Self-interest of independent directors and liquidations of mutual funds

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Abstract

Independent directors are appointed to represent the interests of mutual fund shareholders. Yet, being in the employment of fund–families, the fulfilment of fiduciary duties of independent directors may be compromised. Using a large, hand-collected dataset of over 10,000 U.S. mutual funds, we analyze the impact of the degree of alignment of independent directors' interests with those of shareholders as opposed to those of fund–families on liquidation decisions. We find consistent evidence of our hypotheses that alignment with fund–families dilutes the incentives imposed by the alignment with shareholders in retail funds. We also find consistent evidence that the alignment of independent directors with shareholders has positive effects only in institutional funds. These results have important policy implications which are discussed in the paper.

Keywords: mutual funds, liquidations, independent directors, self-interest, boards, retail investors, institutional investors

JEL classification: G23, G34, G01

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1. Introduction

When the Securities and Exchange Commission (SEC) issued the requirement that independent directors must account for a minimum of 75 percent of mutual fund boards (following the Sarbanes–Oxley Act of 2002), the reaction of the market was mixed and so was the academic evidence in support of the requirement. While the focus of the existing research is on the link between the proportion of independent directors on a board and the quality of governance (e.g. Khorana et al. 2007, Ferris and Yan 2007, Fu and Wedge 2011, Ding and Wermers 2012), little is known about the link between a level of independence of independent directors and the quality of governance even though it is recognized that the independence of independent directors is questionable (Haslem 2010). Thus, in this paper we construct several measures of independent directors' 'alignment' with fund–families using a unique, hand–collected dataset of independent directors' characteristics for 2002–2014. We shed new light on the complex director – shareholder – fund–family relationship and how it changes with shareholders' financial sophistication. In particular, we analyse how independent directors' alignment with fund–families' interests, as opposed to their alignment with shareholders' interests, affects fund liquidation decisions. We look at fund liquidations as they are clear–cut decisions of a board that should, in principle, be driven by and taken in the best interest of shareholders.

The role of directors[2] has been in the center of attention of academics and practitioners for decades. It is well-acknowledged that directors, by fulfilling their fiduciary duties, have a positive impact on firm performance, innovation, CEO turnover, etc. (e.g. Knyazeva et al. 2013, Guo and Masulis 2015, Balsmeiera et al. 2017), although Adams and Ferreira (2007) show that 'management-friendly boards may be optimal' if one assumes that CEOs are less likely to hide important information from 'friendly' boards than they would otherwise. Busy directors, i.e. those who sit on numerous boards, are associated with greater reputation and skills (e.g. Field et al. 2013), although Masulis and Mobbs (2014) show that directors do not treat their board responsibilities in an equal way, i.e. directors put more effort into more 'prestigious' boards than into those that do not carry such high 'kudos'.

[2] Throughout the paper we refer to independent directors simply as directors.

Mutual fund boards, like corporate boards, should represent shareholders' interest. To align directors' interest with that of shareholders, directors are often encouraged to hold shares of the funds they oversee. Cremers et al. (2009) document that an average director holds $67,170 worth of shares, yet an average director's annual compensation from a fund–family is twice as large ($125,122). Our own data collected for this research show that, on average per annum, directors earn nearly two and half times as much in compensation than they hold in shares. Directors' share–ownership is believed to create monitoring incentives that benefit shareholders (e.g. Meschke 2007, Chen et al. 2008, Cremers et al. 2009, Qian 2011, Kryzanowski and Mohebshahedin 2016, Bhagat and Bolton 2019). Much less attention, however, has been paid to the effects of the alignment of directors' interest with those of fund–families. Given that fund–families' incentives differ from those of shareholders, and there is plenty of evidence that fund–families do not always act in the best interest of shareholders (e.g. Najand and Prather 1999, Hillion and Suominen 2004, Ortiz et al. 2012, Shirley and Stark 2016) it is important to understand whether and how the alignment of directors' interests with those of fund–families (henceforth, director – fund–family alignment) dilutes the alignment of directors' interests with those of shareholders (henceforth, director – shareholder alignment) , and whether it has any material impact on how directors represent shareholders' interests.

Our premise is that directors' underpinning intentions are good (i.e. when taking directorships individuals do wish to act in the best interest of shareholders), yet directors' decisions may be influenced by various (potentially contradictory) incentives. For instance, directors' attitude towards their fiduciary duties may be enhanced by greater share-ownership in funds they oversee. Indeed, it is common in the literature to use the dollar value of shares held by directors to measure their alignment with shareholders (e.g. Chen et al. 2008, Cremers et al. 2009, Ding and Wermers 2012). On the other hand, a greater alignment with a fund–family may result in a director being more likely to side with fund–family's preferences even if these are not necessarily in the best interest of shareholders. We pose that the more directorships directors hold within a fund–family, the greater director – fund–family alignment is. This is because, it will be harder to replicate numerous directorships, if they are lost, then a single one. We also proxy the director – fund–family alignment by how many funds s/he

oversees and by the value of the asset under management s/he has. We believe that the scale of the business that a director does for a fund–family is a better proxy of her/his alignment with a fund–family than her/his compensation received from a fund–family. This is because, although compensation depends on the scale of a business, it is influenced by directors' tough negotiations (e.g. Tufano and Sevick 1997). The number of boards a director sits on, on the other hand, is a fund–family decision. Yet, to test robustness of our findings, we also construct several compensation-based alignment measures.

We study the role of directors' alignment with fund–families and with shareholders on fund liquidations because fund liquidations are clear-cut decisions. By studying characteristics of liquidated and surviving funds we can observe how directors' alignment with fund–families and with shareholders magnifies/weakens factors associated with fund liquidations. We focus our attention on fund performance and flows. With no externalities in place, the probability of liquidations should decrease with higher fund performance, and should be stronger, the more financially savvy shareholders are. Flows, as such, may be positively associated with performance, but this may not be the case if, for instance shareholders are not financially savvy and misinterpret market signals. We argue that fund–families' decisions to liquidate funds may be more sensitive to fund flows than to fund performance. This preference may be stronger in funds with less sophisticated shareholders. We test whether the importance of fund flows, and fund returns, in determining fund liquidations changes with directors' alignment with fund–families and with shareholders. We hypothesize that the impact of flows on the probability of fund liquidations increases with the director – fund–family alignment. We also hypothesize that the opposite is true for fund returns. We also argue that the effect should be stronger for retail funds than for institutional funds, given that the quality of governance increases with shareholders' sophistication (e.g. Christoffersen and Musto, 2002; Houge and Wellman, 2007; Cremers et al. 2009, Gil–Bazo and Ruiz–Versy, 2009, Zalewska and Zhang 2020).

The paper makes several contributions to the literature. First, it contributes to the strand that discusses the importance of directors' independence (e.g. Khorana et al. 2007, Ferris and Yan 2007, Kuhnen 2009, Namvar and Phillips 2013). Our analysis confirms that independence of directors matters and benefits shareholders, but it also shows that directors' independence is

a much more subtle concept that is commonly understood. Directors can formally be independent, but *de facto* they can 'sit in a pocket' of a fund–family that employs them. Thus, it is not enough to ensure that there are many independent directors on a board. It seems more important to stop directors sitting on many boards if we wish to prevent directors from being too closely aligned with a fund–family's preferences, especially if these do not enhance shareholder value. This is particularly important for funds that are populated by less financially savvy shareholders.

The paper also contributes to the literature on the importance of directors' share–ownership as a way of aligning directors with shareholders' interest (e.g. Christoffersen and Musto 2002, Meschke 2007 Chen et al. 2008, Cremers et al. 2009, Qian 2011, Kryzanowski and Mohebshahedin 2016, Bhagat and Bolton 2019). We confirm the importance of aligning directors with shareholders but show that this is not the ultimate solution. Director share–ownership makes the difference in institutional funds, i.e. funds in which shareholders are more likely to vote with their feet since they are more financially savvy. It does not make any difference in retail funds. This is an important finding because directors' share-ownership is greater in retail funds than in institutional funds. This suggests that the enhanced monitoring commonly attributed to directors' share–ownership is, in fact, an indication of good governance practices that induces directors' share–ownership rather than the result of directors' share–ownership.

The paper also adds to the broader literature discussing differences in the quality of services provided by institutional investors to their financially savvy and not so savvy clients (e.g. Meschke 2007, Chen et al. 2008, Kong and Tang 2008, Kryzanowski and Mohebshahedin 2016) and on dynamics of decision making. Our results are congruent with the notion that external monitoring by sophisticated shareholders is very important and it is not easily substituted by board monitoring.

2. Literature review and hypothesis development

Historically, in comparison with corporate boards, mutual fund boards have attracted less

attention. This is a bit surprising given the size of the mutual fund industry, its importance for long–term investing (e.g. pensions) and market liquidity. Existing evidence suggests that even though, the product–like nature of mutual funds limits the effectiveness of boards (Morley and Curtis 2010, Roiter 2016), board characteristics matter for fund performance and the quality of services shareholders receive.

For instance, directors' share–ownership in funds they oversee is positively related to fund performance (Cremers et al. 2009). However, Chen et al. (2008) show that directors' share-ownership needs to be high and concentrated to negatively affect fees. They also show that multi-directorships and tenure of directors are positively related to fees. Big boards are also associated with higher fees (e.g. Tufano and Sevick 1997, Chen et al. 2008, del Guercio et al. 2008) but more independent boards are negatively associated with fees (e.g. Tufano and Sevick, 1997). Higher independence of directors is also positively associated with fund performance (e.g. del Guercio et al. 2003, Adams et al. 2014, Kryzanowski and Mohebshahedin 2016) and turnover of poor performing managers (e.g. Khorana et al. 2007, Fu and Wedge 2011, Ding and Wermers 2012). However, Ferris and Yan (2007) claim that the attention paid to board independence is misplaced. They claim that the requirement imposed by the SEC that mutual fund boards consist of at least 75% of independent directors is unjustified because, the probability of scandals and fund performance are not statistically related to the proportion of independent directors or even to a board having an independent chairman.

The lack of consensus on the impact of directors' independence on the quality of governance may be a consequence of difficulties arising when measuring independence. Kuhnen (2009) shows that an appointment of directors is strongly related to "the intensity of their past interaction" with fund families. Indeed, mutual fund directors, being sandwiched between fund families (who appoint them and pay their compensation) and shareholders (whose interest they ought to represent and protect) may be subject to strong conflicts of interest.[3] A conflict of interest may be further magnified by the fact that in the mutual fund

[3] Numerous papers document that fund–families do not always act in the best interest of their shareholders (e.g. Najand and Prather 1999, Hillion and Suominen 2004, Goriaev et al. 2008, Ortiz et al. 2012, Bucher–Koenen and Ziegelmeyer 2013, Chalmers et al. 2013, Shirley and Stark 2016, Guiso and Viviano 2015, Grinblatt et al. 2015, Zalewska and Zhang 2020).

industry annual shareholder meetings do not exist and fund–families, who formally do not have board seats and tend not to be majority shareholders, hold major decision–making powers when it comes to appointing and dismissing directors. Moreover, mutual fund directors tend to sit on numerous boards within one fund–family. In a corporate setting, even if directors sit on several boards, these boards are not likely to be controlled by the same shareholders. Thus, the relationship between directors and fund–families is of a particular nature and is not replicable in a corporate setting. Even though a "lack of independence of "independent" directors is an open secret in the funds industry" (Haslem 2010), the question is whether the strength of the relationship between directors and fund–families dilutes the incentives that are put in place to align directors' interests with those of shareholders and whether the effect, if any, is strong enough to act against shareholders' interest.

It is not known which funds should be liquidated and which should stay. We observe only which funds were liquidated and which stayed operational. Even though, formally, it is boards who approve fund liquidations, it is fund–families who single out funds for liquidation (Tufano and Sevick 1997).

From the shareholders' perspective, poorly performing funds should be 'dealt with' and should exit the market if this is in the best interest of shareholders (i.e. funds cannot be restructured at a reasonable cost and effort). However, this is not always the case (e.g. Tufano and Sevick 1997, Khorana et al. 2007, Zalewska and Zhang 2020).[4] Given that a decision to liquidate a fund is a public acknowledgement of 'failure', it can be expected that it is not taken lightly either by fund–families or by boards. Consequently, it is likely that fewer funds get liquidated than should.

So, what factors may determine fund–families' and boards' decisions to liquidate a fund? Given that fund–families are known for making decisions in their own self–interest (Hillion and Suominen 2004, Goriaev et al. 2008, Bryant 2012, Ortiz et al. 2012; Bucher–Koenen and Ziegelmeyer 2013, Chalmers et al. 2013, Shirley and Stark, 2016, Guiso and Viviano 2015, Grinblatt et al. 2015), they can be expected to be sensitive to fund flows. Cynically speaking,

[4] Similarly, poor performance of fund managers is not always the determining factor of their departures (e.g. Bryant 2012, Kostovetsky and Warner 2015).

fund–families may have weaker incentives to liquidate a poorly performing fund if shareholders do not withdraw their funds. This can happen when shareholders do not correctly assess fund performance or respond to market signals by adjusting their holdings. Thus, we expect that the significance of flows and of performance in determining funds' liquidations may differ depending on the level of shareholders' sophistication. Given that institutional funds are more likely to have a higher proportion of financially savvy shareholders than retail funds, we expect that performance plays a greater role in determining fund liquidations for institutional funds than for retail funds. The opposite may be true for fund flows, i.e. we expect that fund flows play a greater role in determining fund liquidations for retail funds than for institutional funds.

Khorana et al. (2007) show that directors think through their pockets, i.e. they are less likely to approve across–family mergers than within-family mergers as across–family mergers are associated with considerable loss of directors' remuneration. Does this argument extend to liquidations? Using the sample of 1,566 directors who experienced a liquidation of funds used as the base of this study, the mean director received $159,090 of annual compensation from a fund–family prior to a fund liquidation. On average, this compensation would decline by $13,069 (or 8.2%) following a liquidation. This decline is statistically significant at 1%. However, a median director would not experience a decline in his/her compensation. The pre–liquidation compensation of the median director was $150,000 and increased by $558 following a liquidation. This change is statistically insignificant. The SEC's records show that following liquidations the number of funds the mean director oversaw increased from 92.7 to 93.4, and from 82 to 85 for the median director. That is, if directors think through their pocket, it is not a liquidated fund that is a potential big loss, it is the other funds' directorships that it would be costly to lose.

Given that it is likely that boards operate in a democratic way, i.e. the majority vote is a custom for major board decisions, the position of the median director may be more relevant than that of the mean one. Following from that, and the fact that the above statistics show that fund liquidations do not negatively impact the financial and job position within a fund–family of the median director, approving liquidations proposed by fund–families may not necessarily

be a bad outcome from the directors' perspective. Approving liquidations is not necessarily financially disadvantageous. Opposing liquidations, on the other hand, may be financially disadvantageous as it may result in losing directorships. Thus, the question arises of whether directors approve the 'right' liquidations or do they simply approve what fund–families propose?

It may be hard, or even impossible, to identify all possible fund–families' preferences, but if our argument is true that if fund–families are to choose between a liquidation of two comparable funds, except that one has poor flows and the other has good flows, a fund–family will liquidate the former.

If directors' decisions are influenced by a fund–family's preferences, we should observe that directors' actions enhance fund–family's preferences. The effect should be stronger, the greater director – fund–family alignment is.[5] That is, if it is true that a fund–family's decision to liquidate a fund is negatively affected by fund flows, we should observe that the stronger director – fund–family alignment is, the stronger the negative relationship between fund flows and the probability of liquidation is. On the other hand, the opposite should be true for fund returns, i.e. the stronger director – fund–family alignment is, the weaker negative relationship between fund returns and the probability of liquidations is. Whether this is the case, we test in the empirical part of the paper.

It is important to recognize that a director – fund–family alignment is not the only alignment directors may be subject to. Directors are encouraged to hold shares in funds they oversee to align them with shareholders. Moreover, the expectation is that directors hold more shares in retail funds than in institutional funds given that retail funds require more monitoring and are more exposed to a free–rider problem (Chen et al. 2008). Thus, if the director – shareholders alignment works, we should observe that the higher share–ownership of directors is, the stronger negative relationship between fund performance and the probability of liquidation decisions is. Directors' share–ownership should also reduce the importance of fund flows on liquidation decisions. That is, a director – shareholders alignment should have an

[5] Chen et al. (2008) show that directors' tenure is positively related to fees, hence it is negatively related to the quality of corporate governance. This is consistent with our argument as it can be expected that dependence of directors increases with tenure.

opposite effect to the director – fund–family alignment if the alignments are strong enough for their effects to be observed and fund–families' interests differ from shareholders' interests. Moreover, given that share–ownership should be sufficiently high to reduce fees (Chen et al. 2008), it might be true that the alignment of directors with shareholders may be more visible in retail funds where directors' share–holdings are higher, than in institutional funds. Whether this is the case, we test in the empirical part of the paper.

3. Data collection

The Centre for Research in Security Price (CRSP) Survivor-Bias Free U.S. Mutual Fund Database reports that 2,867 funds (accounting for the primary asset classes) were liquidated between January 2002 and December 2014 and 10,887 funds remained operational till June 2015 (we refer to them as the surviving funds). CRSP also provides names of investment companies for 12,214 out of these 13,754 funds. The manual search of the Electronic Data Gathering, Analysis, and Retrieval (EDGAR)[6] available via the SEC website enabled to establish some of the missing names of the investment companies and the Central Index Key (CIK) indicators for as many investment companies as possible. In total we identified the CIKs of 11,939 out of the 13,754 funds in EDGAR. For these funds, the yearly information on board characteristics for the 2002–2014 period was extracted from the 485APOS and 485BPOS files.

Given that investment companies submit reports to the SEC in different months, the files closest to December in each calendar year were used. Because of differences in the files' formatting across funds, downloaded information was not always readable resulting in information loss.[7]

To ensure the representativeness of the dataset, we focused on 30 largest fund–families as of December 2014. These 30 largest fund–families managed 79.96% of the total mutual fund assets through 5,077 funds across 586 investment companies as of December 2014. We

[6] https://www.sec.gov/edgar/searchedgar/companysearch.html

[7] We would like to thank Simone Giansante for his help with download some of the data.

manually searched and collected information about boards of these investment companies for 2002–2014 and collected annual data for 561 boards that oversaw 4,053 funds (650 liquidated and 3,403 surviving funds).

In addition, to utilize the information downloaded from 485APOS and 485BPOS files, we added to the sample of the boards of the top 30 largest fund–families a random sub–sample of boards from other fund–families for which information was readable from the downloaded EDGAR files even if some years were missing. Thus, in total, our sample consists of 9,096 funds belonging to 1,154 investment companies and 344 fund–families. Table 1 Panel A and B report the number of funds, number of investment companies and fund-families for the 30-fund-family sample and for the whole sample, respectively.

********** insert Table 1 here **********

For these 1,154 investment companies, the following information about each board member was collected from the SEC 485A/BPOS files: age, tenure, if he/she was an independent director, total compensation paid from the fund–family[8], number of funds s/he oversaw in the family, and the dollar range of ownership in the funds he/she oversaw across the fund–family.[9]

In addition, for each fund, using CRSP, we collected such basic information as fund's: investment objective classification (determined by the objective codes provided by CRSP), inception date, size, expense ratio, front–end and back–end fees, and monthly returns.

4. Sample and variable construction

[8] Some investment companies do report the data for directors' compensation received from each fund. However, given the large number of sample funds and the long sample period in this paper, colleting the relevant data for every single fund would be extremely time-consuming.

[9] It is possible that some directors put a part or all of their compensation in the shares of the funds they oversee, but it is not possible to know whether and how much of the compensation is in the form of fund ownership. There are some investment companies that disclose this information, but many of the sample companies do not distinguish ownership from the compensation paid to a director.

4.1. Fund and fund–family variables

For each fund and for each calendar year, we calculated funds' objective–adjusted annual net return ($Return_f$) as the fund's net annual return for that year minus the median return for that year of the funds with the same investment style. A fund's age (Age_f) is defined as the number of years a fund has been in operation since its inception till a report month. A fund's size ($Size_f$) is the total value of net assets a year before board information was reported, and its flow ($Flow_f$) is the cumulative monthly flow calculated over the 12 months before a report month. Fee_f denotes the sum of reported expense ratios, front-end and back-end loads. In addition, as the previous research shows that there are statistical differences in the performance of funds run 'in house' and being outsourced to outside managers (e.g. Chuprinin et al. 2015, Cumming et al. 2015) and between those run by individual asset managers and by teams of asset managers (e.g. Chen et al., 2004; Adams et al., 2018), we define two dummies: $In\text{-}house_f$ equals to one if a fund is managed internally and zero if it is outsourced; and $Team_f$ equals to one if a fund is managed by multiple asset managers and zero when it is managed by a single manager.

Finally, we control for two fund–family characteristics. A fund–family's size ($Size_{FF}$) is the sum of the total net assets' value across all the funds in the fund–family as of a report month. The specialization of a fund–family ($Spec_{FF}$) is the ratio of the number of funds belonging to a given investment style over the total number of funds a fund–family provides as of a report month.

Table 2 Panel A shows the summary statistics for the variables defined above. It shows that the average liquidated fund is over five times smaller than the average surviving fund. Thus, accounting for all the surviving funds may create a bias, i.e. the results may be driven by distributional differences across the populations. To reduce the possibility that the results are driven by distributional differences across the populations, we apply the nearest neighbor matching (NNM) with replacement. To satisfy the assumption of ignorability, i.e. that there are no unobserved differences between the liquidated and the surviving funds, conditional on observed covariates, the matching should be based on all variables known to be related to the board characteristics and the decision of liquidation (Rubin and Thomas, 1996; Heckman et al.

1998b, Glazerman et al. 2003, Hill et al. 2004). Based on the past literature, funds' size and age are associated with the board characteristics and exit decisions (e.g. Jayaramanet al. 2002, Zhao 2005, Kryzanowski and Mohebshahedin 2016), and, therefore, are selected as the matching criteria.[10] It can also be expected that investment objectives may be related to board characteristics, as the supervision of, for example, domestic equity funds and foreign fixed-income funds may require different specialized knowledge and industry experience of directors. Moreover, given that it is common that the same directors sit on multiple boards in a fund–family, to increase the variation in the board characteristics in the sample, following Tufano and Sevick (1997), we requested that a liquidated fund is matched with a surviving fund from outside its fund–family. Thus, the NNM matches liquidated funds with surviving funds coming from other fund–families based on their age, size and investments objectives.

********** insert Table 2 here **********

Figure 1 shows the standardized differences in means (SDMs, Panel A) and the variance ratios (VRs, Panel B) for $Size_f$ and Age_f for the matching. It shows that the matching reduces the SDMs between the surviving and the liquidated funds for both $Size_f$ and Age_f, and that it makes the VRs for the two samples closer to one. Moreover, the VRs after the matching for the two covariates are both within the expected range of 0.5-2 (Rubin, 2001). To further show that the matching reduces the differences in the fund characteristics between the two samples, Table 2 Panel B reports the means, medians and standard deviations of fund and fund–family variables for the liquidated and the surviving funds after the matching. It confirms that the matching reduced the differences across many variables, even those not used for matching (e.g. $Return_f$, Fee_f).

********** insert Figure 1 here **********

[10] This method was also adopted in Zalewska and Zhang (2020).

4.2. Measures of directors' alignment

The traditional measure of board's independence as a ratio of the number of directors to the total number of board members does not capture personal interest directors may have. To test our hypotheses, we need to measure how much directors 'sit in the pockets' of fund–families. Obviously, such dependence cannot be directly observed. We propose several constructs that in various way proxy for how much working for a fund–family matters to a director and use these constructs as measures of director – fund–family alignment.

Directors who sit on many boards within a fund–family have more to lose if they antagonize their employer (i.e. fund–family) by opposing his/her decisions than directors who sit on just one board. This is because, it is less likely that a director who sits on just one board draws her/his main income from this board position. It is quite likely that s/he has other sources of income in addition to the fund directorship. The opposite should hold for a director who sits on many boards as for her/him antagonizing a fund–family may result in losing the main source of income. Given that liquidated funds tend to be small and as such have a small contribution to the director's compensation, a director can lose much more if s/he stands up to a fund–family than gain by keeping a fund proposed for liquidation afloat. Thus, the first measure of a director's alignment with a fund–family, $Dir_{\#B}$, we define as the number of boards a director sits on in a fund–family a given fund belongs to.[11]

$Dir_{\#B}$ does not fully control for the scale of engagement. For instance, two directors with the same number of boards may have vastly different AUM under their supervision. If our hypotheses are true, directors with large AUM portfolios should be more sensitive to losing a fund than directors with small AUM portfolios. This may seem counterintuitive, as one might think that a director who oversees a large AUM portfolio may be less sensitive to losing one small fund through liquidation than a director who oversees a small AUM portfolio. This might be true if each fund was overseen by a separate board. However, when many funds are overseen by one board, a decision on one fund (however small) may be detrimental for a director's

[11] Directors' and boards' variables are calculated based on information collected for the whole sample (i.e. before matching).

appointment to oversee many funds. Thus, for each director we define Dir_{AUM} as AUM of all boards s/he sits on for a fund–family.

Another approach to measure a director – fund–family alignment is to account for the relativity of AUM a director oversees for a fund–family to AUM of all boards s/he oversees. We define Dir_{RAUM} as the ratio of AUM a director oversees for a fund–family to AUM of all directorships s/he holds. If a director works for just one fund–family, Dir_{RAUM} is one, and it is less than one if s/he sits on boards of more than one fund–family.

The fourth measure of a director's alignment with a fund–family, $Dir_{\#f}$, is similar to $Dir_{AUM,}$ but accounts for the number of funds a director oversees for the fund–family.

Another way of trying to capture a director – fund–family alignment is to look directly at the remuneration a director earns for her/his directorships. If directors appreciate posts with high excessive compensation, it may be in their interest to protect these jobs (Tufano and Sevick, 1997; Ferris and Yan, 2007; Meschke, 2007), and therefore, the higher the excessive compensation is, the more compliant directors may be. As explained in Section 3, we only know directors' compensation per fund–family. This is a limitation, but using Tufano and Sevick's (1997) approach, we construct several measures of a director's alignment with a fund–family' interests to test robustness of our findings.

Following Tufano and Sevick (1997) we define Dir_{ExC} as residuals, ε, from regressing the total compensation directors earn from a fund–family, $Dir_{C\text{-}FF}$, against the number of funds directors oversee in that fund–family, $Dir_{\#f}$, and the fund–family size, $Size_{FF}$, i.e.

$$\mathrm{Dir}_{\mathrm{C-FF}} = \gamma_1 + \gamma_2 \mathrm{Dir}_{\#\mathrm{f}} + \gamma_3 \mathrm{Size}_{\mathrm{FF}} + \varepsilon. \quad (1)$$

If remuneration matters to directors, it may also be informative to assess whether the compensation they 'defend', i.e. that is left after a fund is liquidated, matters. We assume, following Tufano and Sevick (1997), that directors' compensation is related to the size of director's portfolios and to the size of a fund–family who employs them. The 'left' compensation is the compensation that a director is expected to earn if a given fund is liquidated (and a director loses a fraction of her/his compensation that is associated with overseeing this fund) and no further appointments/liquidations take place. Using the estimates $\hat{\gamma}_1, \hat{\gamma}_2, \hat{\gamma}_3$ of the

coefficients $\gamma_1, \gamma_2, \gamma_3$ of specification (1), we calculate a director's compensation after a fund liquidation, $\text{Dir}_{\text{Cleft}}$ as

$$\text{Dir}_{\text{CLeft}} = \hat{\gamma}_1 + \hat{\gamma}_2(\text{Dir}_{\#\text{f}} - 1) + \hat{\gamma}_3(\text{Size}_{\text{FF}} - \text{Size}_{\text{f}}),$$

where Size_{f} is the size (AUM) of a liquidated fund.

We also calculate the ratio of the compensation a director receives from a fund–family, $\text{Dir}_{\text{C-FF}}$, to the estimated value of a director's compensation related to a liquidated fund, i.e. $\text{Dir}_{\text{C-FF}} - \text{Dir}_{\text{Cleft}}$. This ratio, denoted $\text{Dir}_{\text{RCLoss}}$, measures how large the remaining compensation is in relation to the reduction of the compensation caused by a liquidated fund. The larger $\text{Dir}_{\text{RCLoss}}$ is, the less significant a liquidated fund is in the director's portfolio.

Finally, we need to define a measure of a director's alignment with shareholders. Fund–families report only the dollar range of directors' share–ownership for all boards s/he holds directorships. That is, fund–families only report ranges as: None, \$1-\$10,000, \$10,000-50,000, \$50,000-100,000, over \$100,000, etc. Following Chen et al. (2008), the midpoint of each range was selected as the amount of dollar value owned by a director, Dir_{sh}.

All the above measures are defined at a director level. However, decisions to approve a fund–family's proposals are taken at a board level, Assuming that boards are democratic in nature, it is the median vote that matters. Therefore, the level of board's alignment is measured by the median of the variables defining alignment of individual directors. For instance, the median of $\text{Dir}_{\#\text{B}}$ across all the directors sitting on a board is assumed to be the measure of a board alignment. To simplify the notation, the board medians are also denoted $\text{Dir}_{\#\text{B}}$, unless stated otherwise. This applies to all the other alignment measures defined in this section.

Table 3 Panel A shows the summary statistics of all the alignment measures defined in this section at the board level. It shows that on the average board half of the directors would sit on at least 2.584 boards in the sample of the liquidated funds and 3.142 boards in the surviving sample. In both samples, the highest number of boards the median director sat on was nine. There are also some differences in the other measures of director fund–family alignment. For instant, on the average board the median director oversaw 40 funds or \$41,630m worth of assets in the liquidated sample. The corresponding statistics for the surviving sample are nearly 35

funds and nearly $100,000m AUM.

The comparison of Dir_{sh}, a director – shareholders alignment, shows that the median director of the mean board of the liquidated funds held $78,170 worth of shares and of the surviving fund of $83,793. Given that the total annual compensation of the median director on the mean board was $172,024 for the liquidated funds and $184,829 for the surviving funds, the median director earned nearly two and half times more through her/his cash compensation than the value of shares held by her/him was.

********** insert Table 3 here **********

4.3. Other director and board variables

For each board, several statistics commonly used in the literature were calculated. A board's size ($Size_B$) is the number of all (independent and inside) directors sitting on that board. A board's independence ($Indpnd_B$) is measured as the ratio of the number of independent directors to $Size_B$. In addition, as experience of directors may matter for a success of a fund, we define expertise of an individual director as a ratio of the number of funds of the same investment style as the fund of interest over the total number of funds this director oversees in a fund–family. The median value of the individual directors' expertise, $Expert_B$, defines the expertise of a board.

As we are interested in depicting the impact of director – fund–family alignment, we also control for whether directors sitting on a board experienced a liquidation in the past 12 months. For this purpose, we define the dummy, L_{12}, equal to one if any of the funds within the fund–family overseen by any of the directors sitting on a given board was liquidated in the past 12 months, and zero otherwise. If the dummy depicts a 'general' trend of liquidations that can be related to fund–family strategic decisions, its coefficient should be positive. If, however, despite our numerous controls designed to capture directors' resistance to liquidations, the dummy depicts the resistance of directors to liquidations, the sign of L_{12} coefficient may be

negative.

Table 3 Panel B shows the summary statistics for the variables defined in this section. It shows that there is not a big difference between the liquidated and the surviving funds in how many boards directors who experienced liquidations of at least one of their funds in the previous 12 month had. The average L_{12} for the liquidated and the surviving funds is 0.196 and 0.131 respectively. Both samples also have similar levels the independence ratios (0.811 v. 0.808), board size (8.4 directors v. 9.0 directors), and the expertise ratio (0.428 v. 0.400). Yet, all these statistics are statistically significantly different from each other except for $Indpnd_B$. The summary statistics for the institutional and the retail funds are presented in Appendix 1.

5. Empirical Analysis

To test our hypotheses, we run logit regressions with the dependent variable equal to one for funds that were liquidated and zero for the matched surviving funds. The dependent variables are various board, fund and fund–family characteristics as defined in Section 4. The variables of greatest interest are fund's objective–adjusted performance ($Return_f$), flows ($Flow_f$), and their interactions with variables proxying for the degree of directors' alignment with fund–families' and shareholders' interests. We report marginal effects.

Table 4 Panel A shows the first set of results when the alignment of the board with fund–family's interest is measured by $Dir_{\#B}$, i.e. the median of the number of boards directors of that board sit for a fund–family, and with shareholders' interest by Dir_{sh}. First column shows the results for the regression that controls for whether any of the directors sitting on the board experienced a fund liquidation in past 12 months, L_{12}, in addition to standard board, fund and fund–family characteristics (i.e. $Size_B$, $Size_f$, $Size_{FF}$, Age_f, Fee_f, $Spec_{FF}$, $Indpnd_B$). This specification does not have the interactive effects. It is shown to illustrate robustness of our findings.

The marginal effects of $Return_f$ and $Flows_f$ are negative and statistically significant at 1%. This confirms that funds with better performance and higher net inflows are less likely to be liquidated. The regression also confirms findings previously reported in the literature that

smaller and younger funds are more likely to exit the market than bigger funds, and funds that charge higher fees are less likely to exit the market (e.g. Jayaraman et al. 2002, Khorana et al. 2007, English II et al., 2011). The independence and size of the board are not associated with the probability of liquidations, so are not fund–family characteristics. On the other hand, the probability of liquidations statistically significantly increases if directors sitting on a fund's board experienced liquidations of other funds in previous 12 months. As discussed, it is hard to interpret this effect.

Finally, the marginal effects obtained for $Dir_{\#B}$ are negative and highly statistically significant suggesting that the more boards directors sit on (i.e. the more aligned with fund–families' interests directors are), the less likely liquidations are. This might be interpreted as a good sign, i.e. directors who sit on more boards are more experienced or/are simply do a better job. That is why after controlling for all other board, fund and fund–family characteristics, 'busy' directors are associated with lower probability of liquidations. In contrast, the alignment of directors with shareholders, Dir_{sh}, does not seem to impact funds' fate.

Next, we add to the above regression specification the interactive terms, $Return_f$ x $Dir_{\#B}$, $Flow_f$ x $Dir_{\#B,}$ $Return_f$ x Dir_{sh} and $Flow_f$ x Dir_{sh}. The results are shown in the second column of Table 4 Panel A. All the results obtained for the specification without the interactive terms are preserved in the sense that all the signs and levels of statistical significance are the same. However, the introduction of the interactive effects throws a new light on the meaning of directors' 'busyness'. The marginal effect of $Return_f$ x $Dir_{\#B}$ is positive and statistically significant at 1%. This means that the more boards directors sit on within a fund–family, the less important funds' performance is for the liquidation decision. The opposite is true for fund flows. The marginal effect of $Flow_f$ x $Dir_{\#B}$ is negative and statistically significant at 1%. In other words, the more boards directors sit on within a fund–family, the more detrimental fund flows in determining fund liquidations are. All the marginal effects estimated for the interactive terms with Dir_{sh} are highly statistically insignificant suggesting that in contrast to the directors' alignment with fund–families, the directors' alignment with shareholders does not impact the importance of funds' performance and flows in determining liquidations.

The third column shows the results for the same specification as in column two plus

three extra controls, $Expert_B$, $In\text{-}house_f$, $Team_f$ to further control for the quality of internal expertise and control. The results remain unchanged. The statistical significance and sign of the marginal effects are as in the previous specifications. Moreover, funds that are run internally ($In\text{-}house_f$) or managed by teams ($Team_f$) are more likely to be liquidated than externally manged funds or funds run by unitary managers. This result is consistent with Cumming et al. (2015) who finds that outsourcing of advisor services is associated with higher risk–adjusted performance, and it is consistent with Chen et al. (2004) who document the underperformance of team-managed funds over their single-manged counterparts.

******** insert Table 4 *********

Thus, the above results show that interacting $Dir_{\#B}$ with $Return_f$ and $Flow_f$ uncovers another side of directors' 'busyness' and of the degree of directors' alignment with fund–families. As hypothesised in Section 2, the larger number of boards directors sit on within a fund–family, the less liquidation decisions are aligned with shareholders' interest, and more aligned with fund–family preferences. We have also hypothesised that any 'distortion' to representing shareholders' interests might be stronger the less sophisticated the shareholders are. To test whether this is the case we split our sample into two: institutional funds and retail funds. Table 4 Panels B and C show the results for the institutional and the retail funds, respectively. To save space we only show the regressions with the interactive terms included.

Once more, whether $Expert_B$, $In\text{-}house_f$, and $Team_f$ are used in the regression specifications or not, does not affect the results: the signs and the statistical significance of individual marginal effects are preserved. However, the R^2-pseudo improve when the additional variables are controlled for. Thus, our discussion focuses on the second columns of Panels B and C.

Table 4 Panels B and C show that there are many similarities between the institutional and the retail funds. For instance, as previously reported, the probability of liquidations is statistically significantly negatively associated with $Return_f$, $Flow_f$, $Dir_{\#B}$, $Size_f$, Age_f, Fee_f and statistically significantly positively associated with $In\text{-}house_f$. There also are considerable differences between the two groups of funds. For instance, for the institutional funds, the higher

ratio of independent directors increases the probability of liquidation. No such effects are depicted for the retail funds. However, team management is associated with a higher probability of liquidation for retail funds only. In contrast, the higher the expertise of the board in the investment style of a fund is, the less likely the fund is to be liquidated. No such effects are depicted for the institutional funds.

Most importantly, the marginal effects of the interactive terms with $Dir_{\#B}$ are statistically significant for the retail funds only. Thus, the results reported in Table 4 Panel A are driven by the retail funds. Increasing alignment of directors' interests with fund–families' interests creates a much stronger distortion in a group of funds that are populated by small, less financially savvy shareholders than in a group of funds populated by big and more financially savvy shareholders. This distortion is strongly statistically and economically significant. Moreover, the comparison of the marginal effects of $Return_f$, and $Flow_f$, shows that returns play a much bigger role in exit of the institutional funds than of the retail ones. The marginal effects of the institutional funds are twice the size of those estimated for the retail funds and more statistically significant. The opposite seems true for fund flows. The marginal effects of the retail funds are twice as big as those of the institutional funds.

In contrast, the marginal effects of the interactive terms with Dir_{sh} have stronger statistical significance for the institutional funds than for the retail funds. The marginal effects are in the 'right' direction for the institutional funds too, i.e. the greater director – shareholders alignment is, the more important funds' returns and less important flows are in determining fund liquidations. In other words, directors' alignment with shareholders weakens factors associated with fund–families' preferences that are inconsistent with shareholders' preferences. The marginal effects obtained for the retail funds' regressions are statistically insignificant. However, the negative sign of the estimated marginal effect suggests that, in the case of retail funds, a stronger alignment of directors with shareholders does not protect shareholders against potentially unfair practices of fund–families. This result seems contra intuitive, except that if indeed as Chen et al. (2008) argue, directors ownership increases with shareholders' lack of financial sophistications, funds that have the highest directors' share–ownership, are funds with least savvy shareholders. These shareholders may be easier to take advantage of.

To test robustness of our findings we repeat the regressions as specified in Table 4 when the director – fund–family alignment is measured by the other variables defined in Section 4.2. To save space only the specifications with the interactive terms, and with the three additional controls are shown for the institutional and the retail funds only.

We start with the measures that are based on the fund related information. Table 5 Panels A, B and C show the results for the institutional and the retail funds when the director – fund–family alignment is measured by Dir_{AUM}, Dir_{RAUM}, $Dir_{\#f}$, respectively. Table 6 keeps the format of Table 5 but when Dir_{ExC}, Dir_{Cleft}, and D_{RCloss} are used as the measures of director – fund–family alignment.

Regardless of the specification, the results presented in Table 5 are similar to those presented in Table 4 Panels B and C. For instance, fund size, age and fees are all negatively associated with the probability of a fund being liquidated. Directors experiencing fund liquidations in previous 12 months are positively related to the probability of fund liquidation, etc. Thus, it makes sense to focus our discussion on the variables of the greatest interest to us.

Looking at the institutional funds first, we see that regardless of the specification the marginal effects of $Return_f$ are highly statistically significant and negative. The same is true for $Flow_f$. In contrast, none of the marginal effects of $Return_f$ in the retail funds' regressions is statistically significant. The marginal effects of $Flow_f$ are statistically significant and much bigger for the retail funds than the corresponding estimates obtained for the institutional funds. These results alone show a strong difference in factors associated with fund liquidations in the institutional and the retail samples. The marginal effects of Dir_{sh} are highly statistically insignificant in all the specifications.

Some measures of the director – fund–family alignment have statistically significant marginal effects (Dir_{RAUM}, Dir_{ExC}) but many are statistically insignificant. Where they are statistically significant, they are significant for both the institutional and the retail funds. Most importantly, none but one of the marginal effects for the interactive terms are statistically significant for the institutional funds. In Table 5 Panel C (specification with $Dir_{\#f}$) the marginal effect of $Flow_f$ x $Dir_{\#f}$ is statistically significant and positive. That is, the more funds directors

oversee for a fund–family, the less detrimental fund flows are for fund liquidations.

The results for the retail funds are quite opposite to those for the institutional funds but are consistent with those presented in Table 4. All the marginal effects of the interactive terms of $Return_f$ with director – fund–family alignment are positive, and all but two (one in Table 5 and one in Table 6) are statistically significant. The marginal effects of the interactive terms of $Flow_f$ with director – fund–family alignment are negative and only one (Table 5) is statistically insignificant.

The effects of the director – shareholders alignment are also similar to those presented in Table 4. First, no marginal effect of Dir_{sh} is statistically significant. Also, none of the marginal effects for the interactive terms of Dir_{sh} in the retail funds regressions is statistically significant. The marginal effects estimated for the interactive terms for the institutional funds regressions are also in the same vein as those presented in Table 4. The increase of the director – shareholders alignment increases the importance of the past returns and decreases the importance of the past fund flows on funds' liquidations.

These results confirm that the past performance of funds plays a much greater role in determining fund liquidations for the institutional funds than for the retail funds. The opposite is true for the fund flows. The marginal effects are much bigger for the retail funds than they are for the institutional funds. Both are statistically significant. The great difference is also observed in the impact the director – fund–family alignment has on reducing or magnifying the impact of the past fund performance and flows on the liquidation decisions. In the case of the institutional funds, it is fair to say that none of the measures applied made the past fund performance less important or flows more important. The opposite is true for the retail funds. There is strong evidence that the director – fund–family alignment weakened the impact of the past performance and magnified the impact of the fund flows. The director – shareholders alignment has a greater impact on the liquidation decisions for the institutional funds than for the retail funds. This influence is in the 'right' direction, i.e. it enhances shareholders' interests.

******** insert Table 5 *********

******** insert Table 6 *********

6. Conclusions

In this paper we address the link between the independence of mutual funds' independent directors and the quality of board governance by studying how aligning directors' interests with those of mutual fund–families and of shareholders is associated with fund liquidations. We argue that increasing directors' alignment with fund–families make directors more likely to take decisions that are congruent with fund–families' preferences even if these are not in the best interest of shareholders. Increasing directors' alignment with shareholders should make directors more likely to fulfil their fiduciary duties towards shareholders. We test the strength of these effects on a sample of U.S. mutual funds liquidated between 2002 and 2014 and matched surviving funds.

Consistent with our hypotheses we find that an increase in director – fund–family alignment lowers the quality of board governance: (i) it magnifies the importance of fund flow on the liquidation decisions and (ii) weakens the link between the past fund performance and liquidations. These effects are consistently detected for the retail funds. No such effects are observed for the institutional funds. We also find that the increase in director – shareholders alignment increases the importance of past performance and decreases the importance of fund flows on the probability of fund liquidations. However, contrary to our expectations, the effects are statistically significant for the institutional funds only.

These results are first to quantify conflict of interest between directors and fund – families, and show that it has a material and negative effect on the quality of decisions made by boards. Moreover, this effect is strong in retail funds and non-existent in institutional funds. To make things worse for less financially savvy shareholders, director – shareholders alignment does not mitigate the negative impact of director – fund–family alignment on the quality of board decisions in retail funds. In fact, director – shareholders alignment has a positive impact on the quality of fund governance in institutional funds only.

This suggests that good governance practices are strongly linked to the financial awareness of shareholders and may not be easily mitigated by the institutional setting. The expectation that high directors' share–ownership will deliver high quality governance in a weak shareholder

monitoring environment may be misplaced. Where shareholder monitoring is weak, it may be that high directors' share-ownership is an outcome of better governance practices rather than the cause of them. Moreover, our results show that it is important to account for any potential factors that may offset the effectiveness of the director – shareholders alignment. As we show, lack of directors' independence from fund–families is one such factor.

Accounting for directors' independence from fund–families is more subtle than calculating the ratio of independent directors to board size. We show that accounting for such easily observable characteristics as the number of boards directors sit on has a strong explanatory power in explaining boards' decisions. This is consistent with Chen et al. (2008) who show that multi– directorships and directors' tenure are associated with higher fees, and therefore, low quality of fund governance.

Our results support the claim by Ferris and Yan (2007) that the requirement that the ratio of independent directors on mutual fund boards must be at least 75% will not sufficiently address the issue of weak fund governance. Moreover, directors' share–ownership is also unlikely to sufficiently raise fund governance standards to prevent shareholders with weak financial skills from being taken an advantage of. Our results suggest that while it may be necessary to improve financial literacy among shareholders, it may also be imperative to restrict how many boards directors can sit on a single fund–family.

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Figure 1. Standardized differences in means (Panel A) and the variance ratios (Panel B) for the Nearest-Neighbor matching, matched by investment objectives, Age_f, and $Size_f$.

Panel A. Standardized differences in means (SDM)

Panel B. Variance ratios (VRs)

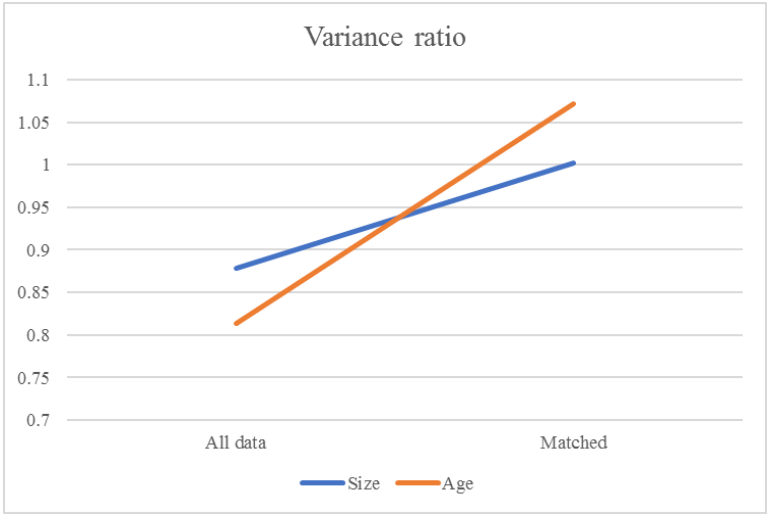

Table 1. Number of funds, investment companies, and fund-families in the sample

	Liquidated funds	Surviving funds	Sample
Panel A. Number of funds, investment companies and fund-families in the 30-family sample			
Number of fund-families	28	30	30
Number of investment companies	173	506	561
Number of funds	650	3,403	4,053
Panel B. Number of funds, investment companies and fund-families in the whole sample			
Number of fund-families	212	300	344
Number of investment companies	453	1,015	1,154
Number of funds	1,685	7,411	9,096

Table 2. Descriptive statistics of the liquidated funds and of the surviving funds for 2002-2014. $Return_f$ and $Flow_f$ are annual observations. Age_f is the number of years in operation till a report month. Fee_f is the sum of expense ratios, front-end loads and bank-end loads in a report month. $Size_f$ is the reported amount of funds' total net assets a year before the report month, $Size_{FF}$ is the sum of the market values of the funds within the family in a report month, and $Spec_{FF}$ is the ratio of the number of funds belonging to a certain style over the total number of funds the family provides in a report month.

	Liquidations					Surviving					T-tests for the differences in means	
	Mean	Median	St.dev	Min	Max	Mean	Median	St.dev	Min	Max	S-L	p-value
Panel A. Unmatched sample												
$Return_f$ (%)	-1.391	-0.286	15.527	-126.324	98.842	0.656	0.099	14.013	-126.190	148.354	2.047***	0.000
$Flow_f$(%)	-8.265	-11.955	36.902	-99.917	199.151	6.969	-1.771	39.305	-99.725	199.544	15.234***	0.000
$Size_f$ ($m)	276	32	1,358	0.100	31,695	1,441	174	5,137	0.100	137,381	1,165***	0.000
Age_f	10.017	8.025	8.060	0.997	85.052	12.770	10.038	10.315	0.997	90.055	2.753***	0.000
Fee_f (%)	2.112	1.440	1.925	0.000	8.600	1.851	1.100	1.693	0.000	8.130	-0.261***	0.000
$Size_{FF}$ ($m)	120,106	67,243	214,852	4.850	1,656,588	267,870	79,834	388,166	3.268	1,656,588	147,764***	0.000
$Spec_{FF}$	0.112	0.083	0.108	0.004	1.000	0.112	0.085	0.112	0.002	1.000	0.000	0.773
Funds			1,685					7,411				
Obs.			9,403					30,262				
Panel B. Matched sample												
$Return_f$	-1.077	-0.167	15.298	-119.491	89.580	0.533	0.044	14.481	-126.190	102.397	1.610***	0.000
$Flow_f$	-10.271	-12.786	38.642	-99.917	194.728	5.361	-2.678	38.832	-98.142	199.544	15.632***	0.000
$Size_f$	247	18	1,716	0	31,695	648	64	4,611	0	137,381	401***	0.000
Age_f	8.579	7.019	6.030	1.000	38.030	11.395	10.011	7.203	0.997	46.033	2.816***	0.000
Fee_f	1.820	1.200	1.886	0.000	8.420	2.043	1.330	1.774	0.000	7.960	0.223***	0.000
$Size_{FF}$	100,891	65,903	162,310	6	1,212,028	240,403	79,915	355,711	17	1,656,588	139,512***	0.000
$Spec_{FF}$	0.121	0.087	0.123	0.004	1.000	0.104	0.081	0.106	0.002	1.000	-0.017***	0.000
Funds			997					686				
Obs.			3,391					4,906				

Table 3. Summary statistics of the alignment measures, and other board characteristics for the liquidated and the matched surviving funds for 2002–2014. $Dir_{\#B}$ is the number of boards the median director sits on in a fund-family a given fund belongs to. $Dir_{\#f}$ is the number of funds the median director oversees for a fund-family. Dir_{AUM} is the AUM of all boards the median director sits on for a fund-family. Dir_{RAUM} is the ratio of the AUM the median director oversees for a fund-family to the AUM of all directorships s/he holds. Dir_{ExC} is the excessive compensation the median director earns from a fund-family. Dir_{Cleft} is the median director's compensation earned from a fund-family after a fund liquidation. Dir_{RCLoss} is the ratio of the compensation a director receives from a fund-family to the estimated value of a director' compensation related to a liquidated fund for the median director. Dir_{sh} is the dollar value of share-ownership for all boards the median director holds directorships in a fund-family. $Size_B$ is the number of all directors sitting on a board. L_{12} is a dummy indicating that any of the funds within the fund-family overseen by any of the directors sitting on a given board was liquidated in the past 12 months. $Indpnd_B$ is the ratio of the number of independent directors to $Size_B$. $Expert_B$ is the expertise of the median director.

	Liquidated funds					Surviving funds					T-tests for the differences in means	
	Mean	Median	St.dev	Min	Max	Mean	Median	St.dev	Min	Max	S-L	p-value
Panel A. Board alignment measures												
$Dir_{\#B}$	2.584	2.000	1.247	2.000	9.000	3.142	2.000	1.847	2.000	9.000	0.558***	0.000
$Dir_{\#f}$	39.859	23.000	43.517	1.000	186.000	34.825	21.000	38.220	1.000	186.000	-5.034***	0.000
Dir_{AUM} ($m)	41,630	14,051	68,938	0.300	774,639	99,990	26,925	171,122	0.833	1,069,582	58,360***	0.000
Dir_{RAUM}	0.994	1.000	0.063	0.000	1.000	0.998	1.000	0.038	0.188	1.000	0.004***	0.000
Dir_{ExC} ($)	17,780	5,890	76,657	-210,360	211,028	-10,041	-7,410	82,087	-210,360	211,028	-27,821***	0.000
Dir_{Cleft} ($)	155,578	153,169	75,249	15,811	489,264	194,530	166,435	127,023	15,811	497,318	38,952***	0.000
Dir_{RCLoss}	0.169	1.379	5.722	-17.016	16.303	0.409	-0.549	5.706	-17.016	16.303	0.240*	0.061
Dir_{sh} ($)	78,170	100,000	36,287	0.000	100,000	83,793	100,000	35,221	0.000	1,000,000	5,623***	0.000
Panel B. Other board variables												
L_{12}	0.196	0.000	0.397	0.000	1.000	0.131	0.000	0.337	0.000	1.000	-0.065***	0.000
$Indpnd_B$	0.811	0.800	0.097	0.500	1.000	0.808	0.800	0.088	0.538	1.000	-0.003	0.303
$Size_B$	8.420	9.000	2.552	3.000	15.000	9.045	9.000	2.726	3.000	15.000	0.625***	0.000
$Expert_B$	0.428	0.422	0.215	0.017	1.000	0.400	0.393	0.216	0.007	1.000	-0.028***	0.000
Funds			997					686				
Obs.			3,391					4,906				

Table 4. Marginal effects of logit regressions clustered by investment objectives and boards after matching by $Size_f$, Age_f and investment objectives from outside a given fund's fund-family. The dependent variable is equal to one for the liquidated funds, and it is equal to zero for the matched surviving funds. $Return_f$ and $Flow_f$ are annual observations. $Dir_{\#B}$ is the number of boards the median director sits on in a fund-family a given fund belongs to. Dir_{sh} is the dollar value of share-ownership for all boards the median director holds directorships in a fund-family. L_{12} is a dummy indicating that any of the funds within the fund-family overseen by any of the directors sitting on a given board was liquidated in the past 12 months. $In\text{-}house_B$ is a dummy indicating that a fund is managed internally. $Team_m$ is a dummy indicating that a fund is managed by multiple asset managers. $Expert_B$ is the expertise of the median director. $Size_B$ is the number of all directors sitting on a board. $Indpnd_B$ is the ratio of the number of independent directors to $Size_B$. Age_f is the number of years in operation till current month. Fee_f is the sum of expense ratios, front-end loads and bank-end loads in current month. $Size_f$ is the reported amount of funds' total net assets a year before the current month, $Size_{FF}$ is the sum of the market values of the funds within the family in current month, and $Spec_{FF}$ is the ratio of the number of funds belonging to a certain style over the total number of funds the family provides in current month. . P–values are shown in brackets. *** - 1% statistical significance, ** - 5% statistical significance, * - 10% statistical significance.

	Panel A. All funds			Panel B. Institutional funds		Panel C. Retail funds	
$Return_f$	-0.092***	-0.223***	-0.227***	-0.300**	-0.291**	-0.105*	-0.114**
	(0.007)	(0.000)	(0.000)	(0.011)	(0.012)	(0.078)	(0.040)
$Flow_f$	-0.298***	-0.200***	-0.200***	-0.171***	-0.162***	-0.281***	-0.267***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$Dir_{\#B}$	-0.030***	-0.035***	-0.032***	-0.039**	-0.041***	-0.039***	-0.033***
	(0.000)	(0.000)	(0.000)	(0.010)	(0.006)	(0.000)	(0.000)
$Return_f x Dir_{\#B}$		0.077***	0.080***	0.067	0.066	0.062**	0.059**
		(0.004)	(0.002)	(0.326)	(0.328)	(0.015)	(0.015)
$Flow_f x Dir_{\#B}$		-0.059***	-0.055***	-0.034	-0.034	-0.051**	-0.051**
		(0.000)	(0.000)	(0.199)	(0.189)	(0.018)	(0.015)
Dir_{sh}	0.001	0.001	0.000	0.000	-0.001	0.002	0.000
	(0.857)	(0.881)	(0.935)	(0.939)	(0.808)	(0.730)	(0.970)
$Return_f x\ Dir_{sh}$		-0.005	-0.001	-0.028**	-0.027**	-0.005	0.006
		(0.543)	(0.928)	(0.035)	(0.040)	(0.764)	(0.778)
$Flow_f x\ Dir_{sh}$		-0.002	-0.003	0.015**	0.013**	-0.020	-0.028
		(0.720)	(0.556)	(0.024)	(0.040)	(0.450)	(0.270)
L_{12}	0.092***	0.095***	0.087***	0.146***	0.129***	0.044*	0.052**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.054)	(0.015)
$In\text{-}house_B$			0.135***		0.146***		0.195***
			(0.000)		(0.005)		(0.000)
$Team_B$			0.110***		0.006		0.133***
			(0.000)		(0.872)		(0.000)
$Expert_B$			-0.002		0.016		-0.032*
			(0.913)		(0.466)		(0.077)
$Indpnd_B$	0.181	0.183	0.193	0.386**	0.405**	-0.126	-0.122
	(0.188)	(0.184)	(0.154)	(0.049)	(0.035)	(0.461)	(0.449)
$Size_B$	-0.004	-0.004	-0.007	-0.007	-0.010	0.003	0.002
	(0.438)	(0.447)	(0.214)	(0.424)	(0.260)	(0.604)	(0.721)
$Size_f$	-0.056***	-0.056***	-0.056***	-0.057***	-0.055***	-0.063***	-0.065***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age_f	-0.098***	-0.100***	-0.092***	-0.078**	-0.075**	-0.090***	-0.080***
	(0.000)	(0.000)	(0.000)	(0.033)	(0.034)	(0.006)	(0.009)
Fee_f	-0.024**	-0.024**	-0.024**	-0.127***	-0.119***	-0.026**	-0.026**
	(0.036)	(0.038)	(0.030)	(0.005)	(0.007)	(0.043)	(0.033)
$Size_{FF}$	-0.012	-0.011	-0.007	-0.004	-0.003	-0.008	0.003
	(0.159)	(0.170)	(0.441)	(0.730)	(0.790)	(0.459)	(0.779)
$Spec_{FF}$	-0.001	-0.003	0.047	-0.054	-0.051	0.031	0.095
	(0.993)	(0.979)	(0.663)	(0.770)	(0.774)	(0.826)	(0.489)
Obs.	8,964	8,964	8,960	3,011	3,011	5,378	5,378
R^2psd	0.215	0.219	0.233	0.256	0.265	0.247	0.270
LL	-4785	-4760	-4674	-1487	-1468	-2763	-2677

Table 5 Marginal effects of logit regressions clustered by investment objectives and boards after matching by $Size_f$, Age_f and investment objectives from outside a given fund's fund-family. The dependent variable is equal to one for the liquidated funds, and it is equal to zero for the matched surviving funds. $Return_f$ and $Flow_f$ are annual observations. Dir_{AUM} is the AUM of all boards the median director sits on for a fund-family. Dir_{RAUM} is the ratio of the AUM the median director oversees for a fund-family to the AUM of all directorships s/he holds. $Dir_{\#f}$ is the number of funds the median director oversees for a fund-family. Dir_{sh} is the dollar value of share-ownership for all boards the median director holds directorships in a fund-family. L_{12} is a dummy indicating that any of the funds within the fund-family overseen by any of the directors sitting on a given board was liquidated in the past 12 months. $In\text{-}house_B$ is a dummy indicating that a fund is managed internally. $Team_m$ is a dummy indicating that a fund is managed by multiple asset managers. $Expert_B$ is the expertise of the median director. $Size_B$ is the number of all directors sitting on a board. $Indpnd_B$ is the ratio of the number of independent directors to $Size_B$. Age_f is the number of years in operation till current month. Fee_f is the sum of expense ratios, front-end loads and bank-end loads in current month. $Size_f$ is the reported amount of funds' total net assets a year before the current month, $Size_{FF}$ is the sum of the market values of the funds within the family in current month, and $Spec_{FF}$ is the ratio of the number of funds belonging to a certain style over the total number of funds the family provides in current month. P–values are shown in brackets. *** - 1% statistical significance, ** - 5% statistical significance, * - 10% statistical significance.

	Panel A		Panel B		Panel C	
	Institutional	Retail	Institutional	Retail	Institutional	Retail
$Return_f$	-0.211***	-0.012	-0.204***	-0.034	-0.191***	-0.005
	(0.002)	(0.732)	(0.002)	(0.373)	(0.003)	(0.903)
$Flow_f$	-0.213***	-0.387***	-0.214***	-0.362***	-0.223***	-0.367***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dir_{AUM}	-0.002	0.016				
	(0.899)	(0.310)				
$Return_f$ x Dir_{AUM}	-0.015	0.049***				
	(0.613)	(0.004)				
$Flow_f$ x Dir_{AUM}	0.006	-0.050***				
	(0.710)	(0.001)				
Dir_{RAUM}			-0.723**	-0.335**		
			(0.016)	(0.027)		
$Return_f$ x Dir_{RAUM}			0.860	1.515		
			(0.397)	(0.428)		
$Flow_f$ x Dir_{RAUM}			0.653	-0.551*		
			(0.452)	(0.082)		
$Dir_{\#f}$					0.037	-0.024
					(0.123)	(0.183)
$Return_f$ x $Dir_{\#f}$					0.002	0.069**
					(0.978)	(0.018)
$Flow_f$ x $Dir_{\#f}$					0.074***	-0.020
					(0.003)	(0.505)
Dir_{sh}	-0.001	-0.000	-0.001	-0.001	-0.002	-0.000
	(0.834)	(0.994)	(0.805)	(0.864)	(0.602)	(0.942)
$Return_f$ x Dir_{sh}	-0.028**	-0.010	-0.028**	0.007	-0.029**	0.003
	(0.031)	(0.633)	(0.032)	(0.723)	(0.024)	(0.873)
$Flow_f$ x Dir_{sh}	0.011*	-0.009	0.012*	-0.040	0.010	-0.038
	(0.061)	(0.728)	(0.066)	(0.121)	(0.116)	(0.130)
L_{12}	0.144***	0.057***	0.144***	0.057***	0.129***	0.067***
	(0.000)	(0.008)	(0.000)	(0.010)	(0.000)	(0.001)
$In\text{-}house_B$	0.146***	0.183***	0.150***	0.195***	0.134***	0.194***
	(0.006)	(0.000)	(0.005)	(0.000)	(0.010)	(0.000)
$Team_B$	0.022	0.142***	0.021	0.148***	0.011	0.148***
	(0.590)	(0.000)	(0.599)	(0.000)	(0.790)	(0.000)
$Expert_B$	0.016	-0.052**	0.017	-0.039**	-0.012	-0.023
	(0.549)	(0.016)	(0.435)	(0.032)	(0.661)	(0.282)
$Indpnd_B$	0.337*	-0.032	0.355*	-0.129	0.414**	-0.156
	(0.086)	(0.838)	(0.076)	(0.427)	(0.027)	(0.324)
$Size_B$	-0.014	-0.003	-0.015*	-0.003	-0.011	-0.003
	(0.119)	(0.689)	(0.090)	(0.609)	(0.204)	(0.587)
$Size_f$	-0.057***	-0.066***	-0.056***	-0.066***	-0.056***	-0.068***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age_f	-0.074**	-0.088***	-0.077**	-0.084***	-0.078**	-0.082***
	(0.036)	(0.005)	(0.031)	(0.006)	(0.025)	(0.008)
Fee_f	-0.126***	-0.023*	-0.125***	-0.024*	-0.110**	-0.023*
	(0.007)	(0.063)	(0.007)	(0.060)	(0.015)	(0.073)
$Size_{FF}$	-0.006	-0.013	-0.007	0.001	-0.006	-0.001
	(0.722)	(0.365)	(0.574)	(0.953)	(0.652)	(0.903)
$Spec_{FF}$	-0.063	0.114	-0.057	0.104	0.018	0.072
	(0.729)	(0.420)	(0.750)	(0.462)	(0.930)	(0.619)
Obs.	3,011	5,378	3,011	5,378	3,011	5,378
R^2psd	0.256	0.265	0.260	0.261	0.264	0.262
LL	-1487	-2695	-1479	-2709	-1471	-2707

Table 6 Marginal effects of logit regressions clustered by investment objectives and boards after matching by $Size_{f,}$, Age_f and investment objectives from outside a given fund's fund-family. The dependent variable is equal to one for the liquidated funds, and it is equal to zero for the matched surviving funds. $Return_f$ and $Flow_f$ are annual observations. Dir_{ExC} is the excessive compensation the median director earns from a fund-family. Dir_{Cleft} is the median director's compensation earned from a fund-family after a fund liquidation. Dir_{RCLoss} is the ratio of the compensation a director receives from a fund-family to the estimated value of a director' compensation related to a liquidated fund for the median director. Dir_{sh} is the dollar value of share-ownership for all boards the median director holds directorships in a fund-family. L_{12} is a dummy indicating that any of the funds within the fund-family overseen by any of the directors sitting on a given board was liquidated in the past 12 months. $In\text{-}house_B$ is a dummy indicating that a fund is managed internally. $Team_m$ is a dummy indicating that a fund is managed by multiple asset managers. $Expert_B$ is the expertise of the median director. $Size_B$ is the number of all directors sitting on a board. $Indpnd_B$ is the ratio of the number of independent directors to $Size_B$. Age_f is the number of years in operation till current month. Fee_f is the sum of expense ratios, front-end loads and bank-end loads in current month. $Size_f$ is the reported amount of funds' total net assets a year before the current month, $Size_{FF}$ is the sum of the market values of the funds within the family in current month, and $Spec_{FF}$ is the ratio of the number of funds belonging to a certain style over the total number of funds the family provides in current month. P–values are shown in brackets. *** - 1% statistical significance, ** - 5% statistical significance, * - 10% statistical significance.

	Panel A		Panel B		Panel C	
	Institutional	Retail	Institutional	Retail	Institutional	Retail
$Return_f$	-0.179***	-0.022	-0.176***	-0.002	-0.177***	-0.009
	(0.004)	(0.567)	(0.006)	(0.965)	(0.010)	(0.822)
$Flow_f$	-0.219***	-0.350***	-0.219***	-0.377***	-0.224***	-0.363***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dir_{ExC}	0.003*	0.006***				
	(0.072)	(0.000)				
$Return_f$ x Dir_{ExC}	-0.002	0.008**				
	(0.749)	(0.026)				
$Flow_f$ x Dir_{ExC}	0.003	-0.006**				
	(0.146)	(0.022)				
Dir_{Cleft}			0.095	0.013		
			(0.105)	(0.471)		
$Return_f$ x Dir_{Cleft}			-0.013	0.067**		
			(0.899)	(0.040)		
$Flow_f$ x Dir_{Cleft}			0.035	-0.071**		
			(0.475)	(0.049)		
Dir_{RCLoss}					-0.001	-0.001
					(0.785)	(0.585)
$Return_f$ x Dir_{RCLoss}					0.017	0.003
					(0.200)	(0.687)
$Flow_f$ x Dir_{RCLoss}					-0.004	-0.012**
					(0.398)	(0.032)
Dir_{sh}	-0.002	-0.003	-0.003	-0.000	-0.002	-0.000
	(0.590)	(0.566)	(0.464)	(0.995)	(0.700)	(0.984)
$Return_f$ x Dir_{sh}	-0.028*	0.004	-0.027*	-0.010	-0.026*	0.002
	(0.054)	(0.842)	(0.051)	(0.690)	(0.071)	(0.944)
$Flow_f$ x Dir_{sh}	0.011*	-0.030	0.013**	-0.018	0.013**	-0.037
	(0.070)	(0.267)	(0.031)	(0.496)	(0.032)	(0.159)
L_{12}	0.134***	0.085***	0.140***	0.070***	0.135***	0.070***
	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)	(0.002)
$In\text{-}house_B$	0.126**	0.203***	0.131**	0.195***	0.132**	0.198***
	(0.018)	(0.000)	(0.016)	(0.000)	(0.016)	(0.000)
$Team_B$	0.009	0.139***	0.014	0.152***	0.010	0.152***
	(0.818)	(0.000)	(0.729)	(0.000)	(0.804)	(0.000)
$Expert_B$	0.016	-0.032*	0.000	-0.046**	0.015	-0.042**
	(0.473)	(0.074)	(0.986)	(0.015)	(0.489)	(0.020)
$Indpnd_B$	0.353*	-0.172	0.406*	-0.139	0.425**	-0.137
	(0.076)	(0.283)	(0.056)	(0.396)	(0.037)	(0.402)
$Size_B$	-0.016*	-0.007	-0.017*	-0.004	-0.016*	-0.004
	(0.059)	(0.297)	(0.055)	(0.548)	(0.067)	(0.588)
$Size_f$	-0.054***	-0.064***	-0.055***	-0.063***	-0.056***	-0.062***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age_f	-0.074**	-0.074**	-0.068*	-0.083***	-0.064*	-0.084***
	(0.044)	(0.013)	(0.059)	(0.008)	(0.078)	(0.007)
Fee_f	-0.114***	-0.022*	-0.109**	-0.022*	-0.119**	-0.022*
	(0.009)	(0.090)	(0.015)	(0.092)	(0.010)	(0.088)
$Size_{FF}$	-0.006	0.006	-0.035*	0.000	-0.014	0.004
	(0.610)	(0.621)	(0.057)	(0.990)	(0.259)	(0.732)
$Spec_{FF}$	-0.075	0.140	-0.082	0.199	-0.120	0.181
	(0.666)	(0.329)	(0.663)	(0.212)	(0.494)	(0.230)
Obs.	2,768	5,095	2,741	5,079	2,741	5,079
R^2psd	0.267	0.276	0.265	0.261	0.263	0.261
LL	-1338	-2505	-1329	-2548	-1334	-2548

Appendix

Table A1. Summary statistics of the alignment measures, other board characteristics, and fund characteristics for the institutional and the retail funds for 2002–2014.

	Institutional funds					Retail funds				
	Mean	Median	St.dev	Min	Max	Mean	Median	St.dev	Min	Max
Panel A. Board alignment measures										
$Dir_{\#B}$	2.596	2.000	1.294	2.000	8.000	3.115	2.000	1.871	2.000	10.000
$Dir_{\#f}$	44.823	30	44.102	1	186	33.233	18	37.876	1	176
Dir_{AUM} ($m)	72,961	23,722	136,787	12.1	1,069,582	74,030	16,427	145,807	0.3	1,069,582
Dir_{RAUM}	0.997	1.000	0.042	0.002	1.000	0.994	1.000	0.059	0.000	1.000
Dir_{ExC} ($)	-1,825	-5,432	76,280	-215,483	172,253	6,327	2,238	84,906	-211,960	230,643
Dir_{Cleft} ($)	171,171	160,395	93,744	25,417	458,481	175,147	160,804	108,638	13,222	492,221
Dir_{RCLoss}	-0.235	-0.531	5.925	-19.921	13.988	0.610	1.301	5.429	-14.380	16.358
Dir_{sh} ($)	72,216	100,000	40,943	0	100,000	85,870	100,000	29,791	0	250,000
Panel B. Other board variables										
L_{12}	0.203	0.000	0.403	0.000	1.000	0.132	0.000	0.339	0.000	1.000
$Indpnd_B$	0.812	0.800	0.092	0.571	1.000	0.810	0.800	0.092	0.500	1.000
$Size_B$	8.312	8.000	2.616	3.000	14.000	8.970	9.000	2.576	4.000	15.000
$Expert_B$	0.410	0.396	0.210	0.007	1.000	0.419	0.417	0.220	0.014	1.000
Panel C. Fund characteristics										
$Return_f$	0.340	0.063	14.844	-79.452	110.139	-0.333	-0.035	14.486	-126.190	107.091
$Flow_f$	3.862	-1.612	43.091	-97.759	198.959	-3.745	-8.773	36.598	-99.917	195.322
$Size_f$	635	78	2,461	0	46,939	588	29	4,643	0	137,381
Age_f	8.943	7.025	6.261	1.000	41.058	11.241	10.008	7.313	0.997	46.033
Fee_f	0.764	0.710	0.598	0.000	4.614	2.546	1.990	1.949	0.000	8.420
$Size_{FF}$	179,981	76,691	284,778	33	1,656,588	173,176	71,746	290,759	6	1,656,588
$Spec_{FF}$	0.111	0.090	0.106	0.004	1.000	0.113	0.083	0.117	0.002	1.000
Funds			631					951		
Obs.			2749					5129		

Table A2 Marginal effects of logit regressions clustered by investment objectives and boards after matching by $Size_{f,}$, Age_f and investment objectives from outside a given fund's fund-family. The dependent variable is equal to one for the liquidated funds, and it is equal to zero for the matched surviving funds. $Return_f$ and $Flow_f$ are annual observations. $Dir_{\#B}$ is the number of boards the median director sits on in a fund-family a given fund belongs to. Dir_{sh} is the dollar value of share-ownership for all boards the median director holds directorships in a fund-family. L_{12} is a dummy indicating that any of the funds within the fund-family overseen by any of the directors sitting on a given board was liquidated in the past 12 months. $In\text{-}house_B$ is a dummy indicating that a fund is managed internally. $Team_m$ is a dummy indicating that a fund is managed by multiple asset managers. $Expert_B$ is the expertise of the median director. $Size_B$ is the number of all directors sitting on a board. $Indpnd_B$ is the ratio of the number of independent directors to $Size_B$. Age_f is the number of years in operation till current month. Fee_f is the sum of expense ratios, front-end loads and bank-end loads in current month. $Size_f$ is the reported amount of funds' total net assets a year before the current month, $Size_{FF}$ is the sum of the market values of the funds within the family in current month, and $Spec_{FF}$ is the ratio of the number of funds belonging to a certain style over the total number of funds the family provides in current month P–values are shown in brackets. *** - 1% statistical significance, ** - 5% statistical significance, * - 10% statistical significance.

	Panel A. All funds			Panel B. Institutional funds		Panel C. Retail funds	
$Return_f$	-0.092***	-0.220***	-0.227***	-0.272**	-0.264**	-0.103*	-0.113**
	(0.007)	(0.000)	(0.000)	(0.022)	(0.025)	(0.079)	(0.039)
$Flow_f$	-0.298***	-0.198***	-0.197***	-0.171***	-0.163***	-0.280***	-0.270***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$Dir_{\#B}$	-0.030***	-0.035***	-0.032***	-0.040***	-0.042***	-0.040***	-0.033***
	(0.000)	(0.000)	(0.000)	(0.008)	(0.005)	(0.000)	(0.000)
$Return_f x Dir_{\#B}$		0.075***	0.080***	0.052	0.052	0.057**	0.055**
		(0.005)	(0.002)	(0.453)	(0.449)	(0.023)	(0.020)
$Flow_f x Dir_{\#B}$		-0.060***	-0.057***	-0.028	-0.028	-0.053**	-0.053***
		(0.000)	(0.000)	(0.297)	(0.276)	(0.010)	(0.008)
L_{12}	0.001	0.001	0.000	0.000	-0.001	-0.002	-0.003
	(0.857)	(0.862)	(0.920)	(0.912)	(0.820)	(0.697)	(0.430)
$In\text{-}house_B$	0.092***	0.094***	0.086***	0.150***	0.133***	0.044**	0.052**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.050)	(0.015)
$Team_B$			0.135***		0.152***		0.196***
			(0.000)		(0.004)		(0.000)
$Expert_B$			0.110***		0.009		0.132***
			(0.000)		(0.830)		(0.000)
Dir_{sh}			-0.002		0.016		-0.031*
			(0.917)		(0.489)		(0.086)
$Indpnd_B$	0.181	0.182	0.191	0.388**	0.406**	-0.125	-0.121
	(0.188)	(0.187)	(0.157)	(0.046)	(0.033)	(0.462)	(0.452)
$Size_B$	-0.004	-0.004	-0.007	-0.007	-0.010	0.004	0.002
	(0.438)	(0.457)	(0.218)	(0.440)	(0.265)	(0.581)	(0.703)
$Size_f$	-0.056***	-0.056***	-0.056***	-0.058***	-0.056***	-0.063***	-0.064***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age_f	-0.098***	-0.099***	-0.092***	-0.076**	-0.074**	-0.095***	-0.086***
	(0.000)	(0.000)	(0.000)	(0.036)	(0.037)	(0.003)	(0.004)
Fee_f	-0.024**	-0.024**	-0.024**	-0.127***	-0.119***	-0.027**	-0.027**
	(0.036)	(0.038)	(0.031)	(0.005)	(0.007)	(0.033)	(0.026)
$Size_{FF}$	-0.012	-0.011	-0.007	-0.003	-0.002	-0.009	0.002
	(0.159)	(0.169)	(0.435)	(0.773)	(0.846)	(0.416)	(0.840)
$Spec_{FF}$	-0.001	-0.003	0.046	-0.033	-0.031	0.025	0.094
	(0.993)	(0.977)	(0.668)	(0.857)	(0.861)	(0.851)	(0.484)
Observations	8,964	8,964	8,960	3,011	3,011	5,477	5,477
r2_p	0.215	0.219	0.233	0.252	0.262	0.247	0.271
ll	-4785	-4760	-4675	-1495	-1474	-2816	-2728

Table A3 Marginal effects of logit regressions clustered by investment objectives and boards after matching by $Size_{f,}$ Age_f and investment objectives from outside a given fund's fund-family. The dependent variable is equal to one for the liquidated funds, and it is equal to zero for the matched surviving funds. $Return_f$ and $Flow_f$ are annual observations. Dir_{AUM} is the AUM of all boards the median director sits on for a fund-family. Dir_{RAUM} is the ratio of the AUM the median director oversees for a fund-family to the AUM of all directorships s/he holds. $Dir_{\#f}$ is the number of funds the median director oversees for a fund-family. Dir_{sh} is the dollar value of share-ownership for all boards the median director holds directorships in a fund-family. L_{12} is a dummy indicating that any of the funds within the fund-family overseen by any of the directors sitting on a given board was liquidated in the past 12 months. $In\text{-}house_B$ is a dummy indicating that a fund is managed internally. $Team_m$ is a dummy indicating that a fund is managed by multiple asset managers. $Expert_B$ is the expertise of the median director. $Size_B$ is the number of all directors sitting on a board. $Indpnd_B$ is the ratio of the number of independent directors to $Size_B$. Age_f is the number of years in operation till current month. Fee_f is the sum of expense ratios, front-end loads and bank-end loads in current month. $Size_f$ is the reported amount of funds' total net assets a year before the current month, $Size_{FF}$ is the sum of the market values of the funds within the family in current month, and $Spec_{FF}$ is the ratio of the number of funds belonging to a certain style over the total number of funds the family provides in current month. P–values are shown in brackets. *** - 1% statistical significance, ** - 5% statistical significance, * - 10% statistical significance.

	Panel A		Panel B		Panel C	
	Institutional	Retail	Institutional	Retail	Institutional	Retail
$Return_f$	-0.207***	-0.019	-0.199***	-0.040	-0.184***	-0.010
	(0.002)	(0.576)	(0.003)	(0.295)	(0.005)	(0.786)
$Flow_f$	-0.208***	-0.385***	-0.207***	-0.375***	-0.218***	-0.379***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dir_{AUM}	-0.002	0.017				
	(0.918)	(0.276)				
$Return_f$ x Dir_{AUM}	-0.020	0.046***				
	(0.515)	(0.003)				
$Flow_f$ x Dir_{AUM}	0.010	-0.048***				
	(0.538)	(0.000)				
Dir_{RAUM}			-0.720**	-0.334**		
			(0.018)	(0.027)		
$Return_f$ x Dir_{RAUM}			1.011	1.681		
			(0.314)	(0.374)		
$Flow_f$ x Dir_{RAUM}			0.604	-0.573*		
			(0.491)	(0.068)		
$Dir_{\#f}$					0.037	-0.022
					(0.124)	(0.225)
$Return_f$ x $Dir_{\#f}$					0.003	0.068**
					(0.964)	(0.020)
$Flow_f$ x $Dir_{\#f}$					0.078***	-0.021
					(0.002)	(0.460)
L_{12}	0.148***	0.057***	0.148***	0.057***	0.132***	0.066***
	(0.000)	(0.007)	(0.000)	(0.010)	(0.000)	(0.001)
$In\text{-}house_B$	0.152***	0.187***	0.156***	0.195***	0.141***	0.195***
	(0.004)	(0.000)	(0.004)	(0.000)	(0.007)	(0.000)
$Team_B$	0.024	0.141***	0.023	0.146***	0.012	0.147***
	(0.561)	(0.000)	(0.568)	(0.000)	(0.757)	(0.000)
$Expert_B$	0.015	-0.052**	0.016	-0.037**	-0.013	-0.023
	(0.578)	(0.015)	(0.464)	(0.037)	(0.645)	(0.267)
Dir_{sh}	-0.001	-0.004	-0.001	-0.003	-0.002	-0.003
	(0.841)	(0.280)	(0.814)	(0.348)	(0.612)	(0.388)
$Indpnd_B$	0.336*	-0.027	0.354*	-0.126	0.410**	-0.150
	(0.086)	(0.862)	(0.075)	(0.435)	(0.027)	(0.342)
$Size_B$	-0.014	-0.003	-0.015*	-0.003	-0.011	-0.003
	(0.123)	(0.695)	(0.093)	(0.617)	(0.211)	(0.604)
$Size_f$	-0.057***	-0.066***	-0.057***	-0.066***	-0.056***	-0.068***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age_f	-0.073**	-0.093***	-0.076**	-0.090***	-0.077**	-0.088***
	(0.038)	(0.002)	(0.033)	(0.003)	(0.027)	(0.004)
Fee_f	-0.126***	-0.024*	-0.125***	-0.025**	-0.110**	-0.024*
	(0.007)	(0.052)	(0.007)	(0.049)	(0.015)	(0.057)
$Size_{FF}$	-0.006	-0.015	-0.006	-0.000	-0.005	-0.002
	(0.739)	(0.319)	(0.617)	(0.978)	(0.684)	(0.847)
$Spec_{FF}$	-0.045	0.105	-0.037	0.101	0.034	0.069
	(0.807)	(0.440)	(0.835)	(0.461)	(0.866)	(0.624)
Obs.	3,011	5,477	3,011	5,477	3,011	5,477
R^2psd	0.253	0.267	0.257	0.262	0.261	0.262
LL	-1492	-2744	-1485	-2761	-1476	-2760

Table A4 Marginal effects of logit regressions clustered by investment objectives and boards after matching by $Size_f$, Age_f and investment objectives from outside a given fund's fund-family. The dependent variable is equal to one for the liquidated funds, and it is equal to zero for the matched surviving funds. $Return_f$ and $Flow_f$ are annual observations. Dir_{ExC} is the excessive compensation the median director earns from a fund-family. Dir_{Cleft} is the median director's compensation earned from a fund-family after a fund liquidation. Dir_{RCLoss} is the ratio of the compensation a director receives from a fund-family to the estimated value of a director' compensation related to a liquidated fund for the median director. Dir_{sh} is the dollar value of share-ownership for all boards the median director holds directorships in a fund-family. L_{12} is a dummy indicating that any of the funds within the fund-family overseen by any of the directors sitting on a given board was liquidated in the past 12 months. $In\text{-}house_B$ is a dummy indicating that a fund is managed internally. $Team_m$ is a dummy indicating that a fund is managed by multiple asset managers. $Expert_B$ is the expertise of the median director. $Size_B$ is the number of all directors sitting on a board. $Indpnd_B$ is the ratio of the number of independent directors to $Size_B$. Age_f is the number of years in operation till current month. Fee_f is the sum of expense ratios, front-end loads and bank-end loads in current month. $Size_f$ is the reported amount of funds' total net assets a year before the current month, $Size_{FF}$ is the sum of the market values of the funds within the family in current month, and $Spec_{FF}$ is the ratio of the number of funds belonging to a certain style over the total number of funds the family provides in current month. P–values are shown in brackets. *** - 1% statistical significance, ** - 5% statistical significance, * - 10% statistical significance.

	Panel A		Panel B		Panel C	
	Institutional	Retail	Institutional	Retail	Institutional	Retail
$Return_f$	-0.182***	-0.025	-0.177***	-0.006	-0.177**	-0.013
	(0.004)	(0.499)	(0.008)	(0.857)	(0.011)	(0.740)
$Flow_f$	-0.210***	-0.363***	-0.211***	-0.384***	-0.215***	-0.378***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dir_{ExC}	0.003*	0.006***				
	(0.061)	(0.000)				
$Return_f$ x Dir_{ExC}	-0.003	0.009**				
	(0.656)	(0.015)				
$Flow_f$ x Dir_{ExC}	0.003	-0.007**				
	(0.132)	(0.013)				
Dir_{Cleft}			0.091	0.010		
			(0.123)	(0.494)		
$Return_f$ x Dir_{Cleft}			-0.051	0.056**		
			(0.639)	(0.015)		
$Flow_f$ x Dir_{Cleft}			0.051	-0.072***		
			(0.294)	(0.010)		
Dir_{RCLoss}					-0.001	-0.001
					(0.765)	(0.724)
$Return_f$ x Dir_{RCLoss}					0.018	0.002
					(0.201)	(0.709)
$Flow_f$ x Dir_{RCLoss}					-0.004	-0.011**
					(0.382)	(0.032)
L_{12}	0.138***	0.082***	0.143***	0.068***	0.139***	0.068***
	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)	(0.003)
$In\text{-}house_B$	0.131**	0.203***	0.137**	0.197***	0.137**	0.199***
	(0.015)	(0.000)	(0.014)	(0.000)	(0.013)	(0.000)
$Team_B$	0.011	0.139***	0.015	0.151***	0.011	0.152***
	(0.790)	(0.000)	(0.703)	(0.000)	(0.777)	(0.000)
$Expert_B$	0.015	-0.031*	0.001	-0.045**	0.015	-0.041**
	(0.496)	(0.077)	(0.972)	(0.015)	(0.513)	(0.022)
Dir_{sh}	-0.002	-0.005	-0.003	-0.003	-0.002	-0.003
	(0.564)	(0.189)	(0.460)	(0.465)	(0.669)	(0.454)
$Indpnd_B$	0.353*	-0.173	0.409*	-0.138	0.429**	-0.139
	(0.074)	(0.279)	(0.054)	(0.398)	(0.034)	(0.397)
$Size_B$	-0.016*	-0.007	-0.017*	-0.004	-0.016*	-0.004
	(0.062)	(0.281)	(0.058)	(0.561)	(0.068)	(0.585)
$Size_f$	-0.054***	-0.064***	-0.055***	-0.062***	-0.056***	-0.062***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age_f	-0.073**	-0.080***	-0.067*	-0.088***	-0.063*	-0.090***
	(0.048)	(0.006)	(0.065)	(0.004)	(0.085)	(0.003)
Fee_f	-0.113***	-0.023*	-0.109**	-0.023*	-0.118**	-0.023*
	(0.010)	(0.077)	(0.016)	(0.079)	(0.011)	(0.076)
$Size_{FF}$	-0.005	0.005	-0.034*	0.000	-0.013	0.003
	(0.653)	(0.667)	(0.071)	(0.999)	(0.283)	(0.799)
$Spec_{FF}$	-0.056	0.137	-0.065	0.187	-0.101	0.168
	(0.746)	(0.325)	(0.731)	(0.227)	(0.567)	(0.252)
Obs.	2,768	5,181	2,741	5,163	2,741	5,163
R^2psd	0.264	0.277	0.262	0.263	0.260	0.262
LL	-1343	-2549	-1334	-2588	-1339	-2592

Table A5 Marginal effects of logit regressions clustered by investment objectives and boards after matching by $Size_{f,}$ Age_f and investment objectives from outside a given fund's fund-family. The dependent variable is equal to one for the liquidated funds, and it is equal to zero for the matched surviving funds. $Return_f$ and $Flow_f$ are annual observations. $Dir_{\#B}$ is the number of boards the median director sits on in a fund-family a given fund belongs to. Dir_{sh} is the dollar value of share-ownership for all boards the median director holds directorships in a fund-family. L_{12} is a dummy indicating that any of the funds within the fund-family overseen by any of the directors sitting on a given board was liquidated in the past 12 months. $In\text{-}house_B$ is a dummy indicating that a fund is managed internally. $Team_m$ is a dummy indicating that a fund is managed by multiple asset managers. $Expert_B$ is the expertise of the median director. $Size_B$ is the number of all directors sitting on a board. $Indpnd_B$ is the ratio of the number of independent directors to $Size_B$. Age_f is the number of years in operation till current month. Fee_f is the sum of expense ratios, front-end loads and bank-end loads in current month. $Size_f$ is the reported amount of funds' total net assets a year before the current month, $Size_{FF}$ is the sum of the market values of the funds within the family in current month, and $Spec_{FF}$ is the ratio of the number of funds belonging to a certain style over the total number of funds the family provides in current month. P–values are shown in brackets. *** - 1% statistical significance, ** - 5% statistical significance, * - 10% statistical significance.

	Panel A. All funds			Panel B. Institutional funds		Panel C. Retail funds	
$Return_f$	-0.092***	-0.091***	-0.090**	-0.200***	-0.192***	0.009	-0.005
	(0.007)	(0.008)	(0.011)	(0.003)	(0.004)	(0.805)	(0.885)
$Flow_f$	-0.298***	-0.298***	-0.293***	-0.218***	-0.209***	-0.371***	-0.358***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$Dir_{\#B}$	-0.030***	-0.030***	-0.026***	-0.038**	-0.040***	-0.033***	-0.027***
	(0.000)	(0.000)	(0.000)	(0.014)	(0.009)	(0.000)	(0.001)
Dir_{sh}	0.001	0.001	0.000	0.001	-0.001	0.001	-0.000
	(0.857)	(0.881)	(0.933)	(0.902)	(0.845)	(0.845)	(0.911)
$Return_f$ x Dir_{sh}		-0.003	0.002	-0.027**	-0.025*	-0.002	0.008
		(0.725)	(0.866)	(0.047)	(0.054)	(0.904)	(0.698)
$Flow_f$ x Dir_{sh}		-0.005	-0.006	0.014**	0.012*	-0.030	-0.039
		(0.322)	(0.237)	(0.036)	(0.062)	(0.250)	(0.130)
L_{12}	0.092***	0.093***	0.085***	0.146***	0.129***	0.041*	0.049**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.072)	(0.021)
$In\text{-}house_B$			0.134***		0.146***		0.194***
			(0.000)		(0.005)		(0.000)
$Team_B$			0.112***		0.009		0.134***
			(0.000)		(0.833)		(0.000)
$Expert_B$			-0.001		0.017		-0.032*
			(0.934)		(0.450)		(0.076)
$Indpnd_B$	0.181	0.183	0.192	0.383*	0.403**	-0.121	-0.119
	(0.188)	(0.183)	(0.155)	(0.050)	(0.035)	(0.478)	(0.461)
$Size_B$	-0.004	-0.004	-0.007	-0.007	-0.010	0.003	0.002
	(0.438)	(0.428)	(0.202)	(0.416)	(0.253)	(0.611)	(0.728)
$Size_f$	-0.056***	-0.056***	-0.056***	-0.057***	-0.056***	-0.063***	-0.065***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age_f	-0.098***	-0.098***	-0.091***	-0.076**	-0.074**	-0.088***	-0.080***
	(0.000)	(0.000)	(0.000)	(0.037)	(0.038)	(0.007)	(0.010)
Fee_f	-0.024**	-0.025**	-0.024**	-0.129***	-0.121***	-0.026**	-0.027**
	(0.036)	(0.035)	(0.028)	(0.005)	(0.007)	(0.039)	(0.031)
$Size_{FF}$	-0.012	-0.011	-0.007	-0.004	-0.003	-0.009	0.003
	(0.159)	(0.162)	(0.424)	(0.730)	(0.785)	(0.437)	(0.801)
$Spec_{FF}$	-0.001	-0.000	0.051	-0.052	-0.050	0.034	0.100
	(0.993)	(1.000)	(0.641)	(0.777)	(0.777)	(0.812)	(0.476)
Obs.	8,964	8,964	8,960	3,011	3,011	5,378	5,378
R^2psd	0.215	0.215	0.229	0.255	0.264	0.243	0.267
LL	-4785	-4784	-4697	-1490	-1471	-2774	-2689

Table A6 Marginal effects of logit regressions clustered by investment objectives and boards after matching by $Size_{f,}$ Age_f and investment objectives from outside a given fund's fund-family. The dependent variable is equal to one for the liquidated funds, and it is equal to zero for the matched surviving funds. $Return_f$ and $Flow_f$ are annual observations. Dir_{AUM} is the AUM of all boards the median director sits on for a fund-family. Dir_{RAUM} is the ratio of the AUM the median director oversees for a fund-family to the AUM of all directorships s/he holds. $Dir_{\#f}$ is the number of funds the median director oversees for a fund-family. Dir_{sh} is the dollar value of share-ownership for all boards the median director holds directorships in a fund-family. L_{12} is a dummy indicating that any of the funds within the fund-family overseen by any of the directors sitting on a given board was liquidated in the past 12 months. $In\text{-}house_B$ is a dummy indicating that a fund is managed internally. $Team_m$ is a dummy indicating that a fund is managed by multiple asset managers. $Expert_B$ is the expertise of the median director. $Size_B$ is the number of all directors sitting on a board. $Indpnd_B$ is the ratio of the number of independent directors to $Size_B$. Age_f is the number of years in operation till current month. Fee_f is the sum of expense ratios, front-end loads and bank-end loads in current month. $Size_f$ is the reported amount of funds' total net assets a year before the current month, $Size_{FF}$ is the sum of the market values of the funds within the family in current month, and $Spec_{FF}$ is the ratio of the number of funds belonging to a certain style over the total number of funds the family provides in current month. P–values are shown in brackets. *** - 1% statistical significance, ** - 5% statistical significance, * - 10% statistical significance.

	Panel A		Panel B		Panel C	
	Institutional	Retail	Institutional	Retail	Institutional	Retail
$Return_f$	-0.208***	-0.032	-0.204***	-0.026	-0.203***	-0.021
	(0.002)	(0.381)	(0.002)	(0.479)	(0.002)	(0.579)
$Flow_f$	-0.213***	-0.366***	-0.213***	-0.364***	-0.211***	-0.364***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dir_{AUM}	-0.002	0.017				
	(0.913)	(0.292)				
Dir_{RAUM}			-0.756***	-0.261		
			(0.001)	(0.104)		
$Dir_{\#f}$					0.035	-0.023
					(0.139)	(0.195)
Dir_{sh}	-0.001	-0.001	-0.001	-0.001	-0.002	-0.000
	(0.840)	(0.765)	(0.804)	(0.869)	(0.657)	(0.937)
$Return_f$ x Dir_{sh}	-0.029**	0.006	-0.028**	0.007	-0.030**	0.007
	(0.029)	(0.764)	(0.031)	(0.727)	(0.023)	(0.734)
$Flow_f$ x Dir_{sh}	0.012*	-0.039	0.011*	-0.039	0.011*	-0.040
	(0.062)	(0.129)	(0.067)	(0.124)	(0.068)	(0.115)
L_{12}	0.145***	0.058***	0.143***	0.057***	0.133***	0.070***
	(0.000)	(0.008)	(0.000)	(0.010)	(0.000)	(0.001)
$In\text{-}house_B$	0.145***	0.191***	0.149***	0.195***	0.136***	0.195***
	(0.006)	(0.000)	(0.005)	(0.000)	(0.009)	(0.000)
$Team_B$	0.022	0.146***	0.021	0.148***	0.014	0.149***
	(0.591)	(0.000)	(0.597)	(0.000)	(0.732)	(0.000)
$Expert_B$	0.015	-0.052**	0.017	-0.039**	-0.012	-0.023
	(0.558)	(0.018)	(0.431)	(0.031)	(0.647)	(0.271)
$Indpnd_B$	0.340*	-0.060	0.354*	-0.129	0.408**	-0.162
	(0.082)	(0.704)	(0.076)	(0.428)	(0.030)	(0.308)
$Size_B$	-0.014	-0.003	-0.015*	-0.003	-0.012	-0.004
	(0.119)	(0.679)	(0.090)	(0.609)	(0.187)	(0.562)
$Size_f$	-0.056***	-0.068***	-0.056***	-0.066***	-0.056***	-0.068***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age_f	-0.074**	-0.085***	-0.077**	-0.084***	-0.077**	-0.082***
	(0.036)	(0.006)	(0.031)	(0.006)	(0.029)	(0.008)
Fee_f	-0.126***	-0.023*	-0.125***	-0.024*	-0.114**	-0.022*
	(0.007)	(0.070)	(0.007)	(0.059)	(0.014)	(0.079)
$Size_{FF}$	-0.006	-0.011	-0.007	0.001	-0.005	-0.001
	(0.717)	(0.460)	(0.580)	(0.949)	(0.664)	(0.935)
$Spec_{FF}$	-0.059	0.109	-0.055	0.104	0.011	0.074
	(0.741)	(0.448)	(0.760)	(0.463)	(0.957)	(0.612)
Obs.	3,011	5,378	3,011	5,378	3,011	5,378
R^2psd	0.256	0.261	0.260	0.261	0.259	0.261
LL	-1487	-2711	-1479	-2710	-1481	-2710

Table A7 Marginal effects of logit regressions clustered by investment objectives and boards after matching by $Size_{f,}$ Age_f and investment objectives from outside a given fund's fund-family. The dependent variable is equal to one for the liquidated funds, and it is equal to zero for the matched surviving funds. $Return_f$ and $Flow_f$ are annual observations. Dir_{ExC} is the excessive compensation the median director earns from a fund-family. Dir_{Cleft} is the median director's compensation earned from a fund-family after a fund liquidation. Dir_{RCLoss} is the ratio of the compensation a director receives from a fund-family to the estimated value of a director' compensation related to a liquidated fund for the median director. Dir_{sh} is the dollar value of share-ownership for all boards the median director holds directorships in a fund-family. L_{12} is a dummy indicating that any of the funds within the fund-family overseen by any of the directors sitting on a given board was liquidated in the past 12 months. $In\text{-}house_B$ is a dummy indicating that a fund is managed internally. $Team_m$ is a dummy indicating that a fund is managed by multiple asset managers. $Expert_B$ is the expertise of the median director. $Size_B$ is the number of all directors sitting on a board. $Indpnd_B$ is the ratio of the number of independent directors to $Size_B$. Age_f is the number of years in operation till current month. Fee_f is the sum of expense ratios, front-end loads and bank-end loads in current month. $Size_f$ is the reported amount of funds' total net assets a year before the current month, $Size_{FF}$ is the sum of the market values of the funds within the family in current month, and $Spec_{FF}$ is the ratio of the number of funds belonging to a certain style over the total number of funds the family provides in current month. P–values are shown in brackets. *** - 1% statistical significance, ** - 5% statistical significance, * - 10% statistical significance.

	Panel A		Panel B		Panel C	
	Institutional	Retail	Institutional	Retail	Institutional	Retail
$Return_f$	-0.174***	-0.011	-0.178***	-0.010	-0.187***	-0.009
	(0.008)	(0.772)	(0.005)	(0.771)	(0.004)	(0.806)
$Flow_f$	-0.222***	-0.352***	-0.218***	-0.368***	-0.222***	-0.368***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dir_{ExC}	0.003*	0.006***				
	(0.070)	(0.000)				
Dir_{Cleft}			0.095	0.010		
			(0.104)	(0.521)		
Dir_{RCLoss}					-0.001	0.000
					(0.693)	(0.837)
Dir_{sh}	-0.002	-0.003	-0.003	-0.001	-0.002	-0.000
	(0.625)	(0.537)	(0.457)	(0.904)	(0.696)	(0.981)
$Return_f$ x Dir_{sh}	-0.028**	0.010	-0.028**	0.004	-0.026*	0.002
	(0.049)	(0.656)	(0.047)	(0.842)	(0.068)	(0.914)
$Flow_f$ x Dir_{sh}	0.012*	-0.034	0.014**	-0.037	0.014**	-0.038
	(0.056)	(0.199)	(0.025)	(0.159)	(0.034)	(0.142)
L_{12}	0.133***	0.082***	0.140***	0.069***	0.138***	0.070***
	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)	(0.002)
$In\text{-}house_B$	0.126**	0.203***	0.131**	0.196***	0.132**	0.197***
	(0.019)	(0.000)	(0.016)	(0.000)	(0.015)	(0.000)
$Team_B$	0.008	0.136***	0.014	0.153***	0.012	0.152***
	(0.835)	(0.000)	(0.735)	(0.000)	(0.756)	(0.000)
$Expert_B$	0.016	-0.032*	0.000	-0.044**	0.016	-0.041**
	(0.477)	(0.074)	(0.995)	(0.018)	(0.474)	(0.022)
$Indpnd_B$	0.353*	-0.164	0.404*	-0.141	0.432**	-0.138
	(0.077)	(0.308)	(0.055)	(0.390)	(0.034)	(0.401)
$Size_B$	-0.016*	-0.006	-0.017*	-0.004	-0.016*	-0.003
	(0.061)	(0.331)	(0.054)	(0.574)	(0.072)	(0.598)
$Size_f$	-0.054***	-0.066***	-0.055***	-0.063***	-0.055***	-0.063***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age_f	-0.073**	-0.071**	-0.068*	-0.082***	-0.066*	-0.082***
	(0.046)	(0.018)	(0.060)	(0.009)	(0.071)	(0.009)
Fee_f	-0.114***	-0.022*	-0.109**	-0.022*	-0.117**	-0.022*
	(0.009)	(0.092)	(0.015)	(0.090)	(0.011)	(0.090)
$Size_{FF}$	-0.006	0.006	-0.035*	0.002	-0.014	0.004
	(0.609)	(0.624)	(0.056)	(0.888)	(0.248)	(0.728)
$Spec_{FF}$	-0.073	0.134	-0.082	0.198	-0.125	0.179
	(0.676)	(0.351)	(0.660)	(0.216)	(0.478)	(0.234)
Obs.	2,768	5,095	2,741	5,079	2,741	5,079
R^2psd	0.266	0.273	0.265	0.260	0.261	0.259
LL	-1340	-2514	-1330	-2552	-1336	-2553