0017**
Other controls as in Panel A	Yes		Yes	
N	15,709		45,636	
Regression's *p*-value	0.0001		0.0001	

Panel D: Placebo tests on voting policy using non-conflict proposals

	Director election Proposals Model 1		*Non-director election proposals* Model 2		*All non-conflict proposals* Model 3	
	Coeff	*p*-value	Coeff	*p*-value	Coeff	*p*-value
Family debt fraction × distress (0,1)	**0.3643**	**0.1432**	**0.4935**	**0.2342**	**0.5179**	**0.1184**
Other controls as in Panel A	Yes		Yes		Yes	
N	1,578,699		624,431		2,203,130	
Regression's *p*-value	0.0001		0.0001		0.0001	

Panel E: Voting dispersion across funds within a family

Percentage of votes in which:	Families holding debt and equity	Families holding equity only	z test for difference in proportions
- Funds within a family vote differently on the same proposal	(N=7,211) 1.872%	(N=54,134) 0.090%	7.74***
- Funds within a family vote differently on the same proposal conditional on ISS being "against"	(N=462) 4.329%	(N=5,092) 1.551%	4.32***

Table 4: Firm investment policy

In this table, we report logistic regressions modelling the probability of firms making certain major investment decisions in a given year. In Panel A, the dependent variable equals one if the ratio of capital expenditure to assets of the firm is above the 50th percentile across all companies in the year concerned and zero otherwise. In Panel B, the dependent variable equals one if the ratio of R&D to assets of the firm is above the 50th percentile across all companies in the year concerned and zero otherwise. In Panel C, the dependent variable equals one if the value of SEO proceeds/assets is greater than the 50th percentile across all SEOs in the year concerned and zero otherwise. In Panel D, the dependent variable equals one if firms have undertaken non-core acquisitions or not in a given year. The key independent variable value weighted debt fraction is the value weighted debt fraction by all families in a firm in a year with the weight being the family's investment (sum of both debt and equity) in the firm. Debt fraction at the family level is the proportion of investment in bonds in total investment in bonds and equity for all funds in the family. All other variables are defined in Appendix A. All regressions control for (industry × year) fixed effects. Standard errors are clustered by firm and year. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Capital expenditure

	Model 1		Model 2	
	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-0.5420***	0.0001	-4.7081***	0.0001
Firm size	0.1363***	0.0001	0.0097	0.7703
Market-to-book	-0.3854***	0.0048	0.1197**	0.0131
Leverage	0.0282**	0.0349	1.8671***	0.0001
ROA	0.0078*	0.0792	-0.0018***	0.0001
Firm age	-0.0291	0.1857	-0.0574	0.4190
Institutional block ownership	-0.1436*	0.0622	-0.0868	0.7700
Value weighted debt fraction	-0.2310	0.3773	-1.2717*	0.0752
Financial distress (0,1)			-1.2898**	0.0308
Value weighted debt fraction × distress (0,1)			**2.5287*** **	**0.0001**
N	17,300		17,300	
Regression's *p*-value	0.0001		0.0001	

Panel B: R&D spending

	Model 1		Model 2	
	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-6.0223***	0.0001	-1.9913***	0.0001
Firm size	-0.1767***	0.0001	-0.1951***	0.0001
Market-to-book	0.6503***	0.0001	0.6016***	0.0001
Leverage	-3.2682***	0.0001	-3.8940***	0.0001
ROA	-0.7638***	0.0079	-0.9022***	0.0008
Firm age	-0.0925***	0.0031	-0.1366***	0.0001
Institutional block ownership	-0.2199	0.1477	-0.2437*	0.0674
Value weighted debt fraction	0.5021	0.2992	-0.2408	0.5986
Financial distress (0,1)			-1.0861	0.1373
Value weighted debt fraction × distress (0,1)			**4.7149** **	**0.0423**
N	17,300		17,300	
Regression's *p*-value	0.0001		0.0001	

Panel C: Seasoned equity offerings

	Model 1		Model 2	
	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-3.8442***	0.0001	-2.9492***	0.0001
Firm size	-0.2424***	0.0001	-0.2792***	0.0001
Market-to-book	0.0046	0.7339	-0.1976***	0.0001
Leverage	1.6013***	0.0001	0.9379***	0.0001
ROA	-0.0014	0.4628	-0.0006	0.7454
Firm age	-0.5290***	0.0001	-0.5734***	0.0001
Institutional block ownership	0.0138	0.6764	0.0123	0.7102
Value weighted debt fraction	0.6825	0.2194	0.8514	0.1114
Financial distress (0,1)			-1.2151	0.1291
Value weighted debt fraction × distress (0,1)			**3.5123***	**0.0644**
N	17,300		17,300	
Regression's *p*-value	0.0001		0.0001	

Panel D: Non-core acquisitions

	Model 1		Model 2	
	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-7.3475***	0.0001	-7.2408***	0.0001
Firm size	0.1786***	0.0001	0.1781***	0.0001
Market-to-book	0.0217	0.1487	0.0217	0.1487
Leverage	0.5242*	0.0954	0.5303*	0.0917
ROA	-0.0011	0.3079	-0.0011	0.3041
Firm age	0.2310	0.0007	0.2312***	0.0007
Institutional block ownership	0.0300	0.2674	0.0297	0.2758
Value weighted debt fraction	0.5758	0.2532	0.5949	0.2389
Financial distress (0,1)			-1.8411***	0.0001
Value weighted debt fraction × distress (0,1)			**-5.2160*** **	**0.0001**
N	17,300		17,300	
Regression's *p*-value	0.0001		0.0001	

Table 5: Firm payout policy

In this table, we report logistic regressions modelling the probability of firms making major payout decisions in a given year. In Panel A, the dependent variable equals one if the ratio of dividend payout ratio of the firm is above the 50th percentile across all companies in the year concerned and zero otherwise. In Panel B, the dependent variable equals one if the ratio of repurchases to assets of the firm is above the 50th percentile across all companies in the year concerned and zero otherwise. The key independent variable value weighted debt fraction is the value weighted debt fraction by all families in a firm in a year with the weight being the family's investment (sum of both debt and equity) in the firm. Debt fraction at the family level is the proportion of investment in bonds in total investment in bonds and equity for all funds in the family. All other variables are defined in Appendix A. All regressions control for (industry × year) fixed effects. Standard errors are clustered by firm and year. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Dividends

	Model 1		Model 2	
	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-3.6815***	0.0001	-3.7107***	0.0001
Firm size	0.2604***	0.0001	0.2172***	0.0001
Market-to-book	-0.0281*	0.0788	0.0142	0.1522
Leverage	-1.2599***	0.0001	0.8466***	0.0001
ROA	0.0024*	0.0618	0.0026*	0.0766
Firm age	0.2882***	0.0001	0.2688***	0.0001
Institutional block ownership	-0.8895***	0.0001	-0.6662***	0.0001
Value weighted debt fraction	-1.6394***	0.0001	-1.6593***	0.0001
Financial distress (0,1)			-0.4448	0.1893
Value weighted debt fraction × distress (0,1)			**-27.3568****	**0.0300**
N	17,300		17,300	
Regression's *p*-value	0.0001		0.0001	

Panel B: Repurchases

	Model 1		Model 2	
	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-4.1688***	0.0001	-4.4503***	0.0001
Firm size	0.2724***	0.0001	0.2880***	0.0001
Market-to-book	0.0254**	0.0209	0.0057	0.6067
Leverage	-3.0212***	0.0001	-3.0574***	0.0001
ROA	-0.0004	0.6693	-0.0003	0.8850
Firm age	0.3515***	0.0001	0.3826***	0.0001
Institutional block ownership	0.0927	0.3944	0.0961*	0.0557
Value weighted debt fraction	-0.7405***	0.0052	-1.1286***	0.0004
Financial distress (0,1)			0.1787	0.6221
Value weighted debt fraction × distress (0,1)			**-7.3162****	**0.0244**
N	17,300		17,300	
Regression's *p*-value	0.0001		0.0001	

Table 6: The voting channel effects on firm policy

This table relates the overall voting policy by fund families on all conflict proposals to firm investment policy or payout policy. To measure the fraction of votes in the interest of creditors on all conflict proposals, we calculate first the fraction of votes in the interest of creditors for each fund family across each conflict proposal category. We then average the fraction of votes in the interest of creditors for each fund family across all conflict proposal categories. After calculating the fraction voted in the interest of creditors for a given fund family in a firm in a given year, we calculate an equity-value weighted average fraction of votes in the interest of creditors across fund families in a firm in a given year. This measure can then be related to the different types of firm investment policy in Panel A and firm payout policy in Panel B. We also control for whether fund families vote on any conflict proposals in the firm in a given year. The dependent variables for firm investment policy and payout policy are defined in Tables 4 and 5, respectively. All other variables are defined in Appendix A. All regressions control for (industry × year) fixed effects. Standard errors are clustered by firm and year. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Firm investment policy

	Model 1 Capital expenditure		Model 2 R&D spending		Model 3 SEOs		Model 4 Non-core M&As	
	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-0.8322***	0.0001	-1.9856***	0.0001	-3.5185***	0.0001	-7.3049***	0.0001
Firm size	0.1460***	0.0001	-0.1983***	0.0001	-0.2656***	0.0001	0.1904***	0.0001
Market-to-book	0.0129	0.2405	0.6022***	0.0001	0.0199	0.1180	0.0166	0.3784
Leverage	0.1463	0.2427	-3.9304***	0.0001	1.7100***	0.0001	0.5517*	0.0735
ROA	0.0064	0.1950	-0.9730***	0.0003	-0.0007	0.7117	-0.0013	0.2480
Firm age	-0.0401*	0.0540	-0.1353***	0.0001	-0.6011***	0.0001	0.1733**	0.0126
Institutional block ownership	-0.1854	0.0604	-0.2684**	0.0437	0.0123	0.7128	0.0297	0.2609
Vote on conflict proposals (0,1)	0.0718	0.3316	0.1370	0.1921	0.0968	0.6312	0.1039	0.6022
Vote on conflict proposals (0,1) × Fraction of votes in the interest of creditors	**0.5191*****	**0.0002**	**0.4338****	**0.0273**	**1.2145*****	**0.0001**	**-0.7831****	**0.0137**
N	17,300		17,300		17,300		17,300	
Regression's *p*-value	0.0001		0.0001		0.0001		0.0001	

Panel B: Firm payout policy

	Model 1 Dividends		Model 2 Repurchases	
	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-3.5678***	0.0001	-4.0607***	0.0001
Firm size	0.1997***	0.0001	0.2584***	0.0001
Market-to-book	0.0170	0.1058	0.0264**	0.0180
Leverage	0.6825***	0.0001	-3.1224***	0.0001
ROA	0.0026*	0.0814	-0.0004	0.6972
Firm age	0.2666***	0.0001	0.3359***	0.0001
Institutional block ownership	-0.6698***	0.0001	0.0851	0.3217
Vote on conflict proposals (0,1)	-0.1338	0.3105	0.5285	0.3001
Vote on conflict proposals (0,1)	**-0.1498****	**0.0297**	**-0.6545*****	**0.0001**
× Fraction of votes in the interest of creditors				
N	17,300		17,300	
Regression's *p*-value	0.0001		0.0001	

Table 7: Active vs passive funds

This table presents the analysis of fund debt holdings on voting and corporate policy. Panel A shows the summary statistics for the value weighted debt fraction held by fund families depending on whether the fund holding the firm's debt is active or passive. Debt fraction at the family level for active (passive) funds is the proportion of investment in bonds by active (passive) funds in total investment in bonds and equity for all funds in the family. *Value weighted debt fraction* is the value weighted debt fraction by all families in a firm in a year with the weight being the family's investment (sum of both debt and equity) in the firm. Panels B and C present the effects of active or passive family debt holding on voting and corporate policy under financial distress using the regressions in Model 2 of Tables 3, 4 and 5. All other variables are defined in Appendix A. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Summary statistics of debt holdings

	Active funds		Passive funds		Difference
	N	Mean [Median]	N	Mean [Median]	t-stat [z-stat]
Value weighted debt fraction held by fund families	17,300	0.0619 [0.0000]	17,300	0.0073 [0.0000]	43.97***
Value weighted debt fraction conditional on family debt holding	5,064	0.2118 [0.1304]	2,580	0.0487 [0.0171]	42.10*** [45.77***]

Panel B: The effects of family debt holdings on voting policy

Coefficient and *p*-value for family debt fraction × distress (0,1)		Active funds		Passive funds	
	N	Coefficient	*p*-value	Coefficient	*p*-value
All proposals	61,345	1.0727***	0.0041	0.4653	0.9050
Creditor = management interests	15,754	2.6072**	0.0138	0.1603	0.9156
Creditor ≠ management interests	45,591	1.4484**	0.0107	-0.0594	0.9640

Panel C: The effects of family debt holdings on firm investment and payout policy

Coefficient and *p*-value for value weighted debt fraction × distress (0,1)		Active funds		Passive funds	
	N	Coefficient	*p*-value	Coefficient	*p*-value
Capital expenditure	17,300	2.3141**	0.0370	1.3144	0.2730
R&D spending	17,300	6.9956**	0.0166	1.6715	0.4011
SEOs	17,300	9.0048***	0.0084	1.1111	0.5506
Non-core M&As	17,300	-7.8461***	0.0002	-1.7581	0.2410
Dividends	17,300	-35.4370**	0.0245	-2.0508	0.3210
Repurchases	17,300	-6.3655**	0.0458	-1.0127	0.3390

Table 8: Debt maturity

This table presents the analysis of fund debt holdings on voting and corporate policy. Panel A shows the summary statistics for the value weighted debt fraction held by fund families depending on whether the fund's debt holding is short term (less than 5 years to maturity) or mid or long term (at least 5 years to maturity). Debt fraction at the family level for short term (mid and long term) funds is the proportion of investment in short term (mid and long term) bonds in total investment in bonds and equity for all funds in the family. Value weighted debt fraction is the value weighted debt fraction by all families in a firm in a year with the weight being the family's investment (sum of both debt and equity) in the firm. Panels B and C present the effects of active or passive family debt holding on voting and corporate policy under financial distress using the regressions in Model 2 of Tables 3, 4 and 5. All other variables are defined in Appendix A. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Summary statistics of debt holdings

	Mid and long term		Short term		Difference
	N	Mean [Median]	N	Mean [Median]	t-stat [z-stat]
Value weighted debt fraction held by fund families	17,300	0.0421 [0.0000]	17,300	0.0180 [0.0000]	19.98***
Value weighted debt fraction conditional on family debt holding	4,035	0.1806 [0.0839]	2,699	0.1157 [0.0404]	12.78*** [17.70***]

Panel B: The effects of family debt holdings on voting policy

Coefficient and *p*-value for family debt fraction × distress (0,1)		Mid and long term		Short term	
	N	Coefficient	*p*-value	Coefficient	*p*-value
All proposals	61,345	1.1946***	0.0008	0.1089	0.5754
Creditor = management interests	15,754	2.9071***	0.0039	0.0934	0.7995
Creditor ≠ management interests	45,591	0.7255***	0.0030	-0.1383	0.7162

Panel C: The effects of family debt holdings on firm investment and payout policy

Coefficient and *p*-value for value weighted debt fraction × distress (0,1)		Mid and long term		Short term	
	N	Coefficient	*p*-value	Coefficient	*p*-value
Capital expenditure	17,300	2.5751***	0.0001	-1.0014	0.4286
R&D spending	17,300	5.4596**	0.0215	-0.9101	0.1974
SEOs	17,300	3.7460**	0.0481	-0.9270	0.5122
Non-core M&As	17,300	-6.0962***	0.0001	-0.1254	0.8966
Dividends	17,300	-36.8544**	0.0268	-0.6473	0.5100
Repurchases	17,300	-10.6597*	0.0517	-1.6006	0.9331

Table 9: Instrumental variables

We report two stage regressions modelling the determinants of the fund family debt fraction in the first stage and policy outcomes in the second stage. In Panel A, we estimate the effect of the creation of new debt funds on debt fraction and its interaction with distress following Woodridge (2002). Models 1 and 2 are estimated at the proposal level and Models 3 and 4 at the firm level. In Panel B, we present the second stage on voting policy using the family debt fraction and its interaction instrumented from the first stage in Panel A Models 1 and 2. The dependent variable for voting is defined in Table 3. All regressions in Panel B control for (proposal type × year) fixed effects. In Panel C, we present the second stage on firm investment and payout policy using the value weighted debt fraction and its interaction instrumented from the first stage in Panel A Models 3 and 4. The dependent variables for firm investment and payout policy are defined in Tables 4 and 5, respectively. All regressions in Panel C control for (industry × year) fixed effects. New debt fund (0,1) equals one if a given fund family with an ownership stake in the firm opens a new debt fund in the year concerned for family level tests (Panel A Models 1 and 2 and Panel B) and one if at least one fund family with an ownership stake in the firm opens a new debt fund in the year concerned for firm level tests (Panel A Models 3 and 4 and Panel C). All other variables are defined in Appendix A. Standard errors are clustered by firm and year. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Impact of index assignment on debt fraction

	First stage models on voting policy				**First stage models on firm policy**			
Dependent variable =	Model 1 Family debt fraction		Model 2 Family debt fraction x Distress (0,1)		Model 3 Value weighted debt fraction		Model 4 Value weighted debt fraction x Distress (0,1)	
	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-0.0786***	0.0001	-0.0141*	0.0591	-0.1795***	0.0001	-0.0026***	0.0052
New debt fund (0,1)	**0.0167*****	**0.0001**	0.0001	0.6682	**0.0243*****	**0.0001**	-0.0003	0.7700
New debt fund (0,1) x Distress (0,1)	0.0054	0.5608	**0.0775****	**0.0425**	0.0093	0.1200	**0.1355*****	**0.0008**
Firm size	0.0117***	0.0001	0.0016*	0.0984	0.0131***	0.0001	0.0001**	0.0233
Market-to-book	-0.0049***	0.0002	0.0003	0.1499	-0.0025***	0.0014	0.0000	0.5779
Leverage	0.0960***	0.0001	0.0097**	0.0299	0.2594***	0.0001	0.0032***	0.0023
ROA	-0.0247	0.1068	-0.0020	0.3079	0.0000	0.4666	0.0000*	0.0558
Firm age	-0.0047**	0.0120	-0.0002	0.6227	0.0024**	0.0491	0.0002	0.0491
Institutional block ownership	-0.0057	0.3066	-0.0010	0.3791	0.0011	0.5992	-0.0002	0.2631
Distress (0,1)	0.0056	0.5420	0.0346***	0.0002	-0.0193	0.3423	0.0377*	0.0600
Big holding (0,1)	0.0210***	0.0001	0.0008	0.1464				
Number of funds in the family	-0.0052***	0.0001	-0.0006*	0.0937				
ISS voting with creditors (0,1)	0.0011	0.7915	-0.0003	0.7263				
Fixed effects	(Proposal type x Year)		(Proposal type x Year)		(Industry x Year)		(Industry x Year)	
F-statistic of excluded instrument	24.86		24.01		23.82		21.33	
N / Regression's *p*-value	61,345	0.0001	61,345	0.0001	17,300	0.0001	17,300	0.0001

Panel B: Second stage on voting policy using index assignment as instrument

	Model 1 *All proposals*		Model 2 *Creditor = management interests*		Model 3 *Creditor ≠ management interests*	
	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-2.0726***	0.0001	-1.1891***	0.0001	-0.6981***	0.0014
Firm size	2.9611***	0.0001	2.9250***	0.0001	-2.8699***	0.0001
Market-to-book	0.0450**	0.0437	0.0930**	0.0214	0.0393	0.1467
Leverage	-0.0539**	0.0111	-0.0323	0.3280	-0.0691**	0.0156
ROA	0.3180	0.1326	0.8575**	0.0469	0.1424	0.5546
Firm age	0.3890*	0.0552	0.5457	0.1459	0.4597*	0.0830
Institutional block ownership	-0.0260	0.3583	-0.0839	0.1533	-0.0565*	0.0614
Distress (0,1)	0.0065	0.9349	-0.0595	0.1231	0.1515	0.3545
Big holding (0,1)	0.0372	0.4001	0.1102	0.1956	0.0190	0.7177
Number of funds in the family	-0.1656***	0.0001	-0.1442***	0.0001	-0.2113***	0.0001
ISS voting with creditors (0,1)	-0.4131***	0.0011	0.0007	0.9969	-0.4955***	0.0005
[Family debt fraction]'	-2.2519	0.1422	-3.4506	0.2091	-1.2068	0.5076
[Family debt fraction × Distress (0,1)]'	**1.9573*** **	**0.0429**	**2.1034** **	**0.0328**	**0.4599** **	**0.0450**
N / Regression's *p*-value	61,345	0.0001	15,754	0.0001	45,591	0.0001

Panel C: Second stage on firm policy using index assignment as instrument

	Model 1 Capital expenditure		Model 2 R&D spending		Model 3 SEOs		Model 4 Non-core M&As		Model 5 Dividends		Model 6 Repurchases	
	Coeff	*p*-value	Coeff	*p*-value	Coeff	*p*-value	Coeff	*p*-value	Coeff	*p*-value	Coeff	*p*-value
Intercept	-0.8689***	0.0005	-2.2310***	0.0001	-3.4371***	0.0001	-3.9042***	0.0001	-3.5274***	0.0001	0.4111	0.1668
Firm size	0.1498***	0.0001	-0.1677***	0.0006	0.5039**	0.0310	-0.2661**	0.0114	0.1954***	0.0001	-0.3525***	0.0001
Market-to-book	0.0114	0.3385	0.6010***	0.0001	-0.2523***	0.0037	0.0933***	0.0019	0.0165	0.1479	0.1300***	0.0001
Leverage	0.1844	0.7349	-3.3180***	0.0001	11.9515***	0.0008	-7.7470***	0.0001	0.6437	0.2346	-1.4337***	0.0001
ROA	0.0064	0.1933	-0.8893***	0.0009	0.0003	0.9993	-0.0015	0.1934	0.0026*	0.0798	-0.0005	0.6147
Firm age	-0.0392*	0.0744	-0.1239***	0.0001	-0.1201	0.4442	0.0616	0.4101	0.2591***	0.0001	0.2037***	0.0001
Inst block ownership	-0.1823*	0.0687	-0.2275*	0.0956	0.4404	0.3250	-0.0477	0.6062	-0.6991***	0.0001	0.0104	0.7030
Distress (0,1)	1.5704***	0.0013	-1.4866*	0.0712	-1.0164	0.1294	-1.1993***	0.0001	0.1571	0.7150	0.7641	0.2843
[Value w debt fraction]'	-0.1934	0.9253	-2.0587	0.5033	-1.7102	0.2008	0.3767	0.5323	0.2014	0.9227	0.4340	0.3429
[Value weighted debt fraction × Distress (0,1)]'	**7.2093** **	**0.0193**	**5.1830***	**0.0828**	**11.2011*** **	**0.0001**	**-6.5565*** **	**0.0001**	**-10.2036*** **	**0.0030**	**-12.8735*** **	**0.0001**
N / Regression's *p*-value	17,300	0.0001	17,300	0.0001	17,300	0.0001	17,300	0.0001	17,300	0.0001	17,300	0.0001

Table 10: Quasi-natural experiment using fund family mergers

This table reports difference-in-differences (DiD) regression analysis on how changes in debt fraction as a result of exogenous shocks from fund family mergers affect voting and firm policies. We identify fund family mergers completed during 2009-2012 from SDC's M&A database in which both the acquirer and the target own debt and/or equity stakes in our sample firms and can be matched to fund families in Morningstar. To identify exogenous changes to debt holdings as a result of the merger, the acquirer does not hold debt while the target holds some debt in the firm concerned in the year before merger completion. We are able to find four fund family mergers: Invesco acquiring Van Kampen in 2009, Affiliated Managers Group acquiring Highbury Financial in 2010, PNC Funds acquiring Allegiant in 2010, and Wells Fargo Funds acquiring Evergreen Funds in 2010. We construct *affected (0,1)* to be one for observations in which the fund family is the acquirer having stakes in the firm and the year is after the merger. We then interact the *affected (0,1)* variable with debt fraction and distress. The effect given by *affected (0,1)* is a DiD of being in a treatment group (families affected by acquiring another family vs families not engaging in any M&As) and being affected by the merger (acquiring families assuming debt and equity holding from the target after vs. before the merger). All other variables are defined in Appendix A. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Voting policy

	Model 1 *All proposals*		Model 2 *Creditor = management*		Model 3 *Creditor ≠ management*	
	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	-1.9842***	0.0001	-0.9995***	0.0001	-0.6624***	0.0002
Firm size	0.0277*	0.0869	0.0528*	0.0502	0.0309	0.1039
Market-to-book	-0.0388**	0.0496	-0.0183	0.5439	-0.0588**	0.0239
Leverage	0.1483	0.3111	0.6327**	0.0335	0.0418	0.7980
ROA	0.4301**	0.0379	0.5169	0.1502	0.4966*	0.0647
Firm age	-0.0186	0.4943	-0.0711	0.2167	-0.0494*	0.0839
Institutional block ownership	-0.0002	0.9973	-0.0440	0.2318	0.1112	0.4562
Big holding (0,1)	-0.0081	0.7972	0.0311	0.6098	-0.0075	0.8447
Number of funds in the family	-0.1551***	0.0001	-0.1241***	0.0006	-0.2059***	0.0001
ISS voting with creditors (0,1)	2.9522***	0.0001	2.9330***	0.0001	-2.8566***	0.0001
Distress (0,1)	-0.1992**	0.0463	0.1022	0.5061	-0.3135**	0.0131
Family debt fraction	0.0958	0.4464	-0.4087*	0.0716	0.1962*	0.0881
Family debt fraction × Distress (0,1)	1.1361***	0.0016	2.6218***	0.0083	0.6065**	0.0113
Affected (0,1)	-0.1643**	0.0269	-0.2884*	0.0716	-0.1887*	0.0541
Distress (0,1) × Affected (0,1)	-3.3767***	0.0001	-3.4530***	0.0001	-3.2735***	0.0001
Family debt fraction × Affected (0,1)	0.1724	0.3576	0.1345	0.6636	0.1320	0.5151
Family debt fraction × Distress (0,1) × Affected (0,1)	**1.4300*****	**0.0007**	**2.1269*****	**0.0001**	**0.8889****	**0.0107**
N / Regression's *p*-value	61,345	0.0001	15,754	0.0001	45,591	0.0001

Panel B: Firm policy

	Model 1 Capital expenditure		Model 2 R&D spending		Model 3 SEOs		Model 4 Non-core M&As		Model 5 Dividends		Model 6 Repurchases	
	Coeff	*p*-value	Coeff	*p*-value	Coeff	*p*-value	Coeff	*p*-value	Coeff	*p*-value	Coeff	*p*-value
Intercept	-4.7014***	0.0001	-1.9646***	0.0001	-18.6807***	0.0001	-6.9434***	0.0001	-3.7688***	0.0001	-3.9729***	0.0001
Firm size	0.0011	0.9746	-0.2029***	0.0001	-0.0027	0.9703	0.1440***	0.0001	0.2290***	0.0001	0.2382***	0.0001
Market-to-book	0.1208**	0.0123	0.6078***	0.0001	-0.0997	0.1216	0.0159	0.3884	0.0153	0.1345	0.0223**	0.0351
Leverage	1.8448***	0.0003	-3.8311***	0.0001	-0.2401	0.6586	0.5283*	0.0991	0.8652***	0.0001	-2.7874***	0.0001
ROA	-0.0018***	0.0001	-0.9585***	0.0004	-0.0217	0.9842	-0.0014	0.2254	0.0026*	0.0826	-0.0004	0.6541
Firm age	-0.0659	0.3701	-0.1350***	0.0001	-0.1187	0.2863	0.1483**	0.0338	0.2762***	0.0001	0.3283***	0.0001
Inst block ownership	-0.0932	0.7544	-0.2522*	0.0586	-0.1439	0.7799	0.0246	0.3943	-0.6519***	0.0001	0.0764	0.2490
Distress (0,1)	-1.2905**	0.0307	-1.2110	0.1206	-1.1951***	0.0001	-1.6540***	0.0001	-0.5069	0.1662	0.2526	0.4981
Value weighted (vw) debt fraction	-0.4944	0.3425	-0.0781	0.7694	-1.7324**	0.0125	0.3730	0.3161	-1.0051***	0.0001	-0.6628***	0.0002
Vw debt fraction × Distress (0,1)	4.8157**	0.0215	4.0263**	0.0108	8.8442***	0.0001	-1.4370**	0.0356	-2.7843**	0.0186	-6.4450*	0.0666
Affected (0,1)	0.0585	0.7842	0.1186	0.2131	-0.4905	0.3218	0.6039***	0.0002	-1.0422***	0.0001	0.8403***	0.0001
Distress × Affected (0,1)	1.7655***	0.0001	-3.3603***	0.0020	1.7282***	0.0001	-0.5345	0.4113	0.7740	0.5355	2.9777	0.1545
Vw debt fraction × Affected (0,1)	0.0233	0.9850	0.3292	0.5725	-8.7756	0.1083	0.5613	0.4283	0.5214	0.1534	-0.8493**	0.0366
Vw debt fraction × Distress × Affected (0,1)	**3.9892*** **	**0.0001**	**3.2882** **	**0.0351**	**3.8284** **	**0.0318**	**-2.9432** **	**0.0305**	**-14.210*** **	**0.0001**	**-16.6613** **	**0.0219**
N / Regression's *p*-value	17,300	0.0001	17,300	0.0001	17,300	0.0001	17,300	0.0001	17,300	0.0001	17,300	0.0001

Table 11: Propensity score matching

This table presents our analysis of fund debt holdings on voting and firm policies using the bias-corrected nearest neighbor matching method derived by Abadie and Imbens (2006 and 2011). Our model uses standard Mahalanobis distance, one match per observation, large-sample bias adjustment on all of our continuous covariates, and an exact match on the distress dummy. Panel A presents our propensity score matching at the vote (family-proposal) level while Panel B presents our propensity score matching at the firm-year level. In each panel, we show the logit model of a firm being in the treatment group in which the dependent variable equals one if fund families hold both debt and equity in the firm (specifically if the family debt fraction is positive in Panel A and if the value weighted debt fraction is positive in Panel B). We then present the average treatment effects of the treatment vs. control for subsamples of whether the firm is in distress in the year concerned. In both panels, fund family characteristics are calculated across all firms in which the family has a stake. In Panel B, fund family characteristics are then value weighted across all families holding debt and/or equity in the firm with the weight being the total debt and equity each family hold in the firm. Number of fund families with holding in the firm, number of funds in the family, and family's total debt and equity holding variables are in natural logarithm. All other variables are defined in Appendix A. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Voting policy		
Dependent variable = 1 if fund families hold both debt and equity in the firm (family debt fraction is positive)	Coefficient	*p*-value
Intercept	-16.7198	0.6061
Firm characteristics		
Firm size	0.4944***	0.0001
Market-to-book	-0.4782***	0.0001
Leverage	2.0511***	0.0001
ROA	1.6768***	0.0001
Firm age	-0.0274	0.1122
Institutional block ownership	-0.3311***	0.0002
Big holding (0,1)	1.3223***	0.0001
Distress (0,1)	-0.2563***	0.0035
Fund family characteristics		
Number of funds in the family	0.2135***	0.0001
Family's total debt and equity holding	0.2553***	0.0001
Proportion of debt funds in the family	2.9891***	0.0001
Proportion of passive funds in the family	-0.9943***	0.0001
Proposal characteristics		
ISS voting with creditors (0,1)	-0.0541	0.4034
Proposal type x year fixed effects	Yes	
N	61,345	
Regression's *p*-value	0.0001	

Average treatment effects (ATE) of family holding both debt and equity vs only equity				
	Distress = 1		Distress = 0	
	ATE	t-stat	ATE	t-stat
All proposals	0.0734**	2.0642	0.0047	0.6080
Creditor = management interests	0.2007***	4.1348	0.0096	1.3286
Creditor ≠ management interests	0.0083*	1.8409	0.0006	0.2122

Panel B: Firm policy

Dependent variable = 1 if fund families hold both debt and equity in the firm (value weighted debt fraction is positive)	Coefficient	*p*-value
Intercept	-12.1320***	0.0001
Firm characteristics		
Firm size	0.2840***	0.0001
Market-to-book	-0.1466***	0.0001
Leverage	4.3291***	0.0001
ROA	0.0001	0.5010
Firm age	0.2969***	0.0001
Institutional block ownership	0.1162	0.1010
Distress (0,1)	0.3308	0.2900
Number of fund families with holding in the firm	1.7627***	0.0001
Average fund family characteristics		
Number of funds in the family	0.1632	0.2110
Family's total debt and equity holding	-0.0519	0.2720
Proportion of debt funds in the family	7.0014***	0.0001
Proportion of passive funds in the family	-2.2835***	0.0001
Year and industry fixed effects	Yes	
N	17,300	
Regression's *p*-value	0.0001	

Average treatment effects (ATE) of family holding both debt and equity vs only equity

	Distress = 1		Distress = 0	
	ATE	t-stat	ATE	t-stat
Capital expenditure	0.2484***	2.5027	-0.0432	1.3181
R&D spending	0.2501***	4.2465	-0.0044	0.6763
SEOs	0.1592**	1.9603	-0.0097	0.7875
Non-core M&As	-0.1261***	-3.9502	0.0125	0.2566
Dividends	-0.2364***	-2.5334	-0.0093	0.8127
Repurchases	-0.2661***	-2.9892	-0.0088	-0.9525

Table 12: Robustness tests

This table presents the robustness tests of the main analysis of fund debt holdings on voting and corporate policy. Panel A shows the results using alternative measures of financial distress: distance to default and debt rating. First, we measure distance to default following Bharath and Shumway (2008) and we define distress (0,1) to be one if the firm's default probability is at least 75% in the year concerned. Second, we define distress (0,1) to be one if the firm's debt rating is CCC and below in the year concerned. Panel B shows the results using the fraction of funds that hold debt in a fund family to measure the average importance of debt for fund families. We calculate the value of equity vs debt owned by each fund in each year across all firms to categorize each fund into debt, equity, or mixed. If the fund owns at least 95% of its holding as debt (equity) then we classify it as a debt (equity) fund. Debt fraction at the family level for debt and mixed funds (debt funds) is the proportion of the number of debt and mixed funds (debt funds) in the total number of funds in the family. Value weighted debt fraction is the value weighted debt fraction by all families in a firm in a year with the weight being family's investment (sum of both debt and equity) in the firm. Panel C shows the results using the equity weighted debt fraction across families, which is the value weighted debt fraction by all families in a firm in a year with the weight being family's investment in the firm's equity. Panel D shows the results when we include only fund families holding both debt and equity in a particular year. Panel E shows the results using subsamples of above and below median family debt fraction heterogeneity. We calculate family debt fraction heterogeneity in a firm during the year concerned using the standard deviation of the family debt fraction by each family in that firm in that year, conditional on the family holding debt in the firm. Panel F presents the analysis of fund's debt holding on voting and corporate policy on subsamples of firms with above vs. below median debt holding concentration level each year. We measure debt holding concentration using the Herfindahl index of debt holding by all fund families in the firm. Panel G shows the results when we exclude firms in the financial industry (with four digit SIC codes starting with 6). Panel H shows the results when we exclude funds holding credit default swap contracts. Panel I shows the results using OLS instead of binary models. All other variables are defined in Appendix A. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Alternative measures of financial distress						
Regression coefficient and *p*-value for Family debt fraction × Distress (0,1)	Distance to default			Debt rating		
	N	Coefficient	*p*-value	N	Coefficient	*p*-value
Voting policy on all proposals	52,745	0.7094**	0.0220	40,443	0.9202**	0.0180
Regression coefficient and *p*-value for Value weighted debt fraction × Distress (0,1)	Distance to default			Debt rating		
	N	Coefficient	*p*-value	N	Coefficient	*p*-value
Capital expenditure	12,327	5.3221***	0.0001	6,287	6.5022**	0.0342
R&D spending	12,327	2.8128**	0.0194	6,287	2.1697*	0.0576
SEOs	12,327	2.0498**	0.0196	6,287	2.4018*	0.0555
Non-core M&As	12,327	-5.5310***	0.0001	6,287	-4.4152***	0.0008
Dividends	12,327	-7.1190***	0.0001	6,287	-11.1576*	0.0501
Repurchases	12,327	-7.1455**	0.0152	6,287	-10.2530**	0.0254

Panel B: Using the proportion of the number of debt funds in the family as debt fraction

Summary statistics	Debt and mixed funds		Debt funds	
	N	Mean [Median]	N	Mean [Median]
Value weighted debt fraction held by fund families	17,300	0.1284 [0.0644]	17,300	0.0129 [0.0000]
Value weighted debt fraction conditional on family debt holding	13,194	0.1683 [0.1030]	4,074	0.0549 [0.0261]

Regression coefficient and *p*-value for Family debt fraction × Distress (0,1)		Debt and mixed funds		Debt funds only	
	N	Coefficient	*p*-value	Coefficient	*p*-value
Voting policy on all proposals	61,345	0.3175**	0.0176	0.2375**	0.0370

Regression coefficient and *p*-value for Value weighted debt fraction × Distress (0,1)		Debt and mixed funds		Debt funds only	
	N	Coefficient	*p*-value	Coefficient	*p*-value
Capital expenditure	17,300	8.6516**	0.0299	2.6176**	0.0419
R&D spending	17,300	3.8755**	0.0105	6.8553**	0.0201
SEOs	17,300	3.6740**	0.0405	9.2851***	0.0006
Non-core M&As	17,300	-4.6981***	0.0001	-14.1685***	0.0015
Dividends	17,300	-31.8544**	0.0268	-40.6400***	0.0064
Repurchases	17,300	-8.2162**	0.0300	-16.0394***	0.0057

Panel C: Weighting the family debt fraction by the family's equity value in the firm

Summary statistics	N	Mean [Median]
Equity weighted debt fraction held by fund families	17,300	0.0131 [0.0000]
Equity weighted debt fraction conditional on family debt holding	4,500	0.0505 [0.0268]

Regression coefficient and *p*-value for Equity weighted debt fraction × Distress (0,1)		Equity weighted average	
	N	Coefficient	*p*-value
Capital expenditure	17,300	8.1846***	0.0001
R&D spending	17,300	7.0197***	0.0002
SEOs	17,300	3.2457*	0.0864
Non-core M&As	17,300	-7.7548***	0.0056
Dividends	17,300	-39.5306*	0.0604
Repurchases	17,300	-16.0394***	0.0057

Panel D: Including only fund families holding both debt and equity in the firm

Summary statistics	N	Mean [Median]
Value weighted debt fraction held by fund families	5,116	0.1939 [0.0980]

Regression coefficient and *p*-value for Family debt fraction × Distress (0,1)		Families holding debt	
	N	Coefficient	*p*-value
Voting policy on all proposals	34,829	0.7410***	0.0068

Regression coefficient and *p*-value for Value weighted debt fraction × Distress (0,1)		Families holding debt	
	N	Coefficient	*p*-value
Capital expenditure	5,116	9.2461***	0.0001
R&D spending	5,116	8.7535***	0.0001
SEOs	5,116	6.0992***	0.0061
Non-core M&As	5,116	-3.8044**	0.0288
Dividends	5,116	-37.3648***	0.0060
Repurchases	5,116	-10.2313**	0.0186

Panel E: Heterogeneity of debt fraction across fund families in a given firm

Regression coefficient and *p*-value for Value weighted debt fraction × Distress (0,1)	Above median family debt fraction heterogeneity			Below median family debt fraction heterogeneity		
	N	Coefficient	*p*-value	N	Coefficient	*p*-value
Capital expenditure	2,142	10.5950***	0.0001	2,142	6.1682*	0.0634
R&D spending	2,142	9.5879***	0.0001	2,142	6.0889**	0.0200
SEOs	2,142	4.2551**	0.0360	2,142	2.0507	0.2506
Non-core M&As	2,142	-12.2256***	0.0001	2,142	-1.3637	0.3602
Dividends	2,142	-22.2236**	0.0180	2,142	0.2889	0.8738
Repurchases	2,142	-3.9536*	0.0856	2,142	-0.9750	0.7242

Panel F: Debt holding concentration among fund families in a given firm

Coefficient and *p*-value for family debt fraction × distress (0,1)	Above median debt holding concentration			Below median debt holding concentration		
	N	Coefficient	*p*-value	N	Coefficient	*p*-value
Voting policy on all proposals	17,323	0.6945**	0.0178	17,235	-0.2060	0.6875

Regression coefficient and *p*-value for Value weighted debt fraction × Distress (0,1)	Above median debt holding concentration			Below median debt holding concentration		
	N	Coefficient	*p*-value	N	Coefficient	*p*-value
Capital expenditure	2,248	10.5950***	0.0001	2,248	6.1682*	0.0634
R&D spending	2,248	9.5879***	0.0001	2,248	6.0889**	0.0200
SEOs	2,248	4.2551**	0.0360	2,248	2.0507	0.2506
Non-core M&As	2,248	-12.2256***	0.0001	2,248	-1.3637	0.3602
Dividends	2,248	-22.2236**	0.0180	2,248	0.2889	0.8738
Repurchases	2,248	-3.9536*	0.0856	2,248	-0.9750	0.7242

Panel G: Excluding financial companies			
Summary statistics		N	Mean [Median]
Value weighted debt fraction held by fund families		12,923	0.0624 [0.0000]
Equity weighted debt fraction conditional on family debt holding		3,977	0.2031 [0.1016]
Regression coefficient and *p*-value for Family debt fraction × Distress (0,1)		Families holding debt	
	N	Coefficient	*p*-value
Voting policy on all proposals	47,402	0.9950**	0.0129
Regression coefficient and *p*-value for Value weighted debt fraction × Distress (0,1)		Families holding debt	
	N	Coefficient	*p*-value
Capital expenditure	12,923	10.0450***	0.0065
R&D spending	12,923	7.4014**	0.0102
SEOs	12,923	4.9817**	0.0349
Non-core M&As	12,923	-8.6648**	0.0469
Dividends	12,923	-35.1712**	0.0152
Repurchases	12,923	-21.3574***	0.0069

Panel H: Excluding funds with credit default swap			
Summary statistics		N	Mean [Median]
Value weighted debt fraction held by fund families		17,300	0.0518 [0.0000]
Equity weighted debt fraction conditional on family debt holding		5,018	0.1757 [0.0900]
Regression coefficient and *p*-value for Family debt fraction × Distress (0,1)		Families holding debt	
	N	Coefficient	*p*-value
Voting policy on all proposals	61,345	1.6608***	0.0012
Regression coefficient and *p*-value for Value weighted debt fraction × Distress (0,1)		Families holding debt	
	N	Coefficient	*p*-value
Capital expenditure	17,300	9.7090***	0.0077
R&D spending	17,300	8.4630***	0.0063
SEOs	17,300	4.9154**	0.0494
Non-core M&As	17,300	-6.4985***	0.0001
Dividends	17,300	-39.9220***	0.0042
Repurchases	17,300	-21.9070***	0.0016

Panel I: Using a linear probability model instead of logit			
Regression coefficient and *p*-value for Family debt fraction × Distress (0,1)		Linear probability model	
	N	Coefficient	*p*-value
Voting policy on all proposals	61,345	0.1909**	0.0422
Regression coefficient and *p*-value for Value weighted debt fraction × Distress (0,1)		Linear probability model	
	N	Coefficient	*p*-value
Capital expenditure	17,300	0.2116**	0.0221
R&D spending	17,300	0.3011**	0.0479
SEOs	17,300	0.1946**	0.0317
Non-core M&As	17,300	-0.0481***	0.0033
Dividends	17,300	-0.4275***	0.0050
Repurchases	17,300	-0.4736***	0.0009

Appendix A: Variable definitions

Firm level variables	
Value weighted debt fraction	the value weighted debt fraction by all families in a firm in a year with the weight being family's investment (sum of both debt and equity) in the firm. Debt fraction at the family level is the proportion of investment in bonds in total investment in bonds and equity for all funds in the family.
Distress (0,1)	one if the three digit SIC industry a firm is in is experiencing financial distress in that year. Based on Opler and Titman (1994), a three digit SIC code industry is in financial distress if the median sales growth is negative and the median stock return is below -30%.
Firm size	the natural logarithm of the market value of assets
Market-to-book	the market value of assets divided by the book value of assets
Leverage	the book value of debt divided by the sum of book value of debt and market value of equity
ROA	the operating income before depreciation divided by the beginning book value of assets
Firm age	the number of years since the IPO date (or the first CRSP date if IPO date is missing)
Institutional block ownership	the total number of shares owned by all institutional blockholders (at least 5% ownership in the firm) on the firm's total shares outstanding
Vote on conflict proposals (0,1)	one if fund families vote on at least one conflict proposal in a firm in a given year
Fraction of votes in the interest of creditors	we calculate first the fraction of votes in the interest of creditors for each fund family across each conflict proposal category, then average the fraction of votes in the interest of creditors for each fund family across all conflict proposal categories, and finally calculate an equity-value weighted average fraction of votes in the interest of creditors across fund families in a firm in a given year
Family level variables	
Family debt fraction	the sum of investment in bonds across all funds of the family in a firm in a year divided by the sum of investment in bonds and equity across all funds of the family in the firm in the year
Big holding (0,1)	one if the investment of the fund family in the firm concerned is above the size of its 75th percentile investment in the year concerned
Number of funds	the number of individual funds owned by the fund family
Vote level variables	
Vote in the interest of creditors (0,1)	one if a given fund family cast more than 50% of the votes of its funds in favor of creditors for the conflict proposal concerned in which there is a conflict of interest between debt holders and equity holders
ISS voting in the interest of creditors (0,1)	one if the voting recommendation by ISS on a proposal is in the interest of creditors

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