

# **When Should Firms Share Credit with Employees? Evidence from Anonymously Managed Mutual Funds\***

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## **ABSTRACT**

We study the economics of sharing credit with employees, using the U.S. mutual fund industry as our testing ground. Between 1993 and 2004, the share of funds that disclosed manager names to their investors fell significantly. We hypothesize that the choice between named and anonymous management reflects a tradeoff between the marketing and incentive benefits of naming managers and the costs associated with increased ex-post bargaining power. Consistent with this tradeoff, we find that funds with named managers receive more positive media mentions, have greater inflows, and suffer less return diversion, but that departures of named managers reduce inflows, especially for funds with strong past performance. To the extent that the hedge fund boom differentially increased outside opportunities for successful named managers, we predict that it should have increased the costs associated with naming managers and led to more anonymous management. Indeed, we find that the shift towards anonymous management is greater in those asset classes and geographical areas with more hedge fund activity.

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Mutual fund firms have traditionally chosen to identify a specific individual as the manager of each fund. For example, Peter Lynch is best known as the manager of Fidelity's Magellan fund. In 1993, over 70% of U.S. mutual funds had a single named manager, but since then funds have increasingly disclosed either multiple manager names or that the fund is "team managed" without naming any specific managers. The incidence of anonymous management has increased from 82 funds (4% of the sample) in 1993 to 905 funds (18%) in 2004 (Table 1).<sup>1</sup>

The use of anonymous management by mutual funds raises a more general question about contracting between firms and their employees: when should firms commit to share credit for project outcomes with their employees? We view the firm's decision about whether to share credit as, fundamentally, a decision about who will own the project's track record. As with many employee contracting choices, sharing credit should involve a tradeoff between increasing joint surplus and sharing rents with employees. Specifically, sharing credit should increase the bargaining power of employees who are successful. This prospect should help motivate (Holmström, 1999) and attract better employees, but at a cost to the firm, since it is unlikely that the full expected value of these future rents can be extracted from the employee upfront.

We build on this traditional tradeoff, by adding the hypothesis that sharing credit with employees may also generate marketing. Past work suggests that investors prefer brands with personalities (Aaker (1997)) and investments with plausible stories for why they should outperform (Barber, Heath, and Odean (2003); Mullainathan, Schwartzstein, and Shleifer (2006)). This preference could be the result of either limited attention or a (rational or behavioral) anticipation of higher quality when a person associates himself with a product. When consumers have these preferences, sharing credit with employees creates product differentiation with the potential to both increase product demand and soften price competition.

In this paper, we exploit cross-sectional and time-series differences in mutual fund managerial anonymity to better understand the benefits and costs of sharing credit with employees. Managing a mutual fund involves a team of people.<sup>2</sup> Therefore, the mutual fund firm's decision about whether to publicly identify one or more fund managers is an *ex ante* decision about who will own the fund's track record—a valuable asset within the money management industry. Using Morningstar manager name data for 1993-2004, we classify funds as sole-managed, co-managed, or anonymously managed.<sup>3</sup> With respect

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<sup>1</sup> Throughout this paper, we refer to funds that do not disclose any manager names as "anonymously managed," to funds that list more than one manager name as "co-managed," and to funds that list a single manager name as "sole-managed." In contrast, most of the existing literature does not distinguish between anonymously-managed fund with co-managed funds, referring to them simply as "team managed." The notable exception is Bär, Kempf, and Ruenzi (2005) which we discuss at various points below.

<sup>2</sup> Based on interviews with managers at several small fund companies, we find that even the smallest fund companies are not one-man shops.

<sup>3</sup> We use Morningstar as our data source for two reasons. Morningstar data is more commonly used by investors and the financial media, and thus is more likely coincide with investors' information. In addition, when we compare the Morningstar and CRSP manager variables with what is disclosed to investors via mutual fund filings, we find

to the costs and benefits of sharing credit, we expect co-management to be a distinct intermediate step between naming a single manager and anonymous management.

Our analysis consists of two parts. We first conduct cross-sectional tests to understand the marketing and performance benefits and the rent-sharing costs of naming fund managers. We then conduct differences-in-differences tests to understand whether differential shifts in these tradeoffs in specific asset classes and local labor markets were accompanied by differential shifts in credit sharing. We find strong evidence of a marketing benefit to credit sharing, but only weak evidence of a performance benefit.

To test whether naming managers generates marketing benefits, we study the determinants of both media mentions and net flows. Extending the analysis of media mentions in Reuter and Zitzewitz (2006), we find that anonymously-managed funds receive significantly fewer media mentions than comparable sole-managed or co-managed funds. For example, the *New York Times* “Investing With” column, which profiled a different mutual fund each Sunday, is most likely to feature sole-managed funds, and more likely to feature co-managed funds than anonymously-managed funds. Given the existing evidence that media mentions impact fund flows (Sirri and Tufano (1998); Reuter and Zitzewitz (2006); Kaniel, Starks, and Vasudevan (2007)), the additional media mentions received by named-manager funds should translate into additional flows into named-manager funds. Indeed, when we examine the determinants of monthly net flows, we find that named-manager funds receive annualized net flows that are approximately 2 percent of assets higher. For funds marketed and sold directly to investors (no-load funds), this effect is predictably larger—about 3 percent of assets per year, even after controlling for the extra media mentions.

To understand whether sharing credit has performance effects that would justify these higher inflows, we study mutual fund returns. Within our sample of domestic equity funds covering 1994-2004, the returns of sole-managed and anonymously-managed funds differ by less than 4 basis points per month—whether measured as net returns, one-factor alphas, or four factor alphas—and none of the differences are statistically significant. Our inability to reject the hypothesis that named-manager and anonymously-managed funds earn the same after-expense return suggests that the additional flows into named-manager funds reflect perceived quality differences (from marketing) rather than actual quality differences. Nevertheless, returns are sufficiently noisy that economically meaningful performance differences may exist.

To reduce the effects of this noise, we examine components of returns less likely to be affected by it. First, we follow Grinblatt and Titman (1993) and Kacperczyk, Sialm, and Zheng (2006, hereafter KSZ) and decompose funds’ pre-expense returns into the returns of their most recently disclosed portfolio

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Morningstar is much more consistent, especially after 1996, while CRSP often fails to capture manager names that are disclosed in both Morningstar and the filings (see Appendix).

holdings and the remainder, which KSZ term the “return gap.” By construction, the return gap is positive when a fund’s actual portfolio return exceeds its prior holdings’ return, reflecting “unobserved actions” such as profitable short-term trading activity or intra-family transfers. KSZ show that return gap is more persistent than overall fund returns and is more predictive of future returns. We find that named-manager funds have return gaps that are about 4 basis points per month more positive than anonymously-managed funds.

This difference could reflect named managers’ greater effort or skill in short-term trading, but we conduct two further tests that suggest it is at least partly related to within-family favoritism. First, we find that return gap differences between anonymous and named-manager funds exist primarily within fund families and that *families* with more named managers do not have significantly higher returns across any of our measures. Second, we test for two specific forms of favoritism and, in both cases, find evidence consistent with families favoring named managers. Specifically, extending the analysis of Gaspar, Massa, and Matos (2006), we find that sole-managed domestic equity funds receive more favorable allocations of shares in underpriced initial public offerings than either co-managed or anonymously-managed funds. Moreover, we find that sole-managed international equity funds experienced less return dilution from market timing and late trading (Zitzewitz, 2006). Again, we find that these differences exist primarily within rather than between fund families. To the extent that higher returns of named manager funds are driven by favoritism that lowers the returns of anonymous managed funds, they do not reflect a net benefit to the firm’s investors. Thus, whereas the evidence for a marketing benefit of naming managers in our setting is strong, the evidence for any incentive or selection benefit is substantially weaker.

Offsetting the benefits of naming managers are the expected costs from rent sharing. We hypothesize that successful named managers benefit from greater bargaining power, because investors give them a greater share of the credit for the success of their funds. Lacking manager wage data, we provide two alternative sets of tests. The first examine whether successful funds experience lower inflows if a named manager departs, finding evidence that they do.

The second test examines whether increases in managerial bargaining power make naming managers less attractive. Specifically, we examine the seven-fold increase in the size of the hedge fund industry between 1994 and 2004, which created lucrative outside employment opportunities for successful fund managers. To the extent that the hedge fund boom increased the outside opportunities of successful named mutual fund managers more than successful but anonymous managers, it should have raised the expected rent sharing costs to mutual fund firms of naming their managers.

The hedge fund boom coincided with the shift to anonymous management, but need not be related. Our tests, therefore, take a differences-in-differences approach: we ask whether the shift to anonymity was especially fast in asset classes and geographies in which hedge fund asset growth was especially

pronounced. We find that it was. For example, the collapse of Long Term Capital Management, a global macro hedge fund, in 1998 contributed to the sharp decline of internationally-oriented hedge assets from 28 percent of total hedge fund assets in 1997 to 4 percent in 2000. Consistent with this decline differentially reducing the outside opportunities of named international fund managers, we find the shift to anonymity slowed substantially more in that asset class.

Collectively, our findings are consistent with firms weighing the expected marketing benefits of named management against the expected rent sharing costs. Further evidence that we have captured the key tradeoff comes from interviews with the firms themselves conducted at the beginning of the project. When we asked industry participants to explain the rise of anonymity in Table 1, the answer was that “fund management always involves more than one person” and thus “team management is primarily about what you tell the outside world.” Anticipating some of our main results, one CEO told us that “stars are good for marketing, especially with retail investors, ... but [named] managers are more expensive to pay.” Providing support for our argument that successful named managers are more valuable to hedge funds, several industry participants also confirmed that a named manager, especially one who has been promoted in the media, can more readily attract hedge fund assets than an anonymous manager at an equally successful fund.<sup>4</sup>

Our paper contributes to both the mutual fund literature and a broader literature on employee contracting and career concerns. We make three contributions to the mutual fund literature. First, we provide new evidence on mutual fund product differentiation and (indirectly) on the question of how high fees can coexist with many competitors. The sole-managed funds in our sample receive more media attention and higher flows, despite charging significantly higher fees. When investors face significant search costs and choose to consider only a subset of funds (e.g., Hortascu and Syverson (2004)), a named manager may provide a “story” that helps distinguish the fund from its peers. Cooper, Gulen, and Rau (2005) provide related evidence that flows respond disproportionately to mutual fund name changes, while Jain and Wu (2000) and Gallaher, Kaniel, and Starks (2007) provide evidence that advertising directly influences fund flows.

Second, we contribute to the literature on the strategic behavior of mutual fund families (Khorana and Servaes (1999); Nanda, Wang, and Zheng (2004); Guedj and Papastaikoudi (2005); Gaspar, Massa, and Matos (2006)). The fact that flows into sole-manager funds are the most sensitive to returns gives firms an incentive to favor these funds, even at the expense of their other funds. Our evidence that sole-managed funds have significantly higher return gaps, greater holdings of underpriced IPOs, and less

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<sup>4</sup> Note that even if the identity of anonymous managers is discoverable by potential employers or investors, if anonymity raises the costs of verifying a manager’s responsibility for a given track record, it still reduces her outside value.

return dilution from stale price arbitrage are consistent with favoritism by families along a previously unexplored dimension. Collectively, this literature demonstrates that families can play significant roles in the performance of their funds, with important implications for the evaluation of mutual fund performance.

Finally, our study relates to a small recent literature on team management and mutual fund returns. Prather and Middleton (2002), Chen, Hong, Huang, and Kubik (2004), and Bliss, Potter, and Schwarz (2006) compare the performance of sole-managed funds to multi-manager funds, a category that combines co-managed and anonymously-managed funds, and find that multi-manager funds underperform by between 0 to 4 basis points per month. In the analysis closest to our own, Bär, Kempf, and Ruenzi (2005) compare the returns of sole-managed funds to anonymously-managed funds, dropping co-managed funds from their sample. Using CRSP manager name data (instead of Morningstar) and a slightly shorter sample period, they find that anonymously-managed funds underperform sole-managed funds by approximately 5 basis points per month.<sup>5</sup> All these papers differ from ours in that they interpret their results as informative about team production, rather than about the relationship between returns and a variable that interviews tell us reflects “what [firms] tell the outside world.”

More generally, we contribute to the career concerns and optimal contracting literature by highlighting that the decision to share credit with employees is an important dimension along which firms and employees can contract. This literature includes theoretical and empirical work on asset ownership and hold-up (Williamson, 1979; Grossman and Hart, 1986; Hart and Moore, 1990; Monteverde and Teece, 1982; Joskow, 1985), asset ownership and incentives (Holmstrom and Milgrom, 1991; Baker and Hubbard, 2003; Simester and Wernerfeldt, 2005) and career concerns (Holmstrom, 1999; Chevalier and Ellison, 1999). We extend this literature by considering the marketing effects of credit sharing, which are potentially important in other contexts. One literature that has touched on them is on the economics of superstars (Rosen (1981), Terviö (2007)). For example, Malmendier and Tate (2005) find that CEOs who win media awards and become “superstars” earn higher compensation, but that their firms subsequently underperform. In contrast, we find that named-manager funds earn (weakly) higher returns for their investors and attract more inflows for their firms but are, nonetheless, becoming less common over our sample period. An important difference between CEOs and fund managers is that CEOs arguably have more discretion about whether to promote themselves as stars, and thus CEO stardom may be less an outcome of optimal contracting than a symptom of suboptimal contracting.

The remainder of the paper is organized as follows. In Section I, we sketch a simple model that motivates our empirical analysis. In Section II, we detail the mutual fund and hedge fund data used in our

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<sup>5</sup> Bär, Kempf, and Ruenzi (2005) also examine the relation between anonymous management and inflows and portfolio turnover, finding results that differ from ours. We discuss possible explanations for the differences below.

analysis. In Section III, we study the marketing benefits, incentive benefits and rent sharing costs of naming managers: III.A. presents evidence that media mentions and investor flows favor named manager funds; III.B. explores return differences between named-manager and anonymously-managed funds; III.C. presents evidence that the bargaining power of named managers increases following periods of good relative performance; III.D. provides evidence that the use of anonymous management rises with hedge fund assets. In Section IV, we discuss a recent Securities and Exchange Commission rule requiring mutual funds to disclose the identities of their fund managers and offer concluding remarks.

## **I. The Setting**

The decision whether to name a fund's managers is a decision about asset ownership, namely, who should own the fund's track record. Embedding this decision in a simple contracting model helps to motivate our empirical analysis. Assume that a manager works for two periods. Before the first period, the firm and manager contract on a first-period wage and on whether the manager will be publicly credited for her performance. After first period returns are realized, the firm and the manager negotiate a second period contract. In both periods, the firm can commit to take it or leave it offers. Both the manager's second-period outside option and her second-period value to the firm increase in her first-period performance. Naming a manager increases her second-period value to the firm (via either marketing or incentive effects), but also increases her outside option. As labor market competition grows more intense, we assume that the second-period outside option increases relatively more for named and successful managers.

In this setup, expected joint surplus is maximized when the manager is named. If the manager has no second-period outside options, then the firm will credit the manager and make the lowest wage offer that induces participation, perhaps offering a performance bonus to create incentives for effort. As the manager's outside options improve, however, retaining her when successful becomes more costly, especially if she is named. It is likely that the firm will be unable to extract all of the expected cost of retaining a named manager in first-period wage bargaining (e.g., due to managerial risk aversion or limited liability). For modest levels of outside labor market competition, incentives provided by second-period bargaining power will simply substitute for incentives provided by a performance bonus, and thus will not affect the attractiveness of naming the manager. At some point, however, retaining successful named managers will become expensive enough that the firm will switch to anonymous management.

## **II. The Data**

Our data come primarily from the CRSP Survivorship-Bias Free Mutual Fund Database. Since the unit of observation in CRSP is the mutual fund share class, we aggregate data to the portfolio level to

avoid double counting. In addition, to limit potential problems with backfill bias, we drop any observation that lacks a fund name. An essential variable for our purposes is manager name, which CRSP begins reporting at the fund-year level in 1992. Since Morningstar is a more important source of information for investors, we also collect manager names from annual Morningstar Principia CDs (Del Guercio and Tkac (2007)). Merging these data onto CRSP using fund tickers yields a Morningstar manager name observation for 84.1% of the fund-year observations in CRSP between 1993 and 2004.

Both manager name variables allow us to classify a fund as sole-managed (when only one name is listed), co-managed (when two or more names are listed), or anonymously managed (when a phrase such as “Team Managed,” “Multiple Managers,” or “Investment Committee” is listed without any manager names). In Table 1, we summarize the number and fraction of sole-managed, co-managed, and anonymously-managed funds according to Morningstar (Panel A) and CRSP (Panel B). To more accurately highlight changes in the form of management, the numbers in both panels are adjusted for regime changes in the contents of the manager name variables through time. (We describe these adjustments and report unadjusted numbers in the appendix.) Both data sources document a sharp increase in the percentage of anonymously-managed funds and a decline in the percentage of sole-managed funds, but the CRSP manager name variable implies significantly higher levels of anonymous management and significantly lower levels of co-management.<sup>6</sup>

To determine which data source more accurately reflects the information that funds disclose to their investors, we compare the Morningstar and CRSP manager name variables to each other and, for a small random sample of domestic equity funds, to the manager information disclosed in Prospectuses and Statements of Additional Information. This comparison, detailed in the appendix, reveals several interesting facts. First, between 1993 and 2004, CRSP rarely reports more than three manager names; the majority of time that Morningstar lists four or more manager names, CRSP simply reports “Team Managed.” This suggests that the CRSP manager name variable does not allow one to reliably distinguish co-managed funds with more than three managers from anonymously-managed funds. Since Morningstar data suggest that the fraction of funds with more than three managers is growing through time, the fraction of funds that CRSP would lead us to misclassify as anonymously managed is growing as well. Similarly, between 1997 and 2004, Morningstar reports up to seven manager names per fund, but between 1993 and 1996 it reports no more than two. The impact of Morningstar misclassifications between 1993 and 1996, however, is limited by the smaller number of funds and smaller fraction of co-managed funds

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<sup>6</sup> Using either data source, a small portion of the increase in team management is associated with index funds. Therefore, to avoid confusing the determinants of anonymous management with the determinants of indexing, in the analysis that follows, we either include an index fund dummy variable or limit our sample to actively-managed funds. Since CRSP does not identify passively-managed (index) funds, we identify index funds as funds whose name does not contain the word index, the name of a major index, or some abbreviation thereof.



during these four years. Finally, our analysis of a random sample of SEC filings for domestic equity funds suggests that while Morningstar and CRSP both appear to extract manager names from filings, Morningstar does a significantly better job of capturing the information disclosed to investors. In 2002, we estimate that Morningstar manager name accurately captures whether a fund is anonymously managed 94.7% of the time, versus 81.3% using CRSP. For this reason, and the fact that the Morningstar data are much more likely to inform investor decisions, we use the (unadjusted) Morningstar manager name variable to classify funds as sole-managed, co-managed, and anonymously managed.

To ask whether media mentions favor funds with named managers, we use hand-collected data on mentions of mutual funds in five publications: *New York Times*, *Money*, *Kiplinger's Personal Finance*, *SmartMoney*, and *Consumer Reports*. For the *New York Times*, we include funds mentioned in their Sunday "Investing With" column, which interviewed fund managers and provided details on a fund they managed. For *Money* and *Consumer Reports*, we include only the funds listed in their annual lists of recommended funds. For *Kiplinger's* and *SmartMoney*, we conduct a Factiva search for articles including the word "fund" and then categorized the mentions of specific funds as being either positive or negative. We also categorized the articles into three groups: articles making general investment recommendations (e.g., "Best Funds to Buy Now"), articles on a specific investment theme (e.g., "Four Great Energy Funds") and articles about a particular fund or firm (e.g., "Magellan's Driven Boss"). Data on monthly fund family advertising expenditures were purchased from Competitive Media Research (CMR) and are used in our analysis of media mentions. CMR tracks advertising by firm and outlet, using its knowledge of published advertising rates and likely discounts to estimate spending. The media mention and advertising data cover the years 1996 to 2002 and are described in more detail in Reuter and Zitzewitz (2006).

Data on monthly fund returns come from CRSP. We construct our prior-period holdings return and return gap variables using the procedure outlined in Kacperczyk, Sialm, and Zheng (2006). Since this procedure involves merging fund-level equity holdings data from Thomson Financial with mutual fund data from CRSP, and Thomson Financial does not report debt holdings, we follow KSZ and construct the return gap only for the sample of non-specialized domestic equity funds. We identify non-specialized domestic equity funds as those in the CRSP dataset with S&P objective codes of Aggressive Growth (AGG), Equity USA Midcap (GMC), Equity USA Growth and Income (GRI), Equity USA Growth (GRO), and Equity USA Small Companies (SCG). To identify recent initial public offerings (IPOs), we merge the Thomson Financial equity holdings data with the SDC New Issues Database. To study dilution from market timing, we use the daily flow data for a sample of international equity funds from Lipper and TrimTabs, as described in Zitzewitz (2006). When we estimate risk-adjusted returns, we do so at the fund level, using their prior 24 monthly returns and factor returns available on Kenneth French's website.

To ask whether the use of anonymous management is associated with the outside options generated by the growth of the hedge fund industry, we utilize data on the geographic locations of hedge fund assets from TASS. Data on the locations of mutual fund families between 1996 and 2002 were hand-collected from the Nelson Directory of Investment Managers. Data on dollars under management by hedge funds within each asset class and year between 1994 and 2004 are reported in Getmansky, Lo, and Wei (2004).

### **III. Empirical Results**

We begin by testing for marketing benefits of sharing credit, in particular whether named-manager funds receive extra media coverage and inflows (III.A.). Next, we test for performance benefits of sharing credit, by examining fund returns and their components (III.B.). To shed light on ex post bargaining power, we explore the extent to which inflows fall when successful named managers depart (III.C.). Finally, since the growth of the hedge fund industry should have (exogenously) increased the ex post bargaining power of successful named managers, we test whether the shift to anonymous management is greater in those asset classes and geographical areas more affected by the hedge fund boom (III.D.).

#### **A. Named Managers, the Media, and Investor Demand**

Sharing credit with employees may benefit firms through increased media attention. In our setting, the financial media both informs and persuades potential investors. For example, Sirri and Tufano (1998) and Reuter and Zitzewitz (2006) show that media mentions can significantly increase flows into mutual funds. To the extent that the financial media prefers to write—or its readership prefers to read—articles about named managers, families with named-manager funds can expect to benefit. To explore this possibility, we extend Reuter and Zitzewitz’s analysis of the determinants of media mentions and ask whether anonymously-managed funds are less likely to receive mentions than their sole-managed and co-managed peers.

Table 2 presents probit regressions predicting positive media mentions in the *New York Times*, *Money magazine*, *Kiplinger’s Personal Finance*, *SmartMoney*, and *Consumer Reports*, as well as a sixth specification predicting a positive mention in any of the five publications. The unit of observation is fund  $i$  in month  $t$  and the sample period is January 1996 through November 2002. In addition to dummy variables for whether a fund is anonymously managed or co-managed, these regressions control for expense ratios; 12b-1 fees; portfolio turnover; fund returns, return volatility, and inflows over the prior 12 months; the natural logarithm of lagged fund and family assets; fund age; the number of stars awarded to the fund by Morningstar in December of the prior year; and an indicator variable for whether the fund

charges a sales commission (load).<sup>7</sup> Magazine mentions are treated as having occurred in the month prior to the issue month and all independent variables are lagged to ensure that no post-mention data is used in their construction.<sup>8</sup>

To control for variation in the popularity of different asset classes at different times (and the fact that not every publication mentions mutual funds in every month), each regression includes a fixed effect for each investment objective-month combination. Given the finding of Reuter and Zitzewitz (2006) that advertising influences mentions in some of these publications, we also control for total and own-publication print advertising expenditure over the prior 12 months. Standard errors are clustered on mutual fund family.

We find that anonymously-managed funds are less likely to receive positive media mentions than both sole-managed funds (the omitted category) and co-managed funds. The coefficients on the anonymous management dummy are negative in all six specifications and statistically significant from zero in five of the six. Furthermore, in five of the specifications, the coefficient on the anonymous management dummy is less than the coefficient on the co-managed dummy, and in four of these cases, we can reject the hypothesis that the coefficients are equal (with p-values ranging from 0.005 to 0.035). Collectively, these results strongly suggest that the media favors named-manager funds over anonymously-managed funds. Moreover, since it should be more difficult for a journalist to identify and interview anonymous managers, it seems plausible that the differences we document are causal.

With respect to differences between co-management and sole-management, the coefficient on the co-management dummy is negative and statistically significant in four of the six specifications. In other words, we find that the publications prefer sole-managed funds to co-managed funds and co-managed funds to anonymously-managed funds. These findings reinforce our view that co-management is a distinct intermediate step between naming a single manager and keeping the management team anonymous.<sup>9</sup>

A comparison of the coefficients on the anonymously-managed dummy variable to the coefficients on other variables reveals that the preference for named-manager funds is economically significant. For instance, relative to being sole-managed, being anonymously managed reduces the likelihood of a positive mention in any of the five publications (column 6) by about half as much as being a load fund, or

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<sup>7</sup> We aggregate share class-level data to the fund level by weighting using the prior-period share of assets in each share class. Morningstar occasionally varies its rating by share class. We deal with this by, for example, setting our “five-star fund” control variable equal to the share of assets in share classes that received five stars.

<sup>8</sup> We established this timing based on the fact that, for example, the September issue of a personal finance magazine almost always appears on newsstands before September 1 and includes return data through July 31, suggesting that its content was largely written in August.

<sup>9</sup> There does not appear to be an alphabetic norm in the ordering of co-manager names, as the probability of the first two named managers being in alphabetical order is 54% in Morningstar. This implies the first-named manager of a co-managed fund can usually be interpreted as a lead manager.

by almost as much as receiving one star (the lowest possible rating) from Morningstar. Coefficients on the other variables, including own-publication advertising, are qualitatively similar to those reported in Reuter and Zitzewitz (2006). In particular, we find that the probability of a positive mention is increasing in lagged returns, flows, fund size, and Morningstar ratings, and higher for no-load funds.

As robustness checks, we estimate several additional probit regressions. For example, one might expect anonymously-managed funds to be mentioned less in articles profiling a particular fund or family. In unreported results, we find this to be the case.<sup>10</sup> On the other hand, we also find that anonymously-managed funds are also less likely to receive negative mentions. This is a smaller advantage than it might seem, however, because positive mentions in our sample of publications outnumber negative mentions by a factor of about eight. Finally, consistent with evidence in Mullainathan and Shleifer (2006) that investor demand for mutual fund information changes between bull and bear markets, when we estimate the probit regression in the last column of Table 2 separately for each year between 1997 to 2002, we find that the preference for named-manager funds peaked between 1998 and 2000 (as measured by either the absolute or relative size of the coefficient on the anonymous management dummy variable).<sup>11</sup> In other words, the media appears to have been more interested in writing about named-manager funds during the stock market boom of the late 1990s. As this interest declined, so did the media benefit of named managers.

Of course, the marketing benefits of named managers may not be limited to increased media mentions. If investors face search costs and consider only a subset of funds (e.g., Hortascu and Syverson (2004)), a named manager may provide a fund with a “story” that helps differentiate it from its peers, resulting in more dollars under management and higher fees.<sup>12</sup> Alternatively, investors might avoid anonymously-managed funds, perceiving them to have lower quality, less motivated managers.<sup>13</sup> Therefore, in Table 3, we turn from probit regressions predicting media mentions to linear panel regressions predicting monthly net flows. These regressions allow us to test whether flows into named-manager funds differ systematically from flows into anonymously-managed funds—both before and after controlling for the impact of media mentions. The unit of analysis is, again, fund  $i$  in month  $t$ . For the purposes of this analysis, we restrict our sample to the 99.84% of observations with continuously

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<sup>10</sup> Anonymously-managed funds are less likely to be mentioned in general investment recommendation and investment theme articles, as well, although these estimated effects are smaller and the latter is only statistically significant at the 15-percent level.

<sup>11</sup> This peak coincides with, but is only partially explained by, a peak in the share of mutual fund mentions in *Kiplinger's* and *SmartMoney* that appear in articles focused on a single fund or family. These articles account for more than 20 percent of mentions in 1998-2000 but less than 10 percent in 2001-2002.

<sup>12</sup> The findings in Jain and Wu (2000) and Gallaher, Kaniel, and Starks (2007) that advertising influences fund flows are also consistent with investors facing search costs.

<sup>13</sup> Ge and Zheng (2006) argue that investors may use fund disclosure policy (in their case, the disclosure of holdings) to draw inferences about fund quality.

compounded monthly flows between -100% and 100%, and we include the same control variables as in Table 2. In particular, we continue to include fixed effects for each investment objective-month combination, so that we are effectively measuring each fund's flow relative to the average level of flow within the same investment objective and month. Standard errors cluster on month.<sup>14</sup>

Within our full sample of funds, we find that anonymously-managed funds receive monthly net flows 16.5 basis points lower than those received by comparable sole-manager funds (column (1)).<sup>15</sup> However, this estimate masks significant heterogeneity across mutual fund distribution channels. When we follow Bergstresser, Chalmers, and Tufano (2006) and estimate separate specifications for no-load funds (column (2)) and load funds (column (3)), we find that anonymity has a greater impact on flows for those funds marketed and sold directly to investors. The difference between sole-managed and anonymously managed is 24.3 basis points per month for no-load funds versus 9.3 basis points for load funds. Regardless, in all three specifications, we can reject the hypotheses (at the 10-percent level or below) that net flows into anonymously managed equal those into sole-managed or co-managed funds. We view this as further evidence that anonymous management is distinct from co-management.

In the remaining columns, we attempt to determine how much of the lower flows into anonymously-managed funds can be explained by the media's preference for named managers. To do so, we restrict our sample to 1997-2002, when we possess data on both Morningstar ratings and media mentions. Columns (4)-(6) include the same control variables as before; columns (7)-(9) add lagged Morningstar ratings and media mentions. Adding the additional controls reduces the coefficient on anonymous management by approximately 20%, suggesting that an economically significant fraction—but certainly not all—of the additional flows into no-load funds are associated with media mentions. In other words, it appears that perceived quality differences between named-manager and anonymously-managed funds significantly impact fund flows.

As a final robustness check on the media and flow results, we re-estimate specifications using instrumental variables techniques. Decisions about managerial anonymity are correlated at the firm level; firm fixed effects alone explain about 38 percent of the variation in anonymity.<sup>16</sup> To the extent that prior firm-level decisions about anonymous management are exogenous to unobserved current-period, fund-

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<sup>14</sup> Inferences are similar when we cluster standard errors on fund, cluster standard errors on both fund and month, or use the procedure outlined in Fama and MacBeth (1973) to estimate coefficients and standard errors.

<sup>15</sup> Bär, Kempf, and Ruenzi (2005) conduct a related analysis, finding *higher* flows into anonymously-managed funds than into sole-managed funds. We are able to replicate their sign and approximate magnitude by using the CRSP manager data and adopting their specification, which omits objective-time fixed effects. Adding time fixed effects alone to their specification is sufficient to flip the sign back to being consistent with our results. This suggests that the source of difference in our results may be that Bär, Kempf, and Ruenzi are partly identifying their regression from time series trends in anonymity and average fund-level flows.

<sup>16</sup> A plausible reason was given by one of our industry interviewees, who argued that having star managers and anonymous teams in the same organization was “culturally incompatible.” Bär, Kempf, and Ruenzi (2005) also find correlations in anonymity within families in the CRSP data.

level variation in investors' appetite for anonymous or named management, we can use the latter as an instrument for the (lagged) anonymous management dummy variable. For both inflow and media mentions, instrumental variable specifications yield coefficients on the anonymously-managed dummy that are similar to those obtained via OLS, suggesting that families' decisions to use anonymous management are uncorrelated with the unobserved characteristics that affect their attractiveness to investors or the media. In general, Hausman tests do not reject the null hypothesis of exogeneity.<sup>17</sup> Given this fact, we do not report the IV results. Overall, the results in this section lead us to conclude that named managers benefit their firms through increased media mentions and, especially in the case of no-load funds, increased flows beyond those implied by the increased media attention.

## **B. Named Managers and Fund Performance**

Finding that named-manager funds benefit from additional media attention and inflows, we next ask whether these benefits are justified by higher expected returns. To the extent that anonymous management results in less skilled or less motivated managers, investors' preference for named-manager funds may be rational. In the first three columns of Panel A of Table 4, we restrict our sample to actively-managed domestic equity funds and use panel regressions to test for differences in the net (after-expense) and risk-adjusted returns of sole-managed, co-managed, and anonymously-managed funds. The set of control variables and fixed effects mirror Table 3, except that in columns (2) and (3), we replace lagged net returns with lagged one-factor and four-factor alphas, respectively. Standard errors cluster on month.

Using classifications based on the Morningstar manager name variable, we find weak evidence of return differences; coefficients on the anonymously-managed dummy range from -0.7 to -3.4 basis points per month, but are not statistically significant even at the 20-percent level.<sup>18</sup> However, in columns (4) and (5), we find that anonymously-managed funds have significantly lower expense ratios and portfolio

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<sup>17</sup> The one exception is for inflows into load funds, where our IV coefficient loses statistical significance, and the Hausman test statistic has a p-value near 0.10.

<sup>18</sup> Prather and Middleton (2002), Chen, Hong, Huang, and Kubik (2004), and Bliss, Potter, and Schwarz (2006) study the performance of sole-managed funds relative to multi-manager funds, a category which lumps co-managed funds together with anonymously-managed funds. Using samples that differ in terms of time periods, types of funds studied, and whether they use manager name variables from CRSP or Morningstar, these papers find that multi-manager funds underperform sole-managed funds by between 0 and 4 basis points per month. When we replace our anonymously-managed and co-managed dummies with a non-sole-managed dummy, and re-estimate specifications (1), (2), and (3), the coefficients on the multi-manager dummy are -0.7 (p-value of 0.626), -1.9 (p-value of 0.198), and -2.5 (p-value of 0.062) basis points per month. Here, as in Table 4, return differences are higher for alphas rather than raw returns because anonymous- (and multi-) manager funds have slightly higher betas and 1994-2004 was a time period in which the market outperformed cash. Bär, Kempf, and Ruenzi (2005) compare anonymous team-managed funds and sole-managed funds, as classified by CRSP. Their estimated differences are larger, ranging from 5.0 basis points per month, in a univariate comparison of net returns, to 5.6 basis points per month, in a multivariate analysis of four-factor alphas.

turnover than other funds within the same investment objectives and month.<sup>19</sup> The higher expense ratios on sole-manager funds are interesting for two reasons. First, they are consistent with sole-managers generating higher revenues for their firms through increased product differentiation. Second, to the extent that sole-managed funds earn the same net returns as anonymously-managed funds, they do so despite having expense ratios that are almost 1.5 basis points higher per month.

To shed further light on the link between returns and management status we turn to a measure of performance that captures the “unobserved actions” of managers. Specifically, we follow Grinblatt and Titman (1993) and Kacperczyk, Sialm, and Zheng (2006) and decompose net returns into expense ratios, the gross returns implied by prior holdings, and the remainder, which KSZ refer to as the “return gap.” Since we possess matched U.S. equity holdings data for 1994 to 2002, we are able to estimate monthly prior holding returns and monthly return gaps for the set of actively-managed domestic equity funds over this period (taking care to adjust the prior holdings return for a fund’s non-stock holdings).<sup>20</sup> In the first three columns of Panel B, our dependent variables are fund *i*’s net (after-expense) return, the predicted return based on its prior holdings, and its return gap. (We continue to include but do not report coefficients for the control variables.)

We find, in column (8), that anonymously-managed funds exhibit more negative return gaps than sole-managed funds. By this less noisy measure of before-expense performance, anonymously-managed funds underperform named-manager funds by 3.6 basis points per month—approximately 43 basis points per year—and the difference is statistically significant at the 1-percent level. Moreover, we can reject the hypothesis that the coefficients on the anonymously-managed and co-managed dummies are equal at the 10-percent level (p-value of 0.063). These findings suggest that, once we isolate a component of returns that past work (KSZ (2006)) has shown to be persistent, we find some evidence that anonymous managed funds underperform.

What explains the lower return gaps of anonymously-managed funds? As KSZ discuss, a negative return gap can have multiple sources. For example, funds with negative return gaps may do more trading, paying higher transaction costs in the form of trading commissions or price impact. However, we have

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<sup>19</sup> We classify Potomac, ProFunds, and Rydex funds as specialized domestic equity funds, thereby excluding them from the analysis in Tables 4 and 5. These funds have exceptionally high portfolio turnover (approximately 20 times the average fund in our sample) and, beginning in 1999, tend to be anonymously team managed. Including these funds changes the sign on the coefficient on the anonymously managed dummy in the analysis of turnover from negative to positive (which makes it consistent with a similar regression in Bär, Kempf, and Ruenzi (2005)) but does not otherwise alter our results.

<sup>20</sup> When a fund invests less than 100 percent of its portfolio in common stock, we assume that its non-stock holdings earn the risk-free rate of return (as reported on Kenneth French's website). To the extent that funds hold long-term bonds instead of cash, this assumption is imprecise. Fortunately, according to the CRSP database, the bond holdings of non-specialized domestic equity funds are small (less than 1 percent of assets on average), and the assumption only biases our tests to the extent that anonymously managed funds hold a different mix of bonds than named-manager funds within the same investment objective and month.

already seen that anonymously-managed funds have lower portfolio turnover. In addition, when we study the number of stocks that funds report holding at fiscal year ends (column (10)), we find that anonymously-managed funds hold less concentrated portfolios, which also suggests less active management. Less active management of anonymously managed funds is consistent with Almazan, Brown, Carlson, and Chapman (2004), who find that multi-manager funds (team and co-managed funds taken together) face more investment restrictions. The lower returns we find for anonymously managed funds, therefore, do not appear to be the result of higher transaction costs arising from active management.<sup>21</sup>

If anonymously-managed funds trade less than named-manager funds, what explains the negative return gap? One possible explanation is that anonymously-managed funds benefit less from favoritism than named-manager funds (Gaspar, Massa, and Matos, 2006). Preliminary evidence of favoritism comes from the fact that adding family-month fixed effects to the return gap regression (column (9) of Table 4) reveals that the named versus anonymous difference is slightly larger within families (5.6 basis points per point) than it is between families, which lends support to the hypothesis that named-manager funds enjoy more favoritism, permit less return diversion, or both.

To test the hypothesis that named managers permit less return diversion in their funds, we ask whether anonymously-managed international funds suffered more dilution due to stale price arbitrage and late trading. Following Zitzewitz (2006), we use Lipper and TrimTabs daily flow data to calculate monthly dilution rates for the period 2000 to 2003. We find that the average (univariate) impact of fund arbitrage on returns is 9.2 basis points per month in anonymously-managed funds but only 3.3 basis points per month in named-manager funds. In columns (2) and (3) of Table 5, we report coefficients from pooled regressions that control for fund characteristics. Without the family-month fixed effects, we find that the coefficient on the anonymously-managed dummy implies 2.7 basis points more dilution per month than in sole-managed funds (significant at the 1-percent level). Adding family-month fixed effects, the coefficient increases to 6.1 basis points per month, which suggests that families with a mixture of anonymously-managed and named-manager funds were more willing to permit dilution from stale price arbitrage in their anonymously-managed funds.

As a second test of the favoritism hypothesis, we ask whether IPO allocations differ across named-manager and anonymously-managed funds. To the extent that named managers have more ability or incentive to ensure they receive IPO allocations, we expect named-manager funds to receive more and

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<sup>21</sup> Whether we should expect active management to be positively or negatively correlated with returns is controversial. Carhart (1997) finds that a proxy for portfolio transaction costs is negatively correlated with returns, and Pollet and Wilson (2006) find that holding concentrated portfolios is also negatively correlated with returns. In contrast, Cremers and Petajisto (2006) use a different measure and find that portfolio concentration is positively correlated with returns.



more valuable IPO allocations. In Table 5, we conduct our tests for favoritism toward named-manager funds. Following Gaspar, Massa, and Matos (2006) and Reuter (2006), we construct proxies for IPO allocations from reported holdings of recent IPOs. Specifically, we assume that positive holdings of IPOs that occurred during the prior quarter reflect allocations on the IPO offer date. To calculate this proxy for IPO allocations, we merge IPO data from SDC with reported equity holdings data from CDA/Spectrum for our sample of non-specialty domestic equity funds. To determine the degree of underpricing of each IPO, we use data from SDC to calculate the percentage increase from the offer price to the first-day closing price.

We consider four (related) measures of the contribution of IPOs to fund performance. Recognizing that reported holdings of recent IPOs are noisy proxies for actual allocations, in column (1), we begin by focusing on the probability that a fund receives any IPO allocation. The dependent variable is a dummy variable that equals one if fund *i* reports holding shares in any of the IPOs that occurred during the past quarter. We estimate column (1) via probit and report marginal effects; standard errors are clustered on month. The coefficient on the anonymously-managed dummy variable is -1.8 percent and statistically significant at the 5-percent level, suggesting that anonymously-managed funds are less likely to receive IPO allocations. Since only 8.92 percent of funds report holding shares of any recent IPOs, the size of the difference is economically significant.

In column (2), we explore the relative size of IPO allocations to named-manager and anonymously-managed funds. The dependent variable is the ratio of the value of fund *i*'s holdings of recent IPOs to the fund *i*'s end-of-quarter TNA. Since this variable equals zero much of the time and cannot be negative, we estimate the coefficients in column (2) via Tobit. The negative and statistically significant coefficient on the anonymously-managed dummy implies that anonymously-managed funds receive slightly smaller IPO allocations than do named-manager funds.

Finding evidence consistent with anonymously-managed funds receiving fewer and smaller IPO allocations than their named-manager peers, we next ask whether anonymously-managed funds are less likely to receive allocations of underpriced IPOs. The dependent variable in column (3) is a dummy variable that equals one if fund *i*'s reported holdings suggest that it earned positive returns from underpricing during the past quarter. Again, we estimate column (3) via probit and report marginal effects. The coefficient on the anonymously-managed dummy variable is -2.6 percent and statistically significant at the 1-percent level, suggesting that anonymously-managed funds are, in fact, slightly less likely to receive allocations of underpriced IPOs.

Finally, we attempt to quantify the impact of IPO allocations on fund returns. The dependent variable in column (4) is the ratio of the total underpricing that we estimate fund *i* earned over the past quarter based on reported holdings at quarter end to the fund *i*'s end-of-quarter TNA. This variable is positive

when the fund is estimated to have earned positive underpricing on its IPO holdings, negative when it is estimated to have earned negative underpricing on its IPO holdings, and zero when the fund does not report holding shares of any recent IPOs. We estimate the coefficients in column (4) via OLS. The negative coefficient on the anonymously-managed dummy indicates that anonymously-managed funds receive less of a boost to their performance from underpriced IPOs than do sole-managed or co-managed funds, but the implied difference in performance is 0.46 basis points per quarter, suggesting that favorable IPO allocations are but one source of the return gap differences of roughly 4 basis points per month.

Taken as a whole, the results in this section demonstrate both that anonymously-managed funds earn slightly lower returns than their named-manager peers and that these lower returns, reflect, at least in part, less favorable IPO allocations and more return dilution from stale price arbitrage. It remains unclear, however, whether these differences reflect the greater bargaining power of named managers within their fund families or strategic behavior by fund families to favor named-manager funds for marketing reasons.

### **C. Bargaining Power and the Cost of Naming Managers**

While the above evidence points to several potential benefits of using named managers, their declining prevalence suggests that using named managers is not costless. In this section, we ask whether named managers enjoy increased bargaining power following periods of good performance. Ideally, if we observed wages for both named and anonymous fund managers, we could directly measure the additional costs of retaining successful named managers. Unfortunately, fund manager wage data are not publicly available and have proven impossible to obtain. We can, however, draw an inference about managerial bargaining power from changes in the flow-performance relation when named managers depart.<sup>22</sup>

In Table 6, we extend our earlier analysis of monthly net flows by controlling for the departure of named managers. In column (1), we replace the fund's net returns over the prior 12 months with its within-objective performance ranking over the prior 12 months; this ranking equals zero for the worst performing fund within the objective and one for the best.<sup>23</sup> We also add a dummy variable indicating whether any named managers departed during the prior 12 months. (By construction, the named manager turnover variable is zero for anonymously-managed funds.) To determine whether flows into anonymously managed and co-managed funds are less sensitive to return rankings, we interact the return ranking with the anonymously managed and co-managed dummy variables, respectively. To shed light on the bargaining power of successful named managers, we interact the return ranking with the named

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<sup>22</sup> According to a pension fund manager that we interviewed, with the rise of hedge funds and private equity funds, "mutual funds fear that anyone they market based on performance will leave after a year or two, frustrating their existing investors." This motivates our analysis in both III.C and III.D.

<sup>23</sup> We use return rank here only because its zero-to-one scaling makes the coefficients easier to interpret. The results in both Tables 3 and 6 are qualitatively similar regardless of whether returns or return ranking is used.

manager turnover dummy. Column (2) adds controls for the fund's past returns, past returns squared, and within-objective rank squared.

In both specifications, the negative and statistically significant coefficient on the interaction between within-objective return ranking and named manager turnover suggests that the inflows generated by better performance are attenuated when one or more named manager departs soon thereafter. The fact that a successful named manager's departure reduces fund inflows suggests that successful named managers have greater bargaining power with their firms. This, in turn, implies that named managers should earn more of the rents accruing to good performance.<sup>24</sup>

Because we cannot observe the departure of anonymous managers, we cannot perform similar tests on the interaction between return ranking and an anonymous manager turnover dummy. Therefore, to conclude that the reduction in flows is lower surrounding the turnover of successful anonymous managers, we must assume that the lack of manager names in Morningstar and SEC filings makes it difficult for retail investors to identify these departures. Since firms should have no incentive to identify departures in these cases, we find this assumption to be quite reasonable.

#### **D. Hedge Fund Competition and the Anonymous Management of Mutual Funds**

According to several industry participants we interviewed, competition from the hedge fund industry for managers with strong track records increased substantially over the past decade. Since anonymous managers receive fewer reputational benefits from a fund's track record, anonymity should reduce their opportunities with prospective employers, especially when they are successful.<sup>25</sup> Therefore, to the extent that the hedge fund boom differentially increased outside opportunities for successful named managers, it should have increased the costs associated with naming managers and led to more anonymous management. In this section, we test whether the use of anonymous management is greater in those asset classes and geographical areas with more hedge fund assets.

While the overall growth in hedge fund assets has been close to monotonic, Table 7 (using data from Getmansky, Lo, and Wei (2004)) reveals that the growth rates of different asset classes have varied

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<sup>24</sup> Within a sample of sole-managed equity and bond funds, Khorana (2001) finds that fund performance increases when managers depart following periods of below-average performance and decreases when managers depart following periods of above-average performance. Lynch and Musto (2003) find that investors are less likely to withdraw money from a poorly performing fund when they anticipate that the fund will adopt a new strategy. This complements our finding in Table 6 that investors' inflows suggest they expect good performance to be less persistent when a named manager departs.

<sup>25</sup> In the context of mutual fund prospectuses and advertising, managers can only take credit for the track record of a prior fund if the management teams, investment objectives, and strategies of the new and old funds are essentially unchanged. When discussing the precedent set by an SEC No-Action Letter (dated August 7, 1996) to the Bramwell Growth Fund, Pierce (1999) states that "it would be difficult to rely on Bramwell to use the performance record of a fund that is run by a committee or by a portfolio manager whose discretion is limited by supervisory approval or other controls" (p. 25)

through time. For example, after the crises in Asia, Russia, and Brazil and the collapse of Long-Term Capital Management in 1997 and 1998, demand for hedge funds in the Emerging Markets and Global Macro categories declined significantly. Similarly, the asset share of domestic equity hedge funds peaked with the stock market, while debt-oriented hedge funds gained share during the low interest-rate environment between 2002 and 2004. Since a successful mutual fund manager should be most employable within her broad asset category, the patterns in Table 7 suggest that competition from the hedge fund industry should have peaked for different mutual fund asset classes at different times.

In Table 8, we exploit within-time-period, cross-sectional variation in manager bargaining power, brought about by the hedge fund boom, to predict variation in the use of anonymous management. We start by testing whether funds are more likely to use anonymous teams when same-category hedge fund assets are higher. The independent variable of interest in columns (1) and (2) is the natural logarithm of hedge fund assets in the same broad investment objective as fund  $i$ , where hedge fund assets are measured at the end of the prior calendar year. In addition to our standard set of control variables, we include a separate fixed effect for each investment objective and for each family-year pair. The inclusion of time period fixed effects ensures that identification comes from cross-sectional variation across hedge fund asset classes—caused, for example, by the collapse in demand for internationally-oriented hedge funds after LTCM failed in 1998—rather than time-series variation in the overall size of the hedge fund industry. Column (2) controls for lagged management status, while column (1) does not. Standard errors adjust for clustering within objective-year.

In both specifications, the coefficients on same-category hedge fund assets are positive and statistically significant (at the 1-percent and 5-percent levels), lending support to the hypothesis that the shift to anonymous mutual fund management was faster in asset classes experiencing faster hedge fund growth.<sup>26</sup> These findings also lend support to our more general hypothesis that mutual funds weigh the expected ex post bargaining costs of successful managers when deciding whether to use named or anonymous managers.

To shed further light on this general hypothesis, we ask whether the move toward anonymous management was more pronounced in geographic areas with more overlap between mutual funds and hedge funds, under the assumption that these are the areas where labor market competition for successful fund managers should be strongest. Data from TASS on the business addresses of hedge funds suggest that the U.S. hedge fund industry is quite concentrated near New York City, with New York state,

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<sup>26</sup> Most other observables are close to uncorrelated with anonymity. One interesting exception is fund size; anonymously managed funds are smaller than otherwise similar funds in the same family. In contrast, in unreported results we find that co-managed funds are larger than either sole or anonymously managed funds, consistent with the finding of Guedj and Papastaikoudi (2005) that families add managers to growing funds. This provides further evidence that anonymous management is distinct from co-management.

Connecticut, and New Jersey accounting for 55, 7, and 3 percent of total assets during our time period.<sup>27</sup> Hand-collected data on mutual fund family locations from the Nelson Directory of Investment Managers reveals that the mutual fund industry is concentrated in Boston and New York, with these cities accounting for 24% and 16%, respectively, of the mutual funds assets in our sample.

In columns (3) and (4), we test whether mutual funds in states with more hedge fund assets are more likely to adopt anonymous management. The new variable of interest is the natural logarithm of hedge fund assets in the same state as fund  $i$ , again measured at the end of the prior calendar year. Since this variable varies at the state-year level we are able to include fixed effects for each objective-year pair and for each family; we also cluster standard errors on state-year. The resulting coefficients on same-state hedge fund assets are positive and statistically significant (again, at 1-percent and 5-percent levels), confirming our prediction that the shift to anonymity should have been relatively faster in those states with faster hedge fund asset growth.

Since most hedge fund assets are located in Boston and New York City, as a robustness check, we focus on the use of anonymous teams in these cities. We include dummy variables indicating whether fund  $i$  is located in Boston or New York City, and we interact these city dummy variables with the natural logarithm of hedge fund assets at the end of the prior calendar year. These specifications include objective-year fixed effects and their standard errors cluster on mutual fund family.

The coefficients on the Boston and New York City dummies are negative and statistically significant (at the 10-percent level and below) in both columns. This suggests that, everything else equal, mutual fund families headquartered in Boston and New York City are less likely to use anonymous management. However, consistent with our hypothesis that the use of anonymous teams is related to the level of hedge fund assets, we find that the coefficients on our lagged hedge fund asset-city interaction terms are positive and statistically significant (at the 10-percent level and below). For example, the coefficient on the New York City interaction term in column (5) implies that the incremental probability of a New York City-based fund reporting anonymous management increased from 3.5 percent in 1996 to 14.4 percent in 2002.

Collectively, the results in Table 8 suggest that the move towards anonymous management by mutual funds was strongest in those asset classes and locations with the most hedge fund assets. It is worth reiterating that these results are not driven by general time series trends. Rather, because we include time period fixed effects, we follow a standard differences-in-differences approach and identify off of cross-sectional differences in the growth of hedge funds in different asset classes or geographical areas. When

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<sup>27</sup> Hedge fund employment appears likewise concentrated in the New York area. For example, of the 175 U.S.-based jobs in the hedge fund industry listed on [efinancialcareers.com](http://efinancialcareers.com) on August 14, 2006 for which a location was provided, 73 percent were in New York and 11 percent in suburban New York. Boston had the second most listings of any major city, with 9 percent.

we remove the time period fixed effects and use the overall level of hedge fund assets for identification, our results get much stronger.

The various coefficients in Table 8 imply that the seven-fold growth of the hedge fund industry should have explained 10 to 40 percent of the 14 percentage point increase in managerial anonymity reported in Table 1. This leaves room for alternative explanations of the remainder. One possibility might be the decline in the media preference for named-manager funds after 2000 mentioned earlier. Another alternative is that the norm of anonymity might have been imported from the hedge fund industry, where arguably less attention is given to managers. It is also possible that long-only inefficiencies have gotten smaller in the last decade, making it more difficult to become a star mutual fund manager. Indeed, consistent with this idea, we find evidence (in unreported regressions) that equity and debt mutual fund returns (risk-adjusted or not) have become less persistent over our time period. While these three mechanisms may have contributed to the rise of anonymity in our time period, they are likely to have done so more gradually and uniformly across cities and asset classes. As a result, they do not lend themselves to the sort of differences-in-differences analysis we conduct above, nor would they explain the findings of our analysis in Table 8.

#### IV. Conclusion

We use the U.S. mutual fund industry as a laboratory to study the economics of firms sharing credit with employees. We conjecture that firms share credit for project outcomes with employees when the expected marketing and incentive benefits of sharing credit exceed the expected costs of increased employee bargaining power. Within our setting, where manager skill is aggressively marketed but hard to detect, the primary benefits of naming managers arise from additional media mentions and flows. Any evidence of return differences between named-manager and anonymously-managed funds appear to reflect family-level decisions to exploit these marketing benefits. With respect to the added rent-sharing costs of named managers, we find that inflows decline when successful named managers depart. Consistent with the growth of the hedge fund industry increasing *ex post* bargaining power more for successful named managers, we also find that the shift to anonymous management is greater in those asset classes and geographical areas with more hedge fund assets.

As one of its responses to the mutual fund scandal in 2003, the SEC promulgated a rule requiring the disclosure of the identity of the five most important members of a portfolio management team.<sup>28</sup> These additional disclosures had not been incorporated into either CRSP or Morningstar data to any significant extent when we first circulated this paper in March 2006. By December 2006, however, Morningstar was

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<sup>28</sup> Disclosure Regarding Portfolio Managers of Registered Investment Companies, Security and Exchange Commission Release 33-8458.

reporting manager names for almost every fund. While this change technically ends the era of anonymous management that we study, it appears that anonymity may persist in another form. In particular, for funds formerly listed as anonymously-managed, Morningstar now lists as many as 65 manager names. This blurs the difference between co-managed and anonymously-managed funds.

Our findings have ambiguous implications for the question of whether the mandatory disclosure of manager names is beneficial for either the industry or the investing public. To the extent that naming managers results in higher returns, everything else equal, it will benefit investors. The return differences are, however, fairly mild and likely driven by within-family favoritism of named-manager funds. Consequently, any return benefits of naming formerly anonymous managers—for example in the form of more equitable allocations of IPOs— may come at the expense of less favoritism for their already named colleagues.

On the other hand, we find that naming managers increases the sensitivity of inflows to their retention, which should increase their bargaining power and wages. In addition, naming managers likely increases the differentiation of mutual funds, in that it leads investors to jointly choose firms and managers. To the extent that these effects explain the fact that expense ratios were 17 basis points higher for named-manager funds, they suggest that eliminating anonymity for any given fund could put upward pressure on its expenses. The equilibrium consequences for fund expenses of eliminating all anonymous management are, of course, less clear.

Outside the fund industry, firms also face decisions about whether to share credit with their employees in ways that allow them to develop reputations independent of the firm. Many CEOs develop such reputations, as do some engineers (e.g., Steve Wozniak at Apple) and division heads (e.g. Jamie Dimon while at Citigroup, Carly Fiorina while at Lucent, and Lee Iacocca while at Ford). For some categories of employees (e.g., print journalists) being allowed such a reputation is the norm, albeit one from which some employers deviate (e.g., *The Economist*). When choosing whether to allow their employees an outside reputation, these firms likely also face the same tradeoff between marketing benefits and retention costs that we document in the context of mutual fund managers.

At the same time, one might expect the incentive effects of employee stardom to differ depending on the alignment between an employee's performance for the firm and what generates stardom. For fund managers, the route to stardom is generating high returns and a media profile, which also generates profits for their employer. For journalists, writing high-impact articles likewise serves both the employer's and employee's interests. In contrast, a stardom-seeking CEO, division manager, or engineer might find that maintaining a public profile is distracting from serving her employer's goals. Sharing credit can be in the firm's interest, but in many cases, firms need to ensure they retain enough credit for themselves.

## **Appendix. Assessing the Accuracy of CRSP and Morningstar Manager Name Data**

As discussed in Section II, we possess manager name variables from both CRSP and Morningstar for the period 1993-2004. In this appendix, we compare the Morningstar manager name variable, which retail investors are more likely to rely upon and which we rely upon in our analysis, with the CRSP manager name variable, which Chen et al (2004), Bär et al (2005), and other academic studies typically rely upon. For a random sample of domestic equity funds in 2002, we also compare the Morningstar and CRSP manager name variables to the information disclosed within Prospectuses and Statements of Additional Information.

In Table A1, we summarize the manager name variables from Morningstar (Panel A) and CRSP (Panel B). The first six columns indicate the fraction of manager name variables that report one manager name, two manager names, three manager names, four or more manager names, anonymous management, or the name of an asset management company (e.g. “Janus Capital”). These fractions are based on the actual manager name variables and not adjusted in any way. We classify a fund as anonymously team managed when the manager name variable contains a phrase like “Team Managed,” “Multiple Managers,” or “Investment Committee” and does not list any manager names.<sup>29</sup>

According to both data sources, there is a substantial decline between 1993 and 2004 in the fraction of sole-managed funds. For example, according to Morningstar, it falls from 71.0% to 40.6% over our sample period. The rise in anonymous management is also evident in both data sources, but the increase in the fraction of anonymously-managed funds is larger and more monotonic using the CRSP manager name variable. The larger number of anonymously-managed funds in CRSP reflects the fact that CRSP rarely reports more than three manager names, despite evidence from Morningstar that the number of funds with four or more named managers is increasingly over time. In other words, some significant fraction of the anonymously team managed funds according to CRSP are really co-managed funds with four or more named managers. Other differences in the fraction of anonymous management reflect regime changes in the content of the Morningstar and CRSP manager name variables.

To more accurately capture the rise in anonymous management, in the last three columns of Table A1, we adjust the fraction of sole-managed, co-managed, and anonymously team managed funds for two such regime changes.<sup>30</sup> In Panel A, the drop in the fraction of anonymous management from 16.9% in 1996 to 7.5% in 1997 reflects that the fact that, prior to 1997, Morningstar classified any fund with more than two named managers as “Team Managed,” leading us to erroneously classify funds with three or more named managers in the first four years of our sample as anonymously team managed. In the last two

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<sup>29</sup> When the manager name variable includes one or more manager names and the phrase “Team Managed” we use the number of named managers to classify the fund as sole-managed or co-managed.

<sup>30</sup> Note that these adjustments only apply to Table 1 and Table A1; the management classification variables used throughout our analysis are constructed from the raw Morningstar manager name variable.



columns of Panel A, we use the fact that 68.1% of the funds classified by Morningstar as anonymously team managed in 1996 are reclassified as co-managed funds in 1997 to adjust the fractions of co-managed and anonymously team managed funds between 1993 and 1996. (Similarly, the drop in the fraction of anonymous management between 2001 and 2002 may reflect Morningstar's increased propensity in 2002 to list five or more manager names.) In Panel B, we adjust the fractions of sole-managed, co-managed, and anonymously-managed funds for the fact that CRSP essentially no longer reports firm names in its manager name variable after 1999. Here, we use the distribution of transitions from "Firm Name" to sole-managed (57.2%), co-managed (20.1%), and anonymously-managed (22.7%) between 1993 and 2000 to re-distribute "Firm Name" funds across the three categories.

In Table A2, we restrict the sample to funds for which we possess both Morningstar and CRSP manager names and examine how well the CRSP manager classification agrees with the Morningstar manager classification. Panel A focuses on 1993-1996, the period during which Morningstar never listed more than two manager names, while Panel B focuses on 1997-2004. Rows are scaled so that they sum to 100% (subject to rounding error). For example, the first row of Panel B indicates that when Morningstar lists a single manager name, CRSP lists a single manager name for 81.9% of the funds, two manager names for 7.8%, three manager names for 1.8%, four managers for 0.3%, and no manager names for 8.2%. Two interesting patterns emerge. First, agreement on anonymous management is much higher in 1997-2004 (73%) than in 1993-1996 (39%), when Morningstar classifies funds with three or more named managers as anonymously team managed. Second, of the thousands of funds that Morningstar classifies as having four or more named managers, CRSP classifies 63% as being anonymously team managed. This reinforces the fact that CRSP tends to misclassify funds with four or more named managers as anonymously team managed.

Our evidence that Morningstar and CRSP both misclassify at least some co-managed funds as anonymously team managed raises a question about the accuracy of either data source. Since our analysis focuses on a mutual fund's decision to name or not name its managers, we want variation in our anonymously team managed dummy variable to be driven by variation in whether the fund discloses manager names to its investors—rather than by variation in the rules that Morningstar and CRSP use to process the manager name data.

To assess the extent to which the Morningstar and CRSP manager name variables reflect what mutual funds disclose to their investors, we hand-collected manager data from Prospectuses and Statements of Additional Information for a random sample of 130 domestic equity funds in 2002. Specifically, we partitioned the sample into four bins based on whether neither CRSP nor Morningstar classified the fund as anonymously team managed, only CRSP classified the fund as anonymously team managed, only Morningstar classified the fund as anonymously team managed, or both CRSP and Morningstar classified

the fund as anonymously team managed. We then randomly sampled either 20 or 45 funds from within each bin and determined the percentage of the funds that report being anonymously team managed in their SEC filings. In all but one case, we were able to locate manager names or a phrase like “The Adviser manages the Funds by an investment team approach” followed by no names. In the one case where we were not able to locate any explicit discussion of how the fund was managed, we followed both CRSP and Morningstar and classified the fund as anonymously team managed.

Table A3 summarizes the findings from this stratified random sample. Overall, we find that Morningstar more accurately captures the content of the filings than does CRSP. In particular, of the 45 funds that CRSP lists as anonymously team managed but that Morningstar does not, we are able to locate one or more manager name for 37 (82.2%) of the funds. In virtually every one of these cases, the filing states that the fund is team managed but goes on to list manager names, providing further evidence that CRSP does not reliably distinguish between anonymous management and co-management. In the much less common case where Morningstar lists the fund as anonymously team managed but CRSP does not, Morningstar is correct 60.0% of the time. Extrapolating from the stratified random sample to the full sample of domestic equity funds in 2002 suggests that Morningstar accurately captures anonymous management 94.7% of the time versus an 81.3% success rate for CRSP. Thus, it appears that the Morningstar manager name variable has the double advantages of being better known to investors and better representative of what mutual funds disclose to investors within their SEC filings—at least beginning in 1997, when the Morningstar manager name variable lists more than two manager names. As a robustness check, we verified (in unreported analysis) that none of our findings are driven by including observations that rely upon the Morningstar manager name data from 1993-1996.

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**Table 1. The use of sole-management, co-management, and anonymous management by U.S. mutual funds, 1993-2004**

**Panel A. Management Classification According to Morningstar**

	All Funds	Adjusted Management Classification			Adjusted Management Classification		
		Sole	Co-managed	Anonymous	Sole	Co-managed	Anonymous
1993	2,102	1,493	527	82	71.0%	25.1%	3.9%
1994	2,572	1,792	680	100	69.7%	26.4%	3.9%
1995	2,866	1,951	792	123	68.1%	27.6%	4.3%
1996	3,094	1,937	990	167	62.6%	32.0%	5.4%
1997	3,345	1,936	1,159	250	57.9%	34.6%	7.5%
1998	3,827	2,002	1,417	408	52.3%	37.0%	10.7%
1999	4,082	2,037	1,559	486	49.9%	38.2%	11.9%
2000	4,300	2,032	1,706	562	47.3%	39.7%	13.1%
2001	4,422	2,011	1,690	721	45.5%	38.2%	16.3%
2002	4,388	1,914	1,988	486	43.6%	45.3%	11.1%
2003	4,726	1,965	1,983	778	41.6%	42.0%	16.5%
2004	4,937	2,003	2,029	905	40.6%	41.1%	18.3%

**Panel B. Management Classification According to CRSP**

	All Funds	Adjusted Management Classification			Adjusted Management Classification		
		Sole	Co-managed	Anonymous	Sole	Co-managed	Anonymous
1993	2,783	2,204	381	198	79.2%	13.7%	7.1%
1994	3,223	2,462	536	224	76.4%	16.6%	7.0%
1995	3,555	2,640	669	246	74.3%	18.8%	6.9%
1996	3,690	2,509	897	284	68.0%	24.3%	7.7%
1997	4,266	2,658	1,262	346	62.3%	29.6%	8.1%
1998	4,518	2,688	1,335	495	59.5%	29.6%	11.0%
1999	4,590	2,464	1,333	793	53.7%	29.0%	17.3%
2000	4,977	2,454	1,406	1,117	49.3%	28.2%	22.4%
2001	5,102	2,363	1,443	1,296	46.3%	28.3%	25.4%
2002	4,993	2,146	1,390	1,457	43.0%	27.8%	29.2%
2003	5,580	2,260	1,579	1,741	40.5%	28.3%	31.2%
2004	5,779	2,258	1,731	1,790	39.1%	29.9%	31.0%

Notes: This table reports the percentage of mutual funds classified as reporting one manager name (sole managed), reporting two or more manager names (co-managed), or reporting no manager names (anonymously managed). Since the Morningstar classification likely better reflects the information available to investors, we use the actual values reported by Morningstar in most of our analysis (see Table A1). However, to better highlight the rise of anonymously-managed funds, the numbers and percentages in this table are adjusted for time-series changes in the rules that CRSP and Morningstar use to classify a mutual fund's management structure. For the purposes of this table only, in 1993-1996, when Morningstar identified any fund with more than two named managers as anonymously managed, we use the distribution of transitions in management type between 1996-1997 to impute management type in 1993-1996. From 1993-1999, CRSP's manager name variable occasionally reports a firm name rather than a manager name. In this table, we use the distribution of transitions from firm names to sole management, co-management, and anonymous management to adjust the aggregate CRSP statistics.

**Table 2. Determinants of positive media mentions, by publication, 1997-2002**

	Positive media mentions					
	New York Times (1)	Money Magazine (2)	Kiplinger's Personal (3)	SmartMoney (4)	Consumer Reports (5)	Positive Media (6)
Objective*month combinations with mentions	139	85	199	546	76	798
Observations in those combinations	34,740	9,738	40,268	80,829	11,310	110,144
Anonymously managed (t-12)	-0.118 *** (0.020)	-0.560 ** (0.204)	-0.067 *** (0.022)	-0.136 *** (0.039)	-0.075 (0.106)	-0.248 *** (0.050)
Co-managed (t-12)	-0.078 *** (0.022)	0.077 (0.194)	-0.052 ** (0.024)	-0.037 (0.031)	-0.156 * (0.098)	-0.111 ** (0.046)
No Load (t-12)	0.005 (0.025)	1.010 *** (0.319)	0.169 *** (0.065)	0.204 *** (0.058)	0.700 *** (0.240)	0.553 *** (0.095)
Expense Ratio (t-12)	0.023 * (0.012)	0.183 ** (0.077)	0.027 *** (0.010)	0.056 *** (0.016)	0.065 (0.063)	0.099 *** (0.030)
12b-1 Fee (t-12)	-0.069 (0.048)	-1.322 *** (0.568)	-0.234 ** (0.101)	-0.127 (0.135)	-3.140 *** (0.862)	-0.657 *** (0.197)
Ln Fund TNA (t-1)	0.043 *** (0.011)	1.062 *** (0.191)	0.094 *** (0.018)	0.236 *** (0.022)	0.267 *** (0.088)	0.390 *** (0.031)
Ln Family TNA (t-1)	-0.031 *** (0.009)	-0.327 *** (0.073)	-0.037 *** (0.010)	-0.064 *** (0.018)	-0.083 ** (0.044)	-0.118 *** (0.025)
Turnover (t-12)	-0.000 (0.000)	-0.001 (0.001)	-0.000 (0.000)	-0.000 * (0.000)	-0.001 (0.000)	-0.000 ** (0.000)
Fund age (t)	-0.001 (0.001)	-0.011 (0.008)	0.001 (0.002)	0.000 (0.001)	0.003 (0.003)	-0.000 (0.002)
Net flows (t-12 to t-1)	0.001 *** (0.000)	0.004 *** (0.002)	0.001 *** (0.000)	0.002 *** (0.000)	0.004 *** (0.001)	0.003 *** (0.000)
Net return (t-12 to t-1)	0.007 *** (0.001)	-0.002 (0.003)	0.003 *** (0.001)	0.007 *** (0.001)	0.002 (0.003)	0.010 *** (0.001)
Std dev net return (t-12 to t-1)	-0.003 (0.006)	-0.076 (0.050)	0.004 (0.004)	0.023 *** (0.008)	0.003 (0.025)	0.013 (0.010)
Prior-year morningstar rating: 1 star	-0.219 ** (0.091)	-1.694 ** (0.657)	-0.248 ** (0.120)	-0.072 (0.092)	1.225 ** (0.442)	-0.260 ** (0.126)
Prior-year morningstar rating: 2 stars	-0.030 (0.062)	-0.868 *** (0.340)	-0.120 ** (0.052)	-0.079 (0.075)	1.441 *** (0.429)	-0.131 (0.090)
Prior-year morningstar rating: 3 stars	0.095 ** (0.043)	-0.393 * (0.244)	-0.119 *** (0.043)	-0.072 (0.067)	2.104 *** (0.497)	0.088 (0.075)
Prior-year morningstar rating: 4 stars	0.169 *** (0.048)	0.176 (0.270)	0.018 (0.032)	0.125 ** (0.060)	2.509 *** (0.573)	0.455 *** (0.082)
Prior-year morningstar rating: 5 stars	0.220 *** (0.053)	0.610 ** (0.307)	0.147 *** (0.047)	0.378 *** (0.064)	2.738 *** (0.640)	0.810 *** (0.087)
Family's print advertising dollars (t-12 to t-1)	0.002 (0.005)	-0.043 ** (0.022)	-0.005 *** (0.002)	-0.006 * (0.003)	0.021 *** (0.010)	0.007 (0.007)
Family's nonprint advertising dollars (t-12 to t-1)	0.002 (0.004)	-0.041 ** (0.021)	-0.004 *** (0.002)	-0.006 (0.004)		
Own-publication advertising dollars (t-12 to t-1)	-0.049 (0.038)	0.453 *** (0.123)	0.147 *** (0.053)	0.275 *** (0.183)		
Ho: Anonymous = Co-managed	0.034 **	0.005 ***	0.282	0.035 **	0.481	0.009 ***
Objective*month fixed effects? Clustering	Yes Family	Yes Family	Yes Family	Yes Family	Yes Family	Yes Family
Pseudo R2	0.182	0.342	0.298	0.260	0.360	0.290
Observed probability (times 100)	0.443	4.590	0.939	1.342	5.473	2.370
Predicted probability (times 100, at x-bar)	0.119	0.667	0.096	0.259	0.363	0.423

Note: Each column reports coefficients from a probit regression estimated for positive media mentions in a single publication or, in column (6), for a positive media mention in any of the five publications. We include a separate fixed effect for each investment objective each month. "Anonymous team managed (t-12)" is a dummy variable that equals one if Morningstar lists fund i as being managed by unnamed managers in month t-12. "Co-managed (t-12)" is a dummy variable that equals one if Morningstar lists fund i as being managed by multiple named managers in month t-12. Fund characteristics come from CRSP. (Sole-managed funds are the omitted category.) "No Load (t-12)" is a dummy variable that equals one if CRSP lists fund i as charging a sales commission. "Expense ratio (t-12)" and "12b-1 fee (t-12)" are fund's lagged expense ratio and 12b-1 fee. Log Fund TNA (t-1) and "Log Family TNA (t-1)" are the natural logarithm of dollars under management by fund i and by its family in month t-1. "Turnover (t-12)" is lagged portfolio turnover. "Fund age in years (t)" is the number of years between fund i's inception (according to CRSP) and month t. "Net Returns (t-12 to t-1)" is defined as the natural logarithm of one plus the return of fund-i between months t-12 and t-1. "Net Flows (t-12 to t-1)" is defined as the natural logarithm of one plus the growth in fund-i's TNA between months t-12 and t-1 minus "Net Returns (t-12 to t-1)". It is the continuously compounded growth in assets minus the continuously compounded net return. Morningstar ratings from December of the prior year are used to create five dummy variables (corresponding to ratings between one and five stars). Since Morningstar ratings are awarded at the share class level, these dummy variables are then multiplied by the fraction of fund i's dollars under management that receive each rating. "Family's print advertising to assets ratio (t-12 to t-1)" is defined as family i's total print advertising expenditures between months t-12 and t-1 divided by the average assets under management in family i during the same twelve-month period. "Own publication advertising (t-12 to t-1)" is defined as family i's total advertising expenditure in publication between months t-12 and t-1. We exclude this variable when predicting media mentions in Consumer Reports (which does not accept advertising) and in the set of all five publications. The advertising data were acquired from Competitive Media Research and are described in Reuter and Zitewitz (2006); they are measured in millions of dollars. Standard errors are clustered on mutual fund family and are reported in parentheses. Significance at the 10-percent, 5-percent, and 1-percent levels (in a two-sided test) is denoted by \*, \*\*, and \*\*\*.

**Table 3. Determinants of monthly net flows**

Sample Period: Sample of Funds:	1994-2004			1997-2002			1997-2002		
	All (1)	No Load (2)	Load (3)	All (4)	No Load (5)	Load (6)	All (7)	No Load (8)	Load (9)
Anonymously managed (t-12)	-0.165 *** (0.048)	-0.243 *** (0.080)	-0.093 * (0.049)	-0.234 *** (0.070)	-0.383 *** (0.107)	-0.070 (0.071)	-0.191 *** (0.071)	-0.325 *** (0.109)	-0.050 (0.070)
Co-managed (t-12)	-0.027 (0.024)	-0.104 *** (0.039)	0.028 (0.029)	-0.028 (0.029)	-0.111 ** (0.048)	0.039 (0.038)	-0.014 (0.029)	-0.091 * (0.047)	0.042 (0.038)
No Load (t-12)	-0.009 (0.035)			-0.106 ** (0.041)			-0.211 *** (0.041)		
Expense ratio (t-12)	0.043 (0.045)	0.015 (0.039)	0.090 (0.085)	-0.013 (0.030)	0.012 (0.035)	-0.062 (0.043)	-0.001 (0.030)	0.013 (0.036)	-0.036 (0.043)
12b-1 Fee (t-12)	-0.071 (0.077)	0.047 (0.151)	-0.138 (0.115)	-0.044 (0.091)	-0.219 (0.161)	0.029 (0.098)	0.044 (0.091)	-0.126 (0.162)	0.090 (0.098)
Ln Fund TNA (t-1)	-0.170 *** (0.014)	-0.155 *** (0.019)	-0.178 *** (0.017)	-0.166 *** (0.019)	-0.138 *** (0.025)	-0.190 *** (0.022)	-0.239 *** (0.020)	-0.230 *** (0.029)	-0.243 *** (0.022)
Ln Family TNA (t-1)	0.100 *** (0.009)	0.102 *** (0.013)	0.097 *** (0.012)	0.092 *** (0.012)	0.084 *** (0.015)	0.096 *** (0.016)	0.101 *** (0.012)	0.097 *** (0.016)	0.103 *** (0.015)
Turnover (t-12)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Fund age (t)	-0.005 *** (0.001)	-0.008 *** (0.002)	-0.002 ** (0.001)	-0.004 ** (0.001)	-0.007 *** (0.002)	-0.001 (0.002)	0.002 (0.001)	-0.001 (0.002)	0.003 ** (0.002)
Net flows (t-12 to t-1)	0.030 *** (0.001)	0.028 *** (0.001)	0.032 *** (0.001)	0.030 *** (0.001)	0.027 *** (0.001)	0.033 *** (0.002)	0.028 *** (0.001)	0.025 *** (0.001)	0.031 *** (0.002)
Net return (t-12 to t-1)	0.064 *** (0.006)	0.065 *** (0.007)	0.062 *** (0.005)	0.058 *** (0.006)	0.059 *** (0.007)	0.056 *** (0.006)	0.055 *** (0.006)	0.055 *** (0.007)	0.053 *** (0.005)
Std dev net return (t-12 to t-1)	0.011 (0.027)	0.022 (0.032)	-0.003 (0.026)	0.000 (0.030)	0.003 (0.034)	-0.008 (0.030)	-0.005 (0.031)	-0.007 (0.035)	-0.008 (0.031)
Ho: Anonymous = Co-managed	0.0062 ***	0.0836 *	0.0215 **	0.0056 ***	0.0136 **	0.1695	0.0170 **	0.0346 **	0.2385
Objective*Month fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for prior-year Morningstar ratings?	No	No	No	No	No	No	Yes	Yes	Yes
Control for prior media mentions?	No	No	No	No	No	No	Yes	Yes	Yes
Clustering	Month	Month	Month	Month	Month	Month	Month	Month	Month
R-squared	0.0537	0.0428	0.0681	0.0541	0.0432	0.0704	0.057	0.0462	0.0732
Sample size	379,641	162,004	217,637	225,747	103,570	122,177	225,747	103,570	122,177

Note: In this table, we estimate the determinants of monthly net flows in a panel regression with a separate fixed effect for each investment objective each month. The dependent variable is the natural logarithm of 1 plus the change in TNA between months t and t+1 minus the natural logarithm of 1 plus the fund's return between months t and t+1, which is the continuously compounded rate of growth in the fund assets minus the continuously compounded monthly return. We limit the sample to the 99.84% of fund-month observations with continuously compounded inflows between -100 percent and +100 percent. The independent variables are defined in the notes to Table 2. Columns (4) through (6) restrict the sample to 1997-2002, when we possess data on both lagged Morningstar ratings and lagged media mentions. Columns (7) through (9) extend columns (4) through (6) but control for the prior-year's Morningstar ratings and media mentions in NYT, Money, Kiplinger's, SmartMoney, and Consumer Report between months t-11 and t. Standard errors cluster on year-month. Significance at the 10-percent, 5-percent, and 1-percent levels (in a two-sided test) is denoted by \*, \*\*, and \*\*\*.



**Table 4. Anonymous management, fund returns, and fund characteristics**

<b>Panel A. Analysis of Fund Returns, Expenses, and Turnover</b>					
Dependent Variable:	Net Return	CAPM Alpha	Carhart Alpha	Expense Ratio	Turnover
Sample Frequency:	monthly	monthly	monthly	annual	annual
Sample Period:	1994-2004	1994-2004	1994-2004	1994-2004	1994-2004
	(1)	(2)	(3)	(4)	(5)
Anonymously managed (t-12)	-0.007 (0.030)	-0.034 (0.031)	-0.031 (0.025)	-0.170 *** (0.035)	-12.038 *** (2.565)
Co-managed (t-12)	-0.008 (0.018)	-0.015 (0.018)	-0.024 (0.018)	-0.028 (0.016)	-6.310 *** (1.876)
No Load (t-12)	0.038 * (0.021)	0.036 * (0.021)	0.034 * (0.018)	-0.348 *** (0.025)	9.303 *** (2.034)
Expense ratio (t-12)	-0.010 (0.052)	-0.056 (0.060)	-0.047 (0.052)		7.328 (4.948)
12b-1 fee (t-12)	-0.004 (0.072)	-0.007 (0.077)	-0.018 (0.071)		1.114 (7.155)
Ln Fund TNA (t-1)	-0.033 *** (0.009)	-0.023 *** (0.009)	-0.013 (0.009)	-0.121 *** (0.016)	-7.397 *** (1.254)
Ln Family TNA (t-1)	0.022 *** (0.008)	0.011 (0.009)	0.006 (0.007)	-0.076 *** (0.006)	3.689 *** (0.621)
Turnover (t-12)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 * (0.000)	
Fund age (t)	0.000 (0.001)	-0.000 (0.001)	-0.001 (0.001)	0.005 ** (0.002)	0.111 (0.086)
Net flow (t-12 to t-1)	-0.001 (0.001)	-0.001 (0.001)	0.000 (0.001)	0.001 *** (0.000)	-0.078 * (0.036)
Lagged return measure (t-12 to t-1)	0.021 (0.019)	0.016 (0.018)	0.015 * (0.008)	-0.006 * (0.003)	-0.129 (0.492)
Std dev net return (t-12 to t-1)	-0.107 (0.115)	-0.089 (0.077)	-0.055 (0.057)	0.075 ** (0.031)	5.291 * (2.480)
Ho: Anonymous = Co-managed	0.983	0.541	0.800	0.001 ***	0.038 **
Objective*Month Fixed Effects?	Yes	Yes	Yes	--	--
Objective*Year Fixed Effects?	--	--	--	Yes	Yes
Clustering	Month	Month	Month	Month	Month
Sample size	126876	126876	126876	10489	10489

  

<b>Panel B. Analysis of Fund Holdings</b>					
Dependent Variable:	Net Return	Prior Holdings	Return Gap	Return Gap	# Stocks
Sample Frequency:	monthly	monthly	monthly	monthly	annual
Sample Period:	1994-2002	1994-2002	1994-2002	1994-2002	1994-2002
	(6)	(7)	(8)	(9)	(10)
Anonymously managed (t-12)	0.013 (0.034)	0.050 (0.030)	-0.036 * (0.020)	-0.056 ** (0.028)	45.540 *** (7.534)
Co-managed (t-12)	0.008 (0.023)	0.007 (0.023)	-0.001 (0.012)	-0.006 (0.016)	0.890 (2.517)
Ho: Anonymous = Co-managed	0.882	0.219	0.063 *	0.071 **	0.000 ***
Control variables from Panel A?	Yes	Yes	Yes	Yes	Yes
Objective*Month Fixed Effects?	Yes	Yes	Yes	Yes	--
Objective*Year Fixed Effects?	--	--	--	--	Yes
Family*Month Fixed Effects?	--	--	--	Yes	--
Clustering	Month	Month	Month	Month	Month
Sample size	95994	95994	95994	95994	6924

Note: In this table, we estimate the determinants of monthly returns and fund characteristics in a panel regression with a separate fixed effect for each investment objective each month. We restrict the sample to actively managed, non-specialty domestic equity funds for which we can estimate risk-adjusted returns. In addition, we exclude funds by Potomac, ProFunds, and Rydex. Panel A focuses on fund returns and fund characteristics from CRSP. Panel B focuses on performance measures and characteristics that require matched portfolio holdings. Since we only possess matched portfolio holding through 2002, the analysis in Panel B excludes 2003 and 2004. For the return measures, the unit of observation is fund *i* in month *t*. Returns are measured as continuously compounded percentage points per month. Prior holdings and return gap are calculated as in Kacperczyk, Sialm, and Zheng (2006): prior holdings return is the returns of the holdings from the most recent disclosure date and return gap is the difference between gross fund return (net return plus expenses) and the prior holdings return. For the expense

ratio, turnover, and number of stock regressions, the unit of observation is fund *i* in January of year *t*. Expense ratio and turnover are measured as percentage points per year. The number of stocks is the number of US stocks disclosed in the fund's most recent N-30D filing. All independent variables except fund age are lagged. Specifications focused on monthly returns include S&P investment objective-by-month fixed effects. Specifications (4), (5), and (10) include objective-by-year fixed effects. Specification (9) also includes mutual fund family fixed effects. Standard errors cluster on year-month or year, as appropriate. Significance at the 10-, 5-, and 1-percent levels (in a two-sided test) is denoted by \*, \*\*, and \*\*\*.

**Table 5. Anonymous management, return dilution due to stale price arbitrage and late trading, and IPO allocations**

Sample: Dependent Variable:	International Equity, 1998-2003			Non-Specialized Domestic Equity, 1994-2002			
	Returns	Dilution	Dilution	Any IPOs Dummy?	IPOs as Fraction of TNA	Hot IPOs Dummy?	Underpricing as Fraction of TNA
Sample Frequency:	monthly	monthly	monthly	quarterly	quarterly	quarterly	quarterly
Estimation:	OLS	OLS	OLS	Probit	Tobit	Probit	OLS
Report:	coefficients (1)	coefficients (2)	coefficients (3)	marginal effects (4)	coefficients (5)	marginal effects (6)	coefficients (7)
Anonymously managed (t-12)	-0.095 (0.089)	-0.027 *** (0.009)	-0.061 ** (0.024)	-0.018 *** (0.006)	-8.137 *** (2.309)	-0.026 *** (0.008)	-45.146 ** (17.484)
Co-managed (t-12)	-0.110 (0.086)	-0.012 * (0.007)	-0.028 * (0.014)	-0.010 *** (0.005)	-2.036 (1.532)	-0.017 *** (0.006)	-13.853 (15.236)
Ho: Anonymous = Co-managed	0.850	0.117	0.050 **	0.09 *	0.01 ***	0.09 *	0.02 **
Control variables from Table 5?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Objective*Month fixed effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Family*Month fixed effects?	--	--	Yes	--	--	--	--
Clustering	Month	Month	Month	Quarter	Quarter	Quarter	Quarter
Sample size	6336	6336	6336	37138	45139	30331	44474

Note: This table explores two potential explanations for the lower return gaps of anonymous team-managed funds. In the first three specifications, we focus on dilution due to stale price arbitrage and late trading in international equity funds. Within the small sample of international equity fund-months for which Lipper and TrimTabs daily flow data are available, dilution is calculated as in Zitzewitz (2006). Estimation is via OLS, includes S&P investment objective-by-month fixed effects, and the full set of control variables from Table 9; specification (3) includes mutual fund family fixed effects as well. In the remaining four specifications, we focus on IPO allocations to anonymously team-managed funds. Our sample is restricted to non-specialty domestic equity funds between 1994 and 2002. Following Reuter (2006), we construct proxies for IPO allocations from reported holdings of recent IPOs. We consider four (related) measures of the contribution of IPOs to fund performance. The dependent variable in column (4) is a dummy variable that equals one if fund *i* reported holding shares in any of the IPOs that occurred during the past quarter. We estimate the specifications in columns (4) via probit and report marginal effects. The dependent variable in column (5) is the ratio of the value of fund *i*'s holdings of recent IPOs to the fund's end-of-quarter TNA. Since this variable equals zero much of the time and cannot be negative, we estimate the specification in column (5) via Tobit. The dependent variable in column (6) is a dummy variable that equals one if fund *i*'s reported holdings suggest that it earned positive returns from underpricing during the past quarter. We estimate the specifications in columns (6) via probit and report marginal effects. Finally, the dependent variable in column (7) is the ratio of the total underpricing that we estimate fund *i* earned over the past quarter based on reported holdings at quarter end to the fund's end-of-quarter TNA. Since this variable can be negative, zero, or positive, we estimate specification (7) via OLS; however, we trim the top 1% of the positive and negative values. Standard errors are clustered on fund. Significance at the 10-, 5-, and 1-percent levels is denoted by \*, \*\*, and \*\*\*.

**Table 6. Monthly net flows and manager turnover**

Sample Period: Sample of Funds:	1994-2004	
	All (1)	All (2)
Anonymously managed (t-12)	0.085 (0.127)	0.042 (0.128)
Co-managed (t-12)	0.013 (0.048)	0.009 (0.049)
Return rank (t-12 to t-1)	2.890 *** (0.121)	0.961 *** (0.260)
Return rank squared (t-12 to t-1)		1.095 *** (0.219)
Return rank * Anonymously managed (t-12)	-0.504 ** (0.226)	-0.409 * (0.228)
Return rank * Co-managed (t-12)	-0.079 (0.095)	-0.071 (0.095)
Named manager turnover dummy (t-12 to t-1)	0.048 (0.087)	0.007 (0.086)
Return rank * Named manager turnover	-0.527 *** (0.193)	-0.450 ** (0.192)
No Load (t-12)	-0.057 (0.035)	-0.060 * (0.035)
Expense Ratio (t-12)	0.056 (0.042)	0.040 (0.042)
12b-1 Fee (t-12)	0.022 (0.076)	0.011 (0.076)
Ln Fund TNA (t-1)	-0.184 *** (0.013)	-0.190 *** (0.014)
Ln Family TNA (t-1)	0.100 *** (0.009)	0.107 *** (0.009)
Turnover (t-12)	-0.000 (0.000)	-0.000 (0.000)
Fund age (t)	-0.004 *** (0.001)	-0.004 *** (0.001)
Net flows (t-12 to t-1)	0.029 *** (0.001)	0.029 *** (0.001)
Net return (t-12 to t-1)		0.029 *** (0.006)
Net return squared (t-12 to t-1)		0.000 *** (0.000)
Std dev net return (t-12 to t-1)	-0.041 ** (0.019)	-0.104 *** (0.023)
Ho: Anonymous = Sole-managed	0.001 ***	0.001 ***
Ho: Anonymous = Co-managed	0.006 ***	0.007 ***
Ho: Co-managed = Sole-managed	0.276	0.288
Objective*month fixed effects? Clustering	Yes Month	Yes Month
R-squared	0.0571	0.0594
Sample size	379,629	379,629

Note: In this table, we extend the analysis of monthly net flows in Table 3. Return rank ranges from 0, when fund *i* has the lowest net return within its investment objective between *t*-12 to *t*-1, to 1, when it has the highest net return. The hypothesis tests are conducted assuming a return rank of 0.5. Standard errors cluster on year-month.

**Table 7. Size of the global hedge fund industry, 1994-2004**

Year	Assets under management (\$billions)	Share by broad category			
		Debt	Domestic equity Long-short equity, equity market- neutral, event-driven, short	International Emerging markets, global macro	Other Managed futures, multi-strategy, funds of funds
1994	58	8%	32%	30%	31%
1995	70	9%	35%	27%	30%
1996	93	10%	36%	27%	27%
1997	138	11%	35%	28%	26%
1998	143	11%	42%	21%	26%
1999	175	10%	52%	14%	25%
2000	157	9%	48%	4%	19%
2001	246	13%	57%	5%	25%
2002	278	15%	51%	6%	28%
2003	390	15%	45%	10%	31%
2004	404	16%	46%	11%	27%

Note: Asset totals by investment category are from the TASS database, as reported by Getmansky, Lo, and Wei (2004).

**Table 8. The growth of hedge funds and the anonymous management of mutual funds**

Specification: Sample period:	Levels 1994-2004 (1)	Changes 1994-2004 (2)	Levels 1996-2002 (3)	Changes 1996-2002 (4)	Levels 1996-2002 (5)	Changes 1996-2002 (6)
Ln Hedge Fund TNA in Same Asset Class (t-12)	0.012 *** (0.005)	0.021 ** (0.009)				
Ln Hedge Fund TNA in Same State (t-12)			0.011 *** (0.002)	0.005 ** (0.002)		
Boston HQ					-0.335 ** (0.132)	-0.286 *** (0.135)
Boston HQ * Ln Hedge Fund Industry TNA (t-12)					0.087 ** (0.040)	0.066 *** (0.025)
NYC HQ					-0.306 * (0.161)	-0.270 ** (0.157)
NYC HQ * Ln Hedge Fund Industry TNA (t-12)					0.051 * (0.032)	0.040 ** (0.018)
Anonymously managed (t-12)		0.848 ***		0.607 ***		0.750 ***
Co-managed (t-12)		0.022 ***		0.010		0.009
Fund new to Morningstar database (t)		0.198 ***		0.088 ***		0.102 ***
Index Fund (t-12)	0.217 ***	0.088 ***	0.098 ***	0.052 **	0.027	0.019
No Load (t-12)	-0.009	-0.007	-0.016	-0.013 *	-0.008	-0.009
Expense ratio (t-12)	-0.065 ***	-0.037 ***	-0.032 **	-0.019 **	-0.052 **	-0.020 **
12b-1 fee (t-12)	0.042 *	0.030	-0.001	-0.003	-0.008	-0.013
Ln Fund TNA (t-1)	-0.008 **	-0.006 **	-0.008 ***	-0.004 **	-0.003	-0.002
Ln Family TNA (t-1)	-0.003	0.005			-0.004	-0.003
Turnover (t-12)	0.000 ***	0.000 **	0.000 ***	0.000 ***	0.000 **	0.000 **
Fund age (t)	-0.001 ***	-0.000	-0.001 ***	-0.000	-0.001	-0.001 **
Net flow (t-12 to t-1)	0.000	0.000	0.000 **	0.000	0.000	0.000
Net return (t-12 to t-1)	-0.001 ***	-0.000 *	-0.001 **	-0.001 ***	-0.001 **	-0.000 *
Std dev net return (t-12 to t-1)	-0.001	0.001	-0.000	0.001	0.000	0.001
Fixed effects	Family*Year, Objective	Family*Year, Objective	Obj*Year, Family	Obj*Year, Family	Obj*Year	Obj*Year
Clustering	Objective*Year	Objective*Year	State*Year	State*Year	Family	Family
Pseudo R2	0.2676	0.5899	0.3413	0.5636	0.0721	0.5082
Sample size	13948	13849	13758	13758	18640	18640

Note: This table adds several variables to the specifications previously estimated in Table 4, with the goal of testing whether the use of anonymous team management is correlated with growth in the hedge fund industry. The first hedge fund-related variable is the natural logarithm of hedge fund assets in the same broad asset class (i.e., debt, domestic equity, or international equity) as fund *i*. The second hedge fund-related variable is the natural logarithm of hedge fund assets managed by firms in the same state as fund *i*. The third set of hedge fund variables are dummy variables indicating whether fund *i* is located in Boston or NYC plus interactions with the log of total hedge fund industry assets. While the set of fixed effects vary across specifications, all specifications include a full set of year fixed effects. How we cluster the standard errors in each specification is reported in the table. Significance at the 10-, 5-, and 1-percent levels (in two-sided tests) is denoted by \*, \*\*, and \*\*\*.

**Table A1. The decline of sole managed mutual funds and the rise of anonymous team managed mutual funds, 1993-2004**

**Panel A. Management Classification According to Morningstar**

	As reported in Morningstar manager name variable						Adjusted for Changing Definitions		
	1 Manager	2 Managers	3 Managers	4+ Managers	Anonymous	Firm Name	Sole	Co-managed	Anonymous
1993	71.0%	16.7%	0.0%	0.0%	12.2%	0.0%	71.0%	25.1%	3.9%
1994	69.7%	18.2%	0.0%	0.0%	12.2%	0.0%	69.7%	26.4%	3.9%
1995	68.1%	18.4%	0.0%	0.0%	13.5%	0.0%	68.1%	27.6%	4.3%
1996	62.6%	20.5%	0.0%	0.0%	16.9%	0.0%	62.6%	32.0%	5.4%
1997	57.9%	22.0%	8.2%	4.5%	7.5%	0.0%	57.9%	34.6%	7.5%
1998	52.3%	23.2%	8.8%	5.0%	10.7%	0.0%	52.3%	37.0%	10.7%
1999	49.9%	22.8%	9.2%	6.2%	11.9%	0.0%	49.9%	38.2%	11.9%
2000	47.3%	24.0%	9.2%	6.5%	13.1%	0.0%	47.3%	39.7%	13.1%
2001	45.5%	22.3%	9.6%	6.2%	16.3%	0.0%	45.5%	38.2%	16.3%
2002	43.6%	25.5%	10.9%	8.8%	11.1%	0.0%	43.6%	45.3%	11.1%
2003	41.6%	24.6%	9.8%	7.5%	16.5%	0.0%	41.6%	42.0%	16.5%
2004	40.6%	23.5%	9.7%	7.8%	18.3%	0.0%	40.6%	41.1%	18.3%

**Panel B. Management Classification According to CRSP**

	As reported in CRSP manager name variable						Adjusted for Changing Definitions		
	1 Manager	2 Managers	3 Managers	4+ Managers	Anonymous	Firm Name	Sole	Co-managed	Anonymous
1993	74.5%	10.1%	1.8%	0.2%	5.2%	8.3%	79.2%	13.7%	7.1%
1994	73.2%	12.4%	2.5%	0.6%	5.7%	5.6%	76.4%	16.6%	7.0%
1995	71.3%	13.8%	3.2%	0.8%	5.7%	5.2%	74.3%	18.8%	6.9%
1996	65.8%	17.0%	5.7%	0.8%	6.8%	3.9%	68.0%	24.3%	7.7%
1997	60.9%	20.3%	7.0%	1.8%	7.6%	2.4%	62.3%	29.6%	8.1%
1998	58.3%	20.8%	6.8%	1.5%	10.5%	2.1%	59.5%	29.6%	11.0%
1999	53.2%	19.8%	7.9%	1.1%	17.1%	0.9%	53.7%	29.0%	17.3%
2000	49.3%	20.2%	7.2%	0.9%	22.4%	0.1%	49.3%	28.2%	22.4%
2001	46.3%	20.7%	6.9%	0.7%	25.4%	0.1%	46.3%	28.3%	25.4%
2002	42.9%	21.2%	6.1%	0.4%	29.2%	0.1%	43.0%	27.8%	29.2%
2003	40.4%	20.8%	6.4%	1.1%	31.2%	0.1%	40.5%	28.3%	31.2%
2004	39.0%	21.2%	6.5%	2.2%	31.0%	0.1%	39.1%	29.9%	31.0%

Notes: This table reports the percentage of mutual funds classified as reporting one manager name (sole managed), reporting two or more manager names (co-managed), or reporting no manager names (anonymously managed). The fractions in the first six columns reflect the actual Morningstar and CRSP manager name variables. The fractions in the three columns are adjusted for time-series changes in the rules that Morningstar and CRSP use to classify a mutual fund's management structure. In 1993-1996, Morningstar identified any fund with more than two named managers as anonymous team managed. Therefore, we use the distribution of transitions in management type between 1996-1997 to impute management type in 1993-1996. (Beginning in 2002, Morningstar appears to have become more likely to list 5 or more manager names, but we do not adjust for this change.) Between 1993 and 1999, the CRSP manager name variable occasionally reports a firm name rather than a manager name. We use the distribution of transitions from firm names to sole managed, co-managed, and anonymous team management to adjust the aggregate CRSP statistics.

**Table A2. Morningstar and CRSP management classification cross-tabulations****Panel A. CRSP classification by Morningstar classification, 1993-1996**

Morningstar classification	CRSP classification Number of named managers				Team
	1	2	3	4+	
1 named manager	91.5%	5.5%	1.6%	0.2%	1.3%
2 named managers	43.6%	49.3%	3.2%	0.6%	3.4%
Anonymously team managed	27.7%	13.4%	15.8%	4.1%	39.0%

**Panel B. CRSP classification by Morningstar classification, 1997-2004**

Morningstar classification	CRSP classification Number of named managers				Team
	1	2	3	4+	
1 named manager	81.9%	7.8%	1.8%	0.3%	8.2%
2 named managers	21.1%	61.6%	6.2%	0.4%	10.8%
3 named managers	17.2%	15.3%	39.8%	1.5%	26.2%
4+ named managers	15.9%	6.9%	8.0%	6.6%	62.6%
Anonymously team managed	16.9%	6.4%	2.7%	0.9%	73.1%

Note: Each panel reports a cross tabulation between the number of fund managers according to CRSP and the number of fund managers according to Morningstar. The numbers in each row are scaled so that they sum to 100% (subject to rounding error). For example, between 1993 and 1996, of the funds having one named manager according to Morningstar, 91% also have one named manager according to CRSP.

**Table A3. Morningstar and CRSP classifications vs. Mutual Fund Prospectuses for Random Sample of Domestic Equity Funds in 2002**

Morningstar Classification	CRSP Classification	Random Sample Dom Eq Funds	Filing Classifies as Anonymous	Actual Percentage Anonymous	Number Dom Eq Funds in 2002	Random Sample as Percentage Population	Implied Morningstar Success Rate	Implied CRSP Success Rate
Named	Named	20	0	0.0%	1,316	1.5%	100.0%	100.0%
Named	Anonymous	45	8	17.8%	375	12.0%	82.2%	17.8%
Anonymous	Named	20	12	60.0%	42	47.6%	60.0%	40.0%
Anonymous	Anonymous	45	40	88.9%	135	33.3%	88.9%	88.9%
		130			1,868		94.7%	81.3%

Note: To determine whether Morningstar or CRSP provided more accurate information on management structure, we hand-collected data on management structure for a sample of domestic equity funds in 2002. Funds were put into four bins based on whether CRSP or Morningstar classified the funds as being anonymously team managed. For the funds chosen at random within each bin, data on the actual management structure were hand-collected from Prospectuses and Statements of Additional Information available on SEC's EDGAR database. In all but one case, we were able to locate manager names or a phrase like "The Adviser manages the Funds by an investment team approach" followed by no names. In the one case where we were not able to locate any explicit discussion of how the fund was managed, we followed both CRSP and Morningstar and classified the fund as anonymously managed.