Conflicting Interests in Fund Families' Acquisitions of Fund Sponsorships*

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Abstract

Our study of fund families' acquisitions of fund sponsorships documents novel evidence supporting the hypothesis that because their fiduciary responsibilities are for investors (partners or shareholders) of fund families, management of fund families prioritize family values over fund investor interests. Specifically, although the sponsorship acquisitions are motivated by sensible reasons from fund families' perspective, they tend to destroy fund performance, especially for the acquired funds that remain intact and the acquiring families are "acquainted" with, and don't benefit fund investors by enhancing liquidity, lowering fees, or expanding the set of fund investment opportunities as indicated by the pre-acquisition fund performance.

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Fund families and mutual funds are important players in the financial markets. While both of them are individual firms, they are linked in a unique way. Specifically, fund families sponsor mutual funds by nominating fund managers, handling sales and advertising, etc. In return, they collect various fees.

This organizational form constitutes a source of potential conflicts of interest. Because management of fund families have fiduciary responsibilities for investors (partners or shareholders) of fund families, not for fund investors, they can take actions to increase family values at the expense of fund investor interests. Existing research has documented evidence of these conflicts. For example, fund families strategically transfer performance across member funds to favor funds with "high family value" (i.e., high fees or high past performers) at the expense of funds with "low family value" (Nanda et al., 2004; and Gasper et al., 2006), and provide an insurance pool against temporary liquidity shocks to member funds through, and at the expense of, affiliated funds of mutual funds (Bhattacharya et al., 2012).

In this article, we conduct an empirical analysis of a type of transactions that are often taken by fund families: acquisitions of fund sponsorships held by other fund families. The sponsorship acquisitions are probably the quickest way for fund families to achieve growth because by paying a price, the acquiring families expand asset and client bases immediately. Examples of the sponsorship acquisitions include Blackrock Inc.'s acquisitions of State Street Research & Management Co. in 2004 and of Merrill Lynch Investment Managers business in 2006.[1] Our results evidence that management of fund families prioritize family values over fund investor interests. Specifically, although the sponsorship acquisitions are motivated by sensible reasons from fund families' perspective and are likely to benefit

[1]Fund families also grow business by: (1) improving fund performance to attract new money; and (2) launching new funds to attract new fund investors.

investors of fund families,[2] they tend to destroy the performance of a substantial number of involved funds, and don't benefit fund investors by enhancing liquidity, lowering fees, or expanding the set of fund investment opportunities as indicated by the pre-acquisition fund performance.

We start our analysis by examining how the sponsorship acquisitions impact the performance of the newly acquired funds and the acquiring families' incumbent funds. Existing research provides limited knowledge about this. Particularly, in the acquisitions of sponsorships of equity mutual funds (which we focus in this article), the acquiring families keep approximately 66% of the acquired funds intact; we refer to these funds as "intact funds." They merge the remaining 34% of the acquired funds, which tend to have relatively small size and poor past performance, into their incumbent funds; we refer to these acquired funds as "merged funds" and the corresponding incumbent funds as "merging funds."[3] Previous studies on mergers at the fund level, e.g., Jayaraman et al. (2002), Zhao (2005), and Khorana et al. (2007), provide valuable information about the 34% merged funds. But the literature has little to say about the 66% intact funds.[4]

Intuitively, the impact of the sponsorship acquisitions on fund performance can be positive or negative. On one hand, the acquiring families bring more funds under one roof through the acquisitions, so managers of these funds can share investment ideas. This tends to improve fund performance. On the other hand, the acquiring families usually conduct a consolidation of the acquired funds for the purpose of branding or facilitating governance. For example, after Blackrock Inc. acquired State Street Research & Manage-

[2]The lack of data on acquisition prices prevent us from examining directly the gain/loss of investors of fund families.

[3]We compute and report the summary statistics for the sponsorship acquisitions in Section I.

[4]Here, we ignore the equity mutual funds remaining in the selling families because there are only a small number of these funds. In most sponsorship acquisitions (approximately 70%), the selling families liquidate their equity fund business completely.

ment Co. in 2004, it replaced State Street Research's large-cap stock-picking capabilities with its computer-based program for managing large-cap assets. This decision affected approximately 17% of Blackrock's mutual fund assets. The consolidation is costly if it hurts the morale and incentives of the managers of the acquired funds. This tends to deteriorate fund performance.

A major finding of our study is that the sponsorship acquisitions tend to destroy the performance of the acquired funds that remain intact. For example, the post-acquisition objective-adjusted return (OAR, which measures the performance of a fund relative to all other funds with the same investment objective) of these funds is significantly lower than the pre-acquisition level. This result is robust after using a regression approach to control for other fund characteristics that can be related to fund performance, and is unlikely to be a performance correction due to fund inflows (Berk and Green, 2004). We find no evidence of a significant performance change for the acquiring families' incumbent funds that remain intact. This is not surprising because the number and size of these funds are much larger than those of the newly acquired funds. We also find evidence of a significant performance improvement (deterioration) for the merged acquired (merging incumbent) funds, consistent with previous studies on fund mergers.[5]

We further show that the performance deterioration of the intact acquired funds concentrates on the funds the acquiring families are "acquainted" with due to the fact that they have incumbent funds with the same investment objective. A plausible explanation for this is that after the sponsorship acquisitions, the acquiring families tend to impose a consolidation upon these funds using their incumbent funds as a prototype. The managers of these funds will accept this reshaping because otherwise, they have to leave. But

[5]See, e.g., Jayaraman et al. (2002), Zhao (2005), and Khorana et al. (2007). We follow the literature using the performance of the combined funds to describe the post-acquisition performance of both the merged funds and the merging funds.

their morale and incentives are likely to be hurt, leading to poor fund performance. For the "unacquainted" funds, the acquiring families do not have a prototype to follow in the consolidation. The consolidation is likely to be complementary and, therefore, won't lower fund performance.

Another consequence of the consolidation is that the performance of the acquired funds and the performance of the acquiring families' incumbent funds tend to move together. Specifically, we find evidence that the post-acquisition correlation between the performance of the intact acquired funds, whether the acquiring families are acquainted with or not, and the performance of the intact incumbent funds is significantly higher than the pre-acquisition level.

Our evidence on the co-movement of fund performance also suggests an interesting view about how fund families function. According to industry anecdotes, in most fund families, major decisions are decentralized in that fund managers pick stocks without substantial coordination with other managers. Our evidence suggests, however, that fund managers in the same family do coordinate with each other in picking stocks.[6] This view is consistent with Elton et al. (2007), who find that mutual fund returns are more closely correlated within than between fund families.

Next, we examine whether the sponsorship acquisitions benefit fund investors by enhancing liquidity, lowering fees, or expanding the set of fund investment opportunities. First, we find little evidence that the sponsorship acquisitions increase fund size and decrease fund turnover ratio, suggesting that they do not enhance liquidity for fund investors.

[6]Coordination may occur if the fund managers share investment ideas, which can be discovered by some of them or by the family's research department, or if the fund family imposes the same investment philosophy or disciplines on the fund managers.

Nanda et al. (2004) and Gasper et al. (2006) find evidence that fund families strategically transfer performance across member funds to favor funds with "high family value" (i.e., high fees or high past performers). This strategy tends to cause the fund performance in the same family to move in opposite directions.

Second, we find little evidence that the sponsorship acquisitions decrease fund expense ratio, suggesting that either the acquiring families do not realize economies of scale and reduce overhead, advertising, and other costs, or they do but won't share this gain with fund investors by lowering fees. Third, the above-mentioned evidence on the correlation between the performance of the acquired funds and the performance of the acquiring families' incumbent funds suggests that although the sponsorship acquisitions expand the set of fund investment opportunities for fund investors, they don't do so as much as indicated by the pre-acquisition fund performance. We further show that fund investors respond negatively to the sponsorship acquisitions by withholding purchases of and/or redeeming shares of the involved funds.

Finally, we examine the determinants of the acquisitions, as well as the sales, of fund sponsorships. We find evidence that large and complex (a large number of fund investment objectives) fund families are likely to acquire fund sponsorships from other fund families, suggesting that these fund families consider the sponsorship acquisitions, in which they can quickly expand asset and client bases and offer more fund choices to attract new clients, as a viable way to achieve growth. We also find evidence that fund families experiencing losses of market shares to rivals are likely to sell fund sponsorhsips, suggesting that fund families' competition conditions are an important reason for the sales of fund sponsorships. Overall, our results suggest that the sponsorship acquisitions and sales are motivated by sensible reasons from fund families' perspective and, therefore, are likely to benefit investors (partners or shareholders) of fund families.

Besides contributing to the research on mutual funds, our study is also related to the literature on mergers and acquisitions. A few studies of corporate mergers and acquisitions using plant-level data of manufacturing firms, e.g., Maksimovic and Phillips (2001), Schoar (2002), and Maksimovic et al. (2011), find evidence of an improvement in the

post-acquisition performance of the acquired plants. Schoar (2002) further shows that this performance improvement mainly happens in the acquired plants that have distinct business lines from the acquiring firms' existing business lines. She interprets this as evidence of a "new toy" effect, according to which managers of the acquiring firms shift their focus towards the new segments.

The difference between the performance of the acquired plants and the performance of the acquired funds can be attributed to the difference between the organizational form of manufacturing firms (plants) and the organizational form of fund families (mutual funds). Specifically, manufacturing firms own plants, and the headquarters decide how plants invest.[7] Therefore, the acquired plants can achieve a performance improvement as managers of the acquiring firms shift their focus towards the new segments. In contrast, fund families sponsor, but don't own, mutual funds. The portfolio management is carried out at the fund level. As the acquiring families conduct a consolidation, which constitutes a detailed reshaping of the funds they are acquainted with, the morale and incentives of the managers of these funds tend to be hurt, leading to poor fund performance.

The remainder of this article is organized as follows. Section I describes the data. Section II examines the impact of the sponsorship acquisitions on fund performance. Section III investigates whether the sponsorship acquisitions benefit fund investors by enhancing liquidity, lowering fees, or expanding the set of fund investment opportunities. Section IV uses fund flows to analyzes fund investors' responses to the sponsorship acquisitions. Section V examines the determinants of fund families' acquisitions and sales of fund sponsorships. Section VI concludes.

[7]See, e.g., Stein (1997) for the capital budgeting process of multi-division firms.

I. The Data

We obtain fund data from the Center for Research in Security Prices (CRSP) Survivorship Bias Free Mutual Fund database.

To focus our analysis on open-end U.S. domestic equity mutual funds, which are associated with more reliable data, we apply the following filters. First, we eliminate balanced, bond, money market, international, and sector funds, and funds not invested primarily in equity securities.[8] Second, we exclude observations prior to the fund total net assets (TNA) surpassing $15 million as suggested by Chen et al. (2004), and observations with a report date prior to fund organization date to control for incubation bias (Evans, 2010). Third, for funds with multiple share classes, we eliminate duplicate funds and compute the fund-level variables by aggregating across the different share classes.[9] We also exclude funds with no information about management company or investment objective because we will need this information to conduct empirical analysis. We end up with a sample of 2,894 distinct equity mutual funds.

We use the management company code to identify fund families for the period of 2000 to 2009. Our sample begins in 2000 because most of the management company code data are available as of 1999. We identify an acquisition of fund sponsorships by a fund family if in a given month, one or several equity mutual funds sign off their old management company (the selling family) and sign in a new management company (the acquiring family). We include in the acquisition all the sales of fund sponsorships by the selling family to the acquiring family in the next 6 months, because the sponsorship acquisition can take a while to complete. We also extend the acquisition window 5 months prior to the first sale

[8]Kacperczyk et al. (2008) describe the procedure to screen funds based on investment objective in detail.

[9]For most variables, we use a value-weighted average for the fund-level observations.

of funds by the selling family to the acquiring family because there can be a delay in the sponsorship acquisition being reported in the CRSP database.

The acquisition window comprises 12 months, where the first (last) month is denoted as month 0 (11). We denote the 24 months before the acquisition window (months -24 to -1) as the pre-acquisition period, and the 24 months after the acquisition window (months 12 to 35) as the post-acquisition period. We also require that to be included in our study, the acquired funds and the acquiring families' incumbent funds must have return information in at least 12 out of the 24 months in both the pre-acquisition period and the post-acquisition period.[10]

[Insert Table I here.]

Table I reports the distribution of the sponsorship acquisitions of equity mutual funds by year for the period of 2000 to 2009. The number of sponsorship acquisitions ranges from 10 in 2007 to 36 in 2002. Over the entire sample period, we identify 213 sponsorship acquisitions. 528 (1,049) distinct equity mutual funds, or approximately 18% (36%) of the 2,894 distinct equity mutual funds in our sample, used to be acquired (the acquiring families' incumbent funds).

In the sponsorship acquisitions, the acquiring families keep approximately 66% (378/569) of the acquired funds intact. They merge the remaining 34% (191/569) of the acquired funds into their incumbent funds. The merged acquired funds and the merging incumbent funds correspond to the sample of funds used by Jayaraman et al. (2002), Zhao (2005), and Khorana et al. (2007) in their studies of across-family fund mergers.

We don't consider the equity mutual funds remaining in the selling families because

[10]This eliminates funds that are liquidated or merged very soon after the acquisitions. There are a very small number of these funds.

there are only a small number of these funds. In most sponsorship acquisitions (approximately 70%), the selling families liquidate their equity fund business completely.

II. The Impact of the Sponsorship Acquisitions on Fund Performance

In this section, we examine how the sponsorship acquisitions impact the performance of the acquired funds and the acquiring families' incumbent funds.

We use three risk- and style-adjusted performance measures for each fund. The first performance measure is the excess return of the fund, R_{it}, over the market portfolio, R_{Mt},

$$R_{it} - R_{Mt}.$$

The second performance measure is a holding-based performance measure, "Characteristic Selectivity" (CS), proposed by Daniel et al. (DGTW) (1997) to describe fund managers' stock selection abilities,

$$\mathrm{CS}_{it} = \sum_j w_{i,t-1}^j \Big[R_{it}^j - \mathrm{BR}_t(j, t-1) \Big],$$

where R_{it}^j is the return on fund i's stockholding j in month t, $\mathrm{BR}_t(j, t-k)$ is the return on a benchmark portfolio in month t to which stockholding j was allocated in month $t-k$ according to its size, book-to-market ratio, and momentum characteristics, and $w_{i,t-k}^j$ is the value weight of stockholding j at the end of month $t-k$ in the mutual fund.[11] The

[11]We compute the value weights of stockholdings using holdings information obtained from the Thompson Financial CDA/Spectrum database, which is linked to the CRSP database using MFLINKS. The DGTW benchmark returns were taken from Russ Wermers' website http://www.smith.umd.edu/faculty/rwermers/ftpsite/Dgtw/coverpage.htm. DGTW (1997) and Werm-

third performance measure is the Objective-Adjusted Return (OAR),

$$\text{OAR}_{it} = R_{it} - R^{O}_{-i,t},$$

which captures the difference between the fund return, R_{it}, and the value-weighted average return on a portfolio that comprises all other funds with the same investment objective, $R^{O}_{-i,t}$.

We compute the excess return and OAR using the fund return before subtracting expenses. This return describes fund managers' investment abilities. We will examine fund expenses separately in Section III.

We don't use factor models, such as CAPM, 3- or 4-factor models, etc., to adjust for risk and style differences because it is not clear which period of data should be used to estimate factor loadings of these models for the post-acquisition period.

A. Pre-Acquisition Fund Performance

Rows 1, 4, and 7 of Table II report the pre-acquisition performance of the acquired funds and the acquiring families' incumbent funds. We follow the literature on fund mergers using the performance of the combined funds to describe the post-acquisition performance of both the merged funds and the merging funds.

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ers (2004) describe the computation of the benchmark returns in detail.

DGTW (1997) also propose a "Characteristic Timing" measure (CT) to describe fund managers' style-timing abilities,

$$\text{CT}_{it} = \sum_{j} \Big[w^{j}_{i,t-1} \text{BR}_{t}(j, t-1) - w^{j}_{i,t-13} \text{BR}_{t}(j, t-13) \Big],$$

where $w^{j}_{i,t-13}$ is the value weight of stockholding j at the end of month $t-13$ in the mutual fund. We don't use this measure because it requires the holding data in the acquisition window to compute some of the CT measures in the post-acquisition period.

[Insert Table II here.]

Among the acquired funds, the pre-acquisition performance of the intact funds is better than that of the merged funds. For example, the excess return summarized in Row 1 indicates that the intact funds significantly outperform the market portfolio by 28.29 basis points (bps) per month, whereas the merged funds significantly underperform the market portfolio by 31 bps per month. The CS measure controls for size, value, and momentum differences. Row 4 shows that the CS of the intact funds is more significant and higher than the CS of the merged funds. The OAR further controls for the investment objective. Row 7 shows that the intact funds perform indistinguishably from peer funds, whereas the merged funds significantly underperform peer funds by 43.65 bps per month.

Among the acquiring families' incumbent funds, the OAR summarized in Row 7 indicates that the pre-acquisition performance of the intact funds is poorer than that of the merging funds. Specifically, the intact funds perform indistinguishably from peer funds, whereas the merging funds significantly outperform peer funds by 11.92 bps per month.

Our results suggest that in the sponsorship acquisitions, the acquiring families tend to keep the acquired funds with relatively good past performance intact, and merge the acquired funds with relatively poor past performance into the acquiring families' good-performing incumbent funds. These results are consistent with the literature on fund mergers, e.g., Jayaraman et al. (2002), Zhao (2005), and Khorana et al. (2007), predicting that the purpose of fund mergers can be to cover up the poor performance of the merged funds.

B. Change in Fund Performance around the Sponsorship Acquisitions

Rows 3, 6, and 9 of Table II summarize the performance change of the acquired funds and the acquiring families' incumbent funds around the sponsorship acquisitions.

Among the acquired funds, the OAR summarized in Row 9 indicates that the intact funds observe a significant performance deterioration. Specifically, the post-acquisition OAR of these funds is 11.79 bps per month lower than the pre-acquisition level. This result is statistically significant at the 1% level. The merged funds, however, observe a significant performance improvement. Specifically, the post-acquisition OAR of these funds is 37.07 bps per month higher than the pre-acquisition level. This result is statistically significant at the 1% level.

Among the incumbent funds, the OAR indicates no significant change in the performance of the intact funds. The merging funds, however, observe a significant performance deterioration. Specifically, the post-acquisition OAR of these funds is 18.94 bps per month lower than the pre-acquisition level. This result is statistically significant at the 1% level.

It is not surprising that the performance of the intact incumbent funds does not change significantly because the number of these funds is much larger than the number of the acquired funds (See Table I). We also show in Section III that these funds have much larger size than the acquired funds do. Our result on the performance improvement (deterioration) of the merged acquired (merging incumbent) funds is consistent with the literature on fund mergers predicting that in general the poor-performing funds are merged into the good-performing funds, producing average combined performance. In what follows, we focus our analysis on the performance deterioration of the intact acquired funds.

C. Change in the Performance of the Intact Acquired Funds: Regression Evidence

The performance deterioration of the intact acquired funds can be caused by changes in fund characteristics, e.g., fund TNA and expense ratio. We use a regression approach to control for these fund characteristics.

[Insert Table III here.]

Table III reports the regression results using the OAR as the only dependent variable because the above analysis suggests that it controls for risk and style differences properly. We include in the regression all the monthly observations of each intact acquired fund in the 24-month pre-acquisition period and the 24-month post-acquisition period. We set the post-acquisition dummy to be 1 (0) if a monthly observation is (isn't) in the post-acquisition 24 months. The explanatory variables, including fund TNA, flow, raw return, and family TNA, are lagged one month; expense and turnover ratios are contemporaneous.

Columns 1-2 of Table III show that after controlling for various fund characteristics and fixed effects, the coefficient on the post-acquisition dummy is significantly negative. This result is consistent with our earlier result using only the OAR that the intact acquired funds observe a deterioration in the post-acquisition performance.

Berk and Green (2004) show that fund flows can induce a correction of abnormal fund performance to the normal level. For example, good-performing funds attract flows of new money, increasing the fund size. Because it is more difficult to manage large funds, the performance of these funds will converge to the normal level. We find, however, in section III that the TNAs of the intact acquired funds don't increase significantly, and in Section IV that these funds observe lower post-acquisition fund flows than peer funds do. Therefore, the deterioration in the performance of these funds cannot be a performance

correction due to fund flows.

Columns 3-4 examine whether the performance deterioration of the intact acquired funds is due to turnover of fund managers. To conduct this analysis, we retrieve from the CRSP database for the 378 intact acquired funds in our sample the fund manager information right before and after the acquisition window. We manually eliminate the funds that do not have precise fund manager information, for example, team management or missing data. This leaves us 239 funds, which are run by 374 managers before the acquisition window. After the acquisition window, 74 funds, or 31% of the 239 funds, observe a change in the composition of fund managers.[12] We set the manager turnover dummy to be 1 (0) if a fund has (doesn't have) a change in the composition of fund managers after the acquisition window. The regression coefficient on the interaction term between the post-acquisition dummy and the manager turnover dummy is not significant, suggesting that turnover of fund managers does not contribute to the deterioration in the performance of the intact acquired funds.

Columns 5-6 consider a new descriptive variable for the intact acquired funds, the acquaintance dummy, which we set to be 1 (0) if the acquiring families have (don't have) incumbent funds with the same investment objective. Whereas the regression coefficient on the post-acquisition dummy alone is no longer significantly, the coefficient on the interaction term between the post-acquisition dummy and the acquaintance dummy is significantly negative. These results suggest that only the funds the acquiring families are acquainted with experience a performance deterioration.

A plausible explanation for these results is that after the sponsorship acquisitions, the acquiring families consolidate the funds they are acquainted with using the incumbent

[12]We also find that 104 fund managers, or 27.8% of the 374 pre-acquisition managers, no longer manage the acquired funds. This percentage seems not abnormally high. For example, Khorana (1996) shows that the average tenure of equity mutual fund managers is around 4 to 5 years, which is equivalent to a turnover rate of 20% to 25%.

funds as a prototype. The managers of these funds have no choice but to accept this reshaping. But their morale and incentives are likely to be hurt, leading to poor fund performance. Although a lack of data prevents us from conducting a systematic analysis, there is ample anecdotal evidence supporting this explanation. For example, after Blackrock Inc. acquired State Street Research & Management Co. in 2004, it replaced State Street Research's large-cap stock-picking capabilities with its computer-based program for managing large-cap assets, a decision that affected approximately 17% of Blackrock's mutual fund assets. An anonymous source close to State Street Research said that "They called this an integration of the business. It is not an integration." (Wall Street Journal, January 17, 2005). For the unacquainted funds, the acquiring families do not have a prototype to follow in the consolidation. The consolidation is likely to be complementary and, therefore, won't lower fund performance.

In sum, our results show that in the sponsorship acquisitions, the intact acquired funds, especially the funds the acquiring families are acquainted with, experience a performance deterioration likely due to costly consolidation.

D. Co-movement between the Performance of the Acquired Funds and the Performance of the Incumbent Funds

Another possible consequence of the acquiring families' consolidation of the acquired funds is that the performance of these funds and the performance of the acquiring families' incumbent funds tend to move together. We examine this possibility in Table IV.

[Insert Table IV here.]

Column 1 of Table IV reports the correlations between the performance of the intact acquired funds and the performance of the intact incumbent funds.[13] The reported statistics are based on the correlation for each pair of funds: one is an intact acquired fund, and the other is an intact incumbent fund. Row 3 shows that the post-acquisition correlation between the raw returns on the intact acquired funds and the incumbent funds is 3.51% higher than the pre-acquisition level. This result is statistically significant at the 1% level. We find similar results using the CS and the OAR to compute the correlation. Specifically, Row 6 shows that the post-acquisition correlation between the CS of the intact acquired funds and the intact incumbent funds is 4.80% higher than the pre-acquisition level. This result is statistically significant at the 1% level. Row 9 shows that the post-acquisition correlation between the OARs of the intact acquired funds and the intact incumbent funds is 1.88% higher than the pre-acquisition level. This result is statistically significant at the 5% level.

Columns 2 (3) shows that the correlation between the performance of the intact acquired funds the acquiring families are (aren't) acquainted with and the performance of the intact incumbent funds is higher than the pre-acquisition level.

In sum, the acquiring families' consolidation of the acquired funds causes the performance of these funds, whether the acquiring families are acquainted or not, and the performance of the acquiring families' incumbent funds to move together.

Our evidence on the co-movement of fund performance also suggests an interesting view about how fund families function. According to industry anecdotes, in most families, major decisions are decentralized in that fund managers pick stocks without substantial coordination with other managers. Our evidence suggests, however, that fund managers in the same family do coordinate with each other in picking stocks. Coordination can

[13]We exclude the merged acquired funds and the merging incumbent funds because after the acquisitions, they are combined and have the same performance.

take many forms. For example, the fund managers can share investment ideas, which are discovered by some of them or by the family's research department; the fund family imposes the same investment philosophy or disciplines on the fund managers. This view is consistent with Elton et al. (2007), who find that mutual fund returns are more closely correlated within than between fund families.

III. Other Impacts on Fund Investors

In this section, we examine whether the sponsorship acquisitions benefit fund investors by enhancing liquidity, lowering fees, or expanding the set of fund investment opportunities.

A. Liquidity: Fund TNA and Turnover Ratio

Large funds provide high liquidity for fund investors because their large cash holdings (usually 5% of TNA) help withstand liquidity shocks, such as asset "fire sales" (Coval and Stafford, 2007) caused by a large amount of redemption. Here, we examine if the sponsorship acquisitions increase fund TNAs and, thereafter, enhance liquidity for fund investors.

[Insert Table V here.]

Rows 1-3 of Table V report fund TNAs for the acquired funds and the acquiring families' incumbent funds. We find no significant increase in the post-acquisition fund TNAs for the intact acquired funds and the intact incumbent funds. Not surprisingly, however, the post-acquisition fund TNAs for the merged acquired funds and the merging incumbent funds increase, because they are combined.

An interesting observation is that among the acquired funds, the merged funds' TNAs are approximately one third (228.2/656.2) of the intact funds' TNAs. This suggests that

the purpose of fund mergers is not only to cover up the poor performance of the merged funds as the previous studies point out, but also to achieve economies of scale. We also find that the incumbent funds have much larger size than the acquired funds do.

Another measure of fund liquidity is fund turnover ratio. A low turnover ratio implies that a fund has a sufficiently large cash holding to cushion investors' purchases and redemption of shares so it does not need to trade often. Rows 4-6 of Table V report the turnover ratios of the acquired funds and the incumbent funds. We find no evidence of a significant decrease in the post-acquisition turnover ratios of these funds. In fact, the post-acquisition turnover ratio of the intact incumbent funds even increase.

In sum, our results suggest that the sponsorship acquisitions do not benefit fund investors by enhancing liquidity.

B. Fund Expense Ratio

If the acquiring families realize economies of scale and thereby reduce overhead, advertising, and other costs, they can share this gain with fund investors by lowering fees.

Rows 7-9 of Table V report the fund expense ratios of the acquired funds and the incumbent funds. We find no evidence of a significant decrease in the post-acquisition fund expense ratio except for the merged acquired funds. This is not surprising because, as Row 1 of Table V shows, these funds are merged into much larger funds, and large funds tend to have low expense ratios.

In sum, our results suggest that either the acquiring families do not realize economies of scale, or they do but won't share this gain with fund investors by lowering fees.

C. Investment Opportunity Set

Fund families usually allow fund investors to switch across funds within the same family without paying extra loads. Therefore, the acquiring families can offer fund investors low-cost access to more fund investment opportunities.

However, our earlier analysis of the correlation between the performance of the acquired funds and the performance of the incumbent funds suggests that after the sponsorship acquisitions, their performance tends to move together. Therefore, the acquisitions can expand the set of fund investment opportunities for fund investors, but not as much as indicated by the pre-acquisition fund performance.

IV. Fund Investors' Responses to the Sponsorship Acquisitions

The net impact of the sponsorship acquisitions on fund investors is not obvious. On one hand, the sponsorship acquisitions deteriorate the performance of the involved funds, especially that of the intact acquired funds the acquiring families are acquainted with. On the other hand, they expand the set of investment opportunities for fund investors, though not as much as indicated by the pre-acquisition fund performance. If fund investors are more concerned about fund performance, they will withhold purchases of and/or redeem shares of these funds. In this section, we use fund flows to examine how fund investors respond to the sponsorship acquisitions.

We follow the procedure proposed by Gruber (1996) and Zheng (1999) to compute monthly fund flow using fund TNA and monthly return, assuming that the flow happens

at the end of each month.

$$\text{Flow}_{it} = \frac{\text{TNA}_{it} - \text{TNA}_{i,t-1}(1 + R_{it})}{\text{TNA}_{i,t-1}},$$

where R_{it} is fund i's return in month t and TNA_{it} is fund i's TNA at the end of month t. We winsorize the fund flows at the 1% level in order to control for unidentified fund mergers during the pre- and post-acquisition periods. We then compute the fund objective-adjusted flow (OAF),

$$\text{OAF}_{it} = \text{Flow}_{it} - \text{Flow}^{O}_{-i,t},$$

which captures the difference between fund i's flow and the value-weighted average flow of a portfolio that comprises all other funds with the same investment objective, $\text{Flow}^{O}_{-i,t}$.

[Insert Figure 1 here.]

Figure 1 depicts the cumulative average OAFs for the intact acquired funds and the intact incumbent funds over the 60 months around the sponsorship acquisitions.[14] Panel A shows that in the 24 months after the acquisitions (months 12 to 35), the intact acquired funds observe approximately 6.8% lower growth than peer funds do. Panel B shows that in the same period, the intact incumbent funds observe approximately 12.7% lower growth than peer funds do. This is surprising because our earlier analysis finds no significant change in the post-acquisition performance of these funds. It is possible that fund investors of these funds are concerned about fund performance and play conservatively.

In sum, our results suggest that fund investors respond negatively to the sponsorship acquisitions by purchasing less and/or redeeming more shares of the involved funds.

[14]We don't consider the merged acquired funds and merging incumbent funds because we can obtain only data on the post-acquisition fund flows for the combined funds.

Figure 1 also shows that in the 24 months before the sponsorship acquisitions (month -24 to -1), the intact acquired funds observe negative OAF, suggesting that the selling families have lost market shares to rivals. In contrast, the acquiring firms' intact incumbent funds observe positive OAF, suggesting that the acquiring families have sound competition conditions. It is likely that fund families' competition conditions motivate the sponsorship acquisitions and sales. We examine this possibility in detail in the next section.

V. The Determinants of the Sponsorship Acquisitions and Sales

Despite the deterioration in the post-acquisition performance of the acquired funds and the severe post-acquisition fund outflows, the acquiring families can still generate profits for investors (partners or shareholders) of fund families if the sponsorship acquisitions expand asset and client bases and bring in more fees, the value of which is higher than the price they pay. We cannot examine the gain/loss observed by investors of the acquiring families due to the lack of data on acquisition prices. We instead examine whether the sponsorship acquisitions, as well as the sponsorship sales, are motivated by sensible reasons from fund families' perspective.

[Insert Table VI here.]

Table VI reports the results of a multinomial logistic regression. The dependent variable takes one of three possible outcomes for a fund family in a calendar year: (1) acquire fund sponsorships, (2) sell fund sponsorships, or (3) no acquisition or selling activity (the reference category). For example, if the fund family starts to acquire fund sponsorships in 2005, that is, month 0 of the acquisition window falls in 2005, then the fund family has the

first outcome in 2005. All the explanatory variables are lagged one year, except for those indicated by "lagged", which are lagged an additional year. We compute the family-level variables using the value-weighted average of fund-level variables. We adjust for the time fixed effects.

Columns 1-2 of Table VI summarize the regression results using the OAR to measure fund performance. Column 1 summarizes the coefficients for the first outcome (acquire fund sponsorships). The significantly positive coefficients on family TNA and number of investment objectives suggest that large and complex fund families are likely to acquire fund sponsorships. Column 2 summarizes the coefficients for the second outcome (sell fund sponsorships). The significantly positive coefficient on the number of investment objectives suggests that complex fund families are likely to sell fund sponsorships. The significantly negative coefficient on OAF suggests that fund families are likely to sell fund sponsorships after they have lost market shares to rivals. Columns 3-4 show that using the CS to measure fund performance in the multinomial logistic regression won't change the results.

In sum, our results suggest the sponsorship acquisitions and sales are motivated by sensible reasons from fund families' perspective and, therefore, are likely to benefit investors of fund families. Particularly, large and complex fund families are likely to view sponsorship acquisitions, in which they can quickly expand asset and client bases and offer more fund choices to attract new clients, as a viable way to achieve growth. Fund families' competition conditions are also an important reason for the acquisitions and sales of fund sponsorships.

VI. Conclusions

In this article, we conduct an empirical analysis of fund families' acquisitions of sponsorships of equity mutual funds. We document novel evidence on the sponsorship acquisitions. The evidence is supportive of the hypothesis that because their fiduciary responsibilities are for investors (partners or shareholders) of fund families, management of fund families prioritize family values over fund investor interests.

Specifically, we find that the sponsorship acquisitions provide limited benefits for, or even hurt, fund investors. For example, the sponsorship acquisitions tend to destroy the fund performance, especially for the intact acquired funds the acquiring families are acquainted with due to the fact that they have incumbent funds with the same investment objective. A plausible explanation for this is that after the sponsorship acquisitions, the acquiring families tend to impose a consolidation upon these funds using their incumbent funds as a prototype, for the purpose of branding or facilitating governance. The managers of these funds will accept this reshaping, but their morale and incentives are likely to be hurt, leading to poor fund performance. Moreover, the sponsorship acquisitions don't benefit fund investors by enhancing liquidity, lowering fees, or expanding the set of fund investment opportunities as indicated by the pre-acquisition fund performance.

On the other hand, we find that the sponsorship acquisitions are likely to benefit investors (partners or shareholders) of fund families because they are motivated by sensible reasons from fund families' perspectives. For example, large and complex fund families are likely to acquire fund sponsorships, suggesting that they consider the sponsorship acquisitions, in which they can quickly expand asset and client bases and offer more fund choices to attract new clients, as a viable way to achieve growth. Moreover, fund families experiencing losses of market shares to rivals are likely to sell fund sponsorhsips, suggesting that the competition conditions are an important reason for the sponsorship acquisitions/sales.

Our study has other interesting implications about how fund families function because the sponsorship acquisitions open a window for us to take a look inside the blackbox of fund families. For example, we find that the performance of the acquired funds and the performance of the acquiring families' incumbent funds tend to move together after the sponsorship acquisitions. This evidence suggests that in contrary to industry anecdotes in most fund families, major decisions are centralized to a certain degree so that fund managers in the same family coordinate with each other in pick stocks.

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Table I: The Distribution of Fund Families' Acquisitions of Sponsorships of Equity Mutual Funds

This table reports the distribution of fund families' acquisitions of sponsorships of equity mutual funds by year for the period of 2000 to 2009. We also report the number of the acquired funds that remain intact or are merged into the acquiring families' incumbent funds (the merged funds), and the number of the acquiring families' incumbent funds that remain intact or are used to merge the acquired funds (the merging funds).

	No. of Sponsorship Acquisitions	No. of Acquired Funds			No. of Incumbent Funds		
		Intact	Merged	Total	Intact	Merging	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2000	19	18	26	44	149	19	168
2001	27	36	18	54	185	16	201
2002	36	79	21	100	259	13	272
2003	23	23	21	44	202	20	222
2004	27	52	26	78	282	26	308
2005	18	57	21	78	212	15	227
2006	24	64	16	80	243	15	258
2007	10	7	26	33	101	20	121
2008	12	20	5	25	221	4	225
2009	17	22	11	33	175	10	185
Sum	213	378	191	569	2029	158	2187
No. of Distinct Funds		348	191	528	1007	132	1049

Table II: Pre- and Post-Acquisition Performance of the Acquired Funds and the Acquiring Families' Incumbent Funds

This table reports the three risk- and style-adjusted performance measures of the acquired funds and the acquiring families' incumbent funds in the pre- (post-) acquisition period, i.e., 24 months before (after) the acquisitions, for the period of 2000 to 2009. We use the excess return over the market, the Characteristic Selectivity measure (CS), and the objective-adjusted return (OAR). The t-statistics are given in parentheses. The table also reports the differences between these performance measures in the pre- and post-acquisition periods, along with their t-statistics. *, **, and *** indicate whether the results are statistically different from zero at the 10%, 5%, and 1% significance levels.

		Acquired Funds		Incumbent Funds	
		Intact	Merged	Intact	Merging
		(1)	(2)	(3)	(4)
Excess Ret per month×100					
Pre-Acquisition	(1)	0.2829***	-0.3100***	0.1570***	0.1164
		(6.15)	(-6.35)	(8.57)	(1.63)
Post-Acquisition	(2)	-0.0146	-0.0102	0.0483***	-0.0160
		(-0.54)	(-0.35)	(4.38)	(-0.50)
Difference	(3)=(2)-(1)	-0.2975***	0.2997***	-0.1087***	-0.1324*
		(-5.57)	(5.27)	(-5.08)	(-1.70)
No. of Fund Obs.		378	190	2,029	158
CS per month×100					
Pre-Acquisition	(4)	0.5843***	0.0840	0.3763***	0.3515***
		(6.43)	(0.68)	(9.39)	(2.74)
Post-Acquisition	(5)	0.1338***	0.1127*	0.0957***	0.0413
		(3.07)	(1.74)	(4.64)	(0.59)
Difference	(6)=(5)-(4)	-0.4505***	0.0288	-0.2806***	-0.3102**
		(-4.47)	(0.21)	(-6.22)	(-2.13)
No. of Funds		221	114	1,141	119
OAR per month×100					
Pre-Acquisition	(7)	0.0358	-0.4365***	-0.0149	0.1192**
		(1.06)	(-8.75)	(-1.01)	(2.42)
Post-Acquisition	(8)	-0.0821***	-0.0658**	-0.0207*	-0.0702***
		(-3.27)	(-2.55)	(-2.08)	(-2.84)
Difference	(9)=(8)-(7)	-0.1179***	0.3707***	-0.0057	-0.1894***
		(-2.79)	(6.60)	(-0.32)	(-3.44)
No. of Fund Obs.		378	190	2,029	158

Table III: Change in the Performance of the Intact Acquired Funds: Regression Evidence

This table reports the regression results of the OAR on the post-acquisition dummy and other fund characteristics for the period of 2000 to 2009. We include in the regression all the monthly observations of each intact acquired fund in the 24-month pre-acquisition period and the 24-month post-acquisition period. For a fund-month observation, the post-acquisition dummy equals 1 (0) if it is (isn't) in the post-acquisition 24 months; the manager turnover dummy equals 1 (0) if there is (isn't) a change in the compositions of fund managers during the acquisition window; the acquaintance dummy equals 1 (0) if the acquiring family has an incumbent fund with the same investment objective. All the other explanatory variables are lagged one month, except for expense and turnover ratios, which are contemporaneous. We cluster standard errors at the fund level. The *t*-statistics are given in parentheses. *, **, and *** indicate whether the results are statistically different from zero at the 10%, 5%, and 1% significance levels.

Dependent Variable: the OAR per month×100

	(1)	(2)	(3)	(4)	(5)	(6)
Post-Acquisition Dummy	-0.116***	-0.099**	-0.182***	-0.155**	-0.039	-0.019
	(-3.22)	(-2.46)	(-2.77)	(-2.29)	(-0.76)	(-0.36)
Post-Acquisition Dummy			0.138	0.060		
×Manager Turnover Dummy			(1.20)	(0.55)		
Post-Acquisition Dummy					-0.134*	-0.137*
×Acquaintance Dummy					(-1.72)	(-1.86)
Manager Turnover Dummy			-0.236**	-0.163*		
			(-2.48)	(-1.70)		
Acquaintance Dummy					0.114*	0.147**
					(1.88)	(2.35)
ln(TNA)		-0.055***		-0.096***		-0.057***
		(-3.81)		(-4.42)		(-3.96)
Expense Ratio×100		0.002		0.019		0.018
		(0.04)		(0.28)		(0.39)
Turnover Ratio		-0.024		-0.072*		-0.029
		(-0.81)		(-1.81)		(-0.96)
Fund Flow		0.003		0.004***		0.002
		(1.13)		(3.10)		(1.07)
Fund Raw Return		0.027***		0.025**		0.026***
		(2.83)		(2.10)		(2.78)
ln(Family TNA)		-0.005		-0.000		-0.003
		(-0.31)		(-0.02)		(-0.20)
Time Fixed Effects	YES	YES	YES	YES	YES	YES
Investment Objective Fixed Effects	YES	YES	YES	YES	YES	YES
No. of Fund-Month Obs.	17,553	16,937	11,046	10,598	17,553	16,937

Table IV: Pre- and Post-Acquisition Correlations between the Performance of the Intact Acquired Funds and the Performance of the Acquiring Fund Families' Intact Incumbent Funds

This table reports the correlations between the performance of the intact acquired funds, including the funds the acquiring families are (aren't) acquainted with due to the fact that they have (don't have) incumbent funds with the same investment objective, and the performance of the acquiring families' intact incumbent funds in the pre- (post-) acquisition period, i.e., 24 months before (after) the acquisitions, for the period of 2000 to 2009. We compute the correlation using fund raw return, the Characteristic Selectively measure (CS), and objective-adjusted return (OAR). The t-statistics are given in parentheses. The table also reports the difference between the correlations in the pre- and post-acquisition periods, along with their t-statistics. *, **, and *** indicate whether the results are statistically different from zero at the 10%, 5%, and 1% significance levels.

Correlations between the Performance of the Below Funds and the Performance of the Intact Incumbent Funds

		All Intact Acquired	Acquainted	Unacquainted
		(1)	(2)	(3)
Raw Return				
Pre-Acquisition	(1)	0.8028***	0.8186***	0.7719***
		(240.79)	(243.97)	(106.23)
Post-Acquisition	(2)	0.8379***	0.8500***	0.8144***
		(296.02)	(317.34)	(125.98)
Difference	(3)=(2)-(1)	0.0351***	0.0314***	0.0425***
		(8.04)	(7.31)	(4.37)
No. of Pair-Fund Obs.		3,943	2,605	1,338
CS				
Pre-Acquisition	(4)	0.8003***	0.8203***	0.7603***
		(160.00)	(155.26)	(72.84)
Post-Acquisition	(5)	0.8482***	0.8521***	0.8406***
		(272.12)	(255.82)	(128.30)
Difference	(6)=(5)-(4)	0.0480***	0.0318***	0.0802***
		(8.14)	(5.09)	(6.51)
No. of Pair-Fund Obs.		1,564	1,042	522
OAR				
Pre-Acquisition	(7)	0.00455	0.0090	-0.004***
		(0.82)	(1.32)	(-0.43)
Post-Acquisition	(8)	0.0234***	0.0260***	0.0184***
		(4.51)	(4.03)	(2.10)
Difference	(9)=(8)-(7)	0.0188**	0.0170*	0.0225*
		(2.48)	(1.81)	(1.73)
No. of Pair-Fund Obs.		3,943	2,605	1,338

Table V: Pre- and Post-Acquisition Characteristics of the Acquired Funds and the Acquiring Fund Families' Incumbent Funds

This table reports the fund characteristics, including fund TNA, the turnover ratio, and the expense ratio, of the acquired funds and the acquiring families' incumbent funds in the pre- (post-) acquisition period, i.e., 24 months before (after) the sponsorship acquisitions, for the period of 2000 to 2009. The table also reports the differences between these fund characteristics in the pre- and post-acquisition periods, along with their t-statistics. *, **, and *** indicate whether the results are statistically different from zero at the 10%, 5%, and 1% significance levels.

		Acquired Funds		Incumbent Funds	
		Intact	Merged	Intact	Merging
		(1)	(2)	(3)	(4)
Fund TNA ($million)					
Pre-Acquisition	(1)	656.2	228.2	1400.8	1351.3
Post-Acquisition	(2)	689.0	1746.3	1352.5	1890.4
Difference	(3)=(2)-(1)	32.7816	1518.1***	-48.3141	539.1*
		(0.32)	(6.92)	(-0.41)	(1.92)
No. of Fund Obs.		378	169	2,029	158
Turnover Ratio					
Pre-Acquisition	(4)	0.9225	0.7374	0.2404	0.2123
Post-Acquisition	(5)	0.8167	0.8147	0.3189	0.2394
Difference	(6)=(5)-(4)	-0.1058	0.0773	0.0785***	0.0270
		(-1.61)	(1.14)	(2.69)	(0.39)
No. of Fund Obs.		376	169	2,012	158
Expense Ratio×100					
Pre-Acquisition	(7)	1.2940	1.3482	1.2199	1.2339
Post-Acquisition	(8)	1.2611	1.1752	1.2091	1.1695
Difference	(9)=(8)-(7)	-0.0329	-0.1730***	-0.0107	-0.0644
		(-1.02)	(-3.83)	(-0.75)	(-1.42)
No. of Fund Obs.		377	169	2,016	158

Table VI: Determinants of Fund Families' Acquisitions and Sales of Fund Sponsorships

This table reports the results of a multinomial logistic regression for the period of 2000 to 2009. The dependent variable takes one of three possible outcomes for a fund family in a calendar year: (1) acquire fund sponsorships, (2) sell fund sponsorships, or (3) no acquisition or selling activity (the reference category). All the explanatory variables are lagged one year, except for those indicated by "lagged", which are lagged an additional year. We compute the family-level variables using the value-weighted average of fund-level variables. The p-values are given in parentheses. *, **, and *** indicate whether the results are statistically different from zero at the 10%, 5%, and 1% significance levels.

	Acquiring Sponsorships (1)	Selling Sponsorships (2)	Acquiring Sponsorships (3)	Selling Sponsorships (4)
1-Year OAR	0.017*	-0.005		
	(0.09)	(0.53)		
1-Year OAR, Lagged	0.009	0.004		
	(0.13)	(0.43)		
1-Year CS			0.013*	-0.007
			(0.10)	(0.31)
1-Year CS, Lagged			0.003	0.004
			(0.63)	(0.38)
1-Year OAF	-0.088	-1.160***	0.162	-1.339***
	(0.73)	(0.00)	(0.59)	(0.00)
1-Year OAF, Lagged	-0.017	-0.085	-0.052	-0.112*
	(0.81)	(0.12)	(0.50)	(0.06)
Expense Ratio×100	0.313	0.001	0.331	0.144
	(0.15)	(1.00)	(0.16)	(0.49)
Turnover Ratio	-0.017	-0.112	-0.046	-0.158
	(0.87)	(0.24)	(0.70)	(0.18)
ln(Family TNA)	0.212***	0.020	0.144*	-0.079
	(0.00)	(0.71)	(0.05)	(0.22)
No. of Investment Objectives	0.180***	0.107***	0.184***	0.137***
	(0.00)	(0.00)	(0.00)	(0.00)
Constant	-22.473	-20.675	-22.713	-20.957
	(0.98)	(0.99)	(0.99)	(0.99)
Time Fixed Effects	YES		YES	
No. of Family-Year Obs.	4,770		3,806	

Figure 1: The Cumulative Objective-Adjusted Fund Flows

This figure depicts the cumulative objective-adjusted flow (OAF) for the intact acquired funds and the acquiring families' intact incumbent funds over the pre-acquisition period of month -24 to -1, the acquisition period of month 0 to 11, and the post-acquisition period of month 12 to 35.