Fund Family Dynamics: A Closer Look at Monitoring by Index and Active Funds

Abed El Karim Farroukh and Jarrad Harford*

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Abstract

Index funds in the US manage 35% of the aggregate mutual fund assets under management (AUM), and fund families offering both index and active funds manage 77% of the aggregate AUM. We study monitoring by index and active funds and find that a significant portion of what appears as looser monitoring by index funds can be attributed to fund family effects. Lack of resources does not explain pro-management preferences at fund families, but attracting 401(k) flows can explain part of the effect. Overall, the results shift the focus from individual fund-level analysis to broader fund-family dynamics when assessing mutual fund monitoring effectiveness.

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JEL Classification: G23, G34

*Contact information: Abed El Karim Farroukh, e-mail: farroukh@iu.edu, Jarrad Harford, e-mail: jarrad@uw.edu. We thank Randy Herron and participants at an Indiana University Brown Bag presentation for feedback.

1 Introduction

At the end of 2023, assets under management (AUM) of index funds in the United States amounted to $10.6 trillion, representing 35% of the total AUM of all US mutual funds. While these investment vehicles provide cheaper access to the stock market than their active counterparts, their relatively limited resources have raised concerns and questions among practitioners and academics regarding their ability to be effective monitors.

In this paper, we study monitoring by index funds in the wider context of the asset management industry. Specifically, in the pursuit of economies of scale, asset managers have evolved to offer a wider set of products (Jayaram, Khorana, and Nelling, 2002). A byproduct of that development is that, as of the end of 2023, 77% of the total AUM of the mutual fund industry is managed by fund families that offer both index and active funds. While sibling active and index funds have different objective functions and can hold different stocks, their shared equity positions represent, on average, 54% of the dollar value of their fund family's entire equity portfolio, which underscores the importance of focusing on monitoring decisions made at, or affected by, the fund family.

By focusing on the fund-family level monitoring incentives, we highlight some of the conflicts of interest that affect monitoring by mutual funds. Extant work studies fund-level incentives and finds that index funds have different incentives to monitor than active funds (e.g., Bebchuk, Cohen, and Hirst, 2017a; Edmans, Levit, and Reilly, 2019). We ask whether it's not index versus active, but fund family versus fund family; some families are simply more management-friendly than others, and that is reflected in the monitoring effectiveness of all of their funds, active or index.

Mutual funds monitor through exit and voice (Broccardo, Hart, and Zingales, 2022). Since the main goal of index funds is to track their benchmark index, which leaves them with less discretion than active funds to exit their positions, we focus on voting as the main family-level factor affecting fund-level monitoring. Morningstar's 2017 Stewardship Report states that "...at Vanguard, SSGA, and LGIM, ...the stewardship teams have ultimate authority on

the final voting decisions. This is to ensure consistency and efficacy, as well as to minimize potential conflicts of interest. Conflicts of interest arise when views of internal portfolio managers differ between each other and with the stewardship team." Note that all these fund families offer both index and active funds. Furthermore, using the entire shareholder voting data, and limiting to fund-family-proposal observations where at least two funds from the same family are voting on the same proposal, we find that in 96% of the cases, sibling funds cast the same vote, suggesting a high degree of commonality in sibling mutual fund voting.

We start by comparing monitoring of index and active funds without accounting for fund-family effects. To avoid basing any conclusion on proposals that are procedural in nature and are non-contentious, we zoom in on the set of contentious proposals, defined as proposals where firm management and Institutional Shareholder Services (ISS) issue different recommendations. ISS is the largest proxy advisor, and its recommendations help funds make more informed decisions (Malenko and Malenko, 2019). By focusing on contentious proposals and evaluating funds based on their votes relative to management recommendations, we can back out their pro-management preferences. The baseline tests show that, comparing index to active funds, index funds are 16.4% more likely to side with management on contentious proposals. This result is consistent with the analytical framework of Bebchuk et al. (2017a) and the empirical findings of Heath, Michaely, and Ringgenberg (2022).

The average result masks important heterogeneity and within-family voting dynamics. Specifically, the coefficient estimate becomes insignificant, both statistically and economically, when we include fund family fixed effects in the tests. To further investigate the within-family dynamic, we limit the sample to observations where active and index funds from the same fund family are both shareholders of the same firm and thus eligible to vote on the same contentious proposal. With this filter, we retain 39.7% of the original sample.[1] We ask how

[1]The remainder of the sample corresponds to fund-proposal observations where active funds are voting without index siblings (37.2%), and index funds are voting without active siblings (23.1%). More details are available in Figure 5. The fact that index funds are 1.7 times (39.7%/23.1%) more likely to be voting alongside an active sibling than voting alone underscores the importance of studying sibling index-active voting dynamics.

do index fund votes compare to sibling active funds when voting together? We find that when present alongside sibling active funds, index fund votes do not show significant differences from active funds. This is consistent with our earlier finding that sibling funds vote similarly 96% of the time. If anything, the most stringent specification using the subsample of votes where sibling active and index funds are present and including firm by year in addition to fund-family fixed effects shows that index funds are 3.1% less likely to side with management than their active siblings, albeit the effect is only marginally statistically significant.

Thus, we confirm the extant finding that, in general, index funds are more likely than active funds to side with management on contentious proposals. However, when sibling index and active funds vote together, they cast the same vote, with active funds just as or more likely to vote with management than index funds. One potential reconciliation of these two results is that index funds generate less expense ratio income and hold significantly more positions than active funds.[2] Therefore, governance committees of mixed families split their attention among a much larger volume of proposals, which makes their funds–both active and index–less effective monitors. This explanation is consistent with the findings of Bolton, Li, Ravina, and Rosenthal (2020) that voting is centralized at the fund-family level, and with the interpretation Heath et al. (2022) present for their result that fund families with a larger fraction of index AUM are more likely to side with management.

We investigate this further. First, while it is the case that families with a larger fraction of index AUM conduct significantly less governance research around shareholder meetings of portfolio firms (Iliev, Kalodimos, and Lowry, 2021), a reasonable conjecture would be that their limited attention would make them more, not less, reliant on ISS. This is reflected in statements of several large asset managers. For example, in their 2023 Responsible Investment Report, the Government Pension Fund of Norway indicates that "we voted on 115,266 resolutions at 11,468 shareholder meetings," and "Given the high number of

[2]The median index fund holds 185 positions and charges 0.3% in fees compared to 64 positions and 0.85% for the median active fund, see Table 2 for more details.

shareholder meetings, we use the services of custodians and proxy advisors to exercise our rights."[3]

Second, while index funds are cheaper than active funds, their sheer scale could still result in a higher income per position for fund-families offering index funds. We compute the expense ratio income and the number of positions for each type of fund family. This approach treats the entire family as a single portfolio rather than a collection of separate portfolios, reflecting the centrality of the voting process. We account for all unique positions held by the family, not limited to equity positions, to capture the potentially more costly vote-determination process when the family also holds bonds or loans of the same firm (Gormley and Jha, 2024). Our findings indicate that mixed fund families are by far the most well-resourced. The median mixed family generates $57,511 in expense ratio income per position, compared to $28,500 for pure active families and $2,291 for pure index families. The median mixed family holds 26 times more unique positions than the median pure active family and 18 times more unique positions than the median pure index family. Nevertheless, the scale of mixed families allows them to generate more income per position than any other type of family, suggesting that their pro-management stance is unlikely to be driven by limited resources. Pure index family are relatively under-resourced, however, those families only manage 0.03% of the aggregate AUM in the sample as of the fourth quarter of 2023, making them too small to exert influence (Panel B of Figure 2).

Next, we ask what motivates mixed families. Is the mere representation of their index funds on the governance committee responsible for their relatively pro-management stance on contentious proposals? If that is the case, we should observe active funds of mixed families voting more pro-management when index siblings are shareholders of the same firm and voting on the same proposal. We zoom in on active funds of mixed families and compare their voting when index siblings are voting on the same proposal versus when they are voting alone. Controlling for the fund's expense ratio and the percentage of its total net assets

[3]The report can be found here.

invested in the firm where the proposal is taking place, we find that active funds of mixed families are 5.4% more likely to side with management when they have index siblings voting on the same proposal. The regressions include firm by year fixed effects in addition to fund fixed effects, indicating that the same active fund supports firm management more often when its index sibling is voting on the same proposal. The results suggest that index funds do influence the voting recommendation of the fund family's governance committee, and additional analysis reveals that their influence is a positive function of their size, but this influence does not fully account for the initial effect. More specifically, our first set of tests document that index funds are 16.4% more likely than active funds to side with management on contentious proposals, but when voting on the same proposal alongside active sibling funds, the latter's propensity to side with management increases by 5.4% only, suggesting that, aside from the effect of the index fund, mixed families are more friendly voters.

Last, we examine how 401(k) flows originating from the firm affect mutual fund votes, and whether those flows can explain pro-management preferences of mixed families. Cvijanović, Groen-Xu, and Venkataraman (2016) show that business ties between fund families and portfolio firms influence mutual fund pro-management voting. Their data pertains to the fund-family level, where they define the total compensation of a fund family earned from a given firm as the sum of direct and indirect plan service provider salary and fees, plus 0.5% of the total plan size. We obtain detailed fund-firm-level data from schedule H of form 5500 for all Compustat firms with a valid EIN-CIK link, spanning 2009 to 2018. This allows us to examine voting at the fund level, as a function of the fund's 401(k) AUM originating from the firm.

The fund-level tests show that funds, index or active, do not exhibit different levels of support to management of firms that include them as investment options on their 401(k) menus. While this contradicts the findings of Cvijanović et al. (2016), the two results could be reconciled by examining the effect of 401(k) flows on voting patterns at the fund-family level, as opposed to fund-level. Specifically, since voting is centralized at the family level,

a fund being added to a given firm's 401(k) plan could signal no news to the family if it is replacing a sibling fund. Or, if the fund family adopts a pro-management stance specifically to garner additional 401(k) flows, a fund being added to a firm's menu will be the result of a family-level policy that has already influenced the underlying funds' voting patterns prior to their addition to 401(k) menus.

We aggregate voting at the fund-family level, and test whether 401(k) flows explain pro-management voting. The results show that fund families with any representation on any 401(k) plan in a given year cast more pro-management votes. Specifically, families with 401(k) AUM are 17.9% more likely to side with management on contentious proposals than families with no 401(k) AUM. In the most stringent specification with fund-family fixed effects, we find that the same family becomes 5.6% more likely to side with management on contentious proposals when it garners any 401(k) flows. The pro-management stance of families with 401(k) flows extends to firms that do not include their funds on 401(k) menus. Specifically, the results suggest that families with 401(k) AUM cast pro-management votes at all portfolio firms, even those that do not include their funds on 401(k) menus, and the effect is not stronger for firms that do include their funds on 401(k) menus. Overall, the results suggest that families switch to a more pro-management stance when attempting to garner or preserve 401(k) flows. Our conclusion here is similar to that of Davis and Kim (2007) and Ashraf and Ryan (2012), but our detailed data allow us to, at least partially, attribute pro-management voting to fund-family level, as opposed to fund-level, voting policies aimed at garnering 401(k) assets.

The paper is organized as follows: section 2 discusses the related literature, section 3 discusses the data and sample, section 4 discusses the results, section 5 concludes.

2 Literature

Index funds have become the largest shareholders of many US corporations (Bebchuk and Hirst, 2019), and the literature studying the effects of index investing on governance finds mixed evidence. Boone and White (2015) use the Russell 1000/2000 index reconstitutions as shocks to index ownership, and find that higher index ownership enhances transparency by increasing management disclosure, analyst following, and stock liquidity. Similarly, Appel and Keim (2016) find that passive mutual funds influence governance positively by appointing more independent directors, removing takeover defenses, and instituting more equitable voting rights. Rock and Kahan (2019) argue that the Big Three index fund managers—BlackRock, Vanguard, and State Street—have strong incentives to engage in governance due to their vast scale and scope. These positive impacts are partly attributed to the economies of scale and competitive pressures driving fund sponsors, as highlighted by Fisch and Solomon (2020), who note that fund sponsors strategically engage to maintain investor confidence while balancing costs.

On the other hand, several studies raise concerns about the adverse governance effects of index investing. Bebchuk, Cohen, and Hirst (2017b) argue that index funds have poor incentives to engage meaningfully in stewardship activities, resulting in systemic governance weaknesses despite reducing the costs of financial intermediation. Lund (2017) points out the collective action problem faced by passive funds, where any improvements to governance benefit all index funds equally, discouraging individual funds from expending resources on engagement. Schmidt and Fahlenbrach (2017) show that increased passive ownership leads to concentrated CEO power, fewer independent director appointments, and worse mergers and acquisitions. Iliev et al. (2021) further find that fund families with larger index AUM allocate fewer resources to governance research, potentially compromising their ability to monitor effectively. Last, Heath et al. (2022) compare index and active funds and find that, compared to active funds, index funds are less effective monitors. Our paper contributes to this literature by focusing on family-level effects, we show that what appears as looser

monitoring by index funds is largely attributable to fund-family preferences that do not stem from limited resources.

Our work also relates to the literature studying the effects of business ties between fund families and portfolio firms. Davis and Kim (2007) and Ashraf and Ryan (2012) show that families with business ties to firms tend to vote pro-management on both client and non-client firms. Using a larger sample, Cvijanović et al. (2016) find that, contrary to earlier studies, families vote more pro-management at portfolio firms with which they have business ties. Duan and Jiao (2018) find that funds have superior information on their client firms. Using detailed fund-firm 401(k) data over a long time-period, we show that 401(k) AUM, not just recordkeeping and other administrative fees, affect governance. Our results suggest that families with any 401(k) AUM vote pro-management on all portfolio firms. The effect also holds within a family; once a family garners 401(k) flows its voting leans pro-management, suggesting a shift in policy likely aimed at preserving or growing current 401(k) AUM.

Last, our paper relates to the literature documenting coordinated efforts between funds in the same fund family. Prior studies have uncovered evidence of information flow within financial conglomerates (Massa and Rehman, 2008; Ivashina and Sun, 2011; Massoud, Nandy, Saunders, and Song, 2011) and cross-fund subsidization in mutual fund families (Gaspar, Massa, and Matos, 2006; Bhattacharya, Lee, and Pool, 2013). For example, Massa and Rehman (2008) show that banks and mutual funds in the same financial conglomerate share private information, which can influence trading decisions. Similarly, Massoud et al. (2011) find that hedge funds can exploit private information from syndicated lending relationships to gain trading advantages. Within fund families, Gaspar et al. (2006) provide evidence that some mutual funds subsidize the performance of other funds in the same family through strategic trading, while Bhattacharya et al. (2013) show that conflicts of interest may arise when fund families prioritize their internal relationships over investor returns.

Other studies show that equity funds also consider the interests of their sibling bond funds when casting votes on governance matters. Bodnaruk and Rossi (2016) find that equity

funds in fund families with funds holding bonds of the same firm tend to vote in ways that align with the interests of the family's bond funds, potentially prioritizing the credit side over equity value maximization. Keswani, Tran, and Volpin (2020) add that institutional debt holders play an important governance role, and their influence can affect voting outcomes. Moreover, institutional investors appear to conduct more governance research when bonds represent a larger share of their overall assets (Gormley and Jha, 2024). Our finding that fund-family effects explain a large proportion of what appears as looser monitoring by index funds is consistent with this strand of the literature underscoring the importance of the overall fund-family, as opposed to individual fund-level, preferences.

3 Data and Summary Statistics

Our mutual fund voting data comes from Institutional Shareholder Services (ISS). Starting in 2003, mutual funds are required by the Securities and Exchange Commission (SEC) to report their votes through via form N-PX. The ISS Voting Analytics dataset provides comprehensive information at the fund-proposal level including details such as fund identifiers, firm identifiers, a description of the proposal, management recommendation, and the voting decision of the fund. The database is sparsely populated prior to 2005, thus, we start our sample in 2005. We obtain ISS recommendations from the same database. Those recommendations are absent from the most recent data update, which limits the sample for tests conditioning on contentious proposals to the 2005-2021 period.

We obtain the mutual fund holdings data from the center for Research in Security Prices (CRSP) Survivor-Bias-Free US Mutual Fund Database. CRSP offers quarterly holdings information for U.S. mutual funds, along with various fund characteristics including total net assets, expense ratios, and an index fund flag.

There is no common fund identifier shared between the ISS voting data and the CRSP Survivor-Bias-Free Mutual Fund data. We construct a linking file between the two databases

following Matvos and Ostrovsky (2010) and Iliev and Lowry (2015). Specifically, we download data on all mutual funds' names, tickers, and CIK through the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) website. Then, using the N-PX file ID in ISS and the Central Index Key (CIK) in EDGAR, we link families and name-match funds within a family, which allows us to obtain tickers for ISS fund identifiers. Then, using tickers, we link ISS with the CRSP mutual fund data, and manually validate each link. We attempt to link all US domestic equity funds in CRSP with at least $10 million in AUM, and we end up linking, on average in a given year and using end-of-year AUM values, 46% of those funds (67% by AUM).

Our 401(k) data comes from Schedule H of Form 5500. All employers sponsoring a retirement plan with 100 or more participants as of the beginning of the plan year must file a Form 5500 with the US Department of Labor. We download Form 5500 for all firms with a defined contribution (401(k)) plan and a valid Employer Identification Number (EIN) - Central Index Key (CIK) link from 2009 till 2018. We then extract Schedule H, which provides detailed plan information including the names of investment options on the plan menu, and value of plan assets invested in each option. We employ an Optical Character Recognition (OCR) software to draw the lines of the table in Schedule H and extract information from the PDF file to Excel, we then manually check the lines and values. Many PDFs are unclear, which requires us to manually inspect each document and fix data errors when present. We then match fund names to tickers in CRSP. Overall, we parse 22,182 documents. At the end of the matching process, we compare the total of plan assets we obtain from Schedule H for each firm in a given year to the total plan assets reported to the Employee Retirement Income Security Act (ERISA) website, and fix any entry where the two numbers are more than 1% apart.

Tables 2, 3, and 4 report CRSP-ISS funds summary statistics, voting summary statistics, and 401(k) summary statistics, respectively. Panel A of Table 2 reports summary statistics of all domestic equity funds in the CRSP mutual funds database with at least $10 million in

AUM, split by index and active. Throughout the study, we define index funds as funds with an index fund flag equal to "D" in the CRSP database, and all other funds as active funds,[4] we also define domestic equity funds as funds with a CRSP style code starting with "ED".

A few points are worth noting in regard to the near universe of domestic equity funds in CRSP, summarized in Panel A of Table 2. First, there are many more active than index funds; 64,817 active fund-year observations compared to 10,841 index fund-year observations. Note that the respective number of observations drops when summarizing the variables *Number of Positions* and *HHI* because some funds in the CRSP Fund Summary dataset might not publicly disclose their holdings due to regulatory exemptions, lack of requirement, or administrative delays. For example, some smaller or newly launched funds might not yet report holdings data or may not comply with disclosure standards. The median active fund is smaller, more expensive, and holds a smaller number of positions than the median index fund. The median active fund also holds a more concentrated portfolio compared to the median index fund (active $HHI = 239 >$ index $HHI = 138$).

The same relations hold in the subset of CRSP-ISS linked funds, described in Panel B of Table 2. The *AUM* values reported in Panel B are higher than those in Panel A, which is a result of the ISS database being skewed towards larger funds and fund families (Iliev and Lowry, 2015). In Panel C, we summarize the percentage of number and AUM of linked funds between the two databases over the 19 year sample period spanning 2005-2023; we link, on average, 46% of domestic equity funds in CRSP with at least $10 million in AUM to ISS, and these funds represent, on average, 67% of the total domestic equity AUM reported in CRSP without taking into account funds with less than $10 million in AUM.

Table 3 presents summary stats of the voting data using the sample of ISS-CRSP linked funds. Panel A presents fund family-level statistics of the variables *Consensus* and *Conditional*

[4]The variable *Index_Fund_Flag* in CRSP can assume one of three values: "B" refers to an index-based fund, where the fund used an index as its primary filter for selecting securities, then invests in the best performers, "D" refers to a pure index fund, whose objective is to match the performance of an index, and "E" refers to an index fund enhanced, whose objective is to exceed the performance of a publicly recognized securities market. More information is available in the CRSP guide here.

Consensus, computed for each fund family-proposal observation. *Consensus* is an indicator variable equal to one if all funds from a given family cast the same votes on a given proposal, and zero otherwise. We compute *Conditional Consensus* the same way, but the variable is only available for fund family-proposal observations where at least two funds from the same family are voting on the same proposal. The idea of *Conditional Consensus* is that we would like to gauge within-family voting disagreement when there is room for disagreement. Note that throughout the study, we follow existing literature and consider votes "Against", "Abstain", "Withhold", and "Do Not Vote" as votes against (Iliev and Lowry, 2015). Panel A shows that funds within a family cast the same vote 98% of the time, and this drops to 96% when conditioning on at least two funds from the same family voting on the same proposal. This is consistent with earlier studies, many of which aggregate votes at the fund-family level, such as Bolton et al. (2020).

Panel B of Table 3 presents proposal-level statistics. 18% of proposals in our sample are contentious, defined as proposals where ISS and management recommendations are different. 83% of proposals pass, and 98% of proposals are sponsored by management. Note that the number of observations when summarizing the variable *Fraction Votes For* is lower than the number of proposals, because voting options for a subset of proposals (such as voting on the frequency of say on pay votes) are not a simple for or against votes.

Panel C of Table 3 presents proposal- and fund-proposal-level statistics separately for contentious and non-contentious proposals. Further, we present summary statistics of the indicator variable *Vote with Mgmt* for all funds, then separately for index and active funds. The variable *Vote with Mgmt* is an indicator variable equal to one if the fund casts a vote that is in line with management's voting recommendation, and zero otherwise. For non-contentious proposals, 97% of votes agree with management (and ISS), and there is virtually no difference in the level of support to management between index and active funds. This validates our reasoning and the reasoning of existing studies, that non-contentious proposals are generally procedural in nature, and justifies our decision to focus on contentious proposals

only. Support to management drops significantly to 43% in the subsample of contentious proposals, and differences in voting patterns between index and active funds become more amplified. Specifically, index funds side with management on 49% of contentious proposals, compared to 38% for active funds. The overall summary statistics agree with the general conclusion that index funds, lacking the resources to conduct research and being spread across many more positions compared to active funds, cede control to management. Our paper further investigates this overall summary statistic to show that much of these differences are attributable to fund-family effects that do not stem from lack of resources.

The last set of summary statistics are presented in Table 4 and pertain to our 401(k) data. Note that our 401(k) data spans the years 2009-2018 since Form 5500 is not available for electronic download prior to 2009, and we are currently working on expanding the data to 2021. There are 22,182 plan-year data points. The median plan includes 20 mutual funds on the menu, those mutual funds garner 77% of the total plan assets, the remainder of the assets are typically invested in collective investment trusts (CITs) and through the brokerage link option, where plan participants are free to trade their plans in a wide range of assets. The average plan size amounts to \$248 million (median = \$46 million), and, on average, each mutual fund on the menu garners \$6.5 million in assets (median = \$0.84 million). The average fund family generates 0.29% of its total expense ratio income from 401(k) plans. The median value of *% Plan Income* is 0, indicating that the median fund family is not represented on any 401(k) menu. 401(k) menus tend to be dominated by options from known fund families; 56% of all mutual funds on 401(k) menus are from the top 4 most common fund families: Fidelity, Vanguard, T. Rowe Price, and American Funds. Last, 18% of fund-proposal observations correspond to mutual funds with some 401(k) income, and 74% of fund-proposal observations correspond to mutual funds belonging to families that garner 401(k) flows.

4 Main Results

4.1 Index versus Active Funds

We start by comparing voting of index versus active funds to back out fund-level pro-management preferences and monitoring efforts for each fund type. Specifically, we estimate the following regression:

$$\begin{aligned} \textit{Vote with Mgmt}_{f,ff,p,i,t} &= \alpha + \beta_1 Index_{f,ff,t} + \gamma Z_{f,ff,i,t} + Industry \times FirmFE_{i,t} \\ &\quad + FundFamilyFE_{ff,t} + \epsilon_{i,t}, \end{aligned} \tag{1}$$

where, $\textit{Vote with Mgmt}_{f,ff,p,i,t}$ is an indicator variable equal to one if fund f belonging to fund family ff voting on proposal p at firm i in year t casts a vote that is in line with management recommendation, and zero otherwise. The main explanatory variable is $Index_{f,ff,t}$, which is an indicator variable equal to one for index funds, and zero otherwise. We define index funds as funds with an index fund flag equal to "D" in the CRSP mutual fund database, and all other funds as active funds. The majority of funds (93.3%) do not switch status between index and active, but some do, which justifies the time element of the variable $Index$. To control for fund f's incentives to monitor firm i at time t, we include $\%\ TNA$, defined as i's weight in f's portfolio (Kempf, Manconi, and Spalt, 2017), as a control variable. Additionally, we control for the fund's expense ratio to account for its available resources. We build up the fixed effects and estimate each regression with and without control variables to gauge their importance in explaining the results. All variables are defined in the Appendix.

We estimate the regression separately for non-contentious and contentious proposals. Columns (1) through (4) of Table 5 present the results using the subsample of non-contentious proposals. The coefficient estimate on the main variable of interest, *Index*, is insignificant, both economically and statistically, which supports the univariate statistics describing index and active votes on non-contentious proposals presented in Panel C of Table 3. The likely

explanation of this null result is that procedural proposals are generally non-contentious, and therefore almost all votes cast on these proposals (97%) support management (and ISS) recommendations. Columns (5) through (8) estimate the regression using the subsample of contentious proposals. These tests tell a different story. Absent the fund-family fixed effects (columns (5) and (7)), the results show that index funds are 11.8% more likely to side with management than active funds on contentious proposals, and the estimate increases in magnitude to 16.4% when controlling for the firm's weight in the fund's portfolio and for the fund's expense ratio. The positive coefficient estimate for the variable *% TNA* in column (7) suggests that funds side more often with management of firms that represent a larger proportion of their portfolio. For active funds, this likely reflects the fund manager's decision to overweight the firm in the first place as a result of favorable past or predicted upcoming management policies.[5] Similarly, for index funds, a larger *% TNA* reflects a higher weight of the firm in the index being tracked, and likely correlates with superior management policies that manifest in a more pro-management stance by index funds at these firms. The coefficient estimates on the two interaction terms capturing fund-level resources are both negative and significant, suggesting that lower resources associate with a more pro-management stance for all funds, active or index.

Overall, the results suggest that index fund votes are more pro-management, and are consistent with the predictions of Bebchuk et al. (2017b) and with the empirical findings of Heath et al. (2022); index funds have less resources and end up ceding power to management. Combining this finding with the dramatic increase in index AUM throughout the sample (see Figure 1) justifies concerns of academics and practitioners that the rise in index investing is likely bad for governance.

[5]Mutual funds in the US rarely file Schedule 13D and index funds never file Schedule 13D (Heath et al., 2022). The Securities and Exchange Commission (SEC) requires shareholders to disclose positions above the 5% threshold if they intend to influence control of the firm. The rarity of 13D filings by mutual funds suggests that funds' larger positions likely reflect approval of current management policies at these firms, which manifests through a more pro-management stance, and thus a positive coefficient estimate on the *% TNA* variable.

Columns (6) and (8) of Table 4.1 estimate similar tests to Columns (5) and (7), but including fund-family fixed effects. The coefficient estimate of the main indicator variable, *Index*, becomes negative and significant in Column (6), and negative and insignificant once we control for *% TNA* and expense ratios in Column (8). The results of the tests with fund-family fixed effects suggest that it is not fund versus fund, but rather fund-family versus fund family. Some families are more management-friendly, and this is reflected in pro-management voting of all of their funds, index or active. Existing studies rationalize pro-management preferences at families that offer index funds through the lower income generated by those funds. We explore this further in subsections 4.2 and 4.3.

4.2 Index versus Active Funds of Mixed Families

We start this subsection by focusing on mixed fund families, defined as families that offer both index and active funds. Mixed families dominate the asset management industry; as of 2023, they manage 77% of the total mutual fund AUM in the US (Panel A of Figure 2), underscoring the importance of studying their governance preferences. Furthermore, shared equity positions between index and active funds of mixed families represent, on average, 54% of all their AUM (Table 1). BlackRock, Vanguard, and State Street (the big 3 families) manage 57% of the aggregate mixed AUM in the US as of 2023 (Figure 3), all of these families offer both index and active funds throughout the sample period, except for BlackRock, whose acquisition of Barclays Global Investors in 2009 marked its entrance to the index fund market. At first glance, these descriptive statistics suggest that pro-management voting at mixed families is unlikely to stem from lack of resources, as these examples of mixed families are some of the most well-resourced fund families in the world. We investigate this further in subsection 4.3.

Table 6 estimates similar tests to Table 5, but limiting the sample to fund-proposal observations where index and active siblings are eligible to vote on the same proposal. This filter retains 39.7% of the original sample. 37.2% of the remaining observations correspond to

fund-proposal observations where active funds are voting alone (without index siblings), and 23.1% correspond to fund-proposal observations where index funds are voting alone (without active siblings). The fact that index funds are more likely to be voting alongside active sibling funds than voting alone underscores the importance of studying within the family index-active dynamic. The results in Table 6 show that, when voting together, index and active fund votes rarely differ. If anything, the most stringent specification in Column (4) suggests that index funds are less likely to side with management on contentious proposals when voting alongside active sibling funds. Nevertheless, the estimate is only marginally statistically significant, economically small, and reverses sign depending on the fixed effects included in the regression. We interpret these findings as showing that index and active sibling funds cast the same vote on contentious proposals when voting together.

The results thus far suggest that, when comparing all index to all active funds in the universe of ISS-CRSP linked funds, index funds vote more pro-management. However, when conditioning on sibling funds voting together, index and active funds cast the same vote. We ask what is driving the result, is it an index-fund effect whereby index funds influence voting of sibling active funds when eligible to vote on the same proposals? Or is it a family-level effect where mixed families are more pro-management, which manifests in more pro-management voting of all their funds, index or active? We recognize that the two channels are not mutually exclusive, and a combination of the two effects could be at play. We address this question in the next set of tests.

To disentangle the fund-family effect from the effect of the sibling index fund, we ask whether active funds of mixed families cast different votes when voting alone versus when voting alongside an index sibling fund. Specifically, if the index fund exerting influence on the sibling active fund is driving the results, we should observe active funds voting more pro-management when voting alongside index funds compared to when voting alone. In Table 6, we run a similar test to regression equation 1 to explain voting with management, but we limit the sample to active funds of mixed families only. The main explanatory variable in this

Table is *Index Sibling*, an indicator variable equal to one if the active fund is voting alongside an index sibling, and zero otherwise. A positive coefficient on the *Index Sibling* variable would be consistent with an index-influence story, where index funds influence voting of active siblings when voting together. Indeed, we find that, across all specifications, active funds are more likely to side with management when an index sibling is eligible to vote on the same proposal. The effect is economically meaningful; including fund fixed effects (Column (6)), we find that the same active fund is 5.4% more likely to side with management on contentious proposals when an index sibling is eligible to vote on the same proposal. Nevertheless, the magnitude does not justify the full effect, specifically, Table 5 shows that index funds are 16.4% more likely to side with management, but the presence of index funds alongside active siblings changes the latter's propensity to side with management by 5.4% only. Combined with the result in Table 6 that sibling index and active funds cast the same vote, this suggests that the majority of the difference stems from family-level effects. It is important to note that the estimate in Table 5 includes index funds of pure index families, meaning that the 16.4% is gauging differences in voting between all index funds, including those belonging to pure index families, and all active funds. Nevertheless, pure index families are a minority of all families in CRSP, representing 2.3% of the total number of fund families as of the fourth quarter of 2023, and less than 1% of the aggreagate AUM. Removing fund-proposal observations where the fund belongs to a pure index family in Table 5 only deletes 3.2% of observations, and does not affect the results.

Next, we test whether the size of the index siblings eligible to vote on the same proposal as the active fund explains the index influence. In Table 8, we repeat the tests of Table 6, but replacing the *Index Sibling* indicator variable with *% AUM Index*, defined as a continuous variable measuring the percentage of the size of index sibling funds eligible to vote on the same proposal as the active fund. Panel A includes all active fund-proposal observations, whereas Panel B excludes observations where no index sibling funds are present. In a sense, Panel B measures the intensive margin of the index sibling influence. Across 10 of the 12

specifications, the coefficient estimate on *% AUM Index* is positive and significant, suggesting a larger degree of influence of index funds when they comprise a larger proportion of the family AUM eligible to vote on a given proposal.

Overall, the results in this subsection show that index fund are indeed more management-friendly than active funds, but the larger part of the difference in voting patterns between active and index funds is driven by fund-family-level preferences, where mixed families are more management friendly. In the next subsection, we explore what explains those preferences.

4.3 401(k) Flows and Pro-Management Preferences

What explains fund-family preferences? In this subsection, we address this question in an attempt to explain the pro-management stance of mixed fund families.

First, index funds are cheaper, and more thinly spread than active funds. The summary statistics in Panel A of Table 10 show that the median index fund in CRSP has an expense ratio of 0.30% and holds 185 positions, compared to 0.85% and 64 positions for the median active fund. Therefore, since families vote as a unit and operate one governance committee, it is likely that introducing index funds significantly increases the number of proposals the committee must study, without necessarily increasing resources given the low expense ratios of these funds. While this explains the findings of Iliev et al. (2021) that fund families with a larger fraction of index AUM conduct less governance research around shareholder meetings of portfolio firms, it is unlikely to explain index funds' under-reliance on ISS recommendations documented by Heath et al. (2022) and in Table 5 of this study.

Nevertheless, we further investigate the lack of resources and limited attention hypothesis. Specifically, we compute the expense ratio income and number of positions for each fund family, and present descriptive statistics in Table 9. Expense ratios in CRSP include management fees, 12b-1 fees, and other expenses. Mutual funds can also charge fees when investors increase their investment in the fund (front-end loads) or decrease it (back-end loads), since we are interested in uncovering the family's income and preferences given its funds' holdings, we

do not take those fees into account. When computing the total number of positions held by the family, we treat the family as one large portfolio, as opposed to a collection of portfolios, therefore, we are essentially counting the number of unique positions held by all funds in the family. We do not limit those counts to equity positions, instead, we count any position. The reason is that governance committees deciding equity votes tend to consider non-equity positions in the same firm (Gormley and Jha, 2024), and non-equity positions in related firms (Bodnaruk and Rossi, 2016).

The results reveal that the median mixed fund family holds the largest number of positions by far: 2,715 positions compared to 103 for the median pure active and 149 for the median pure index family. Nevertheless, the scale of mixed families results in them being the most well resourced among all families, even after accounting for the large number of positions they hold. Specifically, the median mixed family generates $57,511 in expense ratio income per unique position, compared to $28,500 for the median pure active family, and $2,291 for the median pure index family.[6]

Given the results in Table 9, it is unlikely that pro-management preferences of mixed fund families stem from lack of resources. We turn to our 401(k) data to explore whether 401(k) flows can explain those preferences. Specifically, we start by asking if funds, index or active, vote more pro-management at firms that include them as investment options on 401(k) menus. Table 10 reports the results of fund-level tests explaining voting with management, estimated separately for index and active funds. The main explanatory variables are *Fund on Plan* and *Fund on Any Plan*. *Fund on Plan* is an indicator variable equal to one if the firm at which the proposal is taking place includes the fund as an investment option on its menu in the same year as the proposal year, and zero otherwise. *Fund on Any Plan* is an indicator variable equal to one if the fund is included on any 401(k) menu in a given year, and zero

[6]The median mixed family generates $156,142,200 in expense ratio income and holds 2,715 positions, the median pure active family generates $2,935,465 in expense ratio income and holds 103 positions, and the median pure index family generates $341,285 in expense ratio income and holds 149 positions.

otherwise. The results suggest that 401(k) flows do not explain pro-management voting at the fund-level.

The results are inconsistent with earlier studies, such as Davis and Kim (2007), Ashraf and Ryan (2012), and Cvijanović et al. (2016). Davis and Kim (2007) and Ashraf and Ryan (2012) find that families with business ties to firms vote more pro-management at both client and non-client firms, while Cvijanović et al. (2016) find that the pro-management voting is limited to client firms. All of these studies utilize family-level data. Our fund-firm-level data allows us to open the black box of family-firm business ties a little more. Specifically, our null result, although it may appear inconsistent with earlier studies, highlights the importance of examining family-level effects. For example, a fund could be deleted from a given menu, only to be replaced by another fund from the same fund family. In this case, the deletion should signal no news to the governance committee even if the only criterion the committee considers for determining votes is favoritism. Alternatively, pro-management voting could precede additions to menus, to help with those additions.

In Table 11, we run similar regressions at the fund-family level. We compute the left-hand side variable *Vote with Mgmt* at the family level. Specifically, for a given family-proposal observation, we set *Vote with Mgmt* equal to one if all funds from the family cast votes in line with management's recommendation, and zero otherwise. We set the variable to missing when funds within a family cast different votes on the same proposal. The results of Table 11 show that, families with any 401(k) income vote more pro-management. Specifically, the result in Column (3) suggests that fund families with any 401(k) income are 17.9% more likely to vote with management on contentious proposals at all firms. The results also hold when including fund-family fixed effects; the same fund-family is 5.6% more likely to cast pro-management votes on contentious proposals when it garners any 401(k) AUM. This agrees with the findings of Davis and Kim (2007) and Ashraf and Ryan (2012), but not with Cvijanović et al. (2016), who find that families with business ties cast pro-management votes at client firms only. One potential reconciliation of the results is that Cvijanović et al. (2016)

consider mainly fund familys' administrative income from 401(k) plans, as opposed to flow income. In our data, the median plan includes funds from 8 different fund families on its menu, which results in many more business ties than considered by Cvijanović et al. (2016). The focus on ties to the recordkeeper by Cvijanović et al. (2016) likely results in an even stronger pro-management stance to client firms. We thus view our results as complementary to theirs.

In Panel B of Table 11, we run similar tests but replace the two indicator variables *FF on Plan* and *FF on Any Plan* with the continuous variable *% Plan Income*, defined as the percentage of the fund family's expense ratio income generated from its 401(k) AUM. We also exclude cases where *% Plan Income* equals zero, in an attempt to measure the effect of 401(k) AUM on families' pro-management voting at the intensive margin. The results indicate that the amount of 401(k) AUM does not explain pro-management voting. The likely explanation for this is that while pro-management voting can help families gain representation on menus (something under management control), their 401(k) AUM will be decided by plan participants allocating retirement savings to their funds (not directly under management control).

Overall, the results in this subsection are consistent with mixed-fund families' desire to maintain and expand 401(k) representation explaining their pro-management stance.

5 Conclusion

In this paper, we highlight the nuanced dynamics of monitoring by index and active funds within the context of mutual fund families. We find that index funds, often criticized for their pro-management tendencies, exhibit voting behaviors influenced significantly by the preferences of their fund families rather than resource constraints alone. Specifically, we show that fund families offering both index and active funds (mixed families) show more pro-management voting patterns across both types of funds, suggesting that family-level

governance policies play a crucial role in shaping voting outcomes. This finding shifts the focus from individual fund-level analysis to broader fund-family dynamics when assessing mutual fund monitoring effectiveness.

The pro-management stance of mixed families does not stem from lack of resources; families offering both index and active funds dominate the index investing market and are the most well-resourced type of fund families, even after we account for their index funds being thinly spread across many different positions. Instead, we find that fund families receiving assets from 401(k) retirement plans exhibit more pro-management voting. This behavior appears to extend beyond client firms to all portfolio companies, suggesting that the pursuit of 401(k) assets drives governance policies at the family level. The results emphasize the importance of considering fund-family incentives when evaluating the governance role of mutual funds.

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Appendix: Variable Definitions

Variable	Definition
AUM	Assets under management. *Source*: CRSP.
Expense Ratio	Fund-level expense ratio computed as the TNA-weighted average of class expense ratios. *Source*: CRSP.
Number of Positions	Total number of positions held by the fund, we compute a similar variable at the fund-family level which treats the entire family as one portfolio and counts the unique position in that portfolio. *Source*: CRSP.
HHI	Fund-level Herfindahl-Hirschman Index. *Source*: CRSP.
Index	Indicator variable equal to one for index funds, and zero otherwise. Index funds are defined as funds with an index fund flag equal to "D" (*Index_Fund_Flag* = D for pure index funds). *Source*: CRSP.
Active	1-*Index*. *Source*: CRSP.
Index Sibling	Indicator variable equal to one if the active fund is voting alongside an index sibling fund, and zero otherwise. *Index Sibling* is only available for active funds.
% TNA	Percentage of the fund's total net assets invested in the security. For fund-family level regressions, we aggregate *% TNA* across all sibling funds to obtain a value at the family-security level. *Source*: CRSP.
% N Linked Funds	The percentage of all CRSP equity domestic funds with at least $10m in AUM that we match to the ISS voting data. *Source*: CRSP, ISS.
% AUM Linked Funds	The percentage of AUM of all CRSP equity domestic funds with at least $10m in AUM that we match to the ISS voting data. *Source*: CRSP, ISS.
% AUM Index	For each fund i voting on proposal p, we compute *% AUM Index* as the percentage of index AUM of all funds belonging to i's family and voting on the same proposal p.
Vote with Mgmt	Indicator variable equal to one if a fund vote follows management's voting recommendation, and zero otherwise. We compute a similar variable at the fund-family level. The family-level variable equals one if all funds within a family voting on a given proposal follow management's voting recommendation, and zero otherwise. It is missing for cases where funds within a family cast dissimilar votes. *Source*: ISS.

Consensus	Indicator variable computed at the fund family-proposal level. It is equal to one if all funds within a family holding the same stock and voting on the same proposal cast similar votes, and zero otherwise. *Source*: ISS.
Conditional Consensus	Indicator variable computed at the fund family-proposal level. It is equal to one if all funds within a family holding the same stock and voting on the same proposal cast similar votes, and zero otherwise. *Conditional Consensus* conditions on at least two funds from the same family being present at the same meeting and voting on the same proposal, it is set to missing for cases where only one fund from the family is present at the shareholder meeting. *Source*: ISS.
Contentious	Indicator variable equal to one for proposals where ISS and management voting recommendations differ, and zero otherwise. *Source*: ISS.
Pass	Indicator variable equal to one for proposals that pass, and zero otherwise. *Source*: ISS.
Fraction Votes For	The fraction of votes for to the sum of votes for, votes against, votes abstain, broker non-votes, and votes withheld. *Source*: ISS.
Management Sponsor	Indicator variable equal to one for proposals sponsored by management, and zero otherwise. *Source*: ISS.
Number of Funds	Number of mutual funds on the 401(k) plan menu. *Source*: CRSP, ERISA.
Plan Size	401(k) plan size. *Source*: ERISA.
% Mutual Funds	The % of 401(k) menu assets invested in mutual funds. *Source*: CRSP, ERISA.
Assets per Fund	Menu assets invested in a mutual fund. *Source*: CRSP, ERISA.
% Plan Income	The percentage of a fund family's expense ratio income originating from 401(k) assets invested in the family's mutual funds. *Source*: CRSP, ERISA.
% Index AUM	The percentage of a fund family's AUM managed by its index funds. *Source*: CRSP.
ln(FF Size)	Natural log of fund-family size. *Source*: CRSP.
Expense Ratio Income	Total net assets multiplied by the expense ratio for all fund classes in the family, aggregated at the fund family-quarter level. *Source*: CRSP.
ln(FF Income)	Natural log of fund-family *Expense Ratio Income*. *Source*: CRSP.

Fund on Plan	An indicator variable equal to one if the fund casting the vote on proposal p at firm i in year t is included as an investment option on firm i's 401(k) plan in year t, and zero otherwise. *Source*: ISS, ERISA.
Fund on Any Plan	An indicator variable equal to one for fund i in year t if i is included as an investment option on any firm's 401(k) plan in t, and zero otherwise. *Source*: ISS, ERISA.
FF on Plan	An indicator variable equal to one if the fund family housing the fund voting on proposal p at firm i in year t has any representation on i's 401(k) plan in year t, and zero otherwise. *Source*: ISS, ERISA.
FF on Any Plan	An indicator variable equal to one if the fund family housing the fund voting on proposal p at firm i in year t has any fund included on any firm's 401(k) plan in t, and zero otherwise. *Source*: ISS, ERISA.

Tables and Figures

Figure 1: Index versus Active AUM

This figure displays assets under management (AUM) of index and active funds throughout the sample period. We define index funds as funds with an index fund flag equal to "D" in the CRSP Survivor-Bias-Free US Mutual Funds database in a given year, all other funds are considered active.

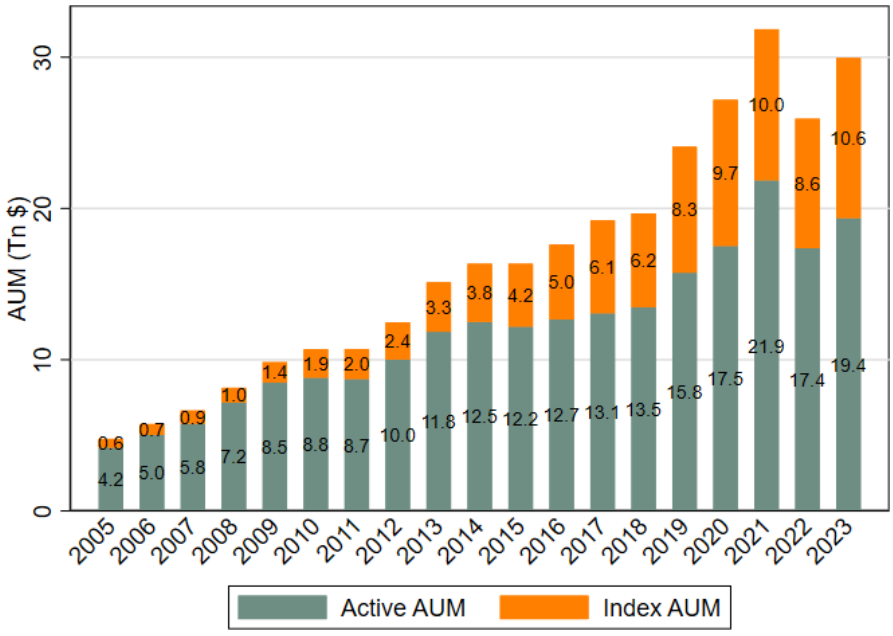
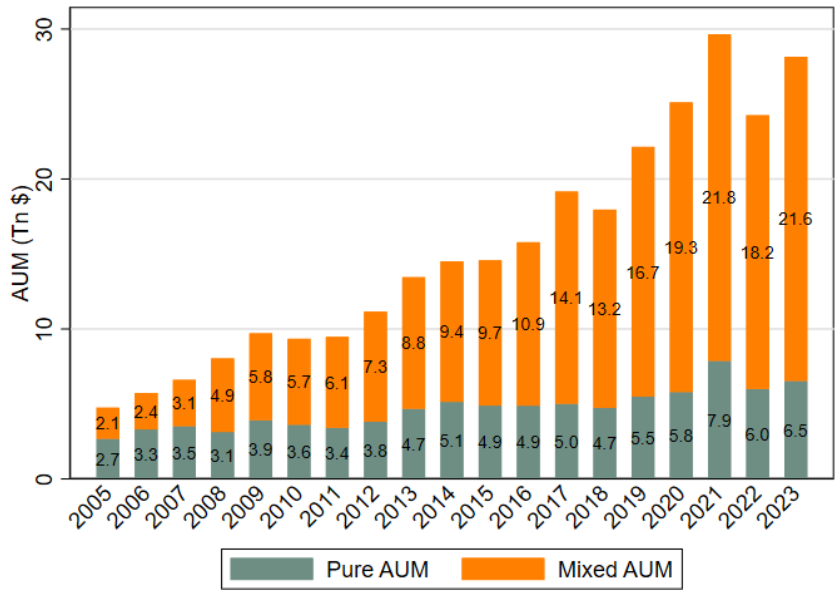
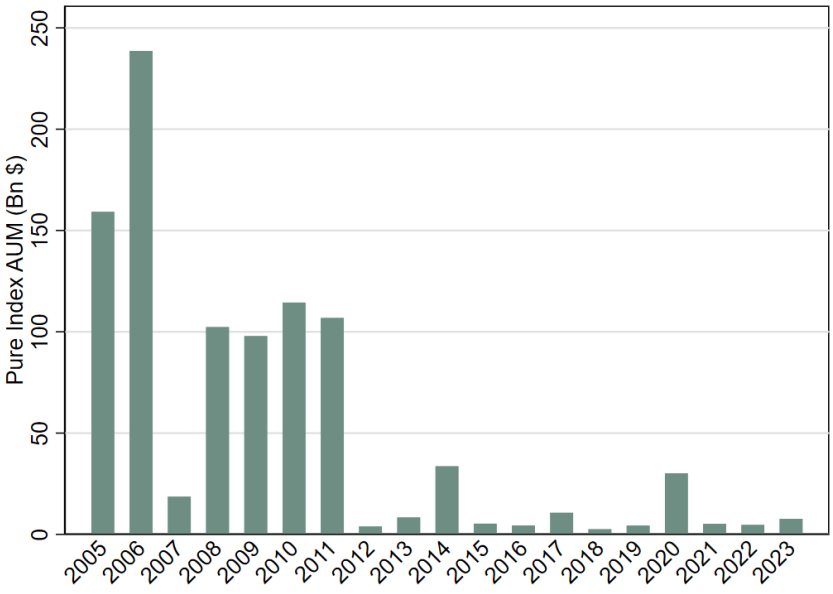


Figure 2: Pure versus Mixed AUM

Panel A of this figure displays assets under management (AUM) by all mixed and pure fund families throughout the sample period, and Panel B displays AUM of pure index families throughout the sample period. We consider a fund family mixed in a given year if it offers both active and index funds in that year, pure index if it only offers index funds in that year, and pure active if it only offers active funds in that year. We define index funds as funds with an index fund flag equal to "D" in the CRSP Survivor-Bias-Free US Mutual Funds database in a given year, all other funds are considered active.



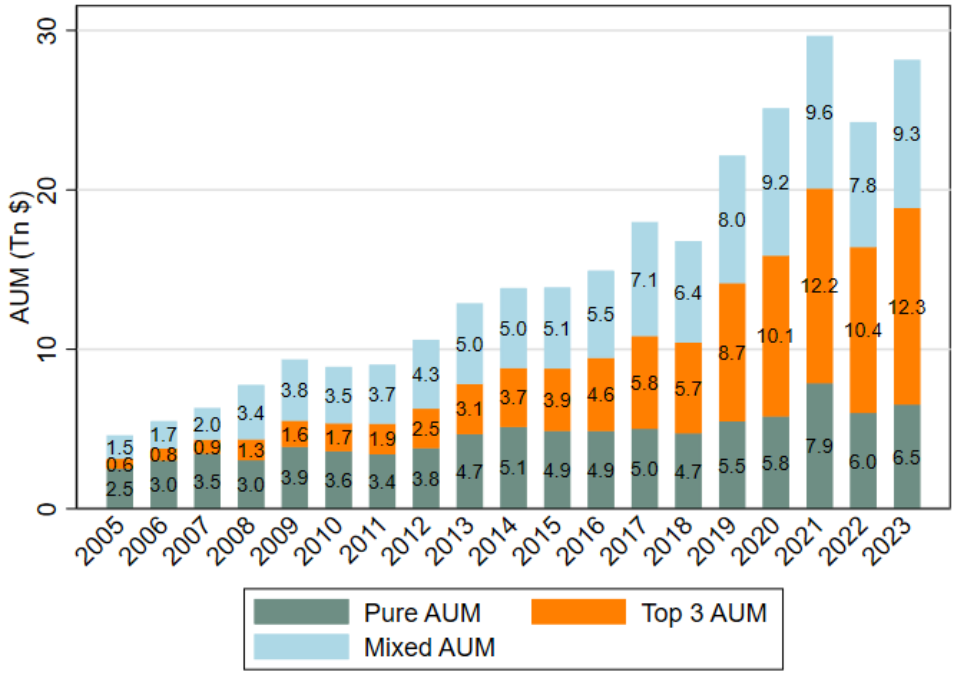
(a) Pure versus mixed AUM



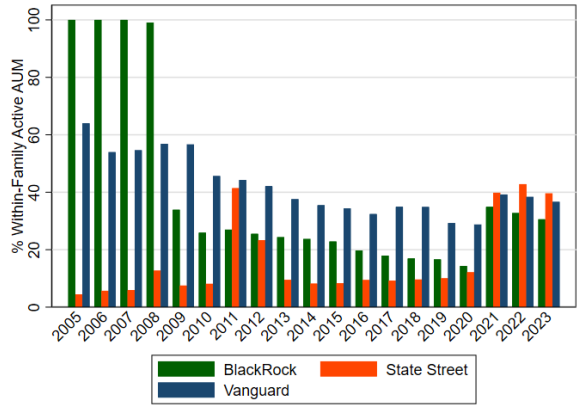
(b) Pure index AUM

Figure 3: Top 3 AUM

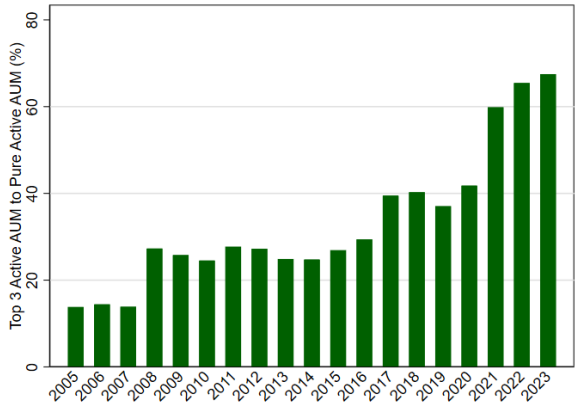
Panel A of this figure displays assets under management (AUM) for the top 3 fund families (BlackRock, Vanguard, and State Street) alongside the aggregate pure and mixed AUM throughout the sample period. Pure and mixed AUM as are defined similar to Figure 2. Panel B shows the percentage of active AUM for each of the Top 3 fund families throughout the sample period, and Panel C shows the percentage of Top 3 Active AUM to the aggregate pure active AUM throghout the sample period.



(a) Pure, Mixed, and Top 3 AUM Over Time



(b) Top 3 Percent Active AUM



(c) Top 3 Active to Pure Active AUM (%)

Figure 4: Mean and Median % Index AUM for Mixed Families

This figure displays the mean and median percentage index AUM for mixed fund families. We classify families as mixed if they offer both index and active funds in a given year, we then compute the fraction of the family's total AUM that is managed by its index funds and take the mean and median across all families. CRSP's holdings data is available at a quarterly frequency, we use the end of year holdings for computations in this figure.

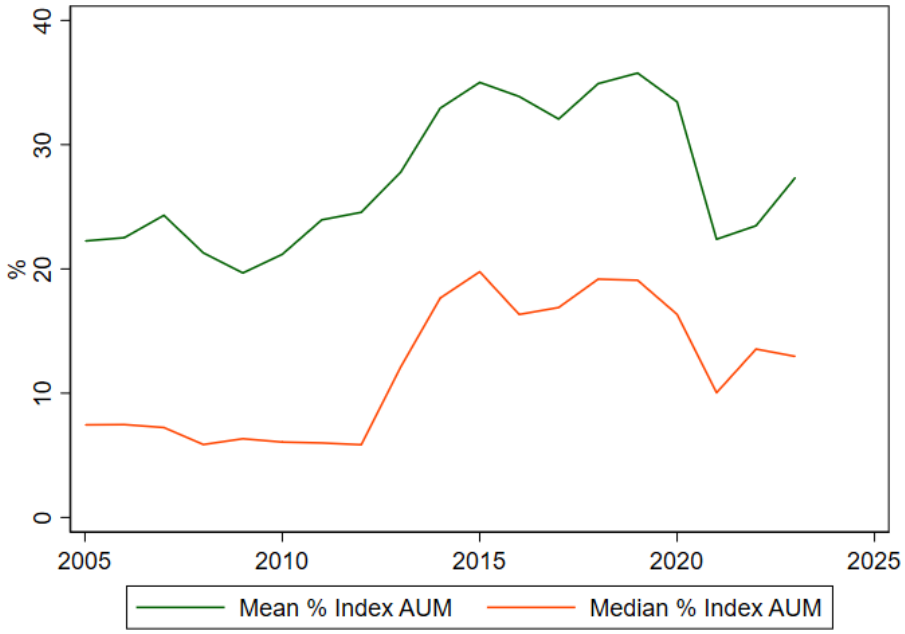


Figure 5: Sibling Funds' Co-Presence

This figure uses the fund-proposal-level data to show the proportion of observations representing active funds voting on proposals without index sibling funds being present in the same shareholder meeting (green), index funds voting without active sibling funds being present in the same shareholder meeting (blue), and both index and active funds voting on the same proposal (orange). The graph is further split by contentious and non-contentious proposals. The sample spans the years 2005 through 2021 due to the lack of availability of ISS voting recommendation in the latest ISS data update, and includes equity domestic funds with at least $10m in assets under management that we are able to link between ISS and CRSP. Index funds are defined as in Figure 1, and contentious proposals are defined as proposals where ISS and management's recommendations differ.

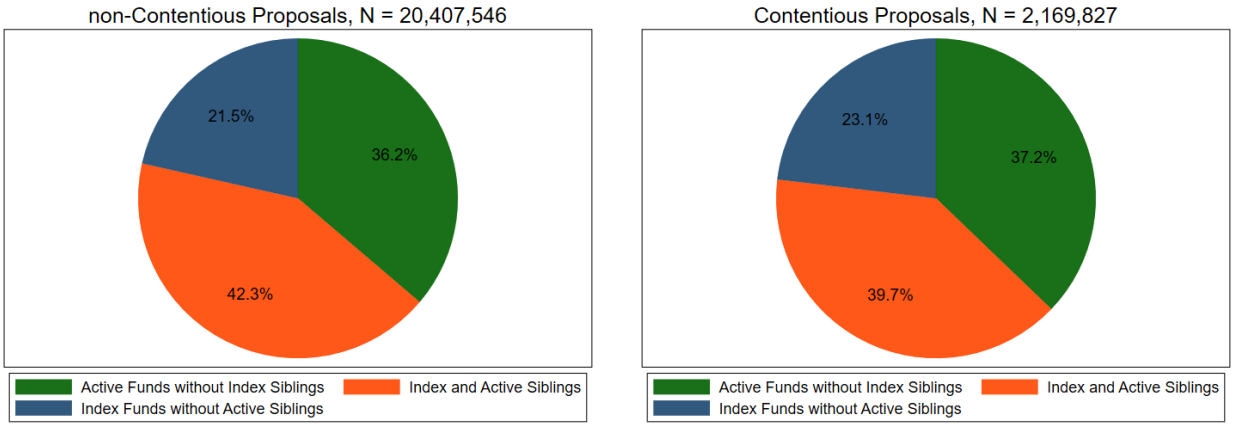


Table 1: Shared Index and Active Positions

This table presents summary statistics for shared index and active positions for mixed fund families. *% N Shared Positions* is the percentage of the number of equity positions that are shared between the family's active and index funds, and *% $ Shared Positions* is the percentage of the dollar value of the family's total equity positions that are shared between its active and index funds. *% N Shared Positions* and *% $ Shared Positions* are computed at the fund family-year level for mixed fund families using end of year values. *Active Weight of Shared Positions* and *Index Weight of Shared Positions* are the % active and index AUM of shared positions between index and active funds within mixed fund families, those variables are computed at the fund family-stock-year level using end of year values. The sample spans from 2005 to 2023. Index funds are defined as in Figure 1 and mixed fund families are defined as described in Figure **??**.

	N	Mean	SD	p10	p25	p50	p75	p90
% N Shared Positions	1,061	26.41%	22.44%	1.14%	7.36%	22.30%	40.85%	57.14%
% $ Shared Positions	1,061	54.09%	33.18%	1.45%	22.10%	63.64%	82.26%	91.69%
Active Weight of Shared Positions	646,331	53.51%	213.94%	2.37%	17.19%	57.64%	90.15%	98.09%
Index Weight of Shared Positions	646,331	46.49%	213.94%	1.91%	9.85%	42.36%	82.81%	97.63%

Table 2: CRSP-ISS Funds Summary Statistics

This table presents summary statistics for all CRSP domestic equity funds with at least $10m in AUM (Panel A), CRSP-ISS linked funds with at least $10m in AUM (Panel B), and the percentage of number and AUM of linked funds between CRSP and ISS (Panel C). Panels A and B are presented at the fund-year level and show end-of-year stats, and Panel C is at the year level. The sample spans from 2005 to 2023. All variables are defined in the Appendix.

Panel A: CRSP Funds

	N	Mean	SD	p10	p25	p50	p75	p90
				Active Funds				
AUM ($mil)	64,817	1598	6660	26	70	258	959	3034
Expense Ratio	64,817	0.74%	0.61%	0.00%	0.00%	0.85%	1.17%	1.49%
Number of Positions	54,650	146	329	12	33	64	118	305
HHI	54,650	696	1435	86	141	239	483	1656
				Index Funds				
AUM ($mil)	10,841	5080	38570	27	78	360	1562	5873
Expense Ratio	10,841	0.36%	0.35%	0.00%	0.08%	0.30%	0.54%	0.70%
Number of Positions	9,373	426	616	30	60	185	504	997
HHI	9,373	349	931	26	67	138	348	585

Panel B: CRSP-ISS Linked Funds

	N	Mean	SD	p10	p25	p50	p75	p90
				Active Funds				
AUM ($mil)	26,699	2315	9196	37	99	379	1379	4390
Expense Ratio	26,699	1.06%	0.43%	0.53%	0.82%	1.03%	1.29%	1.55%
Number of Positions	21,311	153	330	30	44	73	126	311
HHI	21,311	384	875	80	132	208	339	580
				Index Funds				
AUM ($mil)	6,096	6586	48102	37	114	463	2020	8196
Expense Ratio	6,096	0.44%	0.34%	0.10%	0.20%	0.39%	0.60%	0.70%
Number of Positions	5,129	400	613	33	60	150	501	966
HHI	5,129	231	244	28	70	149	341	508

Panel C: Percent N and AUM of CRSP-ISS Linked Funds to CRSP Funds

	N	Mean	SD	p10	p25	p50	p75	p90
% N Linked Funds	19	46%	13%	37%	39%	43%	60%	64%
% AUM Linked Funds	19	67%	9%	62%	62%	66%	74%	79%

Table 3: Voting Summary Stats

This table presents summary statistics for the voting data used in this study. Panel A provides summary statistics at the fund family-proposal level, Panel B provides summary statistics at the proposal level, and Panel C provides summary statistics at the fund-proposal-level as well as proposal-level statistics split by contentious and non-contentious proposals. All variables are defined in the Appendix. The sample in Panels A and B spans the years 2005 through 2023, while the sample in Panel C spans the years 2005 through 2021 because ISS recommendation is unavailable using the most recent ISS data update. Stats in this table cover all funds in the ISS data, except for the variables *Vote with Mgmt*, *% TNA*, *Vote with Mgmt* (*Index Funds*), and *Vote with Mgmt* (*Active Funds*), those variables condition on a valid ISS-CRSP link.

Panel A: Fund Family Consensus

	N	Mean	SD	p10	p25	p50	p75	p90
Consensus	65,398,245	0.98	0.14	1.00	1.00	1.00	1.00	1.00
Conditional Consensus	32,414,476	0.96	0.19	1.00	1.00	1.00	1.00	1.00

Panel B: Proposal-Level Stats

	N	Mean	SD	p10	p25	p50	p75	p90
Contentious	646,095	0.18	0.38	0.00	0.00	0.00	0.00	1.00
Pass	646,095	0.83	0.38	0.00	1.00	1.00	1.00	1.00
Fraction Votes For	542,820	0.83	0.20	0.57	0.77	0.90	0.97	0.99
Management Sponsor	646,095	0.98	0.14	1.00	1.00	1.00	1.00	1.00

Panel C: Proposal- and Fund-Proposal-Level Stats

	N	Mean	SD	p10	p25	p50	p75	p90
				Non-Contentious Proposals				
Vote with Mgmt	20,407,546	0.97	0.16	1	1	1	1	1
% TNA	20,407,546	0.56%	1.03%	0.01%	0.04%	0.16%	0.64%	1.55%
Vote with Mgmt (Index Funds)	8,685,576	0.97	0.17	1.00	1.00	1.00	1.00	1.00
Vote with Mgmt (Active Funds)	11,721,970	0.97	0.16	1.00	1.00	1.00	1.00	1.00
Pass	530,278	0.87	0.34	0.00	1.00	1.00	1.00	1.00
Fraction Votes For	462,143	0.86	0.18	0.65	0.81	0.91	0.98	0.99
Management Sponsor	530,278	0.99	0.09	1.00	1.00	1.00	1.00	1.00
				Contentious Proposals				
Vote with Mgmt	2,169,827	0.43	0.49	0	0	0	1	1
% TNA	2,169,827	0.61%	1.20%	0	0.02%	0.14%	0.69%	1.76%
Vote with Mgmt (Index Funds)	923,718	0.49	0.50	0.00	0.00	0.00	1.00	1.00
Vote with Mgmt (Active Funds)	1,246,109	0.38	0.49	0.00	0.00	0.00	1.00	1.00
Pass	115,817	0.63	0.48	0.00	0.00	1.00	1.00	1.00
Fraction Votes For	80,677	0.67	0.26	0.29	0.52	0.72	0.89	0.97
Management Sponsor	115,817	0.93	0.26	1.00	1.00	1.00	1.00	1.00

Table 4: 401(k) Summary Stats

This table presents summary statistics for the 401(k) data used in this study. The data spans from 2009 till 2018 and covers all US public companies with a valid EIN-CIK link and employee benefit plans that are subject to the Employee Retirement Income Security Act (ERISA). 401(k) menu stats are reported at the plan-year level, except for the variable *Assets Per Fund*, which is at the plan-fund-year level. Fund-family stats are at the fund-family-year level and fund family-proposal and fund-proposal stats are at the fund family-proposal and fund-proposal levels, respectively. All variables are defined in the Appendix.

	N	Mean	SD	p10	p25	p50	p75	p90
				401(k) Menu Stats				
Number of Funds	22,182	19.84	11.95	8.00	13.00	20.00	25.00	30.00
Plan Size ($mil)	22,182	248	838	6	14	46	169	536
% Mutual Funds	22,182	0.69	0.25	0.28	0.55	0.77	0.89	0.95
Assets Per Fund ($mil)	451,277	6.50	31.49	0.03	0.18	0.84	3.66	13.00
				Fund Family Stats				
% Plan Income	7,240	0.29	1.12	0.00	0.00	0.00	0.00	0.73
% Index AUM	7,240	0.05	0.19	0.00	0.00	0.00	0.00	0.02
FF Income ($mil)	7,240	110	528	0	1	3	26	184
FF Size ($mil)	7,240	21500	150662	15	52	274	2829	21868
				Fund Family-Proposal and Fund-Proposal Stats				
Fund on Plan	15,095,647	0.00	0.05	0.00	0.00	0.00	0.00	0.00
Fund on Any Plan	15,095,647	0.18	0.38	0.00	0.00	0.00	0.00	1.00
FF on Plan	5,848,030	0.01	0.09	0.00	0.00	0.00	0.00	0.00
FF on Any Plan	5,848,030	0.74	0.44	0.00	0.00	1.00	1.00	1.00

Table 5: Index versus Active Funds

This table presents results of regressions explaining voting with management. The left-hand side variable is *Vote with Mgmt*, an indicator variable equal to one if the fund casts a vote that follows management's voting recommendation, and zero otherwise. Columns (1) through (4) limit to non-contentious proposals only, defined as proposals where management and ISS issue similar voting recommendations, while columns (5) through (8) limit to contentious proposals only, defined as proposals where management and ISS issue different voting recommendations. The sample spans from 2005 to 2021. The main explanatory variable is *Index*, an indicator variable equal to one for index funds, and zero otherwise. All variables are defined in the appendix. Standard errors are clustered by fund. Significance: *p<10%, **p<5%, ***p<1%.

	non-Contentious				*Contentious*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Index	-0.003	0.001	0.006	0.003	0.118	-0.062	0.164	-0.032
	(0.003)	(0.001)	(0.004)	(0.002)	(0.028)***	(0.021)***	(0.044)***	(0.021)
Active x Expense Ratio			0.010	0.003			-0.072	0.091
			(0.003)***	(0.002)			(0.037)*	(0.026)***
Index x Expense Ratio			-0.003	0.001			-0.324	0.107
			(0.015)	(0.002)			(0.050)***	(0.034)***
% TNA			-0.000	0.001			0.023	0.012
			(0.001)	(0.000)**			(0.005)***	(0.002)***
Observations	20,407,322	20,407,321	20,407,322	20,407,321	2,169,256	2,169,253	2,169,256	2,169,253
R-squared	0.040	0.114	0.041	0.114	0.132	0.387	0.158	0.389
Firm x Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund Family FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 6: Index versus Active Sibling Funds

This table presents results of regressions explaining voting with management. The left-hand side variable is *Vote with Mgmt*, an indicator variable equal to one if the fund casts a vote that follows management's voting recommendation, and zero otherwise. The sample in this table spans from 2005 to 2021 and includes contentious proposals only, defined as proposals where management and ISS issue different voting recommendations, and limits to fund-proposal observations where index and active sibling funds are shareholders of the same firm and voting on the same proposal. The main explanatory variable is *Index*, an indicator variable equal to one for index funds, and zero otherwise. All variables are defined in the appendix. Standard errors are clustered by fund. Significance: *p<10%, **p<5%, ***p<1%.

	(1)	(2)	(3)	(4)
Index	0.012	-0.074	-0.072	-0.031
	(0.029)	(0.017)***	(0.030)**	(0.016)*
Active x Expense Ratio			-0.226	0.127
			(0.035)***	(0.034)***
Index x Expense Ratio			-0.271	0.139
			(0.035)***	(0.037)***
% TNA			0.020	0.010
			(0.004)***	(0.002)***
Observations	861,449	861,448	861,449	861,448
R-squared	0.190	0.400	0.240	0.404
Firm x Year FE	Yes	Yes	Yes	Yes
Fund Family FE	No	Yes	No	Yes

Table 7: Active Funds Voting Alone versus Alongside Index Siblings

This table presents results of regressions explaining voting with management. The left-hand side variable is *Vote with Mgmt*, an indicator variable equal to one if the fund casts a vote that follows management's voting recommendation, and zero otherwise. The sample in this table spans from 2005 to 2021 and includes active funds voting on contentious proposals only, defined as proposals where management and ISS issue different voting recommendations. The main explanatory variable is *Index Sibling*, an indicator variable equal to one if the active fund voting on a contentious proposal is voting alongside an index sibling fund, and zero otherwise. All variables are defined in the appendix. Standard errors are clustered by fund. Significance: *p<10%, **p<5%, ***p<1%.

	(1)	(2)	(3)	(4)	(5)	(6)
Index Sibling	0.293	0.043	0.054	0.289	0.047	0.054
	(0.027)***	(0.013)***	(0.013)***	(0.026)***	(0.012)***	(0.013)***
Expense Ratio				-0.153	0.136	-0.205
				(0.032)***	(0.036)***	(0.076)***
% TNA				0.028	0.005	-0.003
				(0.006)***	(0.002)***	(0.002)*
Observations	757,131	757,131	757,124	757,131	757,131	757,124
R-squared	0.261	0.464	0.486	0.281	0.468	0.487
Firm x Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Fund Family FE	No	Yes	No	No	Yes	No
Fund FE	No	No	Yes	No	No	Yes

Table 8: Active Funds Voting Alongside Index Siblings: Does the Size of the Sibling Matter?

This table presents results of regressions explaining voting with management. The left-hand side variable is *Vote with Mgmt*, an indicator variable equal to one if the fund casts a vote that follows management's voting recommendation, and zero otherwise. The sample in this table spans from 2005 to 2021 and includes active funds voting on contentious proposals only, defined as proposals where management and ISS issue different voting recommendations. The main explanatory variable is *% Index AUM*, computed for each observation where an active fund i belonging to fund family f is voting on proposal p, as the percentage AUM of f's index funds eligible to vote on p to AUM of all of f's funds eligible to vote on the same proposal. Panel A includes all active fund-proposal observations, whereas Panel B conditions on index sibling funds voting at the shareholder meeting (positive values of *% AUM Index*). All variables are defined in the appendix. Standard errors are clustered by fund. Significance: *p<10%, **p<5%, ***p<1%.

Panel A: All Active Fund-Proposal Observations

	(1)	(2)	(3)	(4)	(5)	(6)
% AUM Index	0.395	0.037	0.076	0.370	0.039	0.074
	(0.031)***	(0.021)*	(0.015)***	(0.031)***	(0.020)**	(0.015)***
Expense Ratio				-0.103	0.134	-0.203
				(0.029)***	(0.035)***	(0.075)***
% TNA				0.028	0.005	-0.003
				(0.006)***	(0.002)**	(0.002)
Observations	757,131	757,131	757,124	757,131	757,131	757,124
R-squared	0.269	0.464	0.486	0.280	0.467	0.487
Firm x Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Fund Family FE	No	Yes	No	No	Yes	No
Fund FE	No	No	Yes	No	No	Yes

Penel B: Active Funds Voting Alongside Sibling Index Funds (% AUM Index>0)

	(1)	(2)	(3)	(4)	(5)	(6)
% AUM Index	0.264	0.019	0.077	0.184	0.017	0.076
	(0.036)***	(0.026)	(0.022)***	(0.029)***	(0.025)	(0.022)***
Expense Ratio				-0.188	0.166	-0.263
				(0.031)***	(0.038)***	(0.093)***
% TNA				0.020	0.005	-0.001
				(0.005)***	(0.002)***	(0.001)
Observations	435,398	435,398	435,378	435,398	435,398	435,378
R-squared	0.232	0.419	0.440	0.257	0.424	0.441
Firm x Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Fund Family FE	No	Yes	No	No	Yes	No
Fund FE	No	No	Yes	No	No	Yes

Table 9: Fund Family Expense Ratio Income and Number of Positions

This table presents fund family-quarter-level summary statistics by type of fund family. Each quarter, we classify fund families as pure active, pure index, or mixed. We defined index funds as funds with an index fund flag equal to "D" in the CRSP Survivor-Bias-Free US Mutual Funds database in a given quarter, and all other funds as active. We define pure active families as families that do not offer index funds in a given quarter, pure index families as families that do not offer active funds in a given quarter, and mixed families as families that offer both index and active funds in a given quarter. *Expense Ratio Income* is the total net assets multiplied by the expense ratio, aggregated at the fund family-quarter level, *Number of Positions* is the number of unique positions held by all funds in the family. The sample spans from 2005 to 2023.

Variable	N	Mean	SD	p10	p25	p50	p75	p90
Pure Active Families								
Expense Ratio Income ($mil)	38,622	68.49	430.25	0.24	0.68	2.94	19.40	111.76
Number of Positions	38,622	612	1,810	24	42	103	385	1,371
Pure Index Families								
Expense Ratio Income ($mil)	922	4.05	15.41	0.02	0.07	0.34	1.96	7.58
Number of Positions	922	452	816	23	39	149	506	1,016
Mixed Families								
Expense Ratio Income ($mil)	5,131	624.33	1,282.06	4.43	21.24	156.14	686.57	1,506.64
Number of Positions	5,131	6,967	11,468	176	657	2,715	9,242	17,451

Table 10: 401(k) AUM and Pro-Management Voting: Fund-Level Regressions

This table presents results of regressions explaining voting with management. The left-hand side variable is *Vote with Mgmt*, an indicator variable equal to one if the fund casts a vote that follows management's voting recommendation, and zero otherwise. The sample in this table spans from 2009 to 2018 and includes contentious proposals only, defined as proposals where management and ISS issue different voting recommendations. The main explanatory variables are *Fund on Plan* and *Fund on Any Plan*. *Fund on Plan* is an indicator variable equal to one if the fund casting the vote on proposal p at firm i in year t is included as an investment option on firm i's 401(k) plan in year t, and zero otherwise. *Fund on Any Plan* is an indicator variable equal to one for fund i in year t if i is included as an investment option on any firm's 401(k) plan in t, and zero otherwise. All variables are defined in the appendix. Standard errors are clustered by fund. Significance: *p<10%, **p<5%, ***p<1%.

	Index Funds		*Active Funds*	
	(1)	(2)	(3)	(4)
Fund on Plan	-0.007	-0.007	0.003	0.003
	(0.013)	(0.013)	(0.015)	(0.015)
Fund on Any Plan	0.014	0.012	0.014	0.013
	(0.018)	(0.018)	(0.014)	(0.014)
Expense Ratio		-0.130		-0.138
		(0.150)		(0.065)**
% TNA		0.005		0.000
		(0.002)**		(0.002)
Observations	614,776	614,776	832,686	832,686
R-squared	0.451	0.451	0.455	0.456
Firm x Year FE	Yes	Yes	Yes	Yes
Fund FE	Yes	Yes	Yes	Yes

Table 11: 401(k) AUM and Pro-Management Voting: Fund-Family-Level Regressions

This table presents results of regressions explaining voting with management. The left-hand side variable is *Vote with Mgmt*, an indicator variable equal to one if all funds within a family cast votes that follow management's recommendation, and zero otherwise. The sample in this table spans from 2009 to 2018 and includes contentious proposals only, defined as proposals where management and ISS issue different voting recommendations. In Panel A, the main explanatory variables are *FF on Plan* and *FF on Any Plan*. *FF on Plan* is an indicator variable equal to one if the fund family housing the fund voting on p at firm i in year t has any representation on i's 401(k) plan in year t, and zero otherwise. *FF on Any Plan* is an indicator variable equal to one if the fund family has any fund included on any firm's 401(k) plan in year t, and zero otherwise. In Panel B, the main explanatory variable is *% Plan Income*, defined as the percentage of the fund family expense ratio income originating from 401(k) AUM. Panel B limits to observations where *% Plan Income* is positive. All variables are defined in the appendix. Standard errors are clustered by fund. Significance: *p<10%, **p<5%, ***p<1%.

Panel A: FF on Plan and FF on Any Plan

	(1)	(2)	(3)	(4)
FF on Plan	0.074	0.018	0.014	0.009
	(0.090)	(0.009)*	(0.049)	(0.010)
FF on Any Plan	0.106	0.068	0.179	0.056
	(0.056)*	(0.033)**	(0.060)***	(0.030)*
ln(FF Size)			0.082	0.066
			(0.060)	(0.058)
ln(FF Income)			-0.117	-0.042
			(0.067)*	(0.058)
% FF Index AUM			0.104	0.337
			(0.119)	(0.224)
% TNA			0.003	0.003
			(0.001)*	(0.001)**
Observations	557,236	557,229	557,042	557,035
R-squared	0.117	0.389	0.144	0.391
Firm x Year FE	Yes	Yes	Yes	Yes
Fund Family FE	No	Yes	No	Yes

Panel B: % Plan Income (Conditional on >0 Values)

	(1)	(2)	(3)	(4)
% Plan Income	-0.016	0.014	-0.005	0.013
	(0.018)	(0.010)	(0.014)	(0.009)
ln(FF Size)			0.025	0.002
			(0.069)	(0.090)
ln(FF Income)			-0.036	-0.038
			(0.078)	(0.083)
% FF Index AUM			0.260	0.483
			(0.118)**	(0.302)
% TNA			0.003	0.003
			(0.002)	(0.001)***
Observations	413,099	413,098	412,988	412,987
R-squared	0.130	0.368	0.160	0.372
Firm x Year FE	Yes	Yes	Yes	Yes
Fund Family FE	No	Yes	No	Yes