HOW INSTITUTIONAL INVESTORS FORM AND IGNORE THEIR OWN EXPECTATIONS

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ABSTRACT

The traditional view in the flow-performance literature is that the sensitivity of fund flows to past performance is the result of investors assuming that past performance will persist into the future. This is likely true of retail mutual fund investors, but institutional investors are arguably more sophisticated and better advised. Using survey data for 1999-2011 we analyze the views of institutional investors on their asset managers. These views include judgments about asset managers' past and future performance, as well as about non-performance factors including the business processes of their asset managers, the quality of their personnel and their service delivery. We explore how performance and non-performance factors relate to the flow of funds into the same asset managers. We find that, although expected performance is driven largely by perceived past performance (consistent with the prevailing view of the early flow-performance literature), the two measures are in fact distinct. However, it is perceived past performance, not expected future performance, which drives flows: once we allow for perceived past performance, the effect of expected performance on flows is insignificant. This suggests that institutional investors are ignoring their own expectations when making asset allocation decisions, and points to an agency problem, whereby these investors base decisions on the most tangible and defensible variable at their disposal – probably because they infer in their superiors, or in others who judge their actions, a belief that past performance is indeed a reliable guide to future performance.

Key words: Institutional asset management, asset flows, fund performance, service quality

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I. Introduction

A fundamental principle of financial economics is that rational investors base investment decisions on the expected future performance of the investment alternatives available to them, and we might expect institutional investors to apply this principle in their selection of asset managers.[2]

However, there is little direct evidence of what the expectations of institutional investors actually are, and both empirical and theoretical studies have focused instead on the relationship between past performance and flows. According to Lynch and Musto (2003), much of the relevant literature takes the view that people invest on the assumption that past performance will persist into the future (see also Ippolito 1992). Given abundant evidence on the lack of performance persistence by institutional asset managers (e.g. Busse et al 2010), such an assumption could reflect a behavioral bias to over-extrapolate from past returns when forming expectations of future performance, along the lines of the bias in favor of 'glamour' stocks which have performed well in the recent past (see Lakonishok et al. 1994). Berk and Green (2004), on the other hand, provide a slightly different account of the relationship between past performance and flows. In their model good past performance also signals an asset manager's superior ability, but the combination of decreasing returns to size and investors rationally chasing past performance means that no differences in future performance are expected. An alternative approach to the question of why past performance matters is to argue that institutional investors are hijacked by conflicts. Thus Lakonishok et al. (1992) see the responsiveness of sponsors to past performance as possible evidence of agency problems within the sponsors' organizations; for example, 'the treasurer's office…may hire a stellar past performer in order to avoid being second-guessed ex post'. According to this line of reasoning, agency problems explain why asset flows do not respond to expectations of future performance, but to past performance instead.

In this paper we provide the most direct evidence yet for the actual expectations of institutional investors. Using thirteen years of survey data covering investors with half of the institutional holdings of US equities, we compare the

[2] Institutional investors include retirement plans, foundations, and university and other endowments (see Section II). In this paper we refer to them as 'plan sponsors' to distinguish them clearly from asset managers.

expected performance and (perceived) past performance of the asset managers they appoint, and relate both of these to institutional flows and to actual performance. The survey also asks respondents to rate asset managers by soft factors, allowing us to explore how these interact with measures of performance. The individual survey responses are not made public: respondents either provide their responses anonymously, or they allow them to be disclosed only to the asset manager on whom they are passing judgment.

We find that, although expected performance is driven largely by perceived past performance (consistent with the prevailing view of the early flow-performance literature), the two measures are in fact distinct. However, it is perceived past performance, not expected future performance, which drives flows: once we allow for perceived past performance, the effect of expected performance on flows is insignificant. This suggests that investors are ignoring their own expectations when making their asset allocation decisions. We also find that investors' perceptions of past performance, as well as their expectations of future performance, are colored by the soft factors which they identify in their asset managers, such as the having a consistent investment philosophy, clear decision making processes and capable investment professionals. But, however perceptions or expectation are formed, neither perceived past performance, expected future performance, nor the soft factors that color them, are informative about actual future performance.

These results suggest a more precise separation of roles between behavioral and agency effects in institutional investors' decisions. The partial dependency of expected performance on soft factors is not, in itself, irrational: investors may use such factors as signals of future performance. What does seem irrational is that soft factors are relied upon, and past performance is extrapolated, when neither is in fact informative about future performance; and, further, that soft factors influence even the perception of past performance itself. The extrapolation from past performance, and the effects of soft factors on perceptions point to behavioral but not to agency problems: since investors' expressions of past and expected performance are private, there is no reason to suspect that agency factors are at work.[3]

[3] The GA survey responses are private in contrast, for example, to analysts' corporate earnings forecasts whose incentive structure and very public disclosure may mean that that they represent a biased reflection of the analysts' expectations.

On the other hand, the fact that investors ignore their own expectations when making investment decisions points to agency but not to behavioral effects. In order to provide a behavioral account for this phenomenon, we would have to believe that investors take the trouble to form expectations about the future but then, unwittingly, fail to act on those expectations. More likely, investors ignore their own expectations because they feel that, as an explanation for selecting asset managers, past performance is more defensible to their superiors, stakeholders and, possibly, the courts. Since past performance is a widely followed measure, institutional investors also know that, if they fail, they 'fail conventionally' (Keynes 1936), so rational herding may also be at play (see Scharfstein and Stein 1990 and Zwiebel 1995). To this extent our findings support the agency suggestions in Lakonishok et al. (1992), and are consistent with the conclusions of Goyal and Wahal (2008) that institutional investors pursue return chasing strategies when hiring asset managers. Our analysis adds to the discussion by exploring more precisely than hitherto how institutional investors form future expectations, and how they use them in making investment decisions. We find that expectations of future performance are influenced by past performance and by soft factors which have no bearing on actual performance, but that these expectations are ignored by institutions in allocating funds to asset managers. And they are ignored in favor of perceived past performance.

Plan sponsors ignore their own expectations because they consider that these are less defensible than past performance. We can thus conclude that agency problems are at play in the selection of asset managers by plan sponsors. The policy implications of this are sobering. For, as long as sponsors consider that they will be judged by others who do believe that past performance is informative about future performance, sponsors will behave as if they do so themselves, even if this is not the case. In fact, why bother appointing competent sponsors if they are going to refrain from applying that competence in favor of selecting good past performers?

The rest of the paper is organized as follows. Section II summarizes the institutional background and sources of data, Section III outlines our methodology and documents the results of our analysis, and Section IV concludes.

II. Institutional background and data sources

Institutional background

'Plan sponsors' can be broken down into two broad categories: those responsible for retirement plans and those responsible for nonprofit assets. Retirement plans comprise corporate and public pension schemes, some managed for a single employer, others for more than one employer (Taft–Hartley multiemployer plans). Non-profit entities include foundations as well as university and other endowments. Based on the Greenwich Associates database (described below), US plan sponsors' assets, at the end of 2011, amounted to some $7.6 trillion, broken down as follows: corporate pension funds 38%, public pension funds 47%, foundations and endowments 11% and unions 4%.

Once plan sponsors have determined the apportionment of assets between asset classes, they tend to delegate the management of the funds within each class to outside asset managers. Asset managers may be hired and fired for a number of reasons, and not only to reflect performance. Thus, plan sponsors may make a strategic switch between asset classes (e.g. from equities to fixed income), or between styles (e.g. from value to growth), which could lead to the termination of a manager which has performed well in its category. On the other hand, plan sponsors may increase or decrease the funds delegated to asset managers without hiring or firing them; for example, imbalances between contributions (from the employer and employees) and payments (to beneficiaries) may cause plan sponsors to vary the volume of funds delegated to existing managers. For more details on plan sponsors, see Goyal and Wahal (2008).

Data sources

In compiling our dataset we draw on two sources. The first source is a set of surveys conducted by Greenwich Associates between 1999 and 2011 in which plan sponsors are asked to rate their asset managers on various measures of performance and service. The second source is a set of data provided by eVestment on the returns of institutional US equity asset managers, and their assets under management, for the same period. We limit our analysis to US long-only active equity asset managers. We

provide further details below of each database, and of the way in which they are combined in our dataset.

The Greenwich survey. Since 1972 Greenwich Associates (GA) have conducted an annual survey of the judgements of plan sponsors on their asset managers. We draw on the surveys between 1999 and 2011. For the period before 1999 the GA survey is less complete; for example, it does not include questions on respondents' perception of the performance of asset managers, which is central to our analysis. For each year in this period the survey was carried out over a two-to-three month period starting between late June and early September of the same year. According to GA, the fraction of the total universe of US plan sponsors who responded to the survey was on average 54% for the period; coverage has fluctuated during that period, and stood at 62% (1484 respondents) in 1999 against 43.5% (987 respondents) in 2011. The fraction of total assets under management (AUM) invested by the respondent plan sponsors was calculated only for the end of the period: in 2011 it stood at 52%. Measured either by the number of respondents or by their AUM, the GA survey therefore offers wide coverage of plan sponsors. The breakdown of respondents by the main types of plan sponsor (for the first and last years in our dataset) are Corporate Funds (1999: 58% of all respondents, 2011: 53%), Public Funds (1999: 23%, 2011: 21%) and Endowments and Foundations (1999: 19%, 2011: 22%).

Respondents to the survey express opinions on an entire asset class, (e.g. US Domestic Equity, International Fixed Income) rather than on products (i.e. groups of funds with essentially the same mandate) or individual funds within that class. However, for some of the larger firms, such as Fidelity, Goldman Sachs and Alliance Bernstein, the responses relate to groups of funds broken down by style, e.g. Value or Growth. Within each plan sponsor the GA questionnaire is answered by executives with a range of titles from Chairman of the Board to Assistant Treasurer. The most common title of the respondents is Chief Investment Officer. The incentive to answer the questionnaire is that the respondent's firm has access for the following twelve months to the aggregate results both of that survey and of other GA surveys. Responses to the questionnaire are private, and respondents may keep their responses entirely anonymous. However, they are asked if they would like their judgements on individual asset management firms to be made available to those firms; during the sample period around 50-60% of respondents chose to do so.

The headings under which respondents are asked to rate asset managers are divided by GA into two sets: investment factors and service factors. Two of the investment factors are 'performance factors' and are quantitative in nature: one is the respondent's assessment of the performance of the asset manager over the previous 2-3 years (past performance), and the other is the performance the respondent expects from the asset manager (expected future performance). The other three investment factors, which we call 'soft investment factors', are clear decision making, capability of portfolio manager, and consistent investment philosophy. The other set of categories in which asset managers are rated, the service factors, are as follows: useful informal meetings, capable relationship manager, useful formal meetings, credibility with investment committee, understanding objectives, and useful written reports. For each factor the respondent is invited to rate asset manager's performance on each asset class on a five-point scale. Under each factor GA then aggregates the responses into a single score for each asset manager in each asset class surveyed using the Rasch model (see Andrich, 1978). In this study we work with a modified version of these scores, the fractional rank, obtained by ranking the asset manager's scores for each variable into percentiles and dividing them by 100 to arrive at a factor for each manager between zero and one.

The eVestment database. eVestment is a third party provider of analytic services for the institutional fund management industry. We draw data from two of their databases: one which tracks the monthly and quarterly returns of institutional asset managers, and one which tracks those funds' assets under management (at an annual, and sometimes quarterly, frequency). The returns we obtain for these products are "composite" returns. The individual returns earned by each client may deviate from these composite returns, but deviations are typically small.[4] Composite returns are net of trading costs, but gross of investment management fees. The data are self-reported by the asset managers, but constant scrutiny from clients using this data guarantees a high degree of accuracy. The return data are free from survivorship bias. For each product, the databases also provide cross-sectional information on investment style and capitalization bracket, manager-designated benchmark, and the latest fees. The

[4] For example, some investors may require that their part of the overall portfolio is purged of, say, the influence of tobacco companies or arms manufacturers.

eVestment databases were first compiled in 2000, but include data from before that date. As at the end of 2012, the eVestment database had data on 4,274 US equity funds which were active, and around 2,500 which were inactive (i.e. no longer reporting). One limitation of the database (commented on below) is that, once an asset manager is acquired and absorbed by the acquirer (rather than retaining its distinct identity), eVestment may not report data separately for the acquired firm for the period before the acquisition.

Combining the databases. We eliminate index funds, hedge funds, REITs and retail funds from the eVestment dataset, to confine the analysis to active long-only US domestic equity products. We keep a small number of so-called enhanced index funds, which are active funds aiming to achieve performance close to, but in excess of, an index; we do so on the grounds that these are active funds whose risk adjusted performance we can evaluate like any other's. This gives us 347 unique names, and 2,485 individual separate asset manager/year lines of data. Whereas the GA database, in the main, has one score for each asset manager/asset class, the eVestment database has performance and assets under management data for individual funds within a complex. As a rule we group the eVestment funds together to achieve weighted average performance and aggregate flow information which corresponds to the unique GA name; however, where both databases have a matching breakdown, e.g. between Value and Growth, we use this finer-grained data. In order to match the GA and eVestment databases we reduce the 347 unique GA names to 232 (corresponding to 1,630 asset-manager-year lines). The 115 names eliminated fall into three categories. First, there are fourteen names for which GA has data for only one year, which rules out any time series analysis. Second, there are twelve names for which there is more than one possible match in the eVestment database. Third, there are 89 GA names which are missing from the eVestment database. We identify 20 of these as firms that were acquired and absorbed by the acquirer but, since their performance and flow data is consolidated with that of the acquirer in the eVestment database even for the period before the acquisition, we eliminate them from the dataset. However, in the case of acquisitions where the acquired firm kept a separate identity after the acquisition, the funds are not renamed retrospectively, and it is possible to make a match for the previous period.

Table I provides descriptive statistics for the final sample. The table shows the total number of US domestic equity asset managers in our sample each year. It also shows the number of asset managers which reported assets under management (AUM) data, as well as their mean and median assets under management (in millions of US dollars). Average assets in the US domestic active equity asset class per asset manager during the sample period are $18.9 billion. End of year asset data are available for approximately 90% of the asset managers (although not necessarily for all their products). The availability of AUM data is high for the period with the exception of the first years.

III. Methodology and results

The first part of this section examines how asset flows respond to perceived past investment performance (i.e. the past performance of asset managers as reported by investors) and to expected future investment performance, as well as to soft investment factors and service factors (see Section II for a list of these factors). The second part analyzes how investors form their expectations of the future performance of asset managers; in particular, it explores what drives these expectations, and examines the information content and biases in relative rankings of expected future performance. In the last part of this section we investigate whether perceived past performance is an accurate reflection of actual past performance. We also explore whether the inclusion of actual past performance measures (past excess returns over benchmarks and three- and four-factor alphas) render other variables in our flow-performance-service quality analysis insignificant.

A. Do asset flows respond to past, or expected future, performance and service quality indicators?

The link between fund flows and past performance is the subject of an extensive literature; see, for instance, Ippolito (1992), Chevalier and Ellison (1997) and Sirri and Tufano (1998) for the retail mutual fund industry; or Del Guercio and Tkac (2002) and Goyal and Wahal (2008) for institutional/fiduciary pension investors. The traditional view, in this literature, is that the sensitivity of fund flows to past

performance is the result of people investing on the assumption that past performance, for real or imagined reasons, will persist into the future (Lynch and Musto, 2002).[5]

In this study we not only use measures of past performance, as is standard in most of the literature, but we also have access to information on what investors expect the relative performance of their asset managers to be in the future. Arguably, the main - or only - concern of plan sponsors should be the future performance of their investments. If so, we should expect to see asset flows responding to changes in expected future performance and, in principle, past performance should not matter. Agency problems, however, may lead trustees and other institutional investors to base their decisions on past performance, even if they think that they know better. In this vein Lakonishok et al. (1992) argue that pension sponsor officials, as fiduciaries, have agency reasons to value manager characteristics that are easily justified to superiors or a trustee committee. One of the most obvious of these characteristics is the past performance of asset managers. For example, trustees may fire a poorly performing manager as part of a scapegoat strategy, or they may hire an outstanding past performer to avoid being second-guessed ex post.

Lakonishok et al. (1992) also claim that asset managers provide a service to pension officers consisting of direct interaction and hand holding. One explanation for this is that pension officers always need a good story to account for poor performance to their superiors inside the sponsor organization. According to this reasoning, agency problems within the sponsors' organizations lead to asset flows responding to perceived changes in service quality.[6]

We explore these issues by measuring how flows respond to (perceived) lagged past, and expected future, investment performance, and to variables measuring soft service quality attributes. We estimate the response of flows to these variables using the following regression on yearly data:

[5] In much of the flow-performance literature, past performance is interpreted as a (noisy) signal of quality, and in principle informative about future performance. See, however, Berk and Green (2004) for a theoretical model where past performance signals quality and attracts flows, but it does not predict future performance, owing to the diminution of returns as successful asset managers attract extra assets.

[6] Generally, one would expect a minimum level of service in the form of useful informal meetings, capable relationship managers, frequent personal contact, valuable written reports and other client services provided by asset managers to be appreciated and valued by plan sponsors.

$$Flow_{i,t} =$$
$$\alpha_t + \beta_1 Expected\ Perf_{i,t-1} + \beta_2 Past\ Perf_{i,t-1} + \beta_3 Soft\ Inv.Factors_{i,t-1} +$$
$$\beta_4 Service\ Factors_{i,t-1} + \delta' Controls_{i,t-1} + \epsilon_{i,t} \quad (1)$$

where $Flow_{i,t} = TNA_{i,t} - TNA_{i,t-1} * (1 + r_{i,t})/TNA_{i,t-1}$, $TNA_{i,t}$ is the total net assets for asset manager *i* at year *t* in the US active equity asset class, and $r_{i,t}$ is the asset weighted average return on asset manager *i*'s US active equity products between years *t-1* and *t*. This flow measure reflects the growth of a fund in excess of the growth that would have occurred if no new money had flowed in but dividends had been reinvested, and it is expressed in percentage terms relative to total assets at the beginning of the period. *Expected Perf*$_{i,t-1}$ is the fractional rank at time *t-1* of the aggregate expected future performance of asset manager *i*'s US equity products in coming years; *Past Perf*$_{i,t-1}$ is the fractional rank at time *t-1* of the aggregate perceived performance of asset manager *i*'s US equity products in the recent past (two to three years); *Soft Inv. Factors*$_{i,t-1}$ is the fractional rank at time *t-1* of a set of soft investment factors of asset manager *i*'s US equity team (the individual rank for each separate factor or the aggregate rank for these factors grouped together); and *Service Factors*$_{i,t-1}$ is the fractional rank at time *t-1* of a set of service factors of asset manager *i*'s US equity team (the individual rank for each separate factor or the aggregate rank for these factors grouped together). See Section II for a list of the soft investment factors and service factors. Fractional ranks represent the asset manager's percentile rank relative to other asset managers in the same equity category and period, and ranges from 0 to 1. All regressions also include a lagged measure of log assets under management, return volatility and a full set of time dummies.

Table II reports the results of estimating this regression using pooled time-series cross-sectional data. In this table each column represents a separate regression. The figures against expected future performance, past performance, soft investment factors and service factors represent the percentage change in assets in the current year that reflect the difference between the bottom percentile and the top percentile of expected future performance, past performance, soft investment factors and service factors, respectively. GA surveys are usually conducted during the second part of the year (the last fielding date of the survey is between September and November depending on the year). Given that plan sponsors usually take some time to implement

investment decisions, it seems natural to use time *t-1* (and *t-2*) explanatory variables in the analysis. t-statistics are based on clustered standard errors, which are White heteroskedastic-consistent standard errors corrected for possible correlation across observations of a given asset manager in all of the regressions (White, 1980 and Rogers, 1993). This method seems to be the most sensible given the size of our panel (see Petersen 2009). Similar results obtain if asset manager and time fixed effects are used or if data is clustered in two dimensions, time and manager, as in Cameron et al. (2011).

In all four specifications the coefficient on lagged past performance is positive and statistically significant. At the same time, the coefficient on lagged expected future performance is not statistically different from zero. The estimates in models I to IV indicate that moving from the bottom percentile of past performance to the top percentile is rewarded with a 32% increase in assets for the asset manager; but a similar change in expected future performance has no impact on asset flows. This suggests that institutional investors do not allocate funds to those asset managers they think will do well in the future but to those that they think did well in the recent past. This behavior seems at odds with the most basic finance principles. It also contradicts the most frequent interpretation of the flow-performance relation that attributes the sensitivity of fund flows to past performance to a belief among investors that past performance will persist into the future. That interpretation is perhaps an accurate reflection of what happens in the retail mutual fund industry. Institutional investors, however, are likely to be more sophisticated than retail mutual fund investors and also to have at their disposal advisors, notably investment consultants, to provide help. They may still extrapolate from past performance (something we explore in the next section), but it seems that it is not performance extrapolation that explains their tendency to invest in good past performers.[7]

One possible explanation for this result, consistent with Lakonishok et al.'s (1992) arguments, is that, for agency reasons, trustees decide to base their decisions on the only observable and verifiable variable at their disposal, past performance, even if they think they know better. Trustees may attach unwarranted weight to the

[7] When it comes to individual investors, agency considerations do not play a role. In their case performance extrapolation, perhaps more severe than for institutional investors (plan sponsors), and not necessarily misguided (see Berk and Green, 2004), could be what is driving the performance-flow relationship.

only tangible piece of information (or non-information) they have only because it is observable by the people they are appointed by or answerable to. Such behavior is particularly to be expected of sponsors who are most sensitive to "headline risk" (i.e. negative publicity) - the same investors who, according to Goyal and Wahal (2008), are likely to chase investment styles with high recent returns and to terminate managers for poor performance - but it is perhaps not limited to them. This behavior is also akin to that of money managers said to window-dress their portfolios at year-end by getting rid of poorly performing stocks that the sponsors might take as further evidence of low ability (Lakonishok et al. 1991); or to that of institutional investors who prefer glamour stocks because they appear to be "prudent" investments, and hence easy to justify to sponsors (Lakonishok et al. 1994).[8] Finally, it is also consistent with the well-known, albeit perhaps outdated, market wisdom that "no one gets fired for buying IBM".[9]

The estimates in model III also indicate that the main response of flows to perceived past performance occurs within an interval of a little more than a year, with no visible effects later on.

Regarding service quality, results in Table II suggest that fund flows do not respond to measures of service quality, once we control for perceived past and expected future performance. Institutional investors might use service factors, together with other variables, to infer future performance, but service quality does not seem to be valuable in itself. This is true when looking at service quality factors as a whole (models I to III), or individually (model IV); or even if we consider changes in service quality as the dependent variable instead of levels (not reported).

It could be, however, that service factors are important only if the investment performance of the asset manager is not good or if the quality of these service factors is very poor. To explore these possibilities we estimate the following model:

[8] For evidence of how the prudent man rule affects fiduciaries' portfolio decisions see also Badrinath, Gay and Kale (1989) and Del Guercio (1996).

[9] See also Scharfstein and Stein (1990) and Zwiebel (1995) for theoretical models providing examples of situations where agents may decide to act in ways that seem to ignore their own expectations or substantive private information.

$$Flow_{i,t} =$$
$$\alpha_t + \beta_1 Expected\ Perf_{i,t-1} + \beta_2\left[Past\ Perf_{i,t-1} * I_{i,t-1}^{PP}\right] + \beta_3\left[Past\ Perf_{i,t-1} * \left(1 - I_{i,t-1}^{PP}\right)\right] + \beta_4 Soft\ Inv.Factors_{i,t-1} + \beta_5\left[Service\ Factors_{i,t-1} * I_{i,t-1}^{M}\right] + \beta_6\left[Service\ Factors_{i,t-1} * \left(1 - I_{i,t-1}^{M}\right)\right] + \delta' Controls_{i,t-1} + \epsilon_{i,t} \quad (2)$$

where M = PP (Past Performance) or SF (Service Factors), depending on the specification; $I_{i,t-1}^{PP}$ is an indicator variable equaling one if unscaled *Past Perf*$_{i,t-1}$ is lower than a given threshold and zero otherwise; and $I_{i,t-1}^{SF}$ is another indicator variable equaling one if unscaled *Service Factors*$_{i,t-1}$ is lower than a given threshold and zero otherwise. *Past Perf*$_{i,t-1}$ and *Service Factors*$_{i,t-1}$ are re-scaled by subtracting the threshold value to make this a continuous piecewise linear model. All other variables are defined as before.

The results of estimating this model are collected in Table III. In addition to the usual statistics this table also reports the p-values of an F test of equality of coefficients between the slopes of past performance and service quality above (+) and below (-) a given threshold. The threshold is defined by either the 33rd or 50th percentile of past performance or service quality. Together with the results of Table II, these results indicate that while asset flows are, in general, not very sensitive to past service quality, they become more sensitive when service quality is poor (models II and V). In other words, when service quality is poor investors seem more likely to abandon an asset manager, but having good service quality is unlikely to attract funds by itself. Estimates in models III and VI, however, seem to suggest that service quality is not necessarily more important when performance is bad, as many practitioners believe. This seems at odds with the idea that pension officers' value direct interaction with asset managers and hand holding, for we should expect this service to be particularly highly valued when officers need a good story to explain poor performance to their superiors inside the sponsor organization.[10]

Estimates in models I and IV in Table III also suggest that the relation between flows and past performance is nearly linear. This is consistent with the findings of Del Guercio and Tkac (2002) who document a nearly linear relation for institutional investors, in contrast to studies of the retail mutual fund industry which

[10] The same results obtain if we do not force intercepts (of the piecewise linear regression models) to coincide.

typically find a convex relation between flows and performance. Evidence collected in this table also indicates that soft investment factors are not very important for asset flows.

Lakonishok et al. (1992) also speculate that employees of the treasurer's office may have hubris about their ability to select superior money managers, and therefore try to obtain soft information from them in order to inform their selection. Our analysis of asset flows in this section does not seem to back this hypothesis. Regardless of whether pension officers and other institutional investors in our sample have the ability or not, something to which we will turn below, they do not seem to trust it when it comes to making asset allocation decisions.

To summarize the results so far, we find that institutional investors allocate funds, not to those asset managers they think will do well in the future, but to those that they think did well in the recent past. This behavior points to agency problems in that it is consistent with trustees basing their decisions on the most defensible variable at their disposal, past performance, even if they think they know better. We further find that non-performance factors, that is, soft investment factors and service factors, have little effect on flows: good service quality is unlikely to attract funds on its own, although asset flows do become more sensitive to service quality when it is poor, regardless of whether performance is good or bad.

B. How are expectations of future performance formed? And how costly is it to ignore them?

In this section we try to shed light on what drives expectations of future performance, or more precisely, what drives the relative rankings of expected future performance. We also analyze the information content and biases in rankings of expected future performance.

There is little evidence in the literature about how institutional investors form their expectations of asset manager performance. One possible parallel is the extensive research on financial analysts' earnings forecasts and expectations (see Ramnath, Rock and Shane, 2008, for a survey of this literature). However, there are important differences in the incentives under which analysts produce their earnings forecasts and those which apply to the respondents in the GA survey. Analysts' earnings forecasts are affected by an incentive structure liable to be inconsistent with

conditionally unbiased forecasting, and many people argue that they cannot therefore be used as valid proxies for true expectations.[11] By contrast, we work with forecasts by plan sponsors of asset manager performance which are anonymous, and therefore more likely to qualify as faithful revelations of true expectations.

Our emphasis is not on fully-fledged tests of rationality in (individual) expectations, but instead on an exploratory analysis of aggregate expectations: what they depend on, and what not, and whether these variables have any predictive power over actual future performance ranks.[12]

We explore what drives aggregate expectations of future performance by estimating the following model on yearly data:

$$Expected\ Perf_{i,t} = \alpha + \beta_1 Past\ Perf_{i,t} + \beta_2 Soft\ Inv.Factors_{i,t} + \beta_3 Service\ Factors_{i,t} + \delta' Controls_{i,t-1} + \epsilon_{i,t} \quad (3)$$

where all variables are defined as before.

Table IV reports the results of running this regression using pooled time-series cross-sectional data. All survey variables used in the regression are in (fractional) percentiles, and refer to the asset class of US active equities only. Given that survey respondents are asked to evaluate past and future performance over multiple overlapping periods, t-statistics reported in the table are based on standard errors clustered at the asset manager level (White, 1980 and Rogers, 1993).

Results indicate that past performance is the single most important driver of institutional investors' expectations of asset managers' future performance. Estimates in Table IV indicate that moving from the 25th percentile of past performance to the

[11] Examples of the complex incentive structure faced by financial analysts include: their desire to gain investment banking/underwriting business (Lin and McNichols, 1998; Dugar and Nathan, 1995); generate trading commissions (Dorfman (1991); please corporate managers (Francis and Philbrick, 1993); or follow career concerns (Hong, Kubik and Solomon, 2000).

[12] Like many other studies, we analyze mean survey responses, the data available to us. Using mean survey data of expectations is, however, not without problems. As pointed out by Figlewski and Wachtel (1983) and Keane and Runkle (1990), using average survey response data rather than individual data can lead to the false rejection of rational expectations because average forecasts that are conditional on different information sets are not rational forecasts conditional on any particular information set. Conversely, it can also lead to the false acceptance of rational expectations by masking systematic individual bias that may be randomly distributed in the population. Basu and Markov (2004) argue, however, that, to the extent that individual investors' errors in processing information average out, the average responses are likely to be more accurate and closer to optimality than the individual survey responses.

75th percentile results in an increase of 24 percentiles in expected future performance. This result is consistent with the view, common in the flow performance literature, that investors form expectations of future performance by extrapolating past performance.[13] However, it contrasts with the wealth of evidence that suggests that asset managers' past investment performance is of little help in predicting future performance over the relevant investment horizons (see, for instance, Carhart, 1997; and Busse et al. 2010).

Results in Table IV also indicate that, in addition to past performance, soft investment factors, such as being perceived as having capable investment professionals or a clear decision making process, and, to a lesser extent, service factors, also lead to increased expectation of future performance. The link between soft investment factors and investors' expectations of future performance is unsurprising, given that these factors reflect the quality of decision makers or decision making processes, which are characteristics typically thought to lead to investment success. However, service factors (such as meeting preparation/follow-up, useful informal meetings, and a capable relationship manager), which appear in principle unrelated to investment results, also seem to have a significant impact on expectations. This is perhaps because service factors are read by institutional investors as being informative about the general business practices of the asset manager, which might also be reflected in expected future performance.

While past performance, soft investment factors and service factors all seem to drive expectations of future performance, it is unclear whether these factors have any predictive power over actual future performance. We explore whether that is the case by replacing the measures of expected future performance in equation (3) with alternative measures of actual future performance, to estimate the following model:

[13] This view, coupled with evidence that individuals excessively extrapolate (past performance), is quite common in other related environments. For instance, De Bondt (1993), using classroom experiments and investors surveys, finds strong evidence that people extrapolate past trends; Lakonishok et al. (1994) argue that investors make judgement errors and extrapolate past growth rates. De Bondt and Thaler (1985) argue that people place too much emphasis in the latest news (large recent fund returns) and too little on base-rate information (e.g. whether past performance reliable leads to future performance). Placing excessive weight on recent past growth history, as opposed to a rational prior, is a common judgement error in psychological experiments related to the representativeness heuristic (see Kahneman et al. 1982).

$$Actual\ Perf_{i,t+1} = \alpha + \beta_1 Past\ Perf_{i,t} + \beta_2 Soft\ Inv.Factors_{i,t} + \beta_3 Service\ Factors_{i,t} + \delta' Controls_{i,t-1} + \epsilon_{i,t} \quad (4)$$

where *Actual Perf*$_{i,t+1}$ is the actual excess return or three-factor alpha fractional rank of manager *i*'s US active equity products over the next one or two years; and other variables are defined as before.

Excess returns and three-factor alphas are computed for the period commencing the month following the close of the survey and ending a full one or two years later. To generate these aggregate measures of performance, we create equal-weighted portfolio returns of all US active equity products available from each asset manager in each month. With these returns, we estimate a three factor model on monthly data, using market, size, and book-to-market factors, as in Fama and French (1993). We obtain these factors, as well as a monthly measure of the risk-free return, from the Center for Research in Security Prices (CRSP). Following convention in the asset management industry we also compute the average return of the portfolio of products in excess of a similarly defined portfolio of benchmarks. These benchmarks are selected by eVestment, the data provider, for each product (based on the asset manager's own selection).

The results, presented in Table V, show that future performance is largely unpredictable from past performance (consistent with most of the literature on the topic), and also unpredictable from the assessments of institutional investors about managers' various non-performance qualities. Similar results obtain whether we use three-year future excess returns and three-factor alphas, or one- or four-factor alphas (corresponding to CAPM, see Sharpe, 1964; and Fama-French-Carhart four factor model, Carhart, 1997). The same is true if we employ value weighted, rather than equal weighted, returns (basing the weight used for value weighting on the assets in each product at the end of December of the prior year).

Taken together, the results in Tables IV and V suggest that plan sponsors' expectations of future performance may be systematically biased in the direction of past performance, and also in the direction of managers who are perceived as having good soft investment and, to a lesser extent, service qualities. However, while plan sponsors may infer that managers whom they perceive to have done well in the past,

to have clear decision making processes, and capable and credible investment professionals, will display superior future performance, this is in fact not the case.

We know that institutional investors' forecasts of future performance rely partly on variables with no predictive power over future performance (past performance, soft investment factors and service factors), and are therefore biased in their direction. They could, however, still be informative about actual future performance. To explore this possibility we regress actual future performance rankings on expected future performance rankings and other survey and non-survey variables:

$$Actual\ Perf_{i,t+1} =$$
$$\alpha + \beta_1 Past\ Perf_{i,t} + \beta_2 Expected\ Perf_{i,t} + \beta_3 Soft\ Inv.Factors_{i,t} +$$
$$\beta_4 Service\ Factors_{i,t} + \delta' Controls_{i,t-1} + \epsilon_{i,t} \quad (5)$$

Like previous models, this model is also estimated using pooled time-series cross-sectional data, and restricting the variables to the asset class of US active equities only (the largest, most significant and most well studied market). As before, t-statistics reported in the table are based on standard errors clustered at the asset manager level (White, 1980 and Rogers, 1993).

Results, displayed in Table VI, indicate that expected future performance is a poor predictor of actual future excess returns and alpha rankings, suggesting that it does not contain any information about future performance.[14] The same can be said of other variables included in the regression.

To summarize this subsection, expectations of future performance are highly correlated with past performance, also correlated with other soft/intangible variables and are generally very poor predictors of actual future performance. The evidence is consistent with plan sponsors extrapolating from past performance in forming their expectations of future performance. However, since expected future performance is as bad a predictor of actual future performance as past perceived performance, the observed tendency of plan sponsors to disregard their own expectations and base their

[14] Past performance seems to have some predictive power over one year alpha rankings, but not over two year alpha or excess returns rankings. Even if it proved to be robust, it would be virtually impossible for institutional investors to exploit this type of short lived predictability because of the delays in their investment process and the costs that would be incurred by frequently switching asset managers.

decisions on more tangible variables instead, such as past performance, does not necessarily have costly implications for ultimate investors.

C. Actual versus perceived past performance: differences and implications for asset flows

Our analysis reveals that plan sponsors' decisions to allocate funds to one asset manager or another are mostly driven by these managers' past performance, or at least by their perceived past performance, in managing similar mandates.

Reported, or perceived, past performance, although highly correlated with actual past performance, does not seem entirely to coincide with it. In what follows we therefore investigate in more detail whether perceptions of past performance are a true reflection of past performance or if, rather, these perceptions are systematically affected by variables other than actual past performance itself. To explore this issue we estimate how differences between perceived past performance rankings and several actual past performance measures relate to soft investment factor and service factor rankings:

$$Past\ Perf_{i,t} - Actual\ Perf_{i,t} =$$
$$\alpha + \beta_1 Soft\ Inv.Factors_{i,t} + \beta_2 Service\ Factors_{i,t} + \delta' Controls_{i,t-1} + \epsilon_{i,t} \quad (6)$$

To implement this regression, we proxy actual performance using excess returns over manager selected benchmarks and three-factor alphas rankings for the one-, two- and three-year periods ending at the end of the month preceding the first fielding date of each survey. We concentrate on these horizons because the GA survey explicitly asks respondents about managers' performance over the previous two to three years. And we concentrate on these measures because, in separate analyses, we find that the two measures of past performance most highly correlated with plan sponsors' reported past performance are, first (and foremost), excess returns

over selected benchmarks, and second, Fama-French three factor alphas (and to a lesser extent CAPM alphas).[15]

By concentrating on the relationship between actual and perceived past performance, as opposed to actual and expected future performance, we eliminate the expectations component in the analysis. We thereby not only gain power in our estimates but, more importantly, we eliminate some confounding factors, such as the possibility that soft investment factors or service factors may help predict actual future performance, or quirks in the expectation formation process.

Table VII collects the results of this analysis. In this table excess returns, three-factor alphas, past performance, and soft investment and service factor rankings are expressed using the fractional rank of each asset manager in the sample. All regressions also include a lagged measure of log assets under management, and return volatility. t-statistics based on standard errors clustered at the asset manager level are included in parentheses. Results indicate that the difference between perceived and actual past performance is systematically related to the soft investment factors of having a clear decision making process, a consistent investment philosophy and capable investment professionals. Having, or being perceived to have, more of these attributes results in perceptions of past performance that overshoot actual performance. Service factors, on the other hand, do not seem to affect perceptions of past performance significantly. The fact that the standard deviation of returns, one of the control variables used in these regressions, appears with a negative sign (although it is statistically significant only in a few specifications) suggests that some investors may use not just excess returns over benchmarks or alphas, but perhaps also total risk adjusted measures such as the Sharpe ratio or the Information ratio when evaluating asset managers.

In short, plan sponsors' perceptions of past performance, although highly correlated with actual past performance measures, do not seem entirely accurate, but partly influenced by non-performance factors. This result should not be entirely surprising, as psychological factors are known to affect an individual's perceptions or recollections of past events. Goetzmann and Peles (1997), for instance, using questionnaire studies, find that perceptions of past performance are positively biased.

[15] Fama-French-Carhart alphas on the other hand seem largely unrelated to investors' perceptions of past performance (over almost any horizon).

The fact that perceived past performance, while closely correlated with past excess returns over benchmarks or three factor alphas, does not exactly coincide with them, is in any case to be expected: perceptions of past performance may not be exactly the same as actual past performance; excess returns over benchmarks or three factor alphas over the last one or two years, our measures of actual past performance, may not exactly coincide with what practitioners interpret as performance; moreover, when asked about past performance, practitioners may be responding about a set of funds that does not always coincide with the set of funds we use to measure actual past performance and flows. We next explore whether the inclusion of actual past performance measures (past excess returns over benchmarks and three-factor alphas) renders perceived past performance and other variables in our flow model insignificant, that is, whether perception or reality drives flows. To do that we basically re-estimate equation (1) but adding the measures of actual past performance discussed before:

$$Flow_{i,t} = \alpha_t + \beta_1 Expected\ Perf_{i,t-1} + \beta_2 Past\ Perf_{i,t-1} + \beta_3 Past\ Perf_{i,t-1} + \beta_4 Soft\ Inv.Factors_{i,t-1} + \beta_5 Service\ Factors_{i,t-1} + \delta' Controls_{i,t-1} + \epsilon_{i,t} \quad (7)$$

Results in Table VIII indicate that perceived past performance is an important driver of asset flows even after including measures of actual past performance in the regression. Table VIII reports the coefficients of lagged past perceived, and actual, investment performance rankings in regressions of asset managers' yearly asset flows on these, and additional, variables. Although not reported, all regressions also include lagged expected future investment performance, soft investment factors and service factor rankings, log assets under management, return volatility and a full set of time dummies. The different specifications show that both perceived past performance and actual past performance matter for flows. All else equal, moving from the bottom to the top percentile of actual or perceived past performance leads to an identical increase in assets under management, 21% (average across different specifications). The reported results were obtained using equally weighted measures of past performance but the same results hold when we use asset weighted measures of past performance.

Asset allocation decisions are made by individuals, many of whom fill in the surveys used in this study. These decisions should therefore depend on their opinions and perceptions, and not on something else. To this extent, perception is reality. Results in Table VIII suggest that asset allocation decisions depend on perceptions of past performance, but that actual past performance also has an impact on asset flows. Why is this the case? We obtain our measure of perceived past performance from the GA yearly surveys. While the coverage of these surveys is significant (according to GA, the fraction of the total universe of US plan sponsors who responded to the survey was on average 54% for the period under study), many people whose decisions drive flows are not surveyed and their judgements are not reflected in the survey.[16] These opinions are likely to be correlated with the opinions of those who fill in the survey but also with actual measures of past performance, thus explaining why both of these variables are significant in our regressions. In addition to that, it is also possible that survey variables are only imperfect measures of surveyed plan sponsors' opinions and perceptions. The fact that perceived past performance is a strong predictor of asset flows, even after including several actual performance measures, makes us confident that this problem, if present, is very limited.

In this section we compare perceived past performance with measures of actual past performance, and we document that perceptions of performance are influenced by soft investment factors, although not by service factors. We also find that, when we separate perceived and actual past performance, they both have a significant effect on asset flows. It is worth noting that what affects perceptions of past performance is also likely to indirectly affect actual asset allocation decisions.

IV. Conclusion

Using survey data for 1999-2011 we analyze the views of plan sponsors on their asset managers. These views include judgments about asset managers' past and future performance, as well as about non-performance factors including the business processes of their asset managers, the quality of their personnel and their service

[16] In addition to this, many plan sponsors investing in US equities (and therefore captured by eVestment data) are not US sponsors and therefore not part of the GA's reference universe.

delivery. We explore how performance and non-performance factors interact in plan sponsors' survey responses, and how these relate to the flow of funds into the same asset managers.

Consistent with previous research which finds that investors extrapolate from past performance, we find that the future performance expected of asset managers is driven largely by perceived past performance. However, the two performance measures are distinct, and it is perceived past performance, not expected future performance, which drives flows. This suggests that investors are forming their own expectations, only to disregard them when making their asset allocation decisions. We also find that investors' perceptions of past performance, as well as their expectations of future performance, are colored by the non-performance factors which they discern in their asset managers. Nonetheless, however perceptions or expectation are formed, neither perceived past performance, expected future performance, nor the soft factors that color them, are informative about actual future performance.

These findings shed light on decision making by plan sponsors, in that they help define the respective roles of behavioral and agency effects. The apparent tendency for plan sponsors to extrapolate from past performance and rely on soft factors when neither of these is informative about future performance appears irrational, as does the fact that soft factors slant respondents' perception of past performance. It is doubtful that these findings can be explained by agency problems, since survey responses are private and likely to be a faithful reflection of respondents' beliefs.

By contrast, the fact plan sponsors ignore their own expectations when making investment decisions is consistent with agency rather than behavioral effects on the part of plan sponsors, in line with Lakonishok et al. (1992). A behavioral explanation for this would require us to believe that plan sponsors take the trouble to form expectations about the future but then, unwittingly, fail to act on those expectations. It seems more likely that they ignore their own expectations because they feel that past performance is a more defensible explanation for their decisions to their the superiors and other stakeholders (including the courts if the performance of the fund is the subject of litigation).

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TABLE I

Sample Statistics

The table shows the total number of US domestic equity asset managers in our sample each year. It also shows the number of asset managers which reported assets under management (AUM) data, as well as their mean and median assets. Mean and median assets under management are in millions of US dollars.

	# of Asset Managers in sample	Asset Managers with AUM data			
		#	% of Total	Mean AUM $Million	Median AUM $Million
1999	77	26	34%	10,687	6,516
2000	85	41	48%	12,387	3,805
2001	86	65	76%	17,169	8,983
2002	109	95	87%	16,324	7,223
2003	101	92	91%	15,089	7,829
2004	115	102	89%	19,264	9,848
2005	128	116	91%	21,014	10,130
2006	130	123	95%	23,567	11,041
2007	154	143	93%	23,909	9,421
2008	170	152	89%	22,914	10,051
2009	145	135	93%	14,791	7,157
2010	161	148	92%	16,719	7,312
2011	169	159	94%	18,085	8,259
Total	232	213	92%	18,891	4,232

TABLE II

Effect of past and expected performance, soft investment factors, and service factors on asset flows

This table reports the results of pooled time-series cross-sectional regressions of asset managers' yearly asset flows on lagged past, and expected future, investment performance, and variables measuring soft investment factors and service factors. The sample includes asset managers' US active equity products only. These products are aggregated into a single observation for each asset manager-year. Asset flows are expressed as percentages of total assets under management at the end of the previous year. Past and expected future performance, soft investment factors, and service factors are expressed using the fractional rank of each asset manager in the sample. An asset manager's fractional rank, for a given variable, represents its percentile rank relative to other asset managers in the same period, and ranges from 0 to 1. All regressions also include a lagged measure of log assets under management, return volatility and a full set of time dummies (which are not reported in the table). Each column represents a separate regression. t-statistics based on standard errors clustered at the product level are included in parenthesis.

	I	II	III	IV
Expected Future Performance (t-1)	-0.01	-0.01	-0.05	-0.02
	(-0.24)	(-0.15)	(-1.06)	(-0.54)
Expected Future Performance (t-2)			0.07	
			(1.53)	
Past Performance (t-1)	0.32***	0.32***	0.31***	0.32***
	(7.89)	(7.84)	(6.94)	(7.43)
Past Performance (t-2)			0.03	
			(0.85)	
Soft Investment Factors Ind. (t-1)	-0.08	-0.08*	-0.06	
	(-1.64)	(-1.75)	(-1.29)	
Soft Investment Factors Ind. (t-2)			-0.05	
			(-0.87)	
Consistent Inv. Philosophy (t-1)				0.03
				(0.61)
Clear Decision Making (t-1)				-0.09*
				(-1.70)
Capable Inv. Professionals (t-1)				0.00
				(0.05)
Service Factors Ind. (t-1)	0.01	0.01	0.01	
	(0.35)	(0.41)	(0.38)	
Service Factors Ind. (t-2)			0.02	
			(0.35)	
Understanding of Objectives (t-1)				-0.01
				(-0.22)
Relationship Manager (t-1)				-0.03
				(-0.73)
Credibility (t-1)				0.00
				(0.04)
Useful Written Reports (t-1)				-0.04
				(-0.98)
Useful Formal Meetings (t-1)				0.02
				(0.55)
Useful Informal Meetings (t-1)				0.06
				(1.45)
Total Net Assets (t-1)		-0.01	-0.01	-0.01
		(-1.45)	(-1.30)	(-1.51)
Return Volatility (t-1)		-0.37	-0.85*	-0.42
		(-0.89)	(-1.90)	(-0.99)
Year Dummies	Yes	Yes	Yes	Yes
R-squared	0.15	0.15	0.16	0.15
Number of observations	1,207	1,207	1,044	1,207

***, **, * Statistically significant at 1%, 5% and 10% levels respectively

TABLE III

The effect of investment performance and service quality on asset flows: nonlinearities

This table reports the results of pooled time-series cross-sectional regressions of asset managers' yearly asset flows on lagged past, and expected future, investment performance, and variables measuring soft investment factors and service factors. Asset flows are expressed as percentages of total assets under management at the end of the previous year. Past and expected future performance, soft investment factors and service factors are expressed using the fractional rank of each asset manager in the sample. To test for nonlinearities in the flow-performance/service quality relation we estimate separate lagged performance and service factor coefficients for those asset managers ranked above and below a given threshold (defined, alternatively, by the 33rd and 50th percentile of service quality and past performance). PP and SF stand for past performance and service factors respectively. All regressions also include a lagged measure of log assets under management, return volatility and a full set of time dummies (which are not reported in the table). Each column represents a separate regression. t-statistics based on standard errors clustered at the product level are included in parenthesis.

	Threshold 0.5			**Threshold 0.33**		
	I	**II**	**III**	**IV**	**V**	**VI**
Expected Future Performance (t-1)	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
	(-0.17)	(-0.19)	(-0.17)	(-0.20)	(-0.21)	(-0.18)
Past Performance (t-1)		0.32***	0.32***		0.32***	0.33***
		(7.84)	(7.82)		(7.86)	(7.75)
Past Performance * I(PP<threshold) (t-1)	0.42***			0.49***		
	(4.88)			(3.91)		
Past Performance * I(PP>threshold) (t-1)	0.23***			0.27***		
	(3.42)			(5.31)		
Soft Investment Factors Ind. (t-1)	-0.08*	-0.08*	-0.08*	-0.08*	-0.08*	-0.08*
	(-1.73)	(-1.75)	(-1.75)	(-1.74)	(-1.76)	(-1.75)
Service Factors Ind. (t-1)	0.01			0.01		
	(0.35)			(0.37)		
Service Factors Ind. * I(SF<threshold) (t-1)		0.11*			0.24**	
		(1.67)			(2.00)	
Service Factors Ind. * I(SF>threshold) (t-1)		-0.08			-0.05	
		(-1.25)			(-1.22)	
Service Factors Ind. * I(PP<threshold) (t-1)			0.04			0.06
			(0.74)			(1.11)
Service Factors Ind. * I(PP>threshold) (t-1)			-0.00			-0.00
			(-0.06)			(-0.06)
Total Net Assets (t-1)	-0.01	-0.01	-0.01	-0.01	-0.02	-0.01
	(-1.55)	(-1.59)	(-1.45)	(-1.55)	(-1.63)	(-1.44)
Return Volatility (t-1)	-0.35	-0.39	-0.38	-0.37	-0.43	-0.38
	(-0.84)	(-0.94)	(-0.90)	(-0.90)	(-1.03)	(-0.91)
Test Past Perf (+) = Past Perf (-)	0.15			0.14		
Test Serv. Fact. (+) = Serv. Fact. (-)		0.08*	0.50		0.04**	0.30
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.15	0.15	0.15	0.15	0.15	0.15
Number of observations	1,207	1,207	1,207	1,207	1,207	1,207

***, **, * Statistically significant at 1%, 5% and 10% levels respectively

Table IV

What drives expectations of future performance

This table reports the results of pooled time-series cross-sectional OLS regressions of expected future performance rankings on past performance, soft investment factor and service factor rankings. Expected future performance, past performance, and soft investment factor and service factor rankings are expressed using the fractional rank of each asset manager in the sample. An asset manager's fractional rank, for a given variable, represents its percentile rank relative to other asset managers in the same period, and ranges from 0 to 1. Some regressions also include a lagged measure of log assets under management and return volatility. Each column represents a separate regression. t-statistics based on standard errors clustered at the asset manager level are included in parenthesis.

	I	**II**
Past Performance (t)	0.49***	0.47***
	(20.11)	(17.81)
Soft Investment Factors Ind. (t)	0.32***	0.32***
	(10.93)	(10.60)
Service Factors Ind. (t)	0.08***	0.10***
	(2.81)	(3.38)
Total Net Assets (t-1)		0.00
		(0.07)
Return Volatility (t-1)		0.04
		(0.30)
Intercept	0.05***	0.05
	(5.62)	(0.97)
R-squared	0.62	0.62
Number of observations	1,623	1,390

***, **, * Statistically significant at 1%, 5% and 10% levels respectively

Table V

The relation between actual future performance and past performance, soft investment factors and service factors

This table reports the results of pooled time-series cross-sectional OLS regressions of actual future excess returns or Fama-French 3-factor alpha rankings on past performance, soft investment factor and service factor rankings. Excess returns and 3-factor alphas are computed for the one-year and two-year periods starting one week after the last fielding date of the survey. Excess returns, 3-factor alphas, past performance, and the soft investment factor and service factor rankings are expressed using the fractional rank of each asset manager in the sample. An asset manager's fractional rank, for a given variable, represents its percentile rank relative to other asset managers in the same period, and ranges from 0 to 1. All regressions also include a lagged measure of log assets under management and return volatility. Each column represents a separate regression. t-statistics based on standard errors clustered at the asset manager level are included in parenthesis.

	Excess Return Ranking		**3-Factor Alpha Ranking**	
	1-Year	**2-Year**	**1-Year**	**2-Year**
Past Performance (t)	0.03	-0.04	0.04	-0.03
	(0.87)	(-1.21)	(1.43)	(-0.71)
Soft Investment Factors Ind. (t)	-0.06*	-0.03	-0.03	-0.03
	(-1.66)	(-0.73)	(-0.85)	(-0.65)
Service Factors Ind. (t)	0.04	0.03	-0.01	0.02
	(1.33)	(0.86)	(-0.30)	(0.46)
Total Net Assets (t-1)	-0.00	-0.01	-0.00	-0.00
	(-1.02)	(-1.00)	(-0.61)	(-0.39)
Return Volatility (t-1)	0.01	0.08	-0.13	0.18
	(0.09)	(0.34)	(-0.74)	(0.78)
Intercept	0.50***	0.52***	0.52***	0.49***
	(10.64)	(8.31)	(10.03)	(7.56)
R-squared	0.00	0.01	0.00	0.00
Number of observations	1,196	1,031	1,196	1,031

***, **, * Statistically significant at 1%, 5% and 10% levels respectively

Table VI

Is there any information in expected future performance rankings?

This table reports the results of pooled time-series cross-sectional OLS regressions of actual future excess returns or Fama-French 3-factor alpha rankings on expected future performance rankings and other variables. Excess returns and 3-factor alphas are computed for the one-year and two-year periods starting one week after the last fielding date of the survey. Excess returns, 3-factor alphas, expected future performance, past performance, and soft investment factor and service factor rankings are expressed using the fractional rank of each asset manager in the sample. An asset manager's fractional rank, for a given variable, represents its percentile rank relative to other asset managers in the same period, and ranges from 0 to 1. All regressions also include a lagged measure of log assets under management and return volatility. Each column represents a separate regression. t-statistics based on standard errors clustered at the asset manager level are included in parenthesis.

	Excess Return Ranking		**3-Factor Alpha Ranking**	
	1-Year	**2-Year**	**1-Year**	**2-Year**
Expected Future Performance (t)	-0.04	0.00	-0.07*	0.02
	(-0.99)	(0.04)	(-1.78)	(0.41)
Past Performance (t)	0.05	-0.05	0.08**	-0.04
	(1.33)	(-0.99)	(2.23)	(-0.79)
Soft Investment Factors Ind. (t)	-0.05	-0.03	-0.01	-0.03
	(-1.21)	(-0.72)	(-0.24)	(-0.77)
ServiceFactors Ind. (t)	0.05	0.03	-0.01	0.02
	(1.40)	(0.85)	(-0.15)	(0.44)
Total Net Assets (t-1)	-0.00	-0.01	-0.00	-0.00
	(-1.02)	(-1.00)	(-0.61)	(-0.39)
Return Volatility (t-1)	0.02	0.08	-0.12	0.18
	(0.10)	(0.34)	(-0.73)	(0.78)
Intercept	0.50***	0.52***	0.52***	0.49***
	(10.66)	(8.29)	(10.07)	(7.51)
R-squared	0.00	0.01	0.01	0.00
Number of observations	1,196	1,031	1,196	1,031

***, **, * Statistically significant at 1%, 5% and 10% levels respectively

Table VII

Actual versus perceived past performance

This table reports the results of pooled time-series cross-sectional OLS regressions of the difference between reported (or perceived) and actual past performance rankings on soft investment factor and service factor rankings. Actual performance rankings are computed using one-, two- and three-year excess returns and 3-factor alphas for the periods ending at the end of the month preceding the first fielding date of the survey. Excess returns, 3-factor alphas, past performance, and the soft investment factor and service factor rankings are expressed using the fractional rank of each asset manager in the sample. An asset manager's fractional rank, for a given variable, represents its percentile rank relative to other asset managers in the same period, and ranges from 0 to 1. All regressions also include a lagged measure of log assets under management and return volatility. Each column represents a separate regression. t-statistics based on standard errors clustered at the asset manager level are included in parenthesis.

	Past Perf. − Excess Return			**Past Perf. − 3-Factor Alpha**		
	1-Year	**2-Year**	**3-Year**	**1-Year**	**2-Year**	**3-Year**
Soft Investment Factors Ind. (t)	0.45***	0.39***	0.38***	0.47***	0.44***	0.43***
	(11.39)	(11.04)	(10.25)	(11.03)	(10.51)	(9.94)
Service Factors Ind. (t)	0.02	0.02	0.03	0.04	0.01	0.02
	(0.56)	(0.51)	(0.79)	(0.82)	(0.25)	(0.40)
Total Net Assets (t-1)	-0.01	-0.00	-0.01	-0.01	-0.01**	-0.02**
	(-0.96)	(-0.86)	(-1.47)	(-1.23)	(-2.03)	(-2.58)
Return Volatility (t-1)	-0.51**	-0.13	0.14	0.08	-0.31	-0.48***
	(-2.45)	(-0.70)	(0.95)	(0.38)	(-1.59)	(-2.84)
Intercept	-0.11*	-0.11*	-0.09*	-0.16**	-0.04	0.01
	(-1.89)	(-1.89)	(-1.75)	(-2.47)	(-0.55)	(0.21)
R-squared	0.21	0.19	0.20	0.21	0.20	0.22
Number of observations	1,368	1,365	1,359	1,368	1,365	1,359

***, **, * Statistically significant at 1%, 5% and 10% levels respectively

Table VIII

Actual versus perceived past performance and asset flows

This table reports the coefficients of lagged past perceived, and actual, investment performance rankings on a regressions of asset managers' yearly asset flows on these and additional variables. In these regressions asset flows are expressed as percentages of total assets under management at the end of the previous year. Actual performance rankings are computed using one-, two- and three-year excess returns and 3-factor alphas, for the periods ending at the end of the month preceding the first fielding date of the survey. Excess returns, 3-factor alphas, past performance, and the rest of the variables included in the regression are expressed using the fractional percentiles. Although not reported, all regressions also include lagged expected future investment performance, soft service and investment quality rankings, log assets under management, return volatility and a full set of time dummies. Each column reports the coefficients of a separate regression. t-statistics based on standard errors clustered at the product level are included in parenthesis.

	Excess Return			**3-Factor Alpha**		
	1-Year	**2-Year**	**3-Year**	**1-Year**	**2-Year**	**3-Year**
Past Performance (t-1)	0.23***	0.16***	0.18***	0.26***	0.21***	0.22***
	(6.04)	(4.25)	(4.70)	(6.78)	(5.42)	(6.13)
Excess Return / 3-Factor Alpha (t-1)	0.22***	0.25***	0.21***	0.16***	0.24***	0.18***
	(6.65)	(7.66)	(6.85)	(4.81)	(6.69)	(5.61)
R-squared	0.18	0.19	0.19	0.17	0.19	0.18
Number of observations	1,198	1,195	1,190	1,198	1,195	1,190

***, **, * Statistically significant at 1%, 5% and 10% levels respectively