

Internet Appendix for:

“Change You Can Believe In? Hedge Fund Data Revisions”

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Appendix A

The Consolidated Hedge Fund Database

As hedge funds can report to one or more databases, the use of any single source will fail to capture the complete universe of hedge fund data. We therefore aggregate data from TASS, HFR, CISDM, BarclayHedge and Morningstar, which together have 74,742 records of fund entries that comprise administrative information as well as returns and AUM data for hedge funds, fund of funds and CTAs. However this number hides the fact that there is significant duplication of information, as multiple providers often cover the same fund. To identify all unique entities, we must therefore consolidate the aggregated data. To do so, we adopt the following steps:

1. **Group the Data:** Records are grouped based on reported management company names. To do so, we first create a 'Fund name key' and a 'Management company key' for each data record, by parsing the original fund name and management company name for punctuations, filler words (e.g., 'Fund', 'Class'), and spelling errors. We then combine the fund and management name keys into 8,390 management company groups.
2. **De-Duplication:** Within a management company group, records are compared based on returns data (converted into US dollars), and 27,395 match sets are created out of matching records, allowing for a small error tolerance limit (10% deviation) to allow for data reporting errors.
3. **Selection:** Once all matches within all management company groups are identified, a single record representing the unique underlying fund is created for each match set. We pick the record with the longest returns data history available is selected from the match set, and fill in any missing administrative information using the remaining records in the match set. The process thus yields 27,395 representative funds.

We filter the fund data in a few ways to ensure data integrity. For example, removing return outliers and quarterly reporting funds, and ensuring funds have sufficient return or asset information. We also remove the Morningstar funds (as less than a third passed these filters), to ensure sufficient depth by database. The result is 18,382 funds.

Appendix B Strategy Mappings

This table shows the broad strategies to which the underlying source strategies of the database vendors, HFR, TASS, CISDM, and BarclayHedge, are mapped. Examples of strategies are shown in the second column; the full set of more than 600 mappings is not shown. We also make use of fund type in the source database to aid in allocating an appropriate mapping. For example, a CTA with a source strategy dubbed Other will be allocated to the Managed Futures strategy with the other CTAs, and not into the Other hedge fund category.

| Mapped Strategy | Examples of Source Strategies |
|---------------------|--|
| Security Selection | Equity Long/Short, Equity Arbitrage, Equity Long/Short - Growth Bias, Equity Market Neutral, Equity Market Neutral - US Value Long/Short |
| Macro | Global Macro, Global Macro - FX only, Global Macro - Quantitative, Macro - Active Trading |
| Relative Value | Merger Arbitrage, Equity Market Neutral - Relative Value, Single Strategy - Event Driven Risk Arbitrage, Statistical Arbitrage |
| Directional Traders | Dedicated Short Bias, Equity Long Only, Equity Long/Short - Long biased, Market Timing, Single Strategy - Tactical trading |
| Funds-of-Funds | (By fund type), Fund of Funds, Fund of Funds - Strategic, Conservative - Absolute Return Fund of Funds, Fund of Funds - Nondirectional, Fund of Funds - Derivatives |
| Multi-Process | Multi-process, Multi Strategy - Arbitrage, Equity Hedge - Multi-Strategy, Event Driven Multi Strategy |
| Emerging | Emerging Markets, Emerging Markets - Central Asia focus, Equity Long/Short - Emerging Markets, Emerging Markets - Directional, Emerging Markets - Global |
| Fixed Income | Convertible Arbitrage, Fixed Income - Arbitrage, Fixed Income - ABS/Sec. Loans, Fixed Income - Structured Credit, Global Debt, Distressed Securities - Stressed High Yield Bonds |
| Other | Other, Undefined. |
| Managed Futures | (By CTA fund type), Managed Futures, Global trend, Discretionary - CTA Managed Futures, Systematic - Systematic arbitrage & counter-trend |

Table A.1
Listing of Vintage Dates

This table shows the vintage dates of the 40 snapshots.

| Number | Vintage date | Number | Vintage date |
|---------------|---------------------|---------------|---------------------|
| 1 | Jul 2007 | 21 | Sep 2009 |
| 2 | Jan 2008 | 22 | Oct 2009 |
| 3 | Feb 2008 | 23 | Dec 2009 |
| 4 | Mar 2008 | 24 | Jan 2010 |
| 5 | Apr 2008 | 25 | Feb 2010 |
| 6 | May 2008 | 26 | Mar 2010 |
| 7 | Jun 2008 | 27 | Apr 2010 |
| 8 | Jul 2008 | 28 | May 2010 |
| 9 | Aug 2008 | 29 | Jun 2010 |
| 10 | Sep 2008 | 30 | Jul 2010 |
| 11 | Oct 2008 | 31 | Aug 2010 |
| 12 | Nov 2008 | 32 | Sep 2010 |
| 13 | Dec 2008 | 33 | Oct 2010 |
| 14 | Jan 2009 | 34 | Nov 2010 |
| 15 | Mar 2009 | 35 | Dec 2010 |
| 16 | Apr 2009 | 36 | Jan 2011 |
| 17 | May 2009 | 37 | Feb 2011 |
| 18 | Jun 2009 | 38 | Mar 2011 |
| 19 | Jul 2009 | 39 | Apr 2011 |
| 20 | Aug 2009 | 40 | May 2011 |

Table A.2
Summary Statistics, Overall Universe

This table shows summary statistics on funds across the whole universe including funds defunct before the first vintage, with time-series statistics in Panel A computed only using the May 2011 (final) vintage of the 40 vintages of data that we capture. AUM refers to assets under management. Panel A shows broad statistics on returns and AUM, Panel B shows the strategies into which the funds are classified, and Panel C shows the databases from which the funds are sourced.

| Panel A: Fund Summary Statistics | | | | |
|---|-----------------------|---|------------------------------------|--|
| | Num. Funds | Average Fund AUM US\$ MM | Average Fund Return | Average Fund History Length (years) |
| | 18,382 | 104.19 | 0.640 | 5.535 |

| Panel B: Fund Strategies | | |
|---------------------------------|-------------------|----------------|
| | Fund Count | Count% |
| Security Selection | 3,009 | 16.37% |
| Macro | 1,201 | 6.53% |
| Relative Value | 250 | 1.36% |
| Directional Traders | 2,358 | 12.83% |
| Fund-of-Funds | 4,846 | 26.36% |
| Multi-Process | 1,877 | 10.21% |
| Emerging | 821 | 4.47% |
| Fixed Income | 957 | 5.21% |
| Other | 174 | 0.95% |
| Managed Futures | 2,889 | 15.72% |
| Total | 18,382 | 100.00% |

| Panel C: Funds by Database | | |
|-----------------------------------|-------------------|----------------|
| | Fund Count | Count% |
| TASS | 6,604 | 35.93% |
| HFR | 4,742 | 25.80% |
| CISDM | 1,698 | 9.24% |
| BarclayHedge | 5,338 | 29.04% |
| Total | 18,382 | 100.00% |

Table A.3
Summary Statistics for Lifetime Variables

This table shows summary statistics of lifetime AUM and return averages, medians and standard deviations; the number of return observations in the return history of the fund; and the first sample autocorrelation of returns. (Data used to construct these variables is taken from the final vintage of the data.)

| | AUM Average | AUM Std. | AUM Median | Return Average | Return Std. | Return Median | Return Auto- correlation | Fund History Length |
|--------------|----------------|---------------|---------------|-------------------|----------------|------------------|-----------------------------|------------------------|
| Observations | 12,128 | 12,128 | 12,128 | 12,128 | 12,128 | 12,128 | 12,128 | 12,128 |
| Mean | 190,166,868 | 101,466,637 | 172,968,006 | 0.623 | 3.794 | 0.745 | 0.167 | 6.133 |
| Std dev | 1,695,475,248 | 814,738,188 | 1,641,462,633 | 1.092 | 3.215 | 0.910 | 0.222 | 4.086 |
| 99th perc | 2,189,444,687 | 1,212,588,317 | 2,058,343,660 | 4.368 | 15.641 | 3.741 | 0.667 | 17.333 |
| 75th perc | 98,771,590 | 49,480,000 | 86,378,500 | 0.973 | 4.732 | 1.035 | 0.314 | 8.333 |
| Median | 31,453,446 | 13,216,540 | 27,118,409 | 0.532 | 2.837 | 0.650 | 0.168 | 5.000 |
| 25th perc | 9,122,952 | 3,090,808 | 7,041,061 | 0.178 | 1.788 | 0.323 | 0.024 | 2.917 |
| 1st perc | 107,436 | 1 | - | 2.107 | 0.412 | 1.437 | 0.393 | 1.167 |

Table A.4
Summary Statistics of Revisions by Strategy

This table shows the percentage of funds in each strategy with absolute value revisions of at least 1 bp, 10bp, 50bp, or 100bp. For example, of the 1,762 Security Selection funds, 40.6% have past history which is revised by at least 1 bp, 33.9% by at least 10bp, 24.4% by at least 50 bp, and 18.8% by at least 1%.

| Strategy | Fund Count | Revisions as % of Funds in Strategy | | | |
|---------------------|-------------------|--|----------------------|----------------------|--------------------|
| | | at least 0.01% | at least 0.1% | at least 0.5% | at least 1% |
| Security Selection | 1,762 | 40.6% | 33.9% | 24.4% | 18.8% |
| Macro | 685 | 43.1% | 36.4% | 23.2% | 17.2% |
| Relative Value | 191 | 42.9% | 33.5% | 23.6% | 17.3% |
| Directional Traders | 1,503 | 40.0% | 32.4% | 22.1% | 17.0% |
| Funds-of-Funds | 3,822 | 54.0% | 49.4% | 35.9% | 27.8% |
| Multi-Process | 1,371 | 39.2% | 33.5% | 23.5% | 18.2% |
| Emerging | 612 | 41.7% | 36.1% | 29.1% | 23.9% |
| Fixed Income | 597 | 44.7% | 37.0% | 25.5% | 18.1% |
| Other | 141 | 44.0% | 37.6% | 29.8% | 24.1% |
| Managed Futures | 1,444 | 39.4% | 33.2% | 22.8% | 16.8% |
| All Funds | 12,128 | 44.9% | 38.9% | 27.7% | 21.3% |

Table A.5
Probit Regression for Any Changes

The table shows the marginal effects from a probit regression. The dependent variable takes the value of 1 if a fund had any change (Deletion, Revision or Addition) over any of the 40 vintages that we capture, and 0 otherwise. The independent variables are lifetime average returns, lifetime average AUM, standard deviation of returns, and the autocorrelation of returns, all measured as ranks relative to the other funds in the data; and the number of return observations in the return history of the fund. Other relevant fund variables are a dummy variable which takes the value of 1 if the fund is located Offshore, a total restrictions variable (measured as the sum of the reported lockup and redemption notice periods), a flag which takes the value of 1 if there is any information pertaining to audits available in any of the databases (and in any of the vintages), and a management change flag which takes the value of 1 if the management company or manager name changes across vintages. We also include database and strategy fixed-effects in the regressions. dF/dx shows the change in the independent variable for a discrete change in any independent dummy variable from 0 to 1, and the slope at the mean for continuous independent variables. Robust standard errors control for heteroskedasticity, and cluster by database. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| | dF/dx | Z-stat |
|-------------------------------|--------------|---------------|
| Lifetime Avg. AUM (Rank) | 0.104*** | (3.958) |
| Lifetime Avg. Return (Rank) | -0.063 | (-1.003) |
| Lifetime Ret. Std. (Rank) | 0.114*** | (4.610) |
| Return Autocorrelation (Rank) | 0.076*** | (4.609) |
| Return History Length | 0.021*** | (4.959) |
| Offshore | -0.011 | (-0.343) |
| Total Restrictions | 0.018*** | (10.711) |
| Audit | 0.011 | (0.474) |
| High-Water Mark or Hurdle | 0.130*** | (2.826) |
| Any Management Change | 0.118*** | (4.838) |
| <i>Database Fixed Effects</i> | | |
| HFR | 0.036 | (1.584) |
| CISDM | -0.130*** | (-9.303) |
| BarclayHedge | -0.091*** | (-10.329) |
| <i>Strategy Fixed Effects</i> | | |
| Macro | 0.034** | (2.110) |
| Relative Value | 0.063** | (2.115) |
| Directional Traders | -0.050 | (-1.161) |
| Funds-of-Funds | 0.163*** | (12.104) |
| Multi-Process | -0.036** | (-2.337) |
| Emerging | 0.029 | (1.023) |
| Fixed Income | 0.033 | (1.563) |
| Other | 0.076 | (1.222) |
| Managed Futures | 0.135*** | (4.492) |
| N | 12,128 | |
| Pseudo R ² | 0.080 | |

Table A.6
Probit Regression for Revisions

The table shows the marginal effects from a probit regression. The dependent variable takes the value of 1 if a fund had revised data over any of the 40 vintages that we capture, and 0 otherwise. The independent variables are lifetime average returns, lifetime average AUM, standard deviation of returns, and the autocorrelation of returns, all measured as ranks relative to the other funds in the data; and the number of return observations in the return history of the fund. Other relevant fund variables are a dummy variable which takes the value of 1 if the fund is located Offshore, a total restrictions variable (measured as the sum of the reported lockup and redemption notice periods), a flag which takes the value of 1 if there is any information pertaining to audits available in any of the databases (and in any of the vintages), and a management change flag which takes the value of 1 if the management company or manager name changes across vintages. We also include database and strategy fixed-effects in the regressions. dF/dx shows the change in the independent variable for a discrete change in any independent dummy variable from 0 to 1, and the slope at the mean for continuous independent variables. Robust standard errors control for heteroskedasticity, and cluster by database. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| | dF/dx | Z-stat |
|-------------------------------|--------------|---------------|
| Lifetime Avg. AUM (Rank) | 0.104*** | (3.958) |
| Lifetime Avg. Return (Rank) | -0.063 | (-1.003) |
| Lifetime Ret. Std. (Rank) | 0.114*** | (4.610) |
| Return Autocorrelation (Rank) | 0.076*** | (4.609) |
| Return History Length | 0.021*** | (4.959) |
| Offshore | -0.011 | (-0.343) |
| Total Restrictions | 0.018*** | (10.711) |
| Audit | 0.011 | (0.474) |
| High-Water Mark or Hurdle | 0.130*** | (2.826) |
| Any Management Change | 0.118*** | (4.838) |
| <i>Database Fixed Effects</i> | | |
| HFR | 0.036 | (1.584) |
| CISDM | -0.130*** | (-9.303) |
| BarclayHedge | -0.091*** | (-10.329) |
| <i>Strategy Fixed Effects</i> | | |
| Macro | 0.034** | (2.110) |
| Relative Value | 0.063** | (2.115) |
| Directional Traders | -0.050 | (-1.161) |
| Funds-of-Funds | 0.163*** | (12.104) |
| Multi-Process | -0.036** | (-2.337) |
| Emerging | 0.029 | (1.023) |
| Fixed Income | 0.033 | (1.563) |
| Other | 0.076 | (1.222) |
| Managed Futures | 0.135*** | (4.492) |
| N | 12,128 | |
| Pseudo R ² | 0.080 | |

Table A.7
Probit Regression for Additions

The table shows the marginal effects from a probit regression. The dependent variable takes the value of 1 if a fund had added past data over any of the 40 vintages that we capture, and 0 otherwise. (Additions exclude fund launches; the first time a return appears for a fund; and additions within 12 months of the vintage v-1 date so as to avoid picking up late reporting.) The independent variables are lifetime average returns, lifetime average AUM, standard deviation of returns, and the autocorrelation of returns, all measured as ranks relative to the other funds in the data; and the number of return observations in the return history of the fund. Other relevant fund variables are a dummy variable which takes the value of 1 if the fund is located Offshore, a total restrictions variable (measured as the sum of the reported lockup and redemption notice periods), a flag which takes the value of 1 if there is any information pertaining to audits available in any of the databases (and in any of the vintages), and a management change flag which takes the value of 1 if the management company or manager name changes across vintages. We also include database and strategy fixed-effects in the regressions. dF/dx shows the change in the independent variable for a discrete change in any independent dummy variable from 0 to 1, and the slope at the mean for continuous independent variables. Robust standard errors control for heteroskedasticity, and cluster by database. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| | dF/dx | Z-stat |
|-------------------------------|--------------|---------------|
| Lifetime Avg. AUM (Rank) | -0.009*** | (-2.675) |
| Lifetime Avg. Ret (Rank) | -0.005 | (-0.518) |
| Lifetime Ret. Std. (Rank) | 0.010 | (1.074) |
| Return Autocorrelation (Rank) | 0.002 | (0.247) |
| Return History Length | 0.003*** | (6.577) |
| Offshore | 0.000 | (0.074) |
| Total Restrictions | -0.000 | (-0.228) |
| Audit | 0.008 | (1.179) |
| High-Water Mark or Hurdle | 0.006*** | (3.198) |
| Any Management Change | -0.000 | (-0.020) |
| <i>Database Fixed Effects</i> | | |
| HFR | -0.011*** | (-7.178) |
| CISDM | -0.024*** | (-20.236) |
| BarclayHedge | -0.007*** | (-3.834) |
| <i>Strategy Fixed Effects</i> | | |
| Macro | -0.007 | (-1.156) |
| Relative Value | -0.000 | (-0.032) |
| Directional Traders | -0.006 | (-1.158) |
| Funds-of-Funds | 0.008*** | (2.604) |
| Multi-Process | -0.007*** | (-2.931) |
| Emerging | 0.002 | (0.442) |
| Fixed Income | 0.012 | (0.766) |
| Other | 0.056*** | (23.926) |
| Managed Futures | 0.007 | (1.244) |
| N | 12,128 | |
| Pseudo R ² | 0.068 | |

Table A.8
Probit Regression for Deletions

The table shows the marginal effects from a probit regression. The dependent variable takes the value of 1 if a fund had deleted data over any of the 40 vintages that we capture, and 0 otherwise. The independent variables are lifetime average returns, lifetime average AUM, standard deviation of returns, and the autocorrelation of returns, all measured as ranks relative to the other funds in the data; and the number of return observations in the return history of the fund. Other relevant fund variables are a dummy variable which takes the value of 1 if the fund is located Offshore, a total restrictions variable (measured as the sum of the reported lockup and redemption notice periods), a flag which takes the value of 1 if there is any information pertaining to audits available in any of the databases (and in any of the vintages), and a management change flag which takes the value of 1 if the management company or manager name changes across vintages. We also include database and strategy fixed-effects in the regressions. dF/dx shows the change in the independent variable for a discrete change in any independent dummy variable from 0 to 1, and the slope at the mean for continuous independent variables. Robust standard errors control for heteroskedasticity, and cluster by database. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| | dF/dx | Z-stat |
|-------------------------------|--------------|---------------|
| Lifetime Avg. AUM (Rank) | -0.004 | (-0.280) |
| Lifetime Avg. Return (Rank) | -0.042 | (-1.300) |
| Lifetime Ret. Std. (Rank) | 0.026* | (1.861) |
| Return Autocorrelation (Rank) | -0.020 | (-1.297) |
| Return History Length | 0.003*** | (8.643) |
| Offshore | 0.023*** | (2.726) |
| Total Restrictions | -0.002 | (-0.624) |
| Audit | -0.012** | (-1.991) |
| High-Water Mark or Hurdle | 0.008* | (1.814) |
| Any Management Change | 0.023* | (1.683) |
| <i>Database Fixed Effects</i> | | |
| HFR | -0.005*** | (-3.375) |
| CISDM | -0.054*** | (-23.777) |
| BarclayHedge | -0.039*** | (-14.693) |
| <i>Strategy Fixed Effects</i> | | |
| Macro | -0.001 | (-0.068) |
| Relative Value | 0.038** | (2.196) |
| Directional Traders | 0.007 | (1.055) |
| Fund-of-Funds | 0.015** | (2.248) |
| Multi-Process | -0.025*** | (-4.994) |
| Emerging | 0.010 | (0.931) |
| Fixed Income | 0.015 | (0.668) |
| Other | 0.002 | (0.078) |
| Managed Futures | 0.008* | (1.850) |
| N | 12,128 | |
| Pseudo R ² | 0.032 | |

Table A.9
Explaining Revision Return Differences – Interactions Detail

This table conditions the return differences occasioned by revisions on various fund characteristics and period fixed effects. (This table, similar to Table V, holds the details of the interactions between strategy and crisis periods). The dependent variable is the average difference, for all years in which a fund experienced return revisions, between the final set of annual returns provided by a fund and the first set of annual returns provided by the same fund for the same year. For example, if fund X initially reported 4% average annual return for year t , and at the final vintage, this average stood at 6%, then the return difference variable would be 2%. We only include periods in which the fund had at least 6 months of return observations, to reduce the noise in the dependent variable. Panel A takes the absolute value of all such differences as the dependent variable, and Panel B conditions the signed revisions on the independent variables. Period dummies include crisis dummies for the 1998-1999 period, the 2000-2001 period, and the 2008-2009 period. The remaining regressors have been described earlier in these tables, with three new additions, namely the rank of flows experienced by the fund relative to all other funds in the same year; the Management fee and the Incentive fee of the fund. t -statistics, shown in parentheses, are robust to heteroskedasticity and clustered at the fund-level. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

{Table A.9 is presented on the following two pages }

Panel A: Absolute Value of Differences

| | Coeff | <i>t</i> -stat | | Coeff | <i>t</i> -stat | |
|-------------------------------|--------|----------------|-----|--------|----------------|-----|
| Constant | 1.182 | (20.358) | *** | 1.325 | (5.615) | *** |
| Crisis1 * Security Selection | 1.129 | (1.078) | | 1.186 | (1.161) | |
| Crisis1 * Macro | 2.258 | (1.744) | * | 2.322 | (1.849) | * |
| Crisis1 * Relative Value | - | | | - | | |
| Crisis1 * Directional Traders | 4.800 | (2.158) | ** | 4.681 | (2.152) | ** |
| Crisis1 * Funds-of-Funds | 1.026 | (1.004) | | 1.212 | (1.202) | |
| Crisis1 * Multi-Process | -0.638 | (-1.460) | | -0.884 | (-1.640) | |
| Crisis1 * Emerging | - | | | - | | |
| Crisis1 * Fixed Income | - | | | - | | |
| Crisis1 * Managed Futures | -0.524 | (-1.858) | * | -0.588 | (-1.398) | |
| Crisis2 * Security Selection | 0.275 | (0.437) | | 0.404 | (0.645) | |
| Crisis2 * Macro | 1.683 | (1.380) | | 1.536 | (1.259) | |
| Crisis2 * Relative Value | - | | | - | | |
| Crisis2 * Directional Traders | 1.553 | (1.641) | | 1.481 | (1.653) | * |
| Crisis2 * Funds-of-Funds | 0.791 | (0.737) | | 0.897 | (0.859) | |
| Crisis2 * Multi-Process | -0.469 | (-1.353) | | -0.480 | (-1.318) | |
| Crisis2 * Emerging | 1.492 | (1.570) | | 1.091 | (1.160) | |
| Crisis2 * Fixed Income | - | | | - | | |
| Crisis2 * Managed Futures | 0.370 | (0.599) | | 0.248 | (0.403) | |
| Crisis3 * Security Selection | 0.846 | (3.471) | *** | 0.717 | (2.859) | *** |
| Crisis3 * Macro | 0.443 | (1.707) | * | 0.346 | (1.325) | |
| Crisis3 * Relative Value | 0.184 | (0.635) | | 0.097 | (0.340) | |
| Crisis3 * Directional Traders | 0.662 | (2.898) | *** | 0.605 | (2.677) | *** |
| Crisis3 * Funds-of-Funds | 0.548 | (4.982) | *** | 0.721 | (6.229) | *** |
| Crisis3 * Multi-Process | 0.701 | (3.257) | *** | 0.673 | (3.125) | *** |
| Crisis3 * Emerging | 2.538 | (4.166) | *** | 2.422 | (3.982) | *** |
| Crisis3 * Fixed Income | 0.672 | (2.075) | ** | 0.643 | (2.006) | ** |
| Crisis3 * Managed Futures | 0.339 | (1.857) | * | 0.079 | (0.409) | |
| Offshore | | | | 0.247 | (2.240) | ** |
| Total Restrictions | | | | -0.028 | (-1.607) | |
| High-Water Mark or Hurdle | | | | -0.252 | (-1.976) | ** |
| Audit | | | | 0.276 | (1.868) | * |
| Management Fee | | | | 0.035 | (0.346) | |
| Incentive Fee | | | | 0.025 | (2.926) | *** |
| Asset t-1 rank | | | | -1.132 | (-5.571) | *** |
| Return prior year t-1 rank | | | | -0.241 | (-1.520) | |
| Flow prior year t-1 rank | | | | 0.070 | (0.524) | |
| N | 7,628 | | | 7,628 | | |
| Adjusted R ² | 0.021 | | | 0.034 | | |

| Panel B: Return Differences | | | | | | |
|------------------------------------|--------|----------------|-----|--------|----------------|-----|
| | Coeff | <i>t</i> -stat | | Coeff | <i>t</i> -stat | |
| Constant | -0.016 | (-0.298) | | -0.017 | (-0.083) | |
| Crisis1 * Security Selection | 0.823 | (0.670) | | 0.854 | (0.693) | |
| Crisis1 * Macro | -3.425 | (-2.634) | *** | -3.541 | (-2.841) | *** |
| Crisis1 * Relative Value | - | | | - | | |
| Crisis1 * Directional Traders | 1.168 | (0.396) | | 1.253 | (0.424) | |
| Crisis1 * Funds-of-Funds | -0.365 | (-0.323) | | -0.464 | (-0.400) | |
| Crisis1 * Multi-Process | -0.354 | (-0.808) | | -0.250 | (-0.483) | |
| Crisis1 * Emerging | - | | | - | | |
| Crisis1 * Fixed Income | - | | | - | | |
| Crisis1 * Managed Futures | 0.165 | (0.410) | | 0.055 | (0.132) | |
| Crisis2 * Security Selection | -0.402 | (-0.630) | | -0.371 | (-0.583) | |
| Crisis2 * Macro | -1.781 | (-1.403) | | -1.748 | (-1.388) | |
| Crisis2 * Relative Value | - | | | - | | |
| Crisis2 * Directional Traders | -1.801 | (-1.679) | * | -1.711 | (-1.613) | |
| Crisis2 * Funds-of-Funds | -0.265 | (-0.336) | | -0.355 | (-0.471) | |
| Crisis2 * Multi-Process | -0.438 | (-1.229) | | -0.357 | (-0.980) | |
| Crisis2 * Emerging | -0.593 | (-0.478) | | -0.484 | (-0.392) | |
| Crisis2 * Fixed Income | - | | | - | | |
| Crisis2 * Managed Futures | -0.317 | (-0.342) | | -0.441 | (-0.449) | |
| Crisis3 * Security Selection | 0.029 | (0.136) | | 0.116 | (0.544) | |
| Crisis3 * Macro | -0.341 | (-1.172) | | -0.338 | (-1.127) | |
| Crisis3 * Relative Value | -0.360 | (-1.252) | | -0.297 | (-1.002) | |
| Crisis3 * Directional Traders | -0.098 | (-0.435) | | -0.034 | (-0.150) | |
| Crisis3 * Funds-of-Funds | -0.772 | (-6.621) | *** | -0.859 | (-7.122) | *** |
| Crisis3 * Multi-Process | -0.379 | (-1.771) | * | -0.343 | (-1.581) | |
| Crisis3 * Emerging | -0.749 | (-1.125) | | -0.698 | (-1.044) | |
| Crisis3 * Fixed Income | 0.508 | (1.818) | * | 0.576 | (2.043) | ** |
| Crisis3 * Managed Futures | -0.001 | (-0.004) | | 0.038 | (0.188) | |
| Offshore | | | | -0.092 | (-1.073) | |
| Total Restrictions | | | | 0.012 | (0.712) | |
| High-Water Mark or Hurdle | | | | -0.054 | (-0.466) | |
| Audit | | | | -0.075 | (-0.571) | |
| Management Fee | | | | 0.177 | (2.178) | ** |
| Incentive Fee | | | | -0.017 | (-2.098) | ** |
| Asset t-1 rank | | | | 0.283 | (1.942) | * |
| Return prior year t-1 rank | | | | 0.118 | (0.713) | |
| Flow prior year t-1 rank | | | | -0.174 | (-1.130) | |
| N | 7,628 | | | 7,628 | | |
| Adjusted R ² | 0.008 | | | 0.009 | | |

Table A.10
Multinomial Logistic Regression on Revision Direction

These are coefficients from a multinomial logit regression on revision direction relative to no change at all. Revision Direction is the net number of positive or negative revisions experienced by a fund. The base case of zeros refers to funds having no revisions at all. Funds with exactly equal positive and negative revisions were dropped (4.6% of funds). Regressors are as in Table IV. Standard errors are estimated by clustering by database.

| Panel A: More Negative Revisions | | | |
|---|--------------|---------------|-----|
| -1 to 0 | Coeff | Z-stat | |
| Lifetime Avg. AUM (Rank)(v-1) | 1.079 | 5.550 | *** |
| Lifetime Avg. Ret (Rank) (v-1) | -0.788 | -2.640 | *** |
| Lifetime Ret. Std. (Rank) (v-1) | 0.510 | 4.070 | *** |
| Return Autocorrelation (Rank) (v-1) | 0.555 | 8.590 | *** |
| Return History Length(v-1) | 0.009 | 4.160 | *** |
| Offshore | -0.095 | -2.030 | ** |
| Total Restrictions | 0.001 | 4.190 | *** |
| Audit | 0.934 | 1.730 | * |
| <i>Database Fixed Effects</i> | | | |
| HFR | 0.100 | 3.270 | *** |
| CISDM | -0.027 | -0.060 | |
| BarclayHedge | 0.768 | 24.340 | *** |
| <i>Strategy Fixed Effects</i> | | | |
| Macro | 0.326 | 5.390 | *** |
| Relative Value | 0.668 | 4.240 | *** |
| Directional Traders | -0.161 | -2.040 | ** |
| Funds-of-Funds | 0.884 | 9.470 | *** |
| Multi-Process | 0.136 | 1.460 | |
| Emerging | 0.429 | 6.740 | *** |
| Fixed Income | -0.084 | -0.450 | |
| Other | 0.295 | 0.950 | |
| Managed Futures | 0.548 | 2.120 | ** |
| Constant | -4.073 | -9.170 | *** |

Panel B: More Positive Revisions

| +1 to 0 | Coeff | Z-stat | |
|-------------------------------------|--------------|---------------|-----|
| Lifetime Avg. AUM (Rank)(v-1) | 1.100 | 3.380 | *** |
| Lifetime Avg. Ret (Rank) (v-1) | 0.071 | 0.570 | |
| Lifetime Ret. Std. (Rank) (v-1) | 0.065 | 0.270 | |
| Return Autocorrelation (Rank) (v-1) | 0.587 | 6.600 | *** |
| Return History Length(v-1) | 0.008 | 4.890 | *** |
| Offshore | -0.167 | -4.340 | *** |
| Total Restrictions | 0.001 | 5.040 | *** |
| Audit | 0.690 | 1.430 | |
| <i>Database Fixed Effects</i> | | | |
| HFR | -0.201 | -7.590 | *** |
| CISDM | -0.467 | -1.200 | |
| BarclayHedge | 0.262 | 4.430 | *** |
| <i>Strategy Fixed Effects</i> | | | |
| Macro | 0.415 | 15.030 | *** |
| Relative Value | 0.882 | 2.240 | ** |
| Directional Traders | 0.088 | 2.340 | ** |
| Funds-of-Funds | 0.946 | 15.150 | *** |
| Multi-Process | 0.359 | 2.850 | *** |
| Emerging | 0.651 | 9.220 | *** |
| Fixed Income | 0.160 | 0.870 | |
| Other | 0.663 | 1.320 | |
| Managed Futures | 0.519 | 2.930 | *** |
| Constant | -3.832 | -12.430 | *** |

Panel C: Regression Statistics

| | |
|-----------------------|--------|
| N | 17,587 |
| Pseudo R ² | 0.092 |

Table A.11
Change in Predictions for Revision Direction

The panels below show changes in predicted probabilities in the revision direction multinomial logit regression, where -1 indicates more negative revisions, 1 for more positive revisions in the fund and 0 for no revisions at all. Panel A shows impact of the Audit flag dummy and Panel B shows a change from 1st to 3rd quartile in lifetime ranks. Confidence intervals are estimated by the delta method.

| Panel A: Audit | | | | | |
|--|-----------------|-----------------|-------------|-------------------|-------------|
| Audit flag | Audit | No Audit | Diff | 95% CI for | Diff |
| Pr(y=-1 x): | 0.189 | 0.093 | 0.095 | [0.0810, | 0.1098] |
| Pr(y=1 x): | 0.182 | 0.115 | 0.067 | [0.0518, | 0.0824] |
| Pr(y=0 x): | 0.630 | 0.792 | -0.163 | [-0.1821, | -0.1428] |
| Panel B: Change in quartiles | | | | | |
| Lifetime Average AUM | | | | | |
| | AUM 0.75 | AUM 0.25 | Diff | 95% CI for | Diff |
| Pr(y=-1 x): | 0.186 | 0.129 | 0.057 | [0.0462, | 0.0679] |
| Pr(y=1 x): | 0.194 | 0.133 | 0.061 | [0.0496, | 0.0719] |
| Pr(y=0 x): | 0.620 | 0.738 | -0.118 | [-0.1323, | -0.1032] |
| Lifetime Return Average | | | | | |
| | Ret 0.75 | Ret 0.25 | Diff | 95% CI for | Diff |
| Pr(y=-1 x): | 0.131 | 0.184 | -0.053 | [-0.0636, | -0.0421] |
| Pr(y=1 x): | 0.168 | 0.154 | 0.015 | [0.0036, | 0.0258] |
| Pr(y=0 x): | 0.700 | 0.662 | 0.038 | [0.0238, | 0.0524] |
| Lifetime Return Standard Deviation | | | | | |
| | Std 0.75 | Std 0.25 | Diff | 95% CI for | Diff |
| Pr(y=-1 x): | 0.173 | 0.140 | 0.033 | [0.0217, | 0.0438] |
| Pr(y=1 x): | 0.160 | 0.162 | -0.002 | [-0.0133, | 0.0092] |
| Pr(y=0 x): | 0.667 | 0.698 | -0.031 | [-0.0455, | -0.0159] |
| Lifetime Return First Autocorrelation | | | | | |
| | Rho 0.75 | Rho 0.25 | Diff | 95% CI for | Diff |
| Pr(y=-1 x): | 0.171 | 0.142 | 0.029 | [0.0184, | 0.0397] |
| Pr(y=1 x): | 0.178 | 0.146 | 0.033 | [0.0219, | 0.0435] |
| Pr(y=0 x): | 0.651 | 0.713 | -0.062 | [-0.0759, | -0.0477] |

Table A.12
Characteristics of the Reviser and Non-Reviser funds

This table shows the differences in characteristics between the reviser and non-reviser groups of funds using the status of the funds at the last vintage. The non-reviser funds at this stage have never revised between vintages. Once a fund revises a return it joins the reviser portfolio and it stays out of the non-reviser group. Lifetime AUM and return measures are used for the funds, not the period in which they belonged to the group. There are 5,417 non-reviser funds out of the 12,128 reporting funds. *t*-statistics of the differences between groups assume a common variance.

| Variable | Revisers | | Non-Revisers | | <i>t</i>-stat diff | <i>p</i>-value |
|-------------------------------|-----------------|----------------|---------------------|----------------|---------------------------|-----------------------|
| | Mean | Std Dev | Mean | Std Dev | | |
| Lifetime AUM Average \$m | 183.61 | 1,500.29 | 198.29 | 1,909.94 | -0.474 | 0.636 |
| Lifetime Return Average | 0.629 | 0.992 | 0.615 | 1.205 | 0.697 | 0.486 |
| Lifetime Return Std. | 3.764 | 3.095 | 3.831 | 3.358 | -1.143 | 0.253 |
| Return Autocorrelation | 0.187 | 0.217 | 0.142 | 0.224 | 11.218 | 0.000 |
| Return History Length (years) | 6.685 | 4.211 | 5.449 | 3.817 | 16.743 | 0.000 |
| Total Restrictions (quarters) | 2.256 | 2.921 | 1.552 | 2.396 | 14.275 | 0.000 |

Table A.13
Do Revisions Predict Future Returns? – Detail

This table contains the regression details from Table VI, which regresses the difference in returns between the reviser and non-reviser portfolios over the 40 months from January 2008 to the end of the sample period, May 2011, on several different sets of factors. Panel A employs subsets, followed by the full set, of factors from the Fung-Hsieh model. Panel B employs the Fama-French 3 factor model, adds a momentum factor, and finally adds the Pastor-Stambaugh Liquidity factor. Panel C employs Fung-Hsieh subsets, like Panel A, but uses the original Fung-Hsieh non-tradeable bond factors. Newey-West heteroskedasticity and autocorrelation robust standard errors (with three lags) are employed to assess statistical significance. Regression betas are shown with *t*-statistics shown in parentheses beneath coefficients. The significance of the alpha is denoted by stars at the 10% (*), 5% (**) and 1% (***) levels respectively.

| Panel A: Return differences (Fung-Hsieh Model) | | | | | |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|
| Factors | Constant | Market | FH 4 | FH 7 | FH 8 |
| Constant | 0.309*** (3.805) | 0.309*** (5.133) | 0.277*** (3.526) | 0.278*** (3.053) | 0.279*** (3.077) |
| SP500 | - | -0.001 (-0.063) | -0.007 (-0.510) | -0.005 (-0.435) | -0.010 (-0.845) |
| SMB | - | - | 0.025 (1.521) | 0.027 (1.476) | 0.027 (1.428) |
| BOND10YR | - | - | -0.180 (-0.996) | -0.064 (-0.228) | -0.070 (-0.256) |
| CREDSPR | - | - | 0.016 (0.552) | 0.026 (0.564) | 0.021 (0.472) |
| PTFSBD | - | - | - | 0.007 (0.011) | 0.019 (0.029) |
| PTFSFX | - | - | - | 0.788 (1.156) | 0.786 (1.192) |
| PTFSCOM | - | - | - | -0.842 (-1.081) | -0.819 (-1.109) |
| EMERGING | - | - | - | - | 0.005 (0.601) |
| N | 40 | 40 | 40 | 40 | 40 |
| Adjusted R ² | | -2.62% | -3.46% | -5.48% | -8.53% |

**Panel B: Return differences (Fama-French 3 factors + Momentum +
Pastor-Stambaugh Liquidity Model)**

| Factors | FF3 | FF3 + Mom | FF3 + Mom + Liquidity |
|-------------------------|---------------------|---------------------|----------------------------------|
| Constant | 0.302*** (3.777) | 0.276*** (4.596) | 0.287*** (4.973) |
| MKTRF | -1.321 (-1.044) | -2.366 (-2.503) | -1.831 (-1.981) |
| SMB | 1.685 (1.166) | 2.193 (1.497) | 2.871 (2.307) |
| HML | 3.629 (2.445) | 1.597 (1.337) | -1.227 (-0.568) |
| UMD | - | -2.812 (-3.539) | -2.663 (-3.539) |
| PSLIQ | - | - | -2.254 (-2.079) |
| N | 40 | 40 | 40 |
| Adjusted R ² | 14.94% | 11.73% | 10.96% |

Table A.14
Robustness Checks: Size and Recency – Detail

This table contains the regression details from Table VII Panel A and B, which conditions the results in Table VI on the size and recency of revisions. Panel A shows the impact of using different size thresholds for considering revisions as important. For example, the first column (1 bp) of Panel A reproduces the results from Panel A of Table VI, and ‘10bp’ only includes funds with revisions which are greater than 10bp in absolute value in the construction of the reviser portfolio. Panel B shows the impact of excluding recent revisions near the vintage date. For example, the second column ($k > 3$) of Panel B reproduces the results from Panel A of Table VI, and when $k > 6$ only funds with revisions that occur six months prior to the date of the vintage are included, and when $k > 12$, only funds which revise returns over a year old are included in the construction of the reviser portfolio. Newey-West heteroskedasticity and autocorrelation robust standard errors (with three lags) are employed to assess statistical significance. Regression betas are shown with t -statistics shown in parentheses beneath coefficients. The significance of the alpha is denoted by stars at the 10% (*), 5% (**) and 1% (***) levels respectively.

| Panel A: Size of Revision (Fung-Hsieh 7 Factor Model) | | | | |
|--|--|---------------------|---------------------|---------------------|
| Factors | Minimum Significance of Revisions | | | |
| | 1 bp | 10 bp | 50 bp | 100 bp |
| Constant | 0.278*** (3.053) | 0.292*** (3.362) | 0.262*** (3.247) | 0.250*** (2.638) |
| SP500 | -0.005 (-0.435) | -0.005 (-0.530) | -0.024 (-1.890) | -0.022 (-1.209) |
| SMB | 0.027 (1.476) | 0.012 (0.494) | -0.006 (-0.205) | -0.005 (-0.141) |
| BOND10YR | -0.064 (-0.228) | -0.134 (-0.486) | -0.264 (-0.818) | -0.261 (-0.692) |
| CREDSR | 0.026 (0.564) | 0.020 (0.476) | 0.010 (0.258) | -0.010 (-0.180) |
| PTFSBD | 0.007 (0.011) | -0.026 (-0.048) | -0.160 (-0.324) | -0.193 (-0.334) |
| PTFSFX | 0.788 (1.156) | 1.070 (2.278) | 1.568 (2.915) | 1.914 (2.550) |
| PTFSCOM | -0.842 (-1.081) | -0.978 (-1.643) | -1.862 (-2.297) | -2.277 (-1.939) |
| N | 40 | 40 | 40 | 40 |
| Adjusted R ² | -5.48% | 3.24% | 21.56% | 14.45% |

Panel B: Recency of Revision (Fung-Hsieh 7 Factor Model)

| Factors | Minimum Recency of Revisions | | | |
|-------------------------|-------------------------------------|---------------------|---------------------|---------------------|
| | k = 1 | k > 3 | k > 6 | k > 12 |
| Constant | 0.278*** (3.053) | 0.292*** (3.362) | 0.262*** (3.247) | 0.250*** (2.638) |
| SP500 | -0.005 (-0.435) | -0.005 (-0.530) | -0.024 (-1.890) | -0.022 (-1.209) |
| SMB | 0.027 (1.476) | 0.012 (0.494) | -0.006 (-0.205) | -0.005 (-0.141) |
| BOND10YR | -0.064 (-0.228) | -0.134 (-0.486) | -0.264 (-0.818) | -0.261 (-0.692) |
| CREDSRP | 0.026 (0.564) | 0.020 (0.476) | 0.010 (0.258) | -0.010 (-0.180) |
| PTFSBD | 0.007 (0.011) | -0.026 (-0.048) | -0.160 (-0.324) | -0.193 (-0.334) |
| PTFSFX | 0.788 (1.156) | 1.070 (2.278) | 1.568 (2.915) | 1.914 (2.550) |
| PTFSCOM | -0.842 (-1.081) | -0.978 (-1.643) | -1.862 (-2.297) | -2.277 (-1.939) |
| N | 40 | 40 | 40 | 40 |
| Adjusted R ² | -0.055 | 0.032 | 0.216 | 0.145 |

Table A.15**Robustness Check: Regressions on Median Return Differences between Portfolios - Detail**

To test for the influence of extreme observations, this table shows the significance of the differences in returns between the Non-Reviser and Reviser portfolios using the portfolio's median return. The monthly return differences are analysed against different risk models. Panel A uses factors from the Fung-Hsieh model, such as a market model using S&P 500, four of the market related Fung-Hsieh factors, and then the Fung-Hsieh 7 and 8 Factor model. Panel B uses an alternate specification with the Fama-French 3 factor model, and then adds a momentum factor, and finally the Pastor-Stambaugh Liquidity factor. Newey-West heteroskedasticity and autocorrelation robust standard errors (with three lags) are used. Regression betas are shown with *t*-statistics shown in brackets beneath. Alpha significance is denoted by stars at 10% (*), 5% (**) and 1% (***) respectively.

| Panel A: Return differences (Fung-Hsieh Model) | | | | | |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|
| Factors | Constant | Market | FH 4 | FH 7 | FH 8 |
| Constant | 0.245*** (2.397) | 0.253*** (4.225) | 0.255*** (3.566) | 0.274*** (3.473) | 0.268*** (3.405) |
| SP500 | - | -0.042 (-2.822) | -0.034 (-2.217) | -0.026 (-1.829) | -0.005 (-0.310) |
| SMB | - | - | 0.003 (0.169) | 0.008 (0.359) | 0.008 (0.375) |
| BOND10YR | - | - | -0.395 (-1.724) | -0.280 (-1.000) | -0.256 (-0.963) |
| CREDSR | - | - | -0.038 (-1.155) | -0.039 (-0.994) | -0.020 (-0.461) |
| PTFSBD | - | - | - | 0.501 (0.895) | 0.451 (0.824) |
| PTFSFX | - | - | - | 0.425 (0.936) | 0.435 (0.835) |
| PTFSCOM | - | - | - | -0.140 (-0.254) | -0.232 (-0.415) |
| EMERGING | - | - | - | - | -0.020 (-2.186) |
| N | 40 | 40 | 40 | 40 | 40 |
| Adjusted R ² | | 0.299 | 0.330 | 0.344 | 0.365 |

**Panel B: Return differences (Fama-French 3 factors + Momentum +
Pastor-Stambaugh Liquidity Model)**

| Factors | FF3 | FF3 + Mom | FF3 + Mom + Liquidity |
|-------------------------|---------------------|---------------------|----------------------------------|
| Constant | 0.260*** (3.884) | 0.247*** (4.071) | 0.264*** (5.040) |
| MKTRF | -5.628 (-3.447) | -6.145 (-3.796) | -5.375 (-4.274) |
| SMB | 0.325 (0.214) | 0.577 (0.365) | 1.552 (1.213) |
| HML | 5.347 (2.827) | 4.342 (2.230) | 0.275 (0.152) |
| UMD | - | -1.390 (-2.675) | -1.176 (-2.587) |
| PSLIQ | - | - | -3.246 (-2.733) |
| N | 40 | 40 | 40 |
| Adjusted R ² | 0.116 | 0.110 | 0.091 |

Other robustness checks

Funds-of funds

The returns reported by funds of hedge funds (FOFs) are of course a function of the returns earned by the individual hedge funds in which the FOF is invested. If an individual fund revises past returns then, unless it is offset by a revision in the opposite direction by another hedge fund, the FOF will have to revise its past returns. This leads to worries of double counting, and to whether our results are robust to the removal of FOFs from the analysis.

Tables A.15 and A.16 below replicate the results presented in the tables in the paper. The first two tables refer to the results from probit regressions on the types of funds that revise their returns, and are largely unchanged following the exclusion of FOFs. The latter table presents results on the future performance differential between revisers and non-revisers. We find that the risk-adjusted average return on the difference portfolio is slightly lower when FOFs are excluded (0.24% per month compared with 0.28%), but it remains strongly significant across all risk adjustment models. Thus revising returns remains a significant predictor of poor future performance for both individual funds and funds of hedge funds.

Empirical results for single databases

In addition to tracking vintages of hedge fund databases over the period July 2007 to May 2011, this project also involves the consolidation of the four largest hedge fund databases (TASS, HFR, BarclayHedge and CISDM). Part of this consolidation process, described in detail in Appendix A of this document, involves the identification of funds that appear in more than one database. To avoid labeling as a "revision" a return that differs across two databases, we associate each fund with a single database (choosing the database with the longest history for that fund, if more than one database is available). Nevertheless, to address any concerns that the revisions we detect are due to the computationally-intensive tasks associated with merging and tracking vintages of multiple hedge fund databases, we also present results separately using just a single database at a time.

Table A.18 replicates the probit model results presented in the paper. We see from these tables that the parameter estimates and significance levels are consistent across all databases except CISDM, where the estimates are smaller and rarely significant. This is likely due to the fact that the CISDM database is updated less frequently than the other three databases.

In Table A.19 we present results on the reviser/non-reviser performance differential, described in the paper, separately for each database, using the Fung-Hsieh seven-factor model to risk adjust the returns. For the CISDM database we have too few updates in the out-of-sample period to include it separately in this analysis. The results for the other three databases are in line with the main results: the reviser portfolio underperforms the non-reviser portfolio. The degree of under-performance is weakest in the TASS database (0.14% per month) and greatest in the BarclayHedge database (0.65%) per month. For the HFR and BarclayHedge databases the difference is statistically significant, while not so for the TASS database. Thus our results are not driven by our use of a consolidated hedge fund database.

Table A.16
Robustness Check (excl. FOFs): Probit Regression for Revisions

The table shows the marginal effects from a probit regression on the sample but excluding Funds-of-Funds (FOFs). (We remove funds marked with this strategy.) The dependent variable takes the value of 1 if a fund had revised data over any of the 40 vintages that we capture, and 0 otherwise. The independent variables are lifetime average returns, lifetime average AUM, standard deviation of returns, and the autocorrelation of returns, all measured as ranks relative to the other funds in the data; and the number of return observations in the return history of the fund. Other relevant fund variables are a dummy variable which takes the value of 1 if the fund is located Offshore, a total restrictions variable (measured as the sum of the reported lockup and redemption notice periods), a flag which takes the value of 1 for the fund if there is any information pertaining to audits available in any of the databases (and in any of the vintages), and a management change flag which takes the value of 1 if the management company or manager name changes across vintages. We also include database and strategy fixed-effects in the regressions. dF/dx shows the change in the independent variable for a discrete change in any independent dummy variable from 0 to 1, and the slope at the mean for continuous independent variables. Robust standard errors control for heteroskedasticity, and cluster by database. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| | dF/dx | Z-stat |
|-------------------------------|--------------|---------------|
| Lifetime Avg. AUM (Rank) | 0.119*** | (4.144) |
| Lifetime Avg. Ret (Rank) | -0.022 | (-0.697) |
| Lifetime Ret. Std. (Rank) | 0.138*** | (7.560) |
| Return Autocorrelation (Rank) | 0.047 | (1.634) |
| Return History Length | 0.019*** | (3.874) |
| Offshore | -0.036 | (-0.952) |
| Total Restrictions | 0.011*** | (20.943) |
| Audit | 0.042* | (1.779) |
| High-Water Mark or Hurdle | 0.112*** | (3.316) |
| Any Management Change | 0.128*** | (3.770) |
| <i>Database Fixed Effects</i> | | |
| HFR | 0.019 | (0.708) |
| CISDM | -0.124*** | (-10.960) |
| BarclayHedge | -0.084*** | (-9.928) |
| <i>Strategy Fixed Effects</i> | | |
| Macro | 0.024 | (1.450) |
| Relative Value | 0.051 | (1.328) |
| Directional Traders | -0.044 | (-0.929) |
| Multi-Process | -0.008 | (-0.467) |
| Emerging | 0.030 | (1.337) |
| Fixed Income | 0.040*** | (3.711) |
| Other | 0.079 | (1.247) |
| Managed Futures | 0.126*** | (3.141) |
| N | 8,306 | |
| Pseudo R ² | 0.067 | |

Table A.17
Robustness Check (excl. FOFs): Probit Regression for Revisions at Vintage Level

This table runs essentially the same specification as in Table A.15, excluding Funds-of-Funds (FOFs), the difference is that we employ the panel structure of the data, and the fund-vintage is now our unit of analysis. The dependent variable takes the value of 1 if a fund revised data between the last available vintage v-1 and the current vintage v. The ranks of the lifetime variables are therefore now measured using data in vintage v-1 on assets under management, and returns. We also add an independent variable that takes the value of 1 if the fund experienced a data revision in the prior vintage, and 0 otherwise. Other relevant fund variables are a dummy variable which takes the value of 1 if the fund is located offshore, a total restrictions variable (measured as the sum of the reported lockup and redemption notice periods) and a flag which takes the value of 1 for the fund if there is any information pertaining to audits available in any of the databases. We also include database and strategy fixed-effects in the regressions. dF/dx shows the change in the independent variable for a discrete change in any independent dummy variable from 0 to 1, and the slope at the mean for continuous independent variables. Robust standard errors control for heteroskedasticity, and cluster by vintage. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| | dF/dx | Z-stat |
|-------------------------------------|-----------|----------|
| Lifetime Avg. AUM (Rank) (v-1) | 0.029*** | (7.179) |
| Lifetime Avg. Return (Rank) (v-1) | 0.011*** | (4.321) |
| Prior Year Avg. Return (Rank) (v-1) | 0.024*** | (5.997) |
| Lifetime Ret. Std. (Rank) (v-1) | 0.007** | (2.254) |
| Return Autocorrelation (Rank) (v-1) | 0.009*** | (3.965) |
| Return History Length (v-1) | 0.000** | (2.125) |
| Prior Vintage Revision Indicator | 0.215*** | (11.819) |
| Offshore | -0.008*** | (-4.775) |
| Total Restrictions | 0.001*** | (2.831) |
| Audit | 0.017*** | (5.058) |
| High-Water Mark or Hurdle | 0.007** | (2.285) |
| Any Management Change | 0.077*** | (3.775) |
| <i>Database Fixed Effects</i> | | |
| HFR | 0.009*** | (3.097) |
| CISDM | -0.044*** | (-6.010) |
| BarclayHedge | 0.017** | (2.054) |
| <i>Strategy Fixed Effects</i> | | |
| Macro | 0.018*** | (5.557) |
| Relative Value | 0.007* | (1.737) |
| Directional Traders | -0.005** | (-2.552) |
| Multi-Process | 0.011*** | (3.445) |
| Emerging | 0.007** | (2.209) |
| Fixed Income | 0.011*** | (3.343) |
| Other | 0.016*** | (3.718) |
| Managed Futures | 0.031*** | (5.571) |
| N | 224,426 | |
| Pseudo R ² | 0.133 | |

Table A.18
Robustness Check (excl. FOFs): Regressions on Return Differences between Portfolios

This table shows the significance of the differences in returns between the non-reviser and reviser portfolios (on the sample excluding Funds-of-Funds). The monthly return differences are analysed against different risk models. Panel A uses factors from the Fung-Hsieh model, such as a market model using S&P 500, four of the market related Fung-Hsieh factors, and then the Fung-Hsieh 7 and 8 Factor model. Panel B uses an alternate specification with the Fama-French 3 factor model, and then adds a momentum factor, and finally the Pastor-Stambaugh Liquidity factor. Newey-West heteroskedasticity and autocorrelation robust standard errors (with three lags) are used. Regression betas are shown with *t*-statistics shown in brackets beneath. Alpha significance is denoted by stars at 10% (*), 5% (**) and 1% (***) respectively.

| Panel A: Return differences (Fung-Hsieh Model) | | | | | |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|
| Factors | Constant | Market | FH 4 | FH 7 | FH 8 |
| Constant | 0.284*** (3.536) | 0.285*** (4.339) | 0.253*** (3.141) | 0.236*** (2.853) | 0.238*** (2.886) |
| SP500 | - | -0.004 (-0.378) | -0.014 (-0.813) | -0.016 (-1.154) | -0.023 (-1.799) |
| SMB | - | - | 0.030 (1.898) | 0.031 (2.131) | 0.031 (2.031) |
| BOND10YR | - | - | -0.040 (-0.233) | 0.101 (0.391) | 0.093 (0.368) |
| CREDSPR | - | - | 0.023 (0.997) | 0.045 (1.248) | 0.039 (1.030) |
| PTFSBD | - | - | - | -0.419 (-0.646) | -0.402 (-0.611) |
| PTFSFX | - | - | - | 1.152 (1.600) | 1.149 (1.653) |
| PTFSCOM | - | - | - | -1.353 (-1.621) | -1.319 (-1.673) |
| EMERGING | - | - | - | - | 0.007 (0.775) |
| N | 40 | 40 | 40 | 40 | 40 |
| Adjusted R ² | | -2.27% | -6.11% | -4.09% | -6.84% |

**Panel B: Return differences (Fama-French 3 factors + Momentum +
Pastor-Stambaugh Liquidity Model)**

| Factors | FF3 | FF3 + Mom | FF3 + Mom + Liquidity |
|-------------------------|---------------------|---------------------|----------------------------------|
| Constant | 0.267*** (3.391) | 0.245*** (4.165) | 0.257*** (4.308) |
| MKTRF | -1.455 (-1.100) | -2.339 (-2.480) | -1.801 (-1.644) |
| SMB | 2.952 (1.927) | 3.382 (2.059) | 4.063 (2.868) |
| HML | 2.204 (1.616) | 0.486 (0.429) | -2.357 (-1.051) |
| UMD | - | -2.378 (-2.637) | -2.228 (-2.576) |
| PSLIQ | - | - | -2.269 (-1.892) |
| N | 40 | 40 | 40 |
| Adjusted R ² | 18.62% | 16.55% | 15.91% |

Table A.19**Robustness Check (Single Database Check): Probit Regression for Revisions**

The table shows the marginal effects from a probit regression on the sample focusing on each database in turn. (We drop other funds not from the database in each case). The dependent variable takes the value of 1 if a fund had revised data over any of the 40 vintages that we capture, and 0 otherwise. The remaining regressors have been described earlier in these tables such as Table A.5. We also include strategy fixed-effects in the regressions. dF/dx shows the change in the independent variable for a discrete change in any independent dummy variable from 0 to 1, and the slope at the mean for continuous independent variables. Robust standard errors control for heteroskedasticity. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| | TASS dF/dx | HFR dF/dx | CISDM dF/dx | Barclay Hedge dF/dx |
|-------------------------------|-----------------------------|----------------------------|------------------------------|--|
| Lifetime Avg. AUM (Rank) | 0.129*** | 0.228*** | -0.000 | 0.078** |
| Lifetime Avg. Ret (Rank) | -0.169*** | 0.058 | -0.077 | 0.001 |
| Lifetime Ret. Std. (Rank) | 0.138*** | 0.091** | 0.099 | 0.063* |
| Return Autocorrelation (Rank) | 0.092*** | 0.040 | 0.193*** | 0.078** |
| Return History Length | 0.028*** | 0.012*** | 0.018*** | 0.012*** |
| Offshore | 0.018 | -0.117*** | -0.049 | -0.033* |
| Total Restrictions | 0.016*** | 0.017*** | 0.022*** | 0.014*** |
| Audit | 0.026 | -0.058 | 0.088** | -0.057 |
| High-Water Mark or Hurdle | 0.209*** | 0.006 | 0.028 | 0.117*** |
| Any Management Change | 0.106*** | 0.187*** | 0.003 | 0.079*** |
| <i>Strategy Fixed Effects</i> | | | | |
| Macro | 0.020 | 0.009 | 0.153 | 0.038 |
| Relative Value | 0.292*** | -0.014 | 0.118 | 0.003 |
| Directional Traders | 0.137 | -0.107** | -0.081 | 0.023 |
| Funds-of-Funds | 0.156*** | 0.157*** | 0.236*** | 0.170*** |
| Multi-Process | -0.009 | -0.011 | 0.093 | -0.013 |
| Emerging | 0.073* | | 0.080 | 0.003 |
| Fixed Income | 0.023 | -0.022 | 0.089 | 0.024 |
| Other | 0.127** | | 0.015 | -0.139 |
| Managed Futures | 0.196*** | 0.215*** | 0.209*** | 0.044 |
| N | 4,585 | 2,983 | 1,106 | 3,454 |
| Pseudo R ² | 0.116 | 0.089 | 0.091 | 0.043 |

Table A.20**Robustness Check (Single Database Check): Probit Regression for Revisions at Vintage Level**

This table runs essentially the same specification as in Table A.17, the difference is that we employ the panel structure of the data, and the fund-vintage is now our unit of analysis. We also focus on each database in turn. The dependent variable takes the value of 1 if a fund revised data between the last available vintage $v-1$ and the current vintage v . The remaining regressors have been described earlier in tables such as Table III. We also include strategy fixed-effects. dF/dx shows the change in the independent variable for a discrete change in any independent dummy variable from 0 to 1, and the slope at the mean for continuous independent variables. Robust standard errors control for heteroskedasticity, and cluster by vintage. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| | TASS dF/dx | HFR dF/dx | CISDM dF/dx | Barclay Hedge dF/dx |
|-------------------------------------|-----------------------------|----------------------------|------------------------------|--|
| Lifetime Avg. AUM (Rank)(v-1) | 0.026*** | 0.057*** | 0.001 | 0.039*** |
| Lifetime Avg. Ret (Rank) (v-1) | 0.004 | 0.016** | -0.007 | 0.014** |
| Prior Year Avg. Return (Rank) (v-1) | 0.040*** | 0.029*** | 0.006 | 0.059*** |
| Lifetime Ret. Std. (Rank) (v-1) | 0.005 | 0.009 | 0.005 | -0.009** |
| Return Autocorrelation (Rank) (v-1) | 0.018*** | 0.015*** | 0.003 | 0.016*** |
| Return History Length(v-1) | 0.001*** | 0.001* | 0.001 | -0.002*** |
| Prior Vintage Revision Indicator | 0.229*** | 0.243*** | -0.009 | 0.372*** |
| Offshore | -0.005 | -0.019*** | -0.002 | 0.002 |
| Total Restrictions | 0.001 | 0.001*** | 0.001 | 0.005*** |
| Audit | 0.036*** | 0.015*** | 0.004 | -0.002 |
| High-Water Mark or Hurdle | 0.007 | 0.015*** | 0.001 | 0.023*** |
| | 0.099*** | 0.204*** | 0.164*** | 0.037** |
| <i>Strategy Fixed Effects</i> | | | | |
| Macro | 0.009 | 0.020*** | 0.007 | 0.039*** |
| Relative Value | 0.040* | 0.019** | -0.000 | -0.031*** |
| Directional Traders | 0.023 | -0.016*** | -0.005 | -0.010** |
| Funds-of-Funds | 0.050*** | 0.045*** | 0.012 | 0.075*** |
| Multi-Process | 0.014** | 0.006 | 0.005 | 0.003 |
| Emerging | 0.020*** | | 0.004 | -0.012*** |
| Fixed Income | 0.018*** | 0.002 | 0.009 | -0.008 |
| Other | 0.035*** | | -0.004 | -0.074*** |
| Managed Futures | 0.053*** | 0.067*** | 0.009 | 0.028*** |
| N | 127,030 | 78,435 | 37,048 | 91,906 |
| Pseudo R ² | 0.127 | 0.154 | 0.041 | 0.209 |

Table A.21
Robustness Check (Single Database Check): Regressions on Return Differences between Portfolios

This table shows the significance of the differences in returns between the Non-Reviser and Reviser portfolios (focusing on each database in turn). CISDM is not shown due to the slower updating of the database. The monthly return differences are analysed against different risk models. Panel A analyses return differences against the Fung-Hsieh 7 Factor model. Panel B uses an alternate specification with the Fama-French 3 factor model, with a momentum factor, and the Pastor-Stambaugh Liquidity factor. Newey-West heteroskedasticity and autocorrelation robust standard errors (with three lags) are used. Regression betas are shown with *t*-statistics shown in brackets beneath. Alpha significance is denoted by stars at 10% (*), 5% (**) and 1% (***) respectively.

| Panel A: Return differences (Fung-Hsieh 7 Factor Model) | | | |
|--|---------------------------|--------------------|----------------------|
| Factors | Database Selection | | |
| | TASS | HFR | Barclay-Hedge |
| Constant | 0.142 (1.273) | 0.203** (2.380) | 0.645*** (4.751) |
| SP500 | -0.043 (-2.608) | 0.036 (3.335) | 0.006 (0.342) |
| SMB | 0.030 (1.326) | 0.032 (2.316) | 0.036 (1.216) |
| BOND10YR | -0.037 (-0.116) | -0.195 (-0.834) | -0.066 (-0.157) |
| CREDSR | 0.040 (0.852) | 0.001 (0.022) | -0.059 (-0.890) |
| PTFSBD | -0.052 (-0.071) | 0.077 (0.138) | 0.148 (0.184) |
| PTFSFX | 0.278 (0.291) | 0.440 (0.725) | 1.092 (1.274) |
| PTFSCOM | -1.052 (-0.985) | -0.867 (-1.361) | -0.141 (-0.134) |
| N | 32 | 32 | 40 |
| Adjusted R ² | 0.035 | 0.337 | 0.057 |

**Panel B: Return differences (Fama-French 3 factors + Momentum +
Pastor-Stambaugh Liquidity Model)**

| Factors | Database Selection | | |
|-------------------------|---------------------------|---------------------|---------------------------|
| | TASS | HFR | Barclay- Hedge |
| Constant | 0.129** (2.470) | 0.205*** (3.777) | 0.621*** (6.068) |
| MKTRF | -4.528 (-4.637) | 1.994 (2.062) | -3.842 (-1.631) |
| SMB | 3.706 (2.225) | 3.328 (2.718) | 3.698 (1.593) |
| HML | -2.883 (-1.275) | -0.048 (-0.025) | 1.245 (0.337) |
| UMD | -4.028 (-7.227) | -1.889 (-5.717) | -2.274 (-1.572) |
| PSLIQ | -1.260 (-1.082) | -2.081 (-2.281) | -4.512 (-3.242) |
| N | 32 | 32 | 40 |
| Adjusted R ² | 0.155 | 0.081 | 0.271 |

Table A.22**Robustness Check (Management Change Check): Probit Regression for Revisions**

This table runs essentially the same specification as in Table A.5, but tests the robustness of the management change flag. In Panel A, the management change flag is split into its two underlying components –management company name changes, and manager name changes. Panel B reflects the results over just the two databases that capture manager name information. The remaining regressors have been described earlier in these tables such as Table A.5. We also include strategy fixed-effects in the regressions. dF/dx shows the change in the independent variable for a discrete change in any independent dummy variable from 0 to 1, and the slope at the mean for continuous independent variables. Robust standard errors control for heteroskedasticity. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| Panel A: Split Management Change Flag | | |
|--|--------------|---------------|
| | dF/dx | Z-stat |
| Lifetime Avg. AUM (Rank) | 0.119*** | (3.523) |
| Lifetime Avg. Return (Rank) | -0.051 | (-0.836) |
| Lifetime Ret. Std. (Rank) | 0.112*** | (5.369) |
| Return Autocorrelation (Rank) | 0.083*** | (4.731) |
| Return History Length | 0.020*** | (4.292) |
| Offshore | -0.026 | (-0.777) |
| Total Restrictions | 0.020*** | (13.716) |
| Audit | 0.014 | (0.549) |
| High-Water Mark or Hurdle | 0.137*** | (2.976) |
| Management Company Change | 0.097*** | (4.063) |
| Manager Name Change | 0.111** | (2.457) |
| <i>Database Fixed Effects</i> | | |
| HFR | 0.021 | (1.025) |
| CISDM | -0.107*** | (-8.418) |
| BarclayHedge | -0.087*** | (-11.610) |
| <i>Strategy Fixed Effects</i> | | |
| Macro | 0.038*** | (3.040) |
| Relative Value | 0.056 | (1.291) |
| Directional Traders | -0.047 | (-1.028) |
| Funds-of-Funds | 0.165*** | (17.624) |
| Multi-Process | -0.016* | (-1.755) |
| Emerging | 0.032 | (1.143) |
| Fixed Income | 0.026* | (1.918) |
| Other | 0.070 | (1.263) |
| Managed Futures | 0.147*** | (3.275) |
| N | 12,128 | |
| Pseudo R ² | 0.080 | |

| Panel B: Management Name Databases | | |
|---|--------------|---------------|
| | dF/dx | Z-stat |
| Lifetime Avg. AUM (Rank) | 0.148** | (1.992) |
| Lifetime Avg. Return (Rank) | 0.030 | (1.032) |
| Lifetime Ret. Std. (Rank) | 0.079*** | (6.011) |
| Return Autocorrelation (Rank) | 0.061*** | (2.829) |
| Return History Length | 0.012*** | (37.014) |
| Offshore | -0.075* | (-1.925) |
| Total Restrictions | 0.017*** | (13.176) |
| Audit | -0.021 | (-0.798) |
| High-Water Mark or Hurdle | 0.076 | (1.636) |
| Management Company Change | 0.081* | (1.920) |
| Manager Name Change | 0.118** | (2.367) |
| <i>Database Fixed Effects</i> | | |
| HFR | 0.111*** | (4.675) |
| <i>Strategy Fixed Effects</i> | | |
| Macro | 0.031 | (1.376) |
| Relative Value | 0.002 | (0.165) |
| Directional Traders | -0.055 | (-0.838) |
| Funds-of-Funds | 0.165*** | (19.311) |
| Multi-Process | -0.006 | (-0.737) |
| Emerging | -0.011 | (-0.998) |
| Fixed Income | 0.006 | (0.210) |
| Other | -0.199*** | (-4.480) |
| Managed Futures | 0.042*** | (21.329) |
| N | 6,437 | |
| Pseudo R ² | 0.068 | |

Table A.23
Probit on Fraud Flags

The table shows the coefficients from a probit regression. The dependent variable takes the value of 1 if a fund had revised data over any of the 40 vintages that we capture, and 0 otherwise. The independent variables are functions of the various fraud flags, as in Table VIII. In model 1, this is the flag value, i.e. 1 if the fraud flag is triggered given the fund's simulated percentile. In model 2, the dependent variable is the p -value assessed from the fraud test statistic or simulated percentile. Model 3 is a combination, with flags for data quality tests (first 4), and p -values for AR(1) and CAR(1). Funds require a minimum of 24 months of returns. Panel A is a selection of the tests, given 'Num. Pairs' is correlated to other data quality flags, and the Benford and Uniform distribution are highly correlated. Panel B uses all the fraud tests. Note the Pseudo R^2 figures are unadjusted for the number of variables. Robust standard errors control for heteroskedasticity. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| Panel A: Selected Tests | | | | | | |
|--------------------------------|-----------------|---------------|---------------------------------|---------------|-----------------------|---------------|
| Flag | 1: Flags | | 2: p-values | | 3: Combination | |
| | Coeff | Z-stat | Coeff | Z-stat | Coeff | Z-stat |
| Constant | -0.627*** | (-30.739) | 2.000 | (-5.438) | 3.000 | (-16.935) |
| Perc. Negative | 0.045 | (1.501) | 0.124** | (2.395) | 0.038 | (1.289) |
| Count Zeros | 0.077** | (2.099) | -0.361** | (-2.550) | 0.076** | (2.073) |
| String | -0.011 | (-0.219) | 0.260 | (1.370) | -0.006 | (-0.115) |
| Perc. Repeats | 0.093** | (2.572) | 0.348*** | (6.492) | 0.090** | (2.493) |
| AR(1) | 0.077*** | (2.808) | 0.199*** | (4.358) | 0.215*** | (4.733) |
| CAR(1) | -0.090** | (-2.260) | -0.119*** | (-2.710) | -0.119*** | (-2.726) |
| N | 10,437 | | 10,437 | | 10,437 | |
| Pseudo R^2 | 0.003 | | 0.008 | | 0.004 | |
| Panel B: All Tests | | | | | | |
| Flag | 1: Flags | | 2: p-values | | 3: Combination | |
| | Coeff | Z-stat | Coeff | Z-stat | Coeff | Z-stat |
| Constant | -0.628*** | (-30.141) | -0.448*** | (-11.981) | -0.592*** | (-15.658) |
| Perc. Negative | 0.043 | (1.407) | -0.127** | (-2.418) | 0.039 | (1.304) |
| Count Zeros | 0.074** | (2.000) | 0.122 | (0.782) | 0.076** | (2.053) |
| String | -0.021 | (-0.407) | -0.322* | (-1.710) | -0.012 | (-0.240) |
| Num. Pairs | 0.032 | (0.424) | 0.979*** | (3.618) | 0.035 | (0.469) |
| Perc. Repeats | 0.089** | (2.431) | -0.353*** | (-6.564) | 0.087** | (2.377) |
| Uniform | 0.077 | (1.465) | 0.024 | (0.258) | 0.025 | (0.262) |
| Benford | -0.066 | (-1.165) | -0.036 | (-0.381) | -0.045 | (-0.476) |
| AR(1) | 0.077*** | (2.826) | -0.200*** | (-4.368) | -0.215*** | (-4.733) |
| CAR(1) | -0.090** | (-2.241) | 0.119*** | (2.714) | 0.119*** | (2.710) |
| N | 10,437 | | 10,437 | | 10,437 | |
| Pseudo R^2 | 0.003 | | 0.009 | | 0.004 | |

Table A.24
Robustness Check (Excluding CISDM): Liquidation Probabilities

This table shows the liquidation probabilities of the combined reviser and non-reviser funds, and then excludes the funds from CISDM due to its infrequent reporting. Funds reporting returns are classified within a period, and this cohort is tracked over future six monthly horizons until they stop reporting returns. Liquidation probabilities are calculated relative to the initial number of funds in the cohort. For example, in the six month period up to December 2008, a combined 7,533 funds report returns. Going forward 12 months later, 26.5% of these funds had ceased reporting. Excluding CISDM funds leaves only 6,771 funds reporting returns over this period, with lower liquidation rates after a year of 18.3%. Liquidation rates are averaged across horizons.

| Classification Period | Fund Count | Liquidation Probabilities: Months ahead | | | | |
|-----------------------------|------------|---|-------|-------|-------|-------|
| | | 6 | 12 | 18 | 24 | 30 |
| All Funds | | | | | | |
| Up to Jun 2008 | 8,875 | 0.140 | 0.309 | 0.375 | 0.431 | 0.519 |
| Up to Dec 2008 | 7,533 | 0.192 | 0.265 | 0.329 | 0.434 | |
| Up to Jun 2009 | 6,440 | 0.085 | 0.161 | 0.290 | | |
| Up to Dec 2009 | 6,184 | 0.078 | 0.219 | | | |
| Up to Jun 2010 | 5,525 | 0.146 | | | | |
| Up to Dec 2010 | 4,562 | | | | | |
| Average | | 0.128 | 0.239 | 0.331 | 0.432 | 0.519 |
| All Funds (Excluding CISDM) | | | | | | |
| Up to Jun 2008 | 7,941 | 0.134 | 0.228 | 0.302 | 0.364 | 0.463 |
| Up to Dec 2008 | 6,771 | 0.101 | 0.183 | 0.254 | 0.370 | |
| Up to Jun 2009 | 6,440 | 0.085 | 0.161 | 0.290 | | |
| Up to Dec 2009 | 6,184 | 0.078 | 0.219 | | | |
| Up to Jun 2010 | 5,525 | 0.146 | | | | |
| Up to Dec 2010 | 4,562 | | | | | |
| Average | | 0.109 | 0.198 | 0.282 | 0.367 | 0.463 |

Table A.25
Robustness Check: Correlated Revisions Across Shareclasses and Databases

This table shows the extent to which revisions are correlated across databases and shareclasses. 300 funds were sampled at random from our universe of funds. For example, in the third column, for 184 of these revising funds, a duplicate fund could be found in another database. Of these matched funds, 68.5% had at least one other related fund with a revision in the same period in another database.

| | Shareclasses | Databases |
|--|---------------------|------------------|
| (1) Funds with shareclasses or reporting to multiple databases | 219 | 184 |
| (2) Total revisions for funds in (1) | 3,173 | 2,565 |
| (3) Average number of entities per funds in (1) | 5.526 | 2.489 |
| (4) Average number of entities reporting at time of revision | 2.190 | 1.365 |
| (5) Funds in (1) with another entity in (4) revising | 156 | 126 |
| (6) Percentage of funds with correlated revision (5)/(1) | 0.712 | 0.685 |

Table A.26
Investor Flows and Revisions

The table shows from a regression of flows on past performance for revising funds. The dependent variable is the flow in the following calendar year $t+1$, for all years t for which a fund revised returns (recall notation $R(i,t,v)$ for a fund i in a period t reported in a vintage v). The dependent variables are the “initial” return reported by the fund for year t , i.e., the return $R(i,t,v_{initial})$ reported in the first vintage $v_{initial}$ of data available for the fund, and the difference between the “final” return i.e., the return $R(i,t,v_{final})$ reported in the final vintage v_{final} of data available for the fund and the initial return reported by the fund for the same year t . For example, if fund X initially reported 4% average annual return for year t , and at the final vintage, this reported average stood at 6% including the impact of all revisions, then the Last-Initial variable would be 2%. Flows are standardised by the fund’s previous year AUM, and we only include periods in which the fund had at least 6 months of return observations, to reduce the noise in the dependent variable. We also include strategy fixed-effects and crisis period dummies in some of the specifications. Robust standard errors control for heteroskedasticity, and cluster at the fund-level. *, **, *** denote significance at the 10%, 5%, and 1% levels respectively.

| Future Flows | (1) | (2) | (3) | (4) |
|-------------------------|------------|------------|------------|------------|
| Last Return | 0.286*** | 0.288*** | 0.281*** | 0.262*** |
| Last - Initial Return | | 0.313* | 0.313* | 0.303* |
| Lagged Flow | - | - | 0.207*** | 0.202*** |
| Strategy Fixed Effects? | - | - | Y | Y |
| Crisis Period Dummy? | - | - | - | Y |
| N | 5,726 | 5,726 | 5,726 | 5,726 |
| Adjusted R ² | 0.040 | 0.093 | 0.099 | 0.110 |

Figure A.1
Portfolio Performance – Conditioning on Recency ($k > 12$)

The figure shows the cumulative performance of the reviser and non-reviser portfolios, excluding recent revisions near the vintage date for $k > 12$ months. That is, at each date, only funds which revise returns over a year old are included in the construction of the reviser portfolio. The non-reviser portfolio holds performance of funds that never revise between vintages plus the early records of funds before they become revisers. For example, if a fund first revises at vintage v ; its earlier performance will be included in the non-reviser portfolio as it had not yet been classified as a reviser. But once it joins the reviser portfolio it stays out of the non-reviser portfolio. The index is based to 100 at 31 December 2007, just before the second vintage starts.

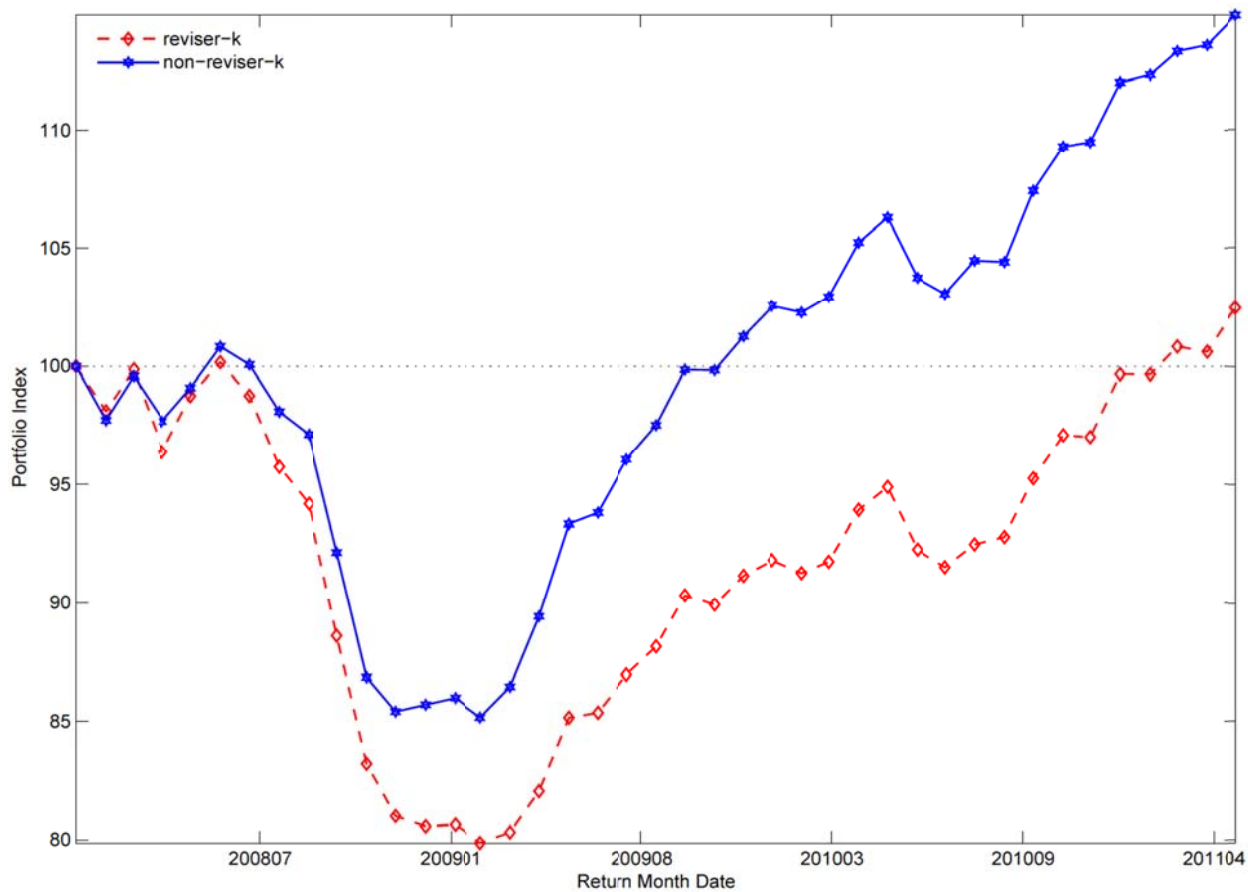


Figure A.2
Cumulative Flows – Revisers and Non-Revisers

This figure shows the cumulative flows to reviser and non-reviser portfolios. The non-reviser portfolio holds performance of funds that never revise between vintages plus the early records of funds before they become revisers. For example, if a fund first revises at vintage v , it will be included in the non-reviser portfolio prior to that vintage. Once it joins the reviser portfolio it is removed from the non-reviser portfolio. The index is based to 100 at 31 December 2007, just before the second vintage starts, and flow calculations employ average assets reported across all vintages.

