

A Appendix

A.1 Identification of Hedge Funds and Mutual Funds in the Ancerno Data

Although Ancerno’s clients, mainly pension funds and money managers, are always anonymous, we follow the procedure in Cotelioglu et al. (2021) to identify asset management companies, which operate primarily mutual funds and hedge funds, whose names we observe. An identifier (the variable *managercode*) denotes the trades originating from the same management company. Corresponding to the company identifier, we are given the name of the management company to which the trade pertains (the variable *manager*). This variable is crucial for our identification of hedge funds. In particular, we identify hedge funds by matching the names of the management companies to two sources. The first source is a list of hedge funds that is based on quarterly 13F mandatory filings. This source is also used in Ben-David et al. (2012) and is based on the combination of a Thomson Reuters proprietary list of hedge funds, ADV filings, and industry listings. The second source is the combined data from three commercial databases – the Lipper/TASS Hedge Fund Database, Morningstar CISDM, and Hedge Fund Research – which contain hedge-fund-level information at the monthly frequency. In the identification process, we make sure to select exclusively “pure-play” hedge fund management companies, that is, institutions whose core business is managing hedge funds. This is done by applying the same criteria as in K. Brunnermeier and Nagel (2004) and by manual verification. In the end, the matching procedure allows us to identify 99 distinct hedge fund management companies that are present in Ancerno at various times throughout the sample.

We single out mutual funds residually as the managers that are not hedge funds or pension funds. To identify pension funds, we use the *clienttype* variable, as done in e.g. Puckett and Yan (2011). In some instances, this classification might be incorrect – for example, when the client is a pension fund, but the trades are executed by a mutual fund

on its behalf. Therefore, we also perform a manual match of the Ancerno manager name with S12 mandatory filings data. Based on this procedure, we identify 417 distinct mutual fund managing companies for our analysis. In part of our analysis, we use the variable *clientmgrcode* in Ancerno to identify an individual fund within a management company, and we aggregate the trades of each stock by each fund per day (at the fund-stock-day level) for that analysis.

A.2 Mutual Fund Holdings Communications

As written in the main text, U.S. mutual funds report their second and fourth fiscal quarter ends' holdings in the N-CSR form, no later than 10 days after quarter end. The first- and third quarter-end holdings are reported in the N-PORT form no later than 60 days after quarter end. They mention specifically whether they were holding some worse and best performing stocks in the corresponding period and whether they keep holding it at the end of this period. The majority of mutual fund families, e.g. Fidelity, report their holdings monthly in Morningstar. More importantly, funds also communicate with their clients about their portfolio holdings through informal channels upon their requests.

Below we report extracts from the Statements of Additional Information (SAI) as well as the Annual Report (Form N-CSR) detailing how the funds communicate their holdings information to third parties. The main upshot of this information is that investors can learn about the fund's holdings more frequently and more timely than the mandatory quarterly reports with their associated delays.

As a first case study, we focus on the Fidelity Magellan Fund (ticker: FMGKX), which in its SAI dating of May 29, 2021, reports:

The fund will provide a full list of holdings, including its top ten holdings, monthly on www.fidelity.com 30 days after the month-end (excluding high income security holdings, which generally will be presented collectively monthly and included in a list of full holdings 60 days after its fiscal quarter-end) [...]

The fund may also from time to time provide or make available to the Board or third parties upon request specific fund level performance attribution information and statistics [which] may include (i) the allocation of the fund's portfolio holdings...

(and italics below): We also report “Management’s Discussion of Fund Performance” in the Annual Report (Form N-CSR) of Fidelity Magellan Fund, dating of August 31, 2021:

Comments from Portfolio Manager Sammy Simnegar:

*For the fiscal year ending March 31, 2022, the fund gained 12.29%, trailing the 15.65% advance of the benchmark S&P 500 index. Versus the benchmark, security selection was the primary detractor, although a complete lack of exposure to the market-leading energy sector was the single biggest headwind for relative performance. Picks among information technology and consumer discretionary stocks also hindered the fund's relative result. Not owning Tesla, a benchmark component that gained about 61%, was the biggest individual relative detractor. **The fund's non-benchmark stake in DocuSign, a position not held at period end, returned approximately -47%. Also hampering performance was our overweighting in Visa, which returned about -11% and was one of our largest holdings at period end.** In contrast, the largest contributor to performance versus the benchmark was an overweighting in information technology. Investment choices in consumer staples also helped, as did an overweighting in the communication services sector, where both avoiding the lagging telecommunication services segment and overweighting the media & entertainment industry helped. **The fund's top individual relative contributor was an outsized stake in Nvidia, which gained roughly 105% the past year. The company was among our biggest holdings. Also boosting value was our overweighting in Fortinet, which gained about 85%. Another notable relative contributor was an outsized stake in Costco Wholesale (+65%), which was one of our largest holdings as of March 31.** Notable changes in positioning include reduced exposure to the communication services sector and a higher allocation to health care stocks.*

As a second case study, we report extracts of the SAI of Applied Finance’s Core,

Explorer, Select Funds (tickers: AFALX, AFDVX, AFVLX, respectively), dating of August 31, 2021:

...From time to time, employees of the Adviser may express their views orally or in writing on the Funds' portfolio securities or may state that the Funds have recently purchased or sold, or continues to own, one or more securities. The securities subject to these views and statements may be ones that were purchased or sold since the Funds' most recent quarter-end and therefore may not be reflected on the list of the Funds' most recent quarter-end portfolio holdings. These views and statements may be made to various persons, including members of the press, brokers and other financial intermediaries that sell shares of the Funds, shareholders in the Funds, persons considering investing in the Funds or representatives of such shareholders or potential shareholders, such as fiduciaries of a 401(k) plan or a trust and their advisers, and other entities for which the Adviser may determine. The nature and content of the views and statements provided to each of these persons may differ. From time to time, employees of the Adviser also may provide oral or written information ("portfolio commentary") about the Funds, including, but not limited to, how the Funds' investments are divided among various sectors, industries, countries, investment styles and capitalization sizes, and among stocks, bonds, currencies and cash, security types, bond maturities, bond coupons and bond credit quality ratings. This portfolio commentary may also include information on how these various weightings and factors contributed to Fund performance. The Adviser may also provide oral or written information ("statistical information") about various financial characteristics of the Funds or their underlying portfolio securities including, but not limited to, alpha, beta, R-squared, coefficient of determination, duration, maturity, information ratio, Sharpe ratio, earnings growth, payout ratio, price/book value, projected earnings growth, return on equity, standard deviation, tracking error, weighted average quality, market capitalization, percent of debt to equity, price to cash flow, dividend yield or growth, default rate, portfolio turnover, and risk and style characteristics. This portfolio commentary and statistical information about the

Funds may be based on the Funds' portfolios as of the most recent quarter-end or the end of some other interim period, such as month-end. The portfolio commentary and statistical information may be provided to various persons, including those described in the preceding paragraph. The nature and content of the information provided to each of these persons may differ...

A.3 Institutional Market Participation around Earnings Announcements

Another relevant dimension of institutional behavior is market participation around these events. In Figure A5, we study unsigned trading volume at the stock level as a fraction of the volume in the prior six months. The analysis replicates the specification in Eq. (3), replacing the dependent variable with the fraction of overall daily volume—i.e., *Buys+Sells*—divided by the average of the numerator in the prior six months. We find a significant reduction in trading volume of up to 5% two days before the announcement. Then, volume rises on the day of the announcement and it spikes on day 1 with an increase of 90% relative to the days outside of the window. It remains at abnormal levels in the following two weeks. The conclusion is that institutions withdraw from the market (i.e., they trade less) ahead of announcements, which is consistent with the previous result that they reduce exposure to the announcing stocks.

The evidence in Figure A5 is consistent with the findings in Frazzini and Lamont (2007), who show that abnormal volume across all investors decreases ahead of earnings announcements and rises from the day of the announcement. This evidence is also consistent with the finding in Zhu (2020) that the stock market volume decreases in anticipation of FOMC announcements and increases afterward. Finally, the finding of a decrease in trading volume is consistent with theories positing that, around the release of earnings, information asymmetry goes up (Kim and Verrecchia, 1994) and *uninformed* traders withdraw from the market. Thus, uninformed investors abstain from trading during these periods to avoid being adversely selected.

A.4 Cross-sectional Risk-Return Tradeoff

From the time-series evidence, it appears that institutional trading behavior neglects the better risk-return tradeoff that stocks provide before earnings announcement. We ask, therefore, whether this attitude is present when looking at the cross section of stocks. In particular, we estimate the following specification:

$$\begin{aligned} trades_{j,t} = & a + b_1 * InfoRatio[0,1]_{j,t} \times EarningDay_{j,t} \\ & + b_2 * \ln(MarketCap)_{j,t} \times EarningDay_{j,t} \\ & + b_3 * InfoRatio[0,1]_{j,t} + b_4 * \ln(MarketCap)_{j,t} + b_5 * EarningDay_{j,t} + v_j + \varepsilon_{j,t}, \end{aligned} \tag{19}$$

where $trades_{j,t}$ is defined as in Eq. (1). $InfoRatio[0,1]_{j,t}$ is the information ratio of stock j 's returns during earnings announcements days $[0,1]$ calculated as the average cumulative abnormal returns of stock j on these two days based on Fama-French-Carhart 4 factor model divided by the standard deviation $SD Ret[0,1] (Idio.)_{j,t}$ using the data in the past five years. The summary statistics of the variables in this regression are reported in Table 1.

As shown in Table A5, there is no evidence that institutions increase their order flow on stocks with high information ratios during earnings announcements in the three days before the earnings announcements. The evidence strengthens the puzzle suggesting that institutional trades do not pursue the best risk-return tradeoff ahead of earnings announcements. We obtain similar results using Sharpe ratios instead of information ratios.

A.5 Daily Flows after A Strongly Negative Realization of Earnings Announcement Returns

To obtain a closer description of investor reaction to the realization of holding returns, we study daily fund flows. Morningstar Direct reports daily fund TNAs from 2008 July the 11th to 2013 November the 1st for a subset of mutual funds in our sample. We merge this data with the CRSP Mutual Fund Database for daily returns and portfolio holdings from Thomson Reuters. We end up with 1,497 mutual funds for which we can calculate daily

fund flows. The percentage daily flows are estimated as in Eq.(15) using daily returns and TNAs.

Then, we measure abnormal fund flows using the following regression, which is run separately for each day within the event window $[-20, 100]$ around the earnings announcement:

$$Flow_{i,t} = a_i + b_1 * EventDay_{i,t} + b_2 * Past Ranks_{i,t-1} + b_3 * Past Returns_{i,t-1} \quad (20)$$

$$+ b_4 * Fund Characteristics_{i,t-1} + b_6 * QtoD Ret_{i,t} + b_5 * Ret_{i,t} + \eta_t + \varepsilon_{i,t},$$

where $Flow_{i,t}$ is the daily flow of fund i on day t . Variable $EventDay_{i,t}$ equals one for the event days under investigation (e.g., day $[-1]$) and zero for days outside the event window $[-20, 100]$. That is, we use the daily fund flows on days outside the event window $[-20, 100]$ as the baseline. We control for both fund fixed effect a_i and day fixed effect η_t in this regression, as well as all the control variables about funds' past return, return ranks, and other characteristics in the last quarter. In addition, we add funds' quarter-to-date returns $QtoD Ret_{i,t}$ and returns on the same day $Ret_{i,t}$ into the control variables. We only include mutual funds holding at least 30 stocks at the end of previous quarter into our analysis. We denote the fund flows that are lower than the baseline as abnormal fund outflows, and those higher than the baseline as abnormal fund inflows. When calculating the weekly abnormal fund flows, we do the regression of daily fund flows in Eq. (20) once for every five consecutive event days together to calculate the average daily abnormal fund flows in these five days (coefficient \hat{b}_1) and multiply this number by five for weekly abnormal fund flows.

For the analysis of abnormal daily fund flows around a strongly negative earnings announcement return, all days within the event window $[-20, 100]$ of this earnings announcement day are set as event days (i.e., $EventDay_{i,t}$ equals one for each of these event days in a separate regression and zero for days outside this event window). For each fund, we find the lowest earnings announcement return in that fund's portfolio, and we sort the lowest earnings announcement returns of all the funds into quintiles in each quarter. We define a strongly negative earnings announcement return as the lowest earnings announcement

return in the lowest quintile.

As shown in Figure A8, there are already significant abnormal fund outflows in the first week (on day 0 as well) after a strongly negative earnings announcement return, suggesting that a small group of investors react instantly after this event. The majority of investors react within three to 17 weeks after this event, and the effect becomes smaller thereafter. These results are consistent with our conjecture that a small group of investors pay close attention to funds' holding performance (or have constant communicate with fund managers through informal channels), whereas the majority of investors get this information with a delay from either the social media or regular reports of mutual funds. The total abnormal outflow within 20 weeks amounts to 0.54% of fund total net assets, which is similar to the estimates based on monthly flows in Table A20 and quarterly flows in Table A14. The abnormal fund outflows peaks in week 15 in Figure A8, which is also consistent with the peak in four month in Table A20.

A.6 Implied Volatility Spikes

Scheduled announcements correspond to anticipated spikes in volatility. To understand the extent to which predictably higher volatility plays a role in explaining our findings, we extend the main analysis of the paper to all situations in which expected volatility increases.

To this purpose, we use the OptionMetrics database to construct a measure of anticipated spikes in short term volatility. Specifically, we create the variable "Dummy dif 10-30", which equals one if the 10-day implied volatility is more than 15% (95th percentile) higher than the 30-day implied volatility. This measure captures the short-term implied volatility spikes relative to the long-term implied volatility. Regressing our stock-day level measure of institutional trades (as described in Eq. (A2)) on the one-day lag of this dummy variable for spikes in short-term implied volatility, and controlling for stock fixed effects, we find that institutions decrease their order flow, on average, by 5.5% of their average daily trading volume one day after a spike in 10-day implied volatility relative to the 30-day implied

volatility. This result, reported in column (1) of Table A6, is robust to controlling for lagged institutional trades and the levels of 30- and 10-day implied volatility (as in column (2)).

We also generate the variable "Dummy IV shock 30", which equals one if the 30-day implied volatility today is more than 43% higher than its past six-month trailing average (95th percentile), and zero otherwise. As reported in column (3) of Table A6, institutions decrease order flow, on average, by 5.8% of their average daily trading volume one day after a 95th percentile spike in 30-day implied volatility.

Table A7 shows the results based on levels of implied volatility to be consistent with, but less significant than, the results based on the dummy variables for volatility spikes.

A.7 Flow-Performance Sensitivity to the Lowest Performing Holding: Model

The empirical evidence in Table 4 suggests that the holding-level FPS loads mainly on the return of the lowest performing stock during earnings announcements. To accommodate this evidence, we introduce the flow-performance sensitivity to the lowest performing stock (FPS to the lowest) into our benchmark setting. In particular, we modify Eq. (8) and assume that the fund flow in dollar also depends on the earnings announcement return of the lowest performing stock in the portfolio, which is denoted as stock l

$$flow = \rho(h'r + \Delta x'r^e) + \eta(h_l \varepsilon_l^e + \Delta x_l \varepsilon_l^e), \quad (21)$$

where parameter $\eta > 0$ captures the flow-performance sensitivity to the earnings announcement return shock of the lowest performing stock in the portfolio ε_l^e . Eq. (21) shows that $flow$ is an increasing function of the product of trading amount Δx_l and ε_l^e after controlling for the fund-level FPS. Therefore, Eq. (21) gives a direct hypothesis for the empirical test of our new assumption (FPS to the lowest) as follows:

Hypothesis 3 *The earnings announcement return of the lowest performing stock in a fund's portfolio positively correlates with its next-quarter fund flows.*

The parameter Δx_l in the second parenthesis further indicates that

Hypothesis 4 *Purchases of the lowest performing stock before its earnings announcement strengthen its effect on fund flows.*

Then the change in fund size q becomes

$$\Delta q = (1 + \rho) (h'r + \Delta x' r^e) + \eta (h_l \varepsilon_l^e + \Delta x_l \varepsilon_l^e) - \frac{1}{2} \lambda \Delta x' \Delta x, \quad (22)$$

and the maximization problem becomes

$$\max_{\Delta x_j} E(\Delta q) = (1 + \rho) (h' \alpha_0 + \Delta x' \alpha^e) + \sum_j Pr(j = l) \eta (h_j + \Delta x_j) E(\varepsilon_j^e | j = l) - \frac{1}{2} \lambda \Delta x' \Delta x. \quad (23)$$

Under the assumption that ε_j^e is normally distributed and that the volatility of ε_j^e is σ^2 for all stocks, $Pr(j = l) = \frac{1}{n}$, and $E(\varepsilon_j^e | j = l) = \sigma E_n$.⁴² Chen and Tyler (1999) show that E_n is well approximated by $\Phi^{-1}(0.5264^{1/n})$, where Φ^{-1} is the inverse of the standard normal cumulative distribution function.⁴³ Taking the F.O.C with respect to each Δx_j gives

$$\Delta x_j^* = \frac{\alpha^e (1 + \rho) - \frac{1}{n} \eta \sigma E_n}{\lambda}. \quad (24)$$

Therefore, *a fund chooses to reduce, rather than increase, its exposure before earnings announcement if and only if its concern of potential outflows associated with strongly negative earnings announcement returns dominates the benefit of the announcement premium.*

Since the average announcement premium α^e is as large as 70 bps in ten days, the opportunity costs of not increasing the exposure before earnings announcement is substantial. Similar to the model in Section 6.1, Eq. (24) shows that the optimal trading amount Δx_j^* is a decreasing function of the volatility of individual stocks σ . Thus, the model delivers the result that motivated its construction. In particular, institutional order flow before

⁴²For simplicity, we assume the volatility of ε_j^e has the same value σ^2 for all the stocks. We later release this assumption for analyses across stock holdings.

⁴³For $n \geq 10$ the approximation error falls below 1% as documented in Chen and Tyler (1999). Another approximation is $E_n \approx \sqrt{2 \log(n)}$ which is simpler but less accurate than the previous one.

earnings announcements decreases with the stock’s idiosyncratic volatility during earnings announcements (see Table 2).

A.8 Flow-Performance Sensitivity to the Lowest Performing Stock Holding

Next, we test Hypotheses 3 and 4 using the sample of 2,989 U.S. active equity mutual funds with quarterly holdings data. In particular, we regress quarterly flows on the returns of the lowest performing stocks during earnings announcement days $[0, 1]$ in the fund’s portfolio last quarter (variable $Lowest Ret[0, 1]$) and its interaction term with the change of portfolio weight of the lowest performing stock (variable $\Delta Weight_{i,t-1}$).

$$\begin{aligned}
 Flow_{i,t} = & b_1 * Lowest Ret[0, 1]_{i,t-1} & (25) \\
 & + b_2 * Lowest Ret[0, 1]_{i,t-1} \times \Delta Weight_{i,t-1} \\
 & + b_3 * Lowest Ret[0, 1]_{i,t-1} \times Weight_{i,t-1} \\
 & + b_4 * \Delta Weight + b_5 * Weight \\
 & + b_6 * Past Ranks_{i,t-1} + b_7 * Past Returns_{i,t-1} \\
 & + b_8 * Fund Characteristics_{i,t-1} + v_t + \varepsilon_{i,t},
 \end{aligned}$$

We calculate $\Delta Weight_{i,t-1}$ as the number of shares traded last quarter multiplied by the price of that stock at the beginning of last quarter divided by the assets under management of fund i at the beginning of last quarter to capture the quarterly net trade in the stock. $Weight_{i,t-1}$ is the portfolio weight of the lowest performing stock at the beginning of last quarter.

As shown in column (1) of Table A15, the return of the lowest performing stock during earnings announcement days has a significant effect on the fund flows in the following quarter. In terms of magnitude, a one-standard-deviation decrease (-11.4% from Panel B of Table A1) in the earnings announcement return of the lowest performing stock leads to an additional fund outflow of -0.40% per quarter. This effect on fund flows is substantial

considering that it reflects the performance of just one stock in the fund’s portfolio during the earnings announcement. For comparison, if we regress the quarterly fund flows on the fund’s last quarter return, we get a flow-performance sensitivity of 0.20, that is, a one-standard-deviation decrease (-11.4%) in the fund’s quarterly return leads to a fund outflow of -2.21% in the next quarter. This evidence validates Hypothesis 3.

As shown in column (2) of Table A15, we find that a one-standard-deviation decrease in $\Delta Weight_{i,t-1}$ (0.8% as reported in Panel B of Table A1) decreases the coefficient of $Lowest Ret[0, 1]$ by 0.015, which is about 43% the unconditional effect of $Lowest Ret[0, 1]$ on fund flow (0.035 as reported in column (1)). That is, less purchases (or more sales) of the lowest performing stock in the same quarter substantially reduce the effect of lowest performing stock on fund outflows. In contrast, the portfolio weight of the lowest performing stock $Weight_{i,t-1}$ at the beginning of the quarter does not have a significant effect, suggesting that the FPS to the lowest is more sensitive to the amounts traded than held at the beginning. These findings hold as well using the Fama-French-Carhart 4 factor alpha (column (4) to (6)). This evidence supports Hypothesis 4.

In Table A16, we provide a more precise quantification of the effect of $Lowest Ret[0, 1]$ on fund flows by double sorting. In brief, we find that funds in the bottom quintile of $Lowest Ret[0, 1]$ have lower flows by 1.08% per quarter. This effect is substantial as it reduces management fee revenues, which is the product of fund assets under management and percentage fee, by 4.32% ($=1.08\%*4$) in a year. The double sorting results in Table A16 also support Hypothesis 3. The effect of $Lowest Ret[0, 1]$ on fund flows is statistically significant for the funds that *increase* their exposure to the lowest performing stocks in the last quarter (as reported in Panel C of Table A16). In contrast, it is insignificant for the funds that *reduce* their exposure to the lowest performing stocks in the last quarter (as reported in Panel B of Table A16). The comparison between Panels B and C provides support for Hypothesis 4

To investigate this channel more closely, we focus on the 331 U.S. active equity mutual

funds for which we have both daily transactions and fund flows. We adjust regression (25) as follows to distinguish trades before and after earnings announcements:

$$\begin{aligned}
Flow_{i,t} = & b_1 * Lowest Ret[0, 1]_{i,t-1} \\
& + b_2 * Lowest Ret[0, 1]_{i,t-1} \times Trades Lowest[-10, -1]_{i,t-1} \\
& + b_3 * Lowest Ret[0, 1]_{i,t-1} \times Trades Lowest[0, 10]_{i,t-1} \\
& + b_4 * Trades Lowest[-10, -1]_{i,t-1} + b_5 * Trades Lowest[0, 10]_{i,t-1} \\
& + b_6 * Past Ranks_{i,t-1} + b_7 * Past Returns_{i,t-1} \\
& + b_8 * Fund Characteristics_{i,t-1} + v_t + \varepsilon_{i,t},
\end{aligned} \tag{26}$$

where $Trades Lowest[-10, -1]_{i,t-1}$ is fund i 's trades of the lowest performing stock in the ten days before the earnings announcement, measured as the signed number of shares traded divided by the average absolute number of shares of the stock traded by fund i in all trading days, and $Trades Lowest[0, 10]_{i,t-1}$ is fund i 's trades of the lowest performing stock on the earnings announcement day and the following ten days. The sample size for this analysis being small, we keep only the most significant control variables from the previous setting. For $Past Ranks_{i,t-1}$ and $Past Returns_{i,t-1}$, we keep fund performance ranks and returns in the past quarter and three years; for $Fund Characteristics_{i,t-1}$, we keep the fund's same-quarter return, age, and past-year flow volatility.

The main finding in Table A17 is that reducing the exposure to the lowest performing stock in the ten-day window before the announcement is successful in stemming the fund outflows that are triggered by the negative returns. In contrast, trades occurring in the ten days after the announcement do not have an effect on these outflows. In column (2), we find that a one-standard-deviation decrease in $Trades Lowest[-10, -1]_{i,t-1}$ (-3.0 as reported in Panel B of Table A1) decreases the coefficient of $Lowest Ret[0, 1]$ by -0.048, which is about half the unconditional effect of $Lowest Ret[0, 1]$ on fund flow (0.087 as reported in column (1)). That is, sales in the ten days before earnings announcements substantially reduce fund outflows caused by the lowest performing stocks, whereas sales on the same day of earnings

announcements and the following ten days do not have such an effect (as shown in column (3)).

A.9 The Model Based On Portfolio Weights

In this section, we write our model as a function of the change in portfolio weight. Dividing both sides of Eq. (8) by fund size q gives the fund flow as a percentage of fund size q as:

$$flow = \rho (w'r + \Delta w'r^e) + \eta \sum_j [(w_j + \Delta w_j)g(\varepsilon_j^e)], \quad (27)$$

The change in fund size q in Eq. (11) becomes

$$\Delta q = (1 + \rho)q (w'r + \Delta w'r^e) - \eta \sum_j [(w_j + \Delta w_j)q(\varepsilon_j^e)^2] - \frac{1}{2}\lambda\Delta w'\Delta wq^2, \quad (28)$$

where Δw is a vector for changes in stocks' portfolio weights before their earnings announcements. A fund chooses Δw that maximize the expected increase in revenue. So Eq. (13) becomes

$$\max_{\Delta x} E(\Delta q) = (1 + \rho)q (w'\alpha_0 + \Delta w'\alpha^e) - \eta \sum_j [(w_j + \Delta w_j)q\sigma_j^2] - \frac{1}{2}\lambda\Delta w'\Delta wq^2. \quad (29)$$

Taking the derivative with respect to each Δw_j gives the F.O.C.

$$\Delta w_j^* = \frac{\alpha_j^e(1 + \rho) - \sigma_j^2\eta}{\lambda q}. \quad (30)$$

As before, this result indicates that a fund chooses to reduce, rather than increase, its exposure before earnings announcement if and only if its concern of potential outflows associated with extreme earnings announcement realizations dominates the benefit of unconditional premium.

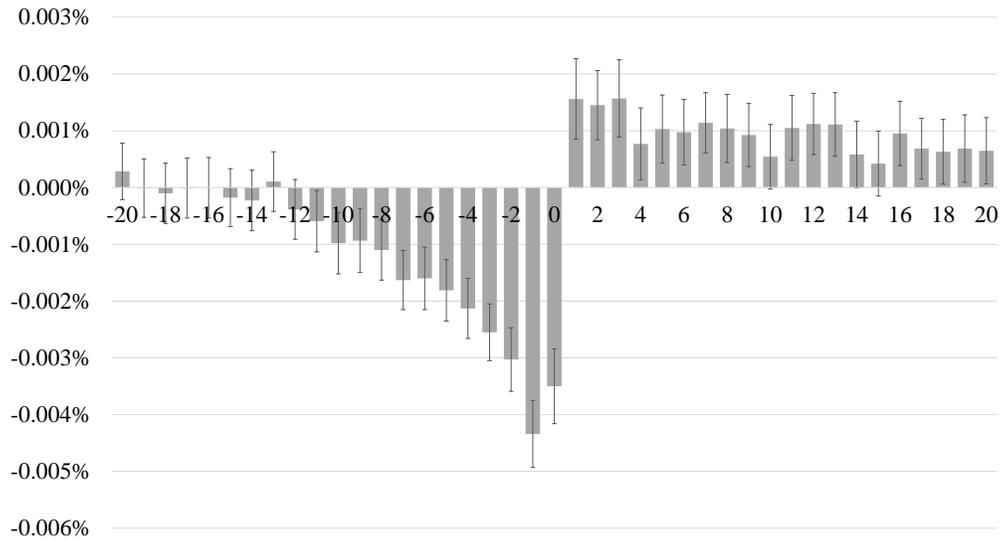


Figure A1: Abnormal Institutional Trades around Earnings Announcement Days (% of total of shares outstanding)

The figure plots institutions' abnormal trading amounts around firms' earnings announcements. The event window is $[-20, 20]$, that is from 20 days before to 20 days after. The trading amount is measured as the net number of shares traded as a percentage of the total number of shares outstanding. The abnormal trading amount is calculated as the differences between event days and non-event days outside the event window using regression (3). The 95% confidence intervals are reported.

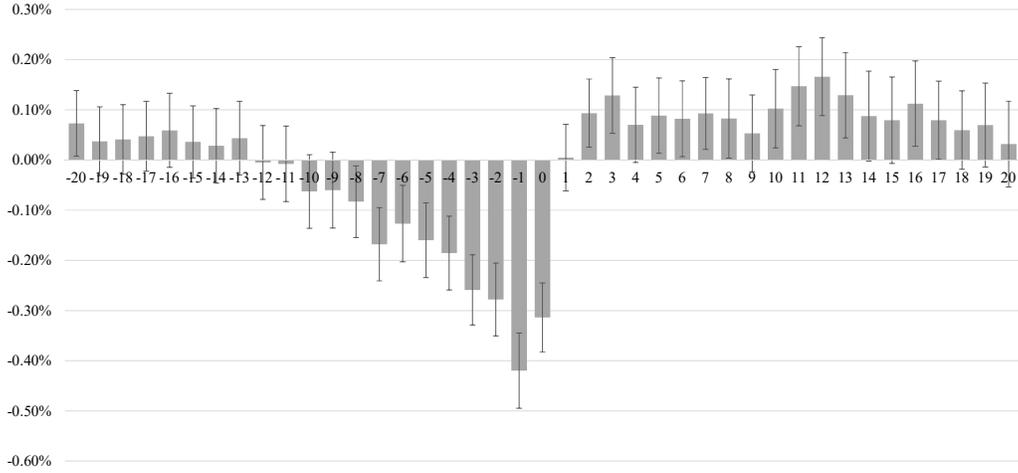


Figure A2: Abnormal Institutional Trades around Earnings Announcement Days (% of total trading volume in CRSP)

The figure plots institutions' abnormal trading amounts around firms' earnings announcements. The event window is $[-20, 20]$, that is from 20 days before to 20 days after. The trading amount is measured as the net number of shares traded as a percentage of the total trading volume in CRSP. The abnormal trading amount is calculated as the differences between event days and non-event days outside the event window using regression (3). The 95% confidence intervals are reported.

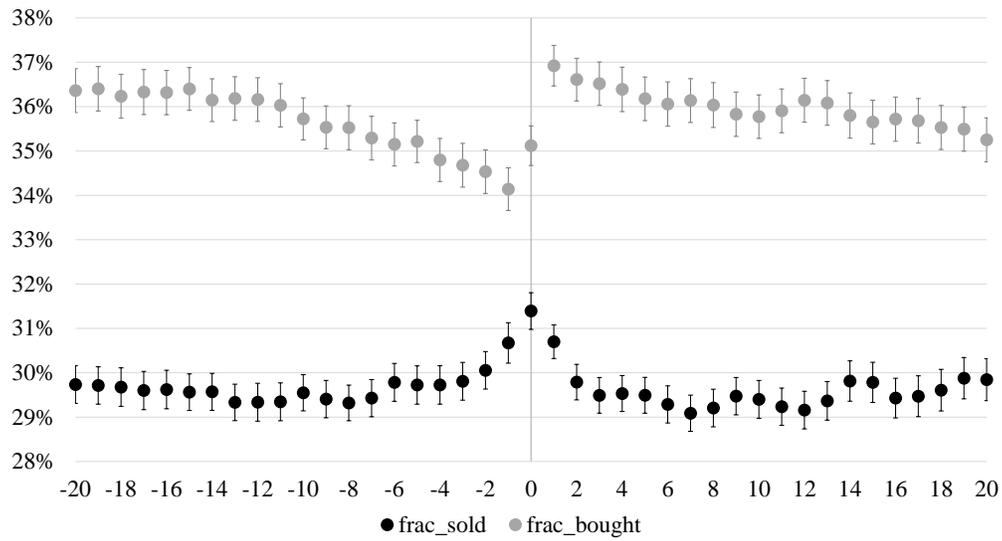


Figure A3: Fractions of Net Purchases and Sales around Earnings Announcement Days

The figure plots the average fractions of stocks with net institutional purchases and sales around earnings announcement days as a percentage of the total number of stocks every quarter. The 95% confidence intervals are based on standard errors clustered by day.

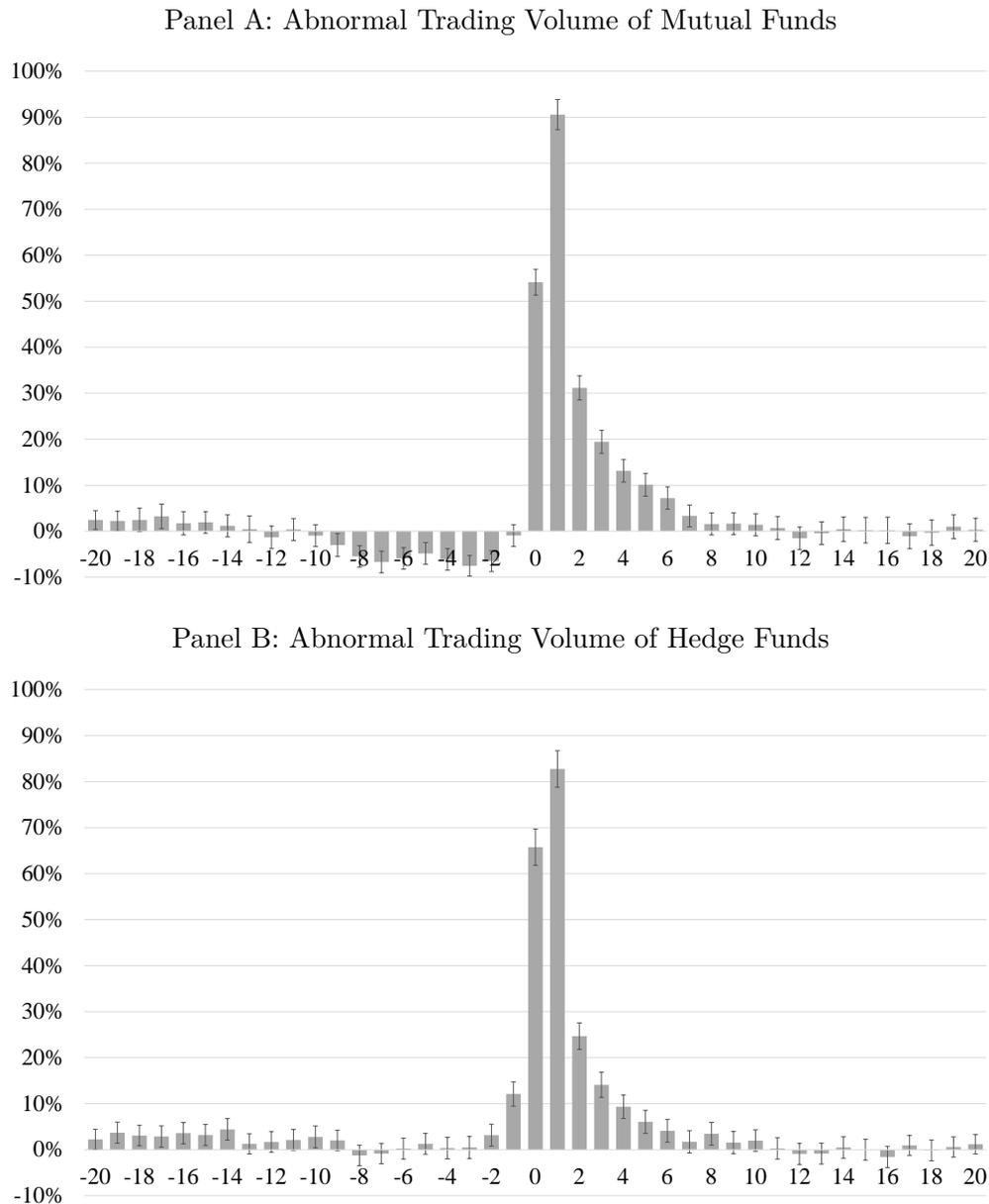


Figure A4: Trading Volume of Mutual and Hedge Funds around Earnings Announcements

The figure plots mutual and hedge funds' total abnormal trading volume (including both purchases and sales) around firms' earnings announcements. The event window is $[-20, 20]$, that is from 20 days before to 20 days after. Panel A reports the total number of shares traded on each day for all mutual funds in the Ancerno database in the aggregate as a percentage of the average total number of shares traded per day on the same stock in the past six months before the event window as in Eq. (1). The abnormal trading amount is calculated as the differences between event days and non-event days outside the event window using regression (3). Panel B reports the results of hedge funds. The 95% confidence intervals are reported.

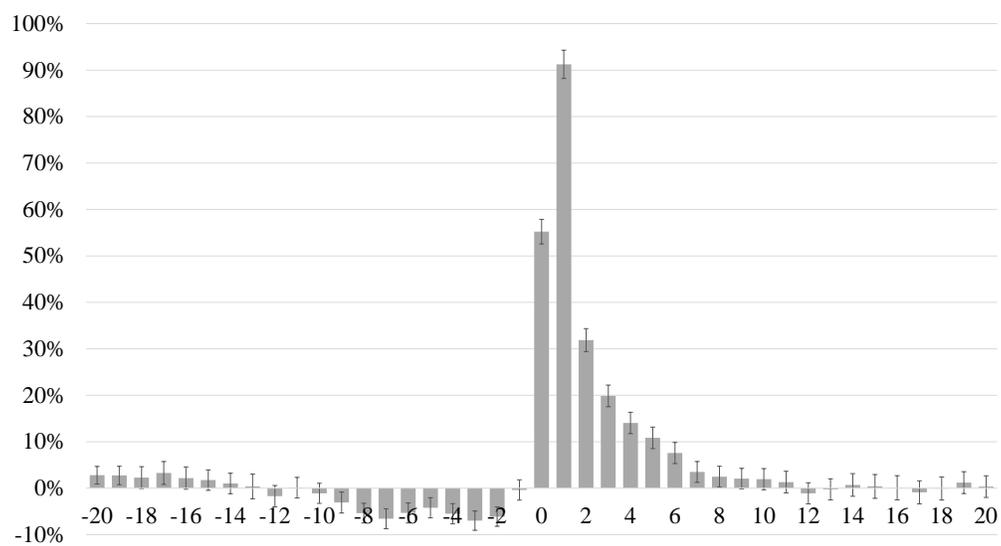


Figure A5: Abnormal Institutional Trading Volume around Earnings Announcement Days

The figure reports the total abnormal trading volume including both purchases and sales. The 95% confidence intervals are reported.

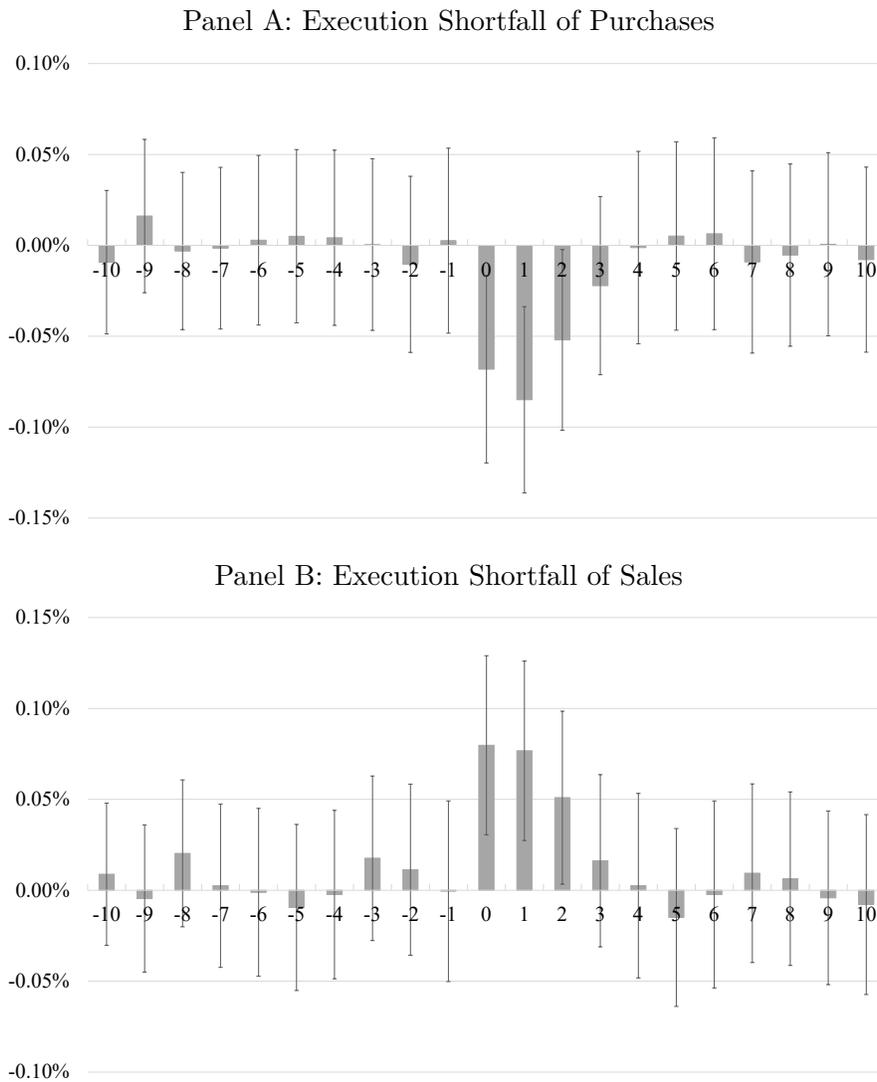


Figure A6: Execution Shortfall around Earnings Announcement Days

The figure reports the abnormal execution shortfall, which is a measure of price impact, of institutional purchases and sales separately. The execution shortfall of trades is calculated as $ES_{i,t} = D_{i,t} \frac{P_{i,t}^e - P_{i,t}^0}{P_{i,t}^0}$, where $D_{i,t}$ is 1 for buys and -1 for sells. $P_{i,t}^0$ is the stock price at order placement, and $P_{i,t}^e$ is the order's actual execution price. If you buy (sell) at a price $P_{i,t}^e$ higher (lower) than $P_{i,t}^0$, the price impact costs of this trade measured by $ES_{i,t}$ is positive. Following Anand et al. (2013), we drop the execution shortfalls with an absolute value larger than 10% from our analysis. The abnormal execution shortfall each day is calculated in the same way as Eq.(3), using $ES_{i,t}$ as the dependent variable instead. The 95% confidence intervals are reported.

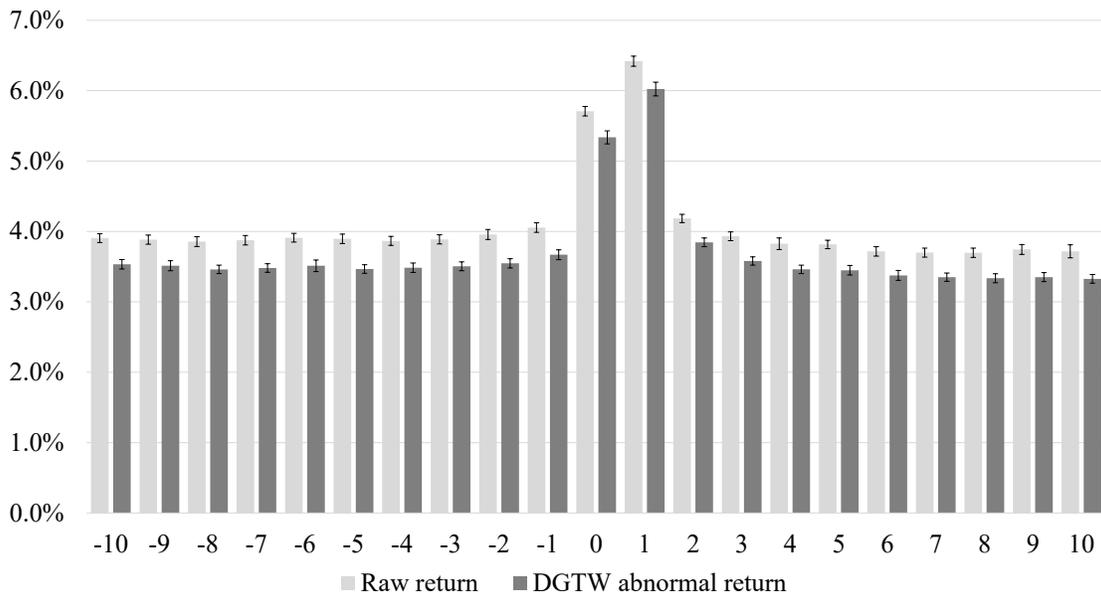


Figure A7: Standard Deviation of Daily Returns around Earnings Announcements

The figure plots the standard deviation of daily returns in the 20 days around earnings announcements. We first calculate the standard deviation of daily returns across all the earnings announcements for each quarter. We report the mean of these standard deviations across quarters. The 95% confidence intervals are calculated across quarters.

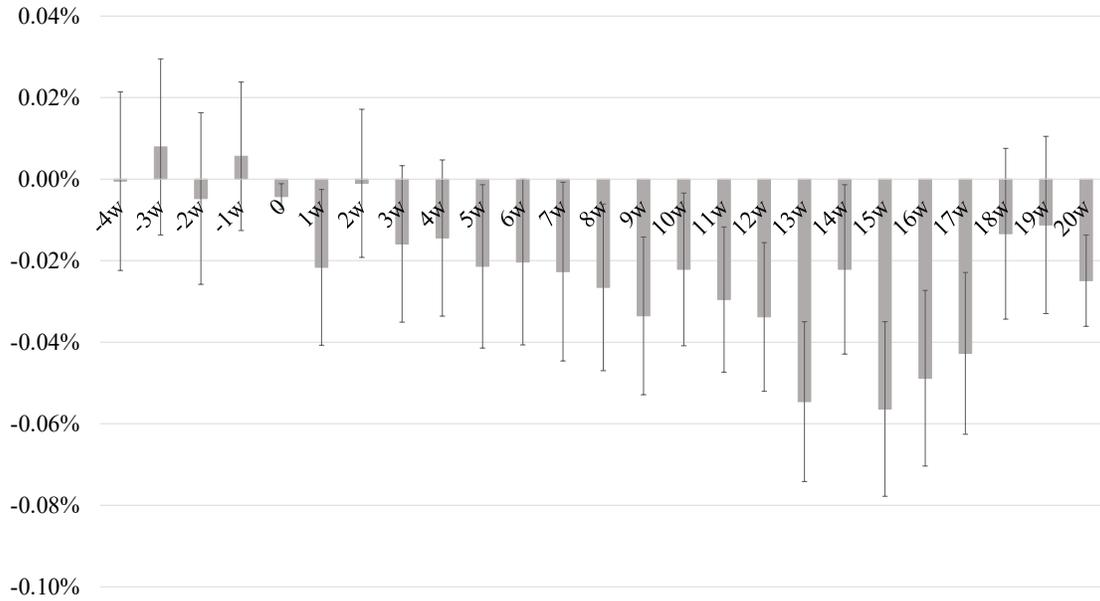


Figure A8: Weekly Abnormal Fund Flows around A Strongly Negative Realization of Earnings Announcement Return

The figure plots weekly abnormal fund flows around a strongly negative realization of earnings announcement return from four weeks before to 20 weeks after. We denote day 0 as “0”. For each fund, we find the lowest earnings announcement return in that fund’s portfolio, and we sort the lowest earnings announcement returns of all the funds into quintiles in each quarter. We define a strongly negative earnings announcement return as the lowest earnings announcement return in the lowest quintile. Abnormal fund flows within the event window are calculated based on Eq.(20), where we control for both fund and time fixed effects as well as other fund-level variables including fund returns and return ranks. The 95% confidence intervals are reported.

Table A1: Summary Statistics for the Mutual Fund Samples

The table reports the summary statistics for the mutual fund samples and the variables used in the regressions of quarterly fund flows on the lowest earnings announcement returns. Panel A reports the summary statistics of the 2989 U.S. equity funds with quarterly holdings (A1) and the 331 funds with daily holdings and transactions (A2). The column “Year” represents the year of the records. “Num. of Funds” represents the number of funds in the sample. “Fund TNA (\$mn)” represents the average fund TNAs in million dollars. “Stock Holding” (“Cash Holding”) represents equity (cash) holdings as a percentage of fund TNAs as reported in CRSP, which are available only after 2001. “Turnover (%)” represents the annual turnover reported in CRSP, which is the minimum of the aggregate purchases and the aggregate sales during the calendar year divided by the average TNA of the fund. “Expense Ratio (%)” represents the annual expense ratio and “Management Fee (%)” represents the management fee. “Fund Age” represents the average age of the funds. Panel B reports the summary statistics for the key variables in regressions of quarterly fund flows on the lowest earnings announcement returns on day [0, 1] of all stock in the fund’s portfolio last quarter. Panel B1 is for Equations (17) and (25) where the quarterly holdings data of 2989 U.S. active equity mutual funds from 1999 to 2014 is used, and Panel B2 is for Equations (16) and (26) where the daily holdings and transaction data of 331 U.S. mutual funds from 1999 to 2010 is used. We report the variables for the analyses using raw returns and Fama-French-Carharts 4 factor alphas separately.

Panel A: Summary Statistics of Mutual Fund Samples

Year	Num. of Funds	Fund TNA (\$mn)	Stock Holding (%)	Cash Holding (%)	Turnover (%)	Expense Ratio (%)	Management Fee (%)	Fund Age
A1. 2989 U.S. equity funds with quarterly holdings								
1999-2014	2,989	1,136	95.0	3.4	92.0	1.49	0.73	7.5
2001	2,033	1,042	-	-	108.8	1.57	0.75	6.1
2005	2,202	1,192	95.7	3.1	84.4	1.51	0.74	7.3
2010	1,985	1,196	93.1	2.7	77.5	1.38	0.71	9.8
A2. 331 funds with daily holdings								
1999-2010	331	1,541	93.2	4.0	95.6	1.51	0.71	7.5
2001	94	1,570	-	-	127.3	1.62	0.71	6.1
2005	208	2,108	93.4	4.1	96.6	1.52	0.70	7.5
2010	79	611	89.7	3.2	80.4	1.41	0.73	8.4

Table A1 (continued): Summary Statistics of Mutual Fund Samples

	# of Obs.	Mean	Std	Min	Max	# of Obs.	Mean	Std	Min	Max	
Panel B: Summary Statistics for Regressions of Fund Flows											
Panel B1: 2989 mutual funds with quarterly holdings											
Quarterly Fund Flow	101,565	0.011	0.124	-0.180	0.647						
<i>Raw return:</i>											
SD Ret[0,1]	77,229	0.073	0.028	0.030	0.165	74,429	0.068	0.025	0.028	0.152	
Lowest Ret[0,1]	77,229	-0.218	0.114	-0.599	-0.049	74,429	-0.211	0.111	-0.601	-0.046	
Pctile 5	77,229	-0.112	0.049	-0.280	-0.037	74,429	-0.106	0.045	-0.260	-0.035	
Pctile 10	77,229	-0.077	0.033	-0.195	-0.025	74,429	-0.072	0.029	-0.175	-0.025	
Pctile 25	77,229	-0.035	0.017	-0.098	-0.005	74,429	-0.031	0.014	-0.080	-0.004	
Pctile 50	77,229	0.002	0.010	-0.028	0.033	74,429	0.002	0.008	-0.021	0.028	
Pctile 75	77,229	0.041	0.018	0.007	0.100	74,429	0.037	0.016	0.007	0.087	
Pctile 90	77,229	0.084	0.032	0.028	0.186	74,429	0.077	0.028	0.026	0.164	
Pctile 95	77,229	0.116	0.045	0.040	0.270	74,429	0.106	0.040	0.037	0.235	
Highest Ret[0,1]	77,229	0.198	0.141	-0.101	0.715	74,429	0.184	0.129	-0.093	0.678	
Δ Weight	76,427	-0.002	0.008	-0.039	0.035	73,593	-0.002	0.009	-0.039	0.033	
Weight	77,229	0.013	0.011	0.000	0.075	74,429	0.013	0.012	0.000	0.074	
<i>FFC 4 factor alpha:</i>											
Panel B2: 331 mutual funds with daily holdings											
Quarterly Fund Flow	9,475	0.009	0.115	-0.180	0.647						
Signed Volume[-10, -1]	3,220	-0.121	1.033	-8.792	10.000						
Δ Weight[-10, -1]	4,169	-0.012	0.107	-0.953	0.288						
Signed Volume[0, 10]	3,234	-0.036	1.066	-9.876	10.415						
Δ Weight[0, 10]	4,169	0.001	0.088	-0.514	0.563						
<i>Raw return:</i>											
SD Ret[0,1]	9,566	0.073	0.026	0.030	0.165	9,226	0.069	0.024	0.028	0.152	
Lowest Ret[0,1]	2,260	-0.223	0.111	-0.631	-0.057	1,988	-0.214	0.107	-0.601	-0.046	
Trades Lowest[-10, -1]	938	-0.396	2.963	-21.239	16.346	806	-0.787	2.985	-21.558	9.874	
Trades Lowest[0, 10]	1,306	-1.094	4.972	-27.597	25.037	933	-0.963	4.469	-31.339	19.516	
<i>FFC 4 factor alpha:</i>											

Table A2: Institutional Trades around Earnings Announcements (Stock-Day Level)

The table studies institutional trades around earnings announcements at the stock-day level with and without fixed effects. We estimate the following specification:

$$trades_{j,t} = a + b_1 * EarningDay_{j,t} + \varepsilon_{j,t},$$

where $trades_{j,t}$ is the standardized net number of shares of stock j traded by all the institutions in Ancerno on day t as defined in Eq. (1), which is positive for purchases and negative for sales. $EarningDay_{j,t}$ is a dummy variable which equals one if it is the earning day under investigation (e.g, [-3] for the first column) and zero for all days outside our event window [-20, 20]. Panel A reports the results without fixed effects, and Panel B reports the results with stock and day fixed effects separately. Robust standard errors are clustered by day and t -statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Panel A: Stock-day level regressions

Dependent Variable	(1)	(2)	(3)	(4)	(5)
	Signed Trading Volume (Stock-Day Level)				
	[-3]	[-2]	[-1]	[0]	[1]
Earning Dummy	-0.036*** (-6.87)	-0.038*** (-7.17)	-0.055*** (-9.62)	-0.030*** (-4.54)	0.019*** (2.79)
Constant	0.068*** (23.51)	0.068*** (23.51)	0.068*** (23.51)	0.068*** (23.51)	0.068*** (23.51)
Observations	4,559,425	4,559,608	4,560,283	4,561,150	4,561,423
Adjusted R^2	0.000	0.000	0.000	0.000	0.000

Panel B: Regressions with fixed effects

	Stock Fixed Effects				
	(1)	(2)	(3)	(4)	(5)
Earning Dummy	-0.038*** (-7.26)	-0.040*** (-7.51)	-0.057*** (-9.94)	-0.033*** (-4.83)	0.017** (2.43)
Adjusted R^2	0.010	0.010	0.010	0.010	0.010
	Day Fixed Effects				
	(1)	(2)	(3)	(4)	(5)
Earning Dummy	-0.019*** (-4.04)	-0.019*** (-3.91)	-0.033*** (-6.45)	-0.006 (-0.98)	0.043*** (6.57)
Adjusted R^2	0.005	0.005	0.005	0.005	0.005

Table A3: Institutional Trades around Earnings Announcements (Fund-Stock-Day Level)

The table studies institutional trades around earnings announcements at the fund-stock-day level with and without fixed effects. We estimate the following specification:

$$trades_{i,j,t} = a + b_1 * EarningDay_{j,t} + \varepsilon_{i,j,t},$$

where $trades_{i,j,t}$ is the standardized net number of shares of stock j traded by fund i on day t as defined in Eq. (2), which is positive for purchases and negative for sales. $EarningDay_{j,t}$ is a dummy variable which equals one if it is the earning day under investigation (e.g, [-3] for the first column) and zero for all days outside our event window [-20, 20]. Panel A reports the results without fixed effects, and Panel B reports the results with fund-day and fund-stock fixed effects separately. Robust standard errors are clustered by day and t -statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Panel A: Fund-stock-day level regressions

Dependent Variable	(1)	(2)	(3)	(4)	(5)
	Signed Trading Volume (Fund-Stock-Day Level)				
	[-3]	[-2]	[-1]	[0]	[1]
Earning Dummy	-0.019 (-1.38)	-0.032* (-1.65)	-0.046*** (-2.68)	-0.018 (-1.17)	-0.021 (-1.04)
Constant	0.051*** (6.19)	0.051*** (6.19)	0.051*** (6.19)	0.051*** (6.19)	0.051*** (6.19)
Observations	47,994,409	48,036,426	48,056,393	48,413,947	48,644,266
Adjusted R^2	0.000	0.000	0.000	0.000	0.000

Panel B: Regressions with fixed effects

	Fund-Day Fixed Effects				
	(1)	(2)	(3)	(4)	(5)
Earning Dummy	-0.012 (-1.22)	-0.022 (-1.04)	-0.021*** (-4.16)	-0.004 (-0.39)	-0.005 (-0.21)
Adjusted R^2	0.220	0.220	0.221	0.220	0.218
	Fund-Stock Fixed Effects				
	(1)	(2)	(3)	(4)	(5)
Earning Dummy	-0.006 (-0.70)	-0.013 (-1.11)	-0.022** (-2.32)	0.015* (1.88)	0.017 (1.38)
Adjusted R^2	0.052	0.052	0.052	0.049	0.047

Table A4: Trades of Other Stocks with No Earnings Announcements Around

The table studies the trades of stocks with no earnings announcements in close proximity conditional on the fraction of stocks with earnings announcements in the coming 10 days. Specifically, we sort all trading days into deciles based on the fraction of stocks with earnings announcements in the coming 10 days. "Decile n " is the dummy variable, which equals one for trading days in decile n from 2 and 10. We investigate the signed trading volume of stocks with no earnings announcements in the surrounding 20 days using Decile 1 (with the smallest fraction of stocks with earnings announcements in 10 days) as the benchmark. The fraction and number of stocks with earnings announcement in the coming 10 days are reported as well. Robust standard errors are clustered by day and t -statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Variable	Signed Trading Volume of Stocks with No Earnings Announcements around (Stock-Day Level)		Stocks with Earnings Announcements in 10 days		Total Number of Stocks
	(1)	(2)	Fraction	Number	
Decile 1	-	-	0.013	82	5507
Decile 2	0.035*** (3.74)	0.052*** (5.48)	0.021	133	5666
Decile 3	0.034*** (3.17)	0.057*** (5.21)	0.027	168	5634
Decile 4	0.043*** (3.71)	0.061*** (5.08)	0.033	209	5586
Decile 5	0.023** (2.03)	0.042*** (3.68)	0.049	316	5641
Decile 6	0.033*** (3.04)	0.048*** (4.30)	0.083	535	5659
Decile 7	0.039*** (3.50)	0.060*** (5.30)	0.136	861	5662
Decile 8	0.050*** (4.09)	0.066*** (5.43)	0.178	1118	5632
Decile 9	0.003 (0.31)	0.033*** (3.16)	0.247	1539	5635
Decile 10	-0.018* (-1.76)	0.014 (1.31)	0.340	2092	5612
Constant	0.044*** (6.49)				
Stock Fixed Effects	No	Yes			
Observations	4,378,989	4,378,989			
Adjusted R^2	0.000	0.011			

Table A5: Institutional Trades before Earnings Announcements and Stocks' Information Ratios

The table studies the relation between institutional trades before earnings announcements and stocks' information ratios during earnings announcements. We estimate the following specification:

$$\begin{aligned} trades_{j,t} = & a + b_1 * InfoRatio[0,1]_{j,t} \times EarningDay_{j,t} \\ & + b_2 * \ln(MarketCap)_{j,t} \times EarningDay_{j,t} \\ & + b_3 * InfoRatio[0,1]_{j,t} + b_4 * \ln(MarketCap)_{j,t} + b_5 * EarningDay_{j,t} + v_j + \varepsilon_{j,t}, \end{aligned}$$

where $trades_{j,t}$ is defined as in Eq. (1). $InfoRatio[0,1]_{j,t}$ is the information ratio of stock j 's returns during earnings announcements days [0,1] calculated as the average cumulative abnormal returns of stock j on these two days based on Fama-French-Carhart 4 factor model divided by the standard deviation $SD Ret[0,1](Idio.)_{j,t}$ using the data in the past five years. $EarningDay_{j,t}$ is a dummy variable which equals one if it is the earning day under investigation (e.g, [-3] for the first column) and zero for all days outside our event window [-20, 20]. All other variables are standardized to a mean of zero and a standard deviation of one. Robust standard errors are clustered by day and t -statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Dependent Variable:	Signed Trading Volume (Stock-Day Level)				
	[-3]	[-2]	[-1]	[0]	[1]
Info Ratio[0,1] (Idio.) * Earnings Day	0.000 (0.08)	-0.003 (-0.60)	-0.007 (-1.50)	-0.001 (-0.21)	0.011* (1.65)
ln(Market-Cap) * Earnings Day	-0.004 (-0.73)	0.001 (0.14)	-0.009* (-1.71)	-0.010 (-1.53)	0.004 (0.59)
Info Ratio[0,1] (Idio.)	0.009*** (5.40)	0.009*** (5.56)	0.009*** (5.36)	0.008*** (5.02)	0.007*** (4.58)
ln(Market-Cap)	-0.023*** (-3.95)	-0.022*** (-3.88)	-0.023*** (-3.96)	-0.024*** (-4.16)	-0.024*** (-4.05)
Earnings Day	-0.039*** (-6.34)	-0.045*** (-7.22)	-0.060*** (-8.79)	-0.037*** (-4.67)	0.017** (2.04)
Stock Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	3,160,050	3,160,241	3,160,809	3,161,546	3,161,643
Adjusted R^2	0.010	0.010	0.010	0.010	0.010

Table A6: Institutional Trades and Shocks in Implied Volatility

The table reports results from the regression of institutional trades on the one-day lagged shocks in stocks' 10-day and 30-day implied volatility. Panel A reports the regression results and Panel B reports the summary statistics of shocks in implied volatility. "dif 10-30" reported in Panel B is the percentage difference between the 10-day implied volatility and 30-day implied volatility. "Dummy dif 10-30" equals one if the 10-day implied volatility is more than 15% (95th percentile of "dif 10-30") higher than the 30-day implied volatility. "IV shock 30" reported in Panel B is the percentage increase of 30-day implied volatility relative to its past 6 months trailing average. "Dummy IV shock 30" equals one if the 30-day implied volatility today is more than 43% higher (95th percentile of "IV shock 30") than its past 6 months trailing average, and it equals zero otherwise. We use the one-day lagged shock dummies "L. Dummy dif 10-30" and "L. Dummy IV shock 30" for this analysis. We control for the one-day lagged institutional trades, "L. Signed trading volume", and two-day lagged 30/10-day implied volatility "L2. IV 30/10" in columns (2) and (4). Stock and day fixed effects are included in all specifications. Robust standard errors are clustered by day and *t*-statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Panel A: Institutional Trades and Implied-Volatility Shocks				
Dependent Variable	Signed Trading Volume (Stock-Day Level)			
	(1)	(2)	(3)	(4)
L. Dummy dif 10-30	-0.065*** (-3.50)	-0.067*** (-3.04)		
L. Dummy_IV shock 30			-0.042*** (-7.68)	-0.022*** (-4.21)
L. Signed trading volume		0.219*** (25.26)	0.328*** (184.42)	
L2. IV 30		-0.072 (-0.57)	0.014** (2.14)	
L2. IV 10		0.097 (0.82)		
Stock Fixed Effects	Yes	Yes	Yes	Yes
Day Fixed Effects	Yes	Yes	Yes	Yes
Observations	111,610	101,204	4,578,489	4,559,558
Adjusted R-squared	0.013	0.061	0.011	0.117

Panel B: Summary Statistics of Implied-Volatility Shocks

Variable	# of obs	Mean	Std.	Min	Max
dif 10-30	124,486	-0.01	0.10	-0.66	6.20
IV shock 30	6,191,385	0.01	0.33	-0.99	125.66

Variable	5%	25%	50%	75%	95%
dif 10-30	-0.16	-0.04	0.00	0.02	0.15
IV shock 30	-0.29	-0.14	-0.04	0.09	0.43

Table A7: Institutional Trades and Implied Volatility Level

The table reports results from the regression of institutional trades on the stocks' 30-day implied volatility and the difference between the 10-day and 30-day implied volatility. Panel A reports the regression results and Panel B reports the summary statistics of implied volatility. "L. dif 10-30 IV" is the one-day lagged difference between the 10-day and 30-day implied volatility (annualized standard deviation of returns). "L. IV 30" is the one-day lagged 30-day implied volatility. We control for the one-day lagged institutional trades, "L. Signed trading volume", and two-day lagged 30/10-day implied volatility, "L2. IV 30/10", in columns (2) and (4). Robust standard errors are clustered by day and *t*-statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Panel A: Institutional Trades and Levels of Implied Volatility

Dependent Variable	Signed Trading Volume (Stock-Day Level)			
	(1)	(2)	(3)	(4)
L. dif 10-30 IV	-0.173 (-1.52)	-0.197 (-1.13)		
L. IV 30			-0.016** (-2.02)	-0.084*** (-6.45)
L. Signed trading volume		0.218*** (25.23)		0.328*** (177.47)
L2. IV 30		0.086 (0.56)		0.088*** (7.12)
L2. IV 10		-0.052 (-0.32)		
Stock Fixed Effects	Yes	Yes	Yes	Yes
Observations	111,641	101,226	4,857,934	4,830,047
Adjusted R-squared	0.008	0.056	0.006	0.113

Panel B: Summary Statistics of Implied-Volatility Level

Variable	Obs	Mean	Std.	Min	Max
IV 10	125,703	0.32	0.20	0.04	2.90
IV 30	6,903,106	0.42	0.24	0.01	3.00
dif 10-30 IV	124,486	0.00	0.04	-1.41	1.22
Variable	5%	25%	50%	75%	95%
IV 10	0.12	0.18	0.26	0.39	0.70
IV 30	0.16	0.26	0.37	0.52	0.89
dif 10-30 IV	-0.053	-0.009	0.000	0.005	0.053

Table A8: Institutional Trades before Earnings Announcements and Stocks' Idiosyncratic and Systematic Volatility

The table reports the complete regressions results of Table 2 in Panel A and univariate results for idiosyncratic volatility "SD Ret[0,1] (Idio.)" and systematic volatility "SD Ret[0,1] (Syst.)" during earnings announcements separately in Panels B and C.

Dependent Variable:	Signed Trading Volume (Stock-Day Level)				
	[-3]	[-2]	[-1]	[0]	[1]
Panel A: Regression for SD Ret[0,1] (Idio.) and SD Ret[0,1] (Syst.)					
SD Ret[0,1] (Idio.) * Earnings Day	-0.016** (-2.36)	-0.027*** (-3.88)	-0.021*** (-2.90)	-0.019** (-2.11)	0.016 (1.52)
SD Ret[0,1] (Syst.) * Earnings Day	0.010* (1.69)	0.014** (2.35)	0.008 (1.25)	0.009 (1.12)	-0.000 (-0.00)
ln(Market-Cap) * Earnings Day	-0.007 (-1.27)	-0.005 (-0.94)	-0.015*** (-2.62)	-0.014** (-2.12)	0.010 (1.39)
SD Ret[0,1] (Idio.)	0.007*** (2.74)	0.007*** (2.95)	0.007*** (3.02)	0.008*** (3.13)	0.007*** (2.72)
SD Ret[0,1] (Syst.)	-0.010*** (-4.63)	-0.010*** (-4.68)	-0.010*** (-4.81)	-0.010*** (-4.66)	-0.011*** (-5.00)
ln(Market-Cap)	-0.020*** (-3.55)	-0.019*** (-3.44)	-0.020*** (-3.57)	-0.021*** (-3.78)	-0.021*** (-3.76)
Earnings Day	-0.039*** (-6.28)	-0.045*** (-7.10)	-0.059*** (-8.63)	-0.036*** (-4.62)	0.016* (1.92)
Stock Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	3,160,050	3,160,241	3,160,809	3,161,546	3,161,643
Adjusted R^2	0.010	0.010	0.010	0.010	0.010

Table A8 (continued): Institutional Trades before Earnings Announcements and Stocks' Idiosyncratic and Systematic Volatility

Dependent Variable:	Signed Trading Volume (Stock-Day Level)				
	[-3]	[-2]	[-1]	[0]	[1]
Panel B: Regression for SD Ret[0,1] (Idio.) alone					
SD Ret[0,1] (Idio.) * Earnings Day	-0.009* (-1.70)	-0.017*** (-3.11)	-0.015*** (-2.66)	-0.013* (-1.86)	0.016* (1.93)
ln(Market-Cap) * Earnings Day	-0.006 (-1.15)	-0.004 (-0.77)	-0.014** (-2.53)	-0.014** (-2.04)	0.010 (1.40)
SD Ret[0,1] (Idio.)	0.001 (0.27)	0.001 (0.44)	0.001 (0.46)	0.002 (0.64)	0.000 (0.09)
ln(Market-Cap)	-0.020*** (-3.47)	-0.019*** (-3.36)	-0.020*** (-3.48)	-0.021*** (-3.69)	-0.021*** (-3.66)
Earnings Day	-0.039*** (-6.24)	-0.045*** (-7.05)	-0.059*** (-8.61)	-0.036*** (-4.60)	0.016* (1.93)
Stock Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	3,160,050	3,160,241	3,160,809	3,161,546	3,161,643
Adjusted R^2	0.010	0.010	0.010	0.010	0.010
Panel C: Regression for SD Ret[0,1] (Syst.) alone					
SD Ret[0,1] (Syst.) * Earnings Day	0.001 (0.19)	-0.001 (-0.14)	-0.004 (-0.72)	-0.002 (-0.31)	0.009 (1.22)
ln(Market-Cap) * Earnings Day	-0.004 (-0.69)	0.000 (0.05)	-0.011* (-1.95)	-0.010 (-1.61)	0.007 (0.97)
SD Ret[0,1] (Syst.)	-0.007*** (-3.46)	-0.007*** (-3.38)	-0.007*** (-3.50)	-0.007*** (-3.31)	-0.008*** (-3.96)
ln(Market-Cap)	-0.021*** (-3.69)	-0.020*** (-3.60)	-0.021*** (-3.73)	-0.022*** (-3.94)	-0.022*** (-3.88)
Earnings Day	-0.040*** (-6.33)	-0.045*** (-7.17)	-0.059*** (-8.69)	-0.037*** (-4.66)	0.016* (1.96)
Stock Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	3,160,050	3,160,241	3,160,809	3,161,546	3,161,643
Adjusted R^2	0.010	0.010	0.010	0.010	0.010

Table A9: Quarterly Flows, Volatility of Holdings' Earnings Announcement Returns, and Institutional Trades – Using Transaction Data (Detailed)

The table reports the regression results in Table 3 with the coefficients on all the control variables fully displayed.

Dependent Variable	Quarterly Fund Flow					
	Raw return			FFC 4 factor alpha		
	(1)	(2)	(3)	(4)	(5)	(6)
SD Ret[0,1]	-0.178** (-2.60)	-0.148 (-1.34)	-0.087 (-0.82)	-0.252*** (-3.59)	-0.183 (-1.45)	-0.154 (-1.25)
SD Ret[0,1] * Signed Volume[-10, -1]		-0.114** (-2.10)			-0.125** (-2.29)	
SD Ret[0,1] * Δ Weight[-10, -1]			-1.541* (-1.69)			-1.996** (-2.11)
Control variables:						
Signed Volume[-10, -1]		0.018*** (4.31)			0.018*** (4.26)	
Δ Weight[-10, -1]			0.235** (2.54)			0.277*** (3.23)
Past Quarter Rank	0.004 (0.53)	-0.011 (-0.57)	-0.012 (-0.63)	-0.006 (-0.69)	0.007 (0.37)	0.004 (0.24)
Past Halfyear Rank	0.015* (1.90)	-0.019 (-0.77)	-0.023 (-0.95)	0.004 (0.44)	-0.030 (-1.27)	-0.032 (-1.43)
Past Year Rank	0.051*** (6.06)	0.039 (1.59)	0.041* (1.70)	0.038*** (4.85)	0.032 (1.24)	0.032 (1.31)
Past 3years Rank	0.050*** (6.91)	0.062*** (3.24)	0.062*** (3.37)	0.071*** (11.26)	0.061*** (3.04)	0.069*** (3.50)
Past Quarter Ret	0.026 (0.71)	0.195 (1.08)	0.198 (1.09)	0.155* (1.79)	0.101 (0.39)	0.115 (0.45)
Past Halfyear Ret	0.008 (0.29)	0.279* (1.92)	0.269* (1.88)	0.018 (0.35)	0.308 (1.49)	0.300 (1.53)
Past Year Ret	-0.034** (-2.41)	-0.046 (-0.45)	-0.043 (-0.43)	-0.029* (-1.89)	0.003 (0.02)	0.017 (0.11)
Past 3years Ret	0.016* (1.97)	-0.015 (-0.48)	-0.010 (-0.33)	-0.001 (-0.24)	-0.015 (-0.37)	-0.029 (-0.73)
Same Quarter Ret	0.043 (0.82)	0.229*** (3.31)	0.236*** (3.23)	-0.031 (-0.26)	0.106* (1.68)	0.124* (1.95)
ln(Age)	-0.016*** (-8.96)	-0.020*** (-7.96)	-0.021*** (-8.55)	-0.017*** (-9.62)	-0.020*** (-7.18)	-0.021*** (-7.41)
Turnover	-0.002 (-0.88)	0.001 (0.33)	-0.001 (-0.15)	-0.003 (-1.22)	-0.001 (-0.26)	-0.002 (-0.50)
Exp Ratio	-0.519 (-1.24)	-1.540*** (-2.72)	-1.878*** (-3.32)	-0.597 (-1.47)	-0.683 (-1.14)	-1.097* (-1.84)
ln(TNA)	-0.000 (-0.47)	-0.002 (-1.41)	-0.003* (-1.94)	-0.001 (-0.91)	-0.001 (-0.92)	-0.002 (-1.58)
Flow Vol Past1y	0.282*** (5.88)	0.371*** (3.63)	0.354*** (3.38)	0.246*** (4.69)	0.328*** (3.08)	0.331*** (3.05)
Ret Vol Past1y	-0.246 (-1.50)	-0.180 (-0.67)	-0.176 (-0.68)	0.740*** (3.68)	0.335 (0.81)	0.426 (1.11)
Num. Stocks	-0.000* (-1.92)	-0.000** (-2.61)	-0.000*** (-3.01)	0.000 (0.40)	-0.000 (-0.63)	-0.000 (-0.68)
Quarterly Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Std. Err. Clustered per	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter
Observations	7,840	2,572	2,676	7,620	2,567	2,670
Adjusted R-squared	0.135	0.183	0.181	0.135	0.162	0.169

Table A10: Quarterly Flows, Volatility of Holdings' Earnings Announcement Returns, and Institutional Trades after Announcements

The table reports results from the regression of Eq. (16) using measures of trades after announcements. $Signed\ Volume[0, 10]_{i,t-1}$ and $\Delta Weight[0, 10]_{i,t-1}$ are defined as in Table 3 but for average trades of stocks on the earnings announcement day and in the ten days after the earnings announcement.

Dependent Variable	Quarterly Fund Flow			
	Raw return (1)	(2)	FFC 4 factor alpha (3)	(4)
SD Ret[0,1]	-0.114 (-1.07)	-0.058 (-0.55)	-0.159 (-1.29)	-0.131 (-1.06)
SD Ret[0,1] * Signed Volume[0, 10]	-0.102 (-1.37)		-0.108 (-1.51)	
SD Ret[0,1] * $\Delta Weight[0, 10]$		-0.598 (-0.35)		-0.169 (-0.10)
Control variables:				
Signed Volume[0, 10]	0.017*** (3.19)		0.017*** (3.27)	
$\Delta Weight[0, 10]$		0.239 (1.58)		0.148 (0.97)
Past Quarter Rank	-0.014 (-0.71)	-0.015 (-0.80)	0.005 (0.26)	0.003 (0.15)
Past Halfyear Rank	-0.019 (-0.80)	-0.019 (-0.80)	-0.028 (-1.23)	-0.027 (-1.18)
Past Year Rank	0.041 (1.63)	0.040 (1.63)	0.031 (1.23)	0.029 (1.20)
Past 3years Rank	0.060*** (3.15)	0.063*** (3.26)	0.061*** (3.03)	0.068*** (3.43)
Past Quarter Ret	0.227 (1.27)	0.233 (1.29)	0.125 (0.49)	0.154 (0.62)
Past Halfyear Ret	0.265* (1.83)	0.256* (1.74)	0.290 (1.43)	0.260 (1.29)
Past Year Ret	-0.051 (-0.49)	-0.044 (-0.44)	-0.001 (-0.00)	0.023 (0.15)
Past 3years Ret	-0.014 (-0.45)	-0.013 (-0.40)	-0.016 (-0.38)	-0.029 (-0.73)
Same Quarter Ret	0.226*** (3.32)	0.230*** (3.28)	0.102 (1.61)	0.108 (1.64)
ln(Age)	-0.021*** (-8.20)	-0.022*** (-8.33)	-0.021*** (-7.48)	-0.021*** (-7.46)
Turnover	0.002 (0.38)	0.000 (0.06)	-0.001 (-0.20)	-0.002 (-0.57)
Exp Ratio	-1.669*** (-2.90)	-2.005*** (-3.86)	-0.802 (-1.33)	-1.041* (-1.84)
ln(TNA)	-0.002 (-1.27)	-0.003** (-2.33)	-0.001 (-0.84)	-0.002 (-1.47)
Flow Vol Past1y	0.357*** (3.51)	0.343*** (3.75)	0.312*** (2.91)	0.309*** (3.11)
Ret Vol Past1y	-0.194 (-0.74)	-0.203 (-0.76)	0.303 (0.74)	0.425 (1.08)
Num. Stocks	-0.000** (-2.65)	-0.000*** (-3.17)	-0.000 (-0.67)	-0.000 (-0.79)
Quarterly Fixed Effects	Yes	Yes	Yes	Yes
Std. Err. Clustered per	Quarter	Quarter	Quarter	Quarter
Observations	2,590	2,676	2,585	2,670
Adjusted R^2	0.184	0.191	0.163	0.166

Table A11: Quarterly Flows and Volatility of Holdings' Earnings Announcement Returns Controlling for Daily Fund Returns

The table reports results from the regression of Eq. (16) adding the standard deviation and minimum value of daily fund returns in the past year ("*Ret Vol Past1y (Daily)*" and "*Min Ret Past1y (Daily)*"), and the concurrent and lagged skewness of daily fund returns every quarter ("*Ret Skewness (Daily)*") as control variables.

Dependent Variable	Quarterly Fund Flow					
	(1)	331 Funds (2)	(3)	(4)	2989 Funds (5)	(6)
SD Ret[0,1]	-0.213** (-2.50)	-0.245*** (-2.86)	-0.256*** (-3.04)	-0.135** (-2.49)	-0.131** (-2.39)	-0.134** (-2.54)
Control variables:						
Past Quarter Rank	-0.006 (-0.56)	-0.004 (-0.38)	-0.005 (-0.44)	0.008 (1.29)	0.007 (1.28)	0.008 (1.36)
Past Halfyear Rank	0.019** (2.12)	0.017** (2.08)	0.016* (1.84)	0.021*** (3.21)	0.021*** (3.22)	0.019*** (3.04)
Past Year Rank	0.055*** (4.66)	0.054*** (4.50)	0.054*** (4.43)	0.041*** (6.46)	0.042*** (6.88)	0.043*** (6.99)
Past 3years Rank	0.048*** (4.89)	0.049*** (4.98)	0.049*** (5.10)	0.073*** (15.49)	0.073*** (15.51)	0.073*** (15.32)
Past Quarter Ret	0.121 (1.54)	0.117 (1.50)	0.126 (1.54)	0.001 (0.16)	-0.000 (-0.05)	-0.004 (-0.45)
Past Halfyear Ret	0.002 (0.11)	-0.003 (-0.16)	0.001 (0.04)	-0.002 (-0.20)	-0.001 (-0.14)	0.003 (0.35)
Past Year Ret	-0.041*** (-3.31)	-0.038*** (-3.20)	-0.042*** (-3.30)	-0.004 (-0.52)	-0.005 (-0.58)	-0.008 (-0.94)
Past 3years Ret	0.019* (2.01)	0.017* (1.94)	0.017* (1.93)	0.002 (0.82)	0.002 (0.84)	0.003 (0.91)
Same Quarter Ret	0.148 (1.63)	0.242*** (3.94)	0.244*** (4.68)	0.026 (1.06)	0.024 (1.00)	0.032 (1.48)
ln(Age)	-0.016*** (-6.34)	-0.015*** (-6.45)	-0.015*** (-6.39)	-0.018*** (-12.92)	-0.018*** (-13.03)	-0.018*** (-13.10)
Turnover	-0.001 (-0.53)	-0.001 (-0.56)	-0.002 (-0.66)	-0.001 (-1.29)	-0.001 (-1.18)	-0.001 (-1.43)
Exp Ratio	-0.448 (-0.89)	-0.478 (-0.96)	-0.462 (-0.93)	-0.974*** (-4.05)	-0.966*** (-3.98)	-0.970*** (-4.01)
ln(TNA)	-0.001 (-1.30)	-0.001 (-1.32)	-0.001 (-1.30)	-0.002*** (-5.19)	-0.002*** (-5.17)	-0.002*** (-5.11)
Flow Vol Past1y	0.289*** (4.46)	0.285*** (4.47)	0.284*** (4.45)	0.362*** (10.25)	0.362*** (10.27)	0.362*** (10.29)
Ret Vol Past1y (Daily)	-0.395 (-0.50)	-1.248 (-1.60)	-0.788 (-0.98)	-1.079** (-2.52)	-0.728 (-1.03)	-0.453 (-0.60)
Num. Stocks	-0.000 (-1.12)	-0.000 (-1.15)	-0.000 (-1.16)	-0.000* (-1.81)	-0.000* (-1.80)	-0.000* (-1.81)
Min Ret Past1y (Daily)		-0.803*** (-3.95)	-0.663*** (-2.74)		0.224 (0.66)	0.313 (0.90)
Ret Skewness (Daily)			-0.016 (-1.35)			-0.013*** (-3.36)
L.Ret Skewness (Daily)			-0.002 (-0.34)			0.001 (0.28)
L2.Ret Skewness (Daily)			0.000 (0.08)			-0.002 (-0.45)
L3.Ret Skewness (Daily)			0.006 (1.31)			0.001 (0.35)
L4.Ret Skewness (Daily)			-0.002 (-0.37)			0.004 (1.07)
Quarterly Fixed Effects	Yes	Yes	95 Yes	Yes	Yes	Yes
Std. Err. Clustered per	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter
Observations	5,389	5,389	5,389	49,545	49,545	49,544
Adjusted R-squared	0.141	0.150	0.150	0.159	0.159	0.160

Table A12: Quarterly Flows and Volatility of Holdings' Earnings Announcement Returns Controlling for Non-Linear Past Returns and Morningstar Ratings

The table reports results from the regression of Eq. (16) adding the dummy variables for past quarter, year, and 3 year return quintiles, the squares of past returns, as well as the dummy variable for Morningstar ratings as control variables. Funds in return quintile 1 or with Morningstar rating 1 are used as the benchmark case.

	Quarterly Fund Flow					
	(1)	331 Funds (2)	(3)	(4)	2989 Funds (5)	(6)
SD Ret[0,1]	-0.185*** (-2.67)	-0.182** (-2.65)	-0.189*** (-2.81)	-0.186*** (-4.19)	-0.187*** (-4.21)	-0.196*** (-5.07)
Control variables:						
Past Quarter Q2	0.004 (1.41)	0.004 (1.33)	0.007** (2.07)	0.004** (2.40)	0.004** (2.41)	0.004*** (2.78)
Past Quarter Q3	0.004 (1.11)	0.004 (1.03)	0.004 (1.22)	0.004** (2.30)	0.004** (2.30)	0.006*** (3.13)
Past Quarter Q4	0.006 (1.43)	0.006 (1.37)	0.007 (1.52)	0.006** (2.33)	0.006** (2.33)	0.007*** (3.00)
Past Quarter Q5	0.015*** (2.73)	0.015*** (2.69)	0.013** (2.42)	0.014*** (4.02)	0.014*** (4.02)	0.015*** (5.13)
Past Year Q2	0.011*** (3.59)	0.011*** (3.52)	0.010*** (3.24)	0.011*** (7.53)	0.011*** (7.53)	0.010*** (7.32)
Past Year Q3	0.018*** (5.75)	0.018*** (5.76)	0.014*** (4.26)	0.017*** (8.30)	0.017*** (8.30)	0.016*** (7.88)
Past Year Q4	0.024*** (5.78)	0.025*** (5.82)	0.024*** (5.11)	0.023*** (8.61)	0.023*** (8.61)	0.021*** (8.68)
Past Year Q5	0.043*** (7.78)	0.044*** (7.89)	0.035*** (6.79)	0.044*** (10.74)	0.044*** (10.77)	0.038*** (11.89)
Past 3year Q2	0.005 (1.50)	0.005 (1.52)	0.001 (0.33)	0.013*** (10.56)	0.013*** (10.56)	0.007*** (6.19)
Past 3year Q3	0.017*** (5.15)	0.017*** (5.13)	0.004 (1.07)	0.022*** (16.05)	0.022*** (16.06)	0.009*** (6.43)
Past 3year Q4	0.024*** (5.51)	0.024*** (5.41)	0.002 (0.40)	0.033*** (16.07)	0.033*** (16.08)	0.012*** (6.13)
Past 3year Q5	0.046*** (9.98)	0.045*** (9.82)	0.015*** (3.06)	0.064*** (20.50)	0.064*** (20.61)	0.025*** (9.52)
Past Quarter Ret ²		-0.002* (-1.71)	0.295* (1.80)		0.000 (0.62)	0.000 (0.04)
Past Year Ret ²		-0.009*** (-3.39)	-0.007*** (-3.16)		-0.001 (-1.58)	-0.000 (-0.34)
Past 3years Ret ²		0.004* (1.90)	0.003* (1.85)		-0.000 (-1.28)	-0.000*** (-3.41)
Morningstar Rating 2			-0.007 (-0.82)			0.003 (1.42)
Morningstar Rating 3			0.006 (0.82)			0.017*** (8.28)
Morningstar Rating 4			0.031*** (4.07)			0.046*** (17.49)
Morningstar Rating 5			0.054*** (6.53)			0.100*** (24.20)
Controls for Fund Char.	Yes	Yes	Yes	Yes	Yes	Yes
Quarterly Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Std. Err. Clustered per	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter
	7,840	7,840	6,012	71,817	71,817	55,850
	0.132	0.133	0.148	0.153	0.151	0.196

Table A13: Estimation of Fund-Level Flow-Performance Sensitivity

The table reports estimates of the fund-level FPS using the quarterly returns.

Dependent Variable	Quarterly Fund Flow	
	Raw return (1)	FFC 4 factor alpha (2)
Past Quarter Ret	0.116** (2.18)	0.155*** (3.21)
Control variables:		
Same Quarter Ret	0.061 (1.59)	0.185*** (4.36)
ln(Age)	-0.027*** (-16.98)	-0.028*** (-16.78)
Turnover	-0.005*** (-3.54)	-0.006*** (-3.95)
Exp Ratio	-1.083*** (-4.82)	-1.337*** (-5.96)
ln(TNA)	-0.000 (-0.09)	-0.000 (-0.21)
Flow Vol Past1y	0.411*** (12.56)	0.392*** (12.57)
Ret Vol Past1y	-0.168 (-1.47)	0.547*** (3.57)
Num. Stocks	-0.000*** (-3.72)	-0.000*** (-2.78)
Quarterly Fixed Effects	Yes	Yes
Std. Err. Clustered per	Quarter	Quarter
Observations	78,426	78,475
Adjusted R-squared	0.097	0.099

Table A14: Quarterly Flows, Strongly Negative Holdings' Earnings Announcement Returns, and Institutional Trades

The table reports results from the regression of quarterly flows on a dummy variable for strongly negative earnings announcement return in each quarter and its interaction terms with funds' average trades before earnings announcements. We use the 331 mutual funds with daily holdings data for this regression below.

$$\begin{aligned}
 Flow_{i,t} = & b_1 * D_Lowest[0, 1]_{i,t-1} + b_2 * D_Lowest[0, 1] \times \Delta Weight[-10, -1]_{i,t-1} \\
 & + b_3 * \Delta Weight[-10, -1]_{i,t-1} + b_4 * Past Ranks_{i,t-1} + b_5 * Past Returns_{i,t-1} \\
 & + b_6 * Fund Characteristics_{i,t-1} + v_t + \varepsilon_{i,t},
 \end{aligned}$$

where $D_Lowest[0, 1]_{i,t-1}$ is a dummy variable for funds with strongly negative earnings announcement return in quarter $t-1$ (i.e., funds with the lowest earnings announcement returns in the lowest quintile of all the funds in that quarter). We use $\Delta Weight[-10, -1]_{i,t-1}$ as a measure of a fund's trades before earnings announcements, which is the total dollar amounts of stocks shares traded ten days before the earnings announcement as a fraction of the fund's total net assets. $Past Ranks_{i,t-1}$ and $Past Returns_{i,t-1}$ control for fund performance ranks and returns in the past quarter, half year, year, and three years. $Fund Characteristics_{i,t-1}$ include controls for the fund's same-quarter return, age, turnover, expense ratio, $\ln(TNA)$, past-year flow volatility, return volatility, and number of stocks in the portfolio. Robust standard errors are clustered by quarter and t -statistics are reported in parentheses. Column (1) and (3) are estimated using the 2,989 funds with quarterly holdings for higher accuracy. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Dependent Variable	Quarterly Fund Flow			
	Raw return (1)	(2)	FFC 4 factor alpha (3)	(4)
D_Lowest[0,1]	-0.006*** (-3.66)	0.003 (0.54)	-0.004*** (-3.54)	-0.001 (-0.21)
D_Lowest[0,1] × Δ Weight [-10, -1]		-0.117* (-1.94)		-0.138*** (-2.68)
Control variables:				
Δ Weight [-10, -1]		0.149*** (3.42)		0.173*** (4.35)
Controls for the past ranks	Yes	Yes	Yes	Yes
Controls for the past returns	Yes	Yes	Yes	Yes
Controls for fund characteristics	Yes	Yes	Yes	Yes
Quarterly Fixed Effects	Yes	Yes	Yes	Yes
Observations	71,817	2,676	69,778	2,670
Adjusted R-squared	0.153	0.183	0.156	0.171

Table A15: Quarterly Flows, Lowest Earnings Announcement Returns, and Institutional Trades

The table reports results from the regression of quarterly flows on the lowest earnings announcement returns in the portfolio. We use 2,989 U.S. active equity mutual funds with quarterly holdings data for this analysis. In particular, we regress quarterly fund flows on the return of the lowest performing stocks during earnings announcement days [0, 1] in the fund's portfolio last quarter (variable *Lowest Ret*[0,1]) and its interaction terms with the change and level of portfolio weights.

$$\begin{aligned}
 Flow_{i,t} = & b_1 * Lowest\ Ret[0,1]_{i,t-1} + b_2 * Lowest\ Ret[0,1]_{i,t-1} \times \Delta Weight_{i,t-1} \\
 & + b_3 * Lowest\ Ret[0,1]_{i,t-1} \times Weight_{i,t-1} \\
 & + b_4 * \Delta Weight + b_5 * Weight + b_6 * Past\ Ranks_{i,t-1} \\
 & + b_7 * Past\ Returns_{i,t-1} + b_8 * Fund\ Characteristics_{i,t-1} + v_t + \varepsilon_{i,t},
 \end{aligned}$$

where $\Delta Weight_{i,t-1}$ is the change of the portfolio weight of the lowest performing stock caused by trades in last quarter. $Weight_{i,t-1}$ is the portfolio weight of the lowest performing stock at the beginning of last quarter. $Past\ Ranks_{i,t-1}$ and $Past\ Returns_{i,t-1}$ control for fund performance ranks and returns in the past quarter, half year, year, and three years. $Fund\ Characteristics_{i,t-1}$ include controls for the fund's same-quarter return, age, turnover, expense ratio, $\ln(TNA)$, past-year flow volatility, return volatility, and number of stocks in the portfolio. Robust standard errors are clustered by quarter and t -statistics are reported in parentheses. Complete regression results including all control variables are reported in Table A18. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Dependent Variable	Quarterly Fund Flow					
		Raw Return		FFC 4 factor alpha		
	(1)	(2)	(3)	(4)	(5)	(6)
Lowest Ret[0,1]	0.035*** (4.96)	0.039*** (5.38)	0.024*** (3.03)	0.025*** (4.83)	0.028*** (5.54)	0.015** (2.04)
Lowest Ret[0,1] \times Δ Weight		1.785*** (3.10)			1.465** (2.33)	
Lowest Ret[0,1] \times Weight			0.302 (0.58)			0.582 (1.30)
Control variables:						
Δ Weight		1.024*** (6.60)			1.011*** (6.57)	
Weight			0.319*** (2.87)			0.232** (2.27)
Controls for the past ranks	Yes	Yes	Yes	Yes	Yes	Yes
Controls for the past returns	Yes	Yes	Yes	Yes	Yes	Yes
Controls for fund characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Quarterly Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	71,817	71,746	71,817	69,778	69,708	69,778
Adjusted R-squared	0.153	0.156	0.153	0.157	0.160	0.157

Table A16: Double Sorting on Fund Return and Lowest Ret[0,1]

The table reports the quarterly fund flows doubled sorted by funds' past-quarter returns and the returns of the lowest performing stocks during earnings announcements, Lowest Ret[0, 1], in funds' portfolios last quarter. Every quarter, we first sort funds into quintiles based on their past-quarter returns. Within each past-quarter-return quintile, we further sort funds into Lowest Ret[0, 1] quintiles based on their Lowest Ret[0, 1] last quarter. Panel A includes all fund-quarter observations of the 2,989 US equity mutual funds with quarterly holdings. Panel B only includes fund-quarter observations where funds *reduced* their holdings of the lowest performing stocks in the last quarter for this analysis, and Panel C only includes fund-quarter observations where funds *increased* their holdings of the lowest performing stocks in the last quarter. Robust standard errors are clustered per quarter and *t*-statistics are reported in parentheses. Sig. lvl: *** 0.01, ** 0.05, and * 0.1.

(in fraction)	Lowest Ret[0, 1] Quintiles					
	Q1 (low)	2	3	4	Q5 (high)	(5-1)
Panel A: All fund-quarter observations						
Lowest Ret[0, 1]	-0.3480	-0.2392	-0.1877	-0.1468	-0.0988	0.2492
Past-Quarter-Ret Quintiles						
Q1 (low)	-0.0138*** (-4.19)	-0.0093*** (-2.62)	-0.0114*** (-2.78)	-0.0090** (-2.43)	-0.0100*** (-2.62)	0.0038 (1.39)
2	-0.0028 (-1.13)	-0.0013 (-0.45)	-0.0071*** (-2.62)	-0.0003 (-0.13)	0.0034 (1.33)	0.0062** (2.41)
3	0.0046* (1.65)	0.0037 (1.15)	0.0054* (1.87)	0.0061** (2.21)	0.0114*** (3.58)	0.0068** (2.26)
4	0.0103*** (2.71)	0.0171*** (5.08)	0.0173*** (5.61)	0.0196*** (5.84)	0.0251*** (6.73)	0.0148*** (3.64)
Q5 (high)	0.0387*** (6.86)	0.0360*** (7.17)	0.0431*** (7.80)	0.0473*** (8.24)	0.0594*** (10.20)	0.0206*** (3.84)
Average	0.0075*** (2.63)	0.0093*** (3.33)	0.0095*** (3.37)	0.0131*** (4.89)	0.0183*** (6.54)	0.0108*** (5.16)

Table A16 (continued): Double Sorting on Fund Return and Lowest Ret[0,1]

(in fraction)	Lowest Ret[0, 1] Quintiles					
	Q1	2	3	4	Q5	(5-1)
Past-Quarter-Ret Quintiles						
Panel B: Conditional on funds <i>reduced</i> their holdings of the lowest performing stocks in the last quarter						
Q1 (low)	-0.0201*** (-5.58)	-0.0192*** (-5.90)	-0.0238*** (-5.87)	-0.0176*** (-4.31)	-0.0245*** (-5.96)	-0.0043 (-1.31)
2	-0.0090*** (-3.30)	-0.0078*** (-2.78)	-0.0146*** (-5.13)	-0.0129*** (-4.43)	-0.0117*** (-4.43)	-0.0027 (-0.80)
3	-0.0032 (-1.04)	-0.0028 (-0.87)	-0.0044* (-1.70)	-0.0047 (-1.45)	-0.0028 (-0.84)	0.0004 (0.12)
4	0.0056 (1.32)	0.0101** (2.34)	0.0118*** (3.05)	0.0016 (0.43)	0.0123*** (3.05)	0.0067 (1.44)
Q5 (high)	0.0367*** (6.15)	0.0265*** (5.51)	0.0337*** (5.63)	0.0364*** (4.89)	0.0411*** (5.75)	0.0045 (0.69)
Average	0.0018 (0.62)	0.0013 (0.50)	0.0004 (0.17)	0.0006 (0.21)	0.0034 (1.18)	0.0016 (0.71)
Panel C: Conditional on funds <i>increased</i> their holdings of the lowest performing stocks in the last quarter						
Q1 (low)	0.0110* (1.93)	0.0169*** (2.86)	0.0151*** (2.65)	0.0296*** (4.37)	0.0299*** (4.08)	0.0189*** (2.66)
2	0.0230*** (4.88)	0.0196*** (4.71)	0.0208*** (4.22)	0.0356*** (6.30)	0.0378*** (7.41)	0.0148*** (2.43)
3	0.0296*** (6.17)	0.0277*** (5.55)	0.0363*** (6.69)	0.0342*** (6.06)	0.0563*** (9.36)	0.0267*** (3.61)
4	0.0369*** (6.18)	0.0523*** (8.63)	0.0490*** (8.80)	0.0490*** (8.63)	0.0692*** (11.24)	0.0323*** (4.37)
Q5 (high)	0.0713*** (9.41)	0.0720*** (9.24)	0.0841*** (11.42)	0.0892*** (11.57)	0.1059*** (12.63)	0.0346*** (4.65)
Average	0.0355*** (8.71)	0.0397*** (9.55)	0.0428*** (11.53)	0.0489*** (11.24)	0.0624*** (14.06)	0.0269*** (7.02)

Table A17: Quarterly Flows, Lowest Earnings Announcement Returns, and Institutional Trades – Using Transaction Data

The table reports results from the regression of quarterly flows on the lowest earnings announcement returns in the portfolio and its interaction terms with funds' trades before and after earnings announcements. We use the 331 mutual funds with daily holdings data for this regression below.

$$\begin{aligned}
 Flow_{i,t} = & b_1 * Lowest\ Ret[0, 1]_{i,t-1} + b_2 * Lowest\ Ret[0, 1]_{i,t-1} \times Trades\ Lowest[-10, -1]_{i,t-1} \\
 & + b_3 * Lowest\ Ret[0, 1]_{i,t-1} \times Trades\ Lowest[0, 10]_{i,t-1} \\
 & + b_4 * Trades\ Lowest[-10, -1]_{i,t-1} + b_5 * Trades\ Lowest[0, 10]_{i,t-1} \\
 & + b_6 * Past\ Ranks_{i,t-1} + b_7 * Past\ Returns_{i,t-1} \\
 & + b_8 * Fund\ Characteristics_{i,t-1} + v_t + \varepsilon_{i,t},
 \end{aligned}$$

where $Lowest\ Ret[0, 1]_{i,t-1}$ is the return of the lowest performing stocks during earnings announcement days $[0, 1]$ in fund i 's portfolio last quarter. $Trades\ Lowest[-10, -1]_{i,t-1}$ is fund i 's trades of the lowest performing stock in the ten days before the earnings announcement, which is measured as the signed number of shares traded divided by the average absolute number of shares of this stock traded by fund i in all trading days. $Trades\ Lowest[0, 10]_{i,t-1}$ is fund i 's trades of the lowest performing stock on the earnings announcement day and the following ten days. $Past\ Ranks_{i,t-1}$ and $Past\ Returns_{i,t-1}$ control for fund performance ranks and returns in the past quarter and three years. $Fund\ Characteristics_{i,t-1}$ include controls for the fund's same-quarter return, age, and past-year flow volatility. Complete regression results including all control variables are reported in Table A19. Robust standard errors are clustered by quarter and t -statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Dependent Variable	Quarterly Fund Flow					
	Raw return			FFC 4 factor alpha		
	(1)	(2)	(3)	(4)	(5)	(6)
Lowest Ret[0,1]	0.087*** (3.50)	0.069 (1.34)	0.096** (2.32)	0.067** (2.53)	0.133*** (2.76)	0.081* (1.86)
Lowest Ret[0,1] × Trades Lowest[-10, -1]		0.016** (2.23)			0.021** (2.24)	
Lowest Ret[0,1] × Trades Lowest[0, 10]			0.004 (0.68)			0.012 (1.61)
Control variables:						
Trades Lowest[-10, -1]		0.006** (2.64)			0.006** (2.31)	
Trades Lowest[0, 10]			0.001 (0.48)			0.003 (1.54)
Controls for the past ranks	Yes	Yes	Yes	Yes	Yes	Yes
Controls for the past returns	Yes	Yes	Yes	Yes	Yes	Yes
Controls for fund characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Quarterly Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,926	768	1,103	1,704	672	781
Adjusted R-squared	0.151	0.177	0.157	0.177	0.234	0.174

Table A18: Quarterly Flows, Lowest Earnings Announcement Returns, and Institutional Trades – Using Transaction Data (Detailed)

The table reports the regression results in Table A15 with the coefficients on all the control variables fully displayed.

Dependent Variable	Quarterly Fund Flow					
	(1)	Raw Return (2)	(3)	(4)	FFC 4 factor alpha (5)	(6)
Lowest Ret[0,1]	0.035*** (4.96)	0.039*** (5.38)	0.024*** (3.03)	0.025*** (4.83)	0.028*** (5.54)	0.015** (2.04)
Lowest Ret[0,1] × Δ Weight		1.785*** (3.10)			1.465** (2.33)	
Lowest Ret[0,1] × Weight			0.302 (0.58)			0.582 (1.30)
Δ Weight		1.024*** (6.60)			1.011*** (6.57)	
Weight			0.319*** (2.87)			0.232** (2.27)
Past Quarter Rank	0.007 (1.32)	0.007 (1.38)	0.007 (1.43)	0.004 (0.98)	0.004 (1.07)	0.004 (1.03)
Past Halfyear Rank	0.017*** (3.38)	0.017*** (3.36)	0.018*** (3.43)	0.012** (2.41)	0.011** (2.39)	0.012** (2.43)
Past Year Rank	0.042*** (7.44)	0.041*** (7.35)	0.042*** (7.46)	0.038*** (7.59)	0.037*** (7.52)	0.038*** (7.57)
Past 3years Rank	0.074*** (20.51)	0.073*** (20.15)	0.074*** (20.63)	0.082*** (24.49)	0.081*** (23.71)	0.082*** (24.47)
Past Quarter Ret	0.009 (0.56)	0.009 (0.58)	0.009 (0.57)	-0.000 (-0.02)	-0.000 (-0.01)	-0.000 (-0.02)
Past Halfyear Ret	-0.002 (-0.18)	-0.002 (-0.18)	-0.003 (-0.20)	-0.001 (-0.10)	-0.001 (-0.07)	-0.001 (-0.11)
Past Year Ret	0.002 (0.18)	0.002 (0.18)	0.002 (0.17)	-0.000 (-0.05)	-0.001 (-0.06)	-0.000 (-0.05)
Past 3years Ret	0.002 (0.85)	0.002 (0.81)	0.002 (0.88)	0.001 (0.21)	0.001 (0.18)	0.001 (0.22)
Same Quarter Ret	0.042 (1.44)	0.042 (1.44)	0.042 (1.44)	0.119** (2.57)	0.118** (2.56)	0.119** (2.58)
ln(Age)	-0.017*** (-15.37)	-0.017*** (-15.25)	-0.017*** (-15.36)	-0.019*** (-14.85)	-0.018*** (-14.80)	-0.019*** (-14.82)
Turnover	-0.001 (-1.11)	0.000 (0.12)	-0.001 (-0.92)	-0.001 (-0.77)	0.001 (0.70)	-0.001 (-0.64)
Exp Ratio	-0.922*** (-4.64)	-0.902*** (-4.58)	-0.969*** (-4.85)	-0.883*** (-4.99)	-0.876*** (-4.98)	-0.899*** (-5.06)
ln(TNA)	-0.002*** (-5.49)	-0.002*** (-6.00)	-0.002*** (-4.88)	-0.003*** (-8.32)	-0.003*** (-9.01)	-0.003*** (-8.06)
Flow Vol Past1y	0.303*** (10.98)	0.296*** (10.76)	0.301*** (10.94)	0.270*** (9.86)	0.263*** (9.73)	0.269*** (9.86)
Ret Vol Past1y	-0.200* (-1.96)	-0.189* (-1.86)	-0.213** (-2.06)	0.254** (2.47)	0.280*** (2.72)	0.229** (2.12)
Num. Stocks	-0.000 (-1.34)	-0.000* (-1.69)	-0.000 (-0.42)	0.000** (2.22)	0.000* (1.78)	0.000** (2.19)
Quarterly Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	71,817	71,746	71,817	69,778	69,708	69,778
Adjusted R-squared	0.153	0.156	0.153	0.157	0.160	0.157

Table A19: Quarterly Flows, Lowest Earnings Announcement Returns, and Institutional Trades – Using Transaction Data (Detailed)

The table reports the regression results in Table A17 with the coefficients on all the control variables fully displayed.

Dependent Variable	Quarterly Fund Flow					
	Raw return			FFC 4 factor alpha		
	(1)	(2)	(3)	(4)	(5)	(6)
Lowest Ret[0,1]	0.087*** (3.50)	0.069 (1.34)	0.096** (2.32)	0.067** (2.53)	0.133*** (2.76)	0.081* (1.86)
Lowest Ret[0,1] * Signed Volume[-10, -1]		0.016** (2.23)			0.021** (2.24)	
Lowest Ret[0,1] * Signed Volume[0, 10]			0.004 (0.68)			0.012 (1.61)
Control variables:						
Signed Volume[-10, -1]		0.006** (2.64)			0.006** (2.31)	
Signed Volume[0, 10]			0.001 (0.48)			0.003 (1.54)
Past Quarter Rank	0.001 (0.04)	0.033 (0.78)	-0.004 (-0.11)	-0.039 (-1.41)	0.001 (0.03)	0.010 (0.29)
Past 3years Rank	0.071*** (4.24)	0.013 (0.43)	0.037* (1.71)	0.085*** (4.07)	0.102** (2.08)	0.056** (2.11)
Past Quarter Ret	0.359* (1.85)	0.095 (0.22)	0.425 (1.50)	0.928*** (2.73)	0.479 (0.75)	0.388 (1.01)
Past 3years Ret	0.006 (0.19)	0.120* (1.86)	0.067 (1.50)	0.005 (0.10)	0.030 (0.22)	0.074 (1.03)
Same Quarter Ret	0.246*** (3.00)	0.174 (1.25)	0.202* (1.73)	0.127 (1.32)	0.261 (1.57)	0.050 (0.30)
ln(Age)	-0.019*** (-7.90)	-0.026*** (-5.11)	-0.021*** (-5.40)	-0.018*** (-6.43)	-0.024*** (-4.50)	-0.022*** (-4.34)
Flow Vol Past1y	0.397*** (4.38)	0.431*** (3.02)	0.356*** (3.09)	0.394*** (3.62)	0.582*** (2.97)	0.382** (2.30)
Quarterly Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,926	768	1,103	1,704	672	781
Adjusted R-squared	0.151	0.177	0.157	0.177	0.234	0.174

Table A20: Monthly Flows after A Strongly Negative Realization of Earnings Announcement Return

The table studies the abnormal monthly fund flows within nine months after a negative realization of earnings announcement return in the lowest quintile (<-23.1%) per month. We estimate the abnormal monthly flows using this regression below.

$$Flow_{i,t} = \sum_{s=1}^9 b_s * D_Lowest[0,1]_{i,t-s} + b_{10} * D_Lowest[0,1]_{i,t} + b_{11} * Past\ Ranks_{i,t-1} + b_{12} * Past\ Returns_{i,t-1} + b_{13} * Fund\ Characteristics_{i,t-1} + v_t + \varepsilon_{i,t},$$

where $D_Lowest[0,1]_{i,t-s}$ is a dummy variable for a strongly negative realization of the lowest earnings announcement return in the fund's portfolio s months ago, which equals one for those in the lowest quintile (<-23.1%) and zero for others. Since 92.5% of earnings announcements in our sample are in the first two months of a quarter, we also report the results for fund flows in month 1, 2, and 3 of a quarter separately. Robust standard errors are clustered by quarter and t -statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Dependent variable:	Monthly Flows			
	(1) All Months	(2) Month1	(3) Month2	(4) Month3
L.D_Lowest[0,1]	-0.0009*** (-2.63)	0.0009 (1.12)	-0.0010** (-2.38)	-0.0015*** (-2.74)
L2.D_Lowest[0,1]	-0.0009*** (-2.92)	-0.0011** (-2.28)	-0.0003 (-0.53)	-0.0011** (-2.06)
L3.D_Lowest[0,1]	-0.0006** (-2.03)	-0.0009* (-1.96)	-0.0012*** (-2.79)	0.0012* (1.86)
L4.D_Lowest[0,1]	-0.0012*** (-3.58)	0.0001 (0.08)	-0.0010* (-1.87)	-0.0020*** (-3.90)
L5.D_Lowest[0,1]	-0.0007** (-2.17)	-0.0010** (-2.03)	0.0003 (0.46)	-0.0009* (-1.72)
L6.D_Lowest[0,1]	-0.0007** (-2.26)	-0.0011** (-2.28)	-0.0014*** (-2.79)	0.0011** (2.01)
L7.D_Lowest[0,1]	-0.0005* (-1.77)	0.0005 (0.74)	-0.0007 (-1.40)	-0.0008* (-1.80)
L8.D_Lowest[0,1]	-0.0003 (-0.69)	-0.0006 (-1.01)	0.0006 (0.80)	-0.0004 (-0.66)
L9.D_Lowest[0,1]	-0.0004 (-1.18)	-0.0006 (-1.04)	-0.0007* (-1.74)	0.0006 (0.81)
D_Lowest[0,1]	-0.0006** (-2.01)	-0.0009* (-1.74)	-0.0011** (-2.36)	0.0010 (1.39)
Controls for the past ranks	Yes	Yes	Yes	Yes
Controls for the past returns	Yes	Yes	Yes	Yes
Controls for fund characteristics	Yes	Yes	Yes	Yes
Monthly Fixed Effects	Yes	Yes	Yes	Yes
Observations	151,691	50,735	50,842	50,114
Adjusted R-squared	0.121	0.129	0.120	0.115

Table A21: Institutional Trades before Announcements after A Strongly Negative Earnings Announcement Realization

The table studies the changes of institutional trades before earnings announcements after a negative realization of earnings announcement return in the lowest quintile (<-30.7%) per quarter. We estimate the changes of institutional trades using the 331 mutual funds with daily holdings data.

$$Signed\ Volume[-10, -1]_{i,t} = a_i + \sum_{s=1}^4 b_s * D_Lowest[0, 1]_{i,t-s} + \sum_{s=0}^4 f_s * Flow_{i,t-s} \\ + b_5 * Past\ Ranks_{i,t-1} + b_6 * Past\ Returns_{i,t-1} + b_7 * Fund\ Characteristics_{i,t-1} + v_t + \varepsilon_{i,t},$$

where $SignedVolume[-10, -1]_{i,t}$ is fund i 's across-stocks average of the trades in the ten days before the earnings announcement in quarter t . The trade in each stock is measured as the signed number of shares traded divided by the average absolute number of shares traded in this stock by fund i in all trading days. Variable $D_Lowest[0, 1]_{i,t-s}$ is a dummy variable for a strongly negative realization of the lowest earnings announcement return in the fund's portfolio s quarters ago, which equals one for those in the lowest quintile (<-30.7%) and zero for the others. Variable $Flow_{i,t-s}$ is quarterly fund flows s quarters ago. Both fund and quarter fixed effects are included. Robust standard errors are clustered by quarter and t -statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Dependent variable: Signed Volume[-10, -1]			
	(1)	(2)	(3)
L.D_Lowest[0,1]	0.000 (0.01)	-0.018 (-0.54)	-0.013 (-0.40)
L2.D_Lowest[0,1]	-0.050*** (-2.71)	-0.058** (-2.53)	-0.052** (-2.14)
L3.D_Lowest[0,1]		-0.042 (-1.30)	-0.045 (-1.50)
L4.D_Lowest[0,1]		-0.029 (-1.13)	-0.027 (-1.00)
Flow			1.090*** (4.47)
L.Flow			0.148 (0.66)
L2.Flow			0.188 (1.25)
L3.Flow			0.320** (2.04)
L4.Flow			0.219** (2.16)
Controls for the past ranks	Yes	Yes	Yes
Controls for the past returns	Yes	Yes	Yes
Controls for fund characteristics	Yes	Yes	Yes
Quarter Fixed Effects	Yes	Yes	Yes
Fund Fixed Effects	Yes	Yes	Yes
Observations	2,006	1,634	1,634
Adjusted R-squared	0.206	0.224	0.270

Table A22: Hedge Funds' Trades and Financial Constraints

The table studies the effect of financial constraints on hedge funds' trades before and after earnings announcements. We estimate Eq. (18):

$$\begin{aligned} trades_{i,j,t} = & a + b_1 * Constrained_{i,t} \times EarningDay_{j,t} \\ & + b_2 * Constrained_{i,t} + b_3 * EarningDay_{j,t} + v_j + \varepsilon_{i,j,t}, \end{aligned}$$

where $trades_{i,j,t}$ is defined as in Eq. (2). $EarningDay_{j,t}$ is a dummy variable which equals one if it is the earning day under investigation (e.g, [-3] for the first column) and zero for all days outside our event window [-20, 20]. For the variable $Constrained_{i,t}$, we use an index of hedge fund financial constraints, constructed as explained in Section 7, with a mean of zero and a standard deviation of one. We use lockup period, redemption notice period, redemption frequency, fund age, and past year performance to construct this fund-level measure of financial constraint. Stock fixed effects are included into our analysis. Robust standard errors are clustered by day and t -statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Dependent Variable:	Signed Trading Volume (Fund-Stock-Day Level)				
	[-3]	[-2]	[-1]	[0]	[1]
Constrained Index \times Earning Day	-0.018 (-0.52)	-0.105*** (-3.23)	-0.126*** (-3.84)	-0.047 (-1.54)	0.107*** (3.39)
Constrained Index	0.007 (0.64)	0.009 (0.79)	0.006 (0.55)	0.006 (0.50)	0.007 (0.59)
Earning Day	-0.012 (-0.35)	-0.036 (-0.94)	-0.012 (-0.36)	0.059** (1.97)	0.017 (0.61)
Stock Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	100,879	101,018	101,520	103,331	103,749
Adjusted R^2	0.05	0.05	0.05	0.05	0.05

Table A23: Hedge Funds and Financial Constraints (Individual Constraint)

The table reports the estimates of Eq. (18):

$$trades_{i,j,t} = a + b_1 * Constrained_{i,t} \times EarningDay_{j,t} + b_2 * Constrained_{i,t} + b_3 * EarningDay_{j,t} + v_j + \varepsilon_{i,j,t},$$

using each individual measure of financial constraint for hedge funds. We only report the coefficients of the interaction terms. We use minus lockup period (LOCKUP), minus the redemption notice period (RED NOTICE), minus the redemption frequency (RED FREQ), minus the age of the fund (YOUNG), and minus the past year performance (BAD) for this regressions analysis. For each variable, we standardize it to a mean of zero and a standard deviation of one. Robust standard errors are clustered by day and t -statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Dependent Variable: Signed Trading Volume (Fund-Stock-Day Level)					
Coefficients of "Constrained \times Earning Day"					
	[-3]	[-2]	[-1]	[0]	[1]
LOCKUP	0.003 (0.24)	-0.007 (-0.47)	-0.026* (-1.79)	-0.047*** (-3.55)	-0.035*** (-2.64)
RED NOTICE	-0.027** (-2.26)	-0.006 (-0.48)	-0.087*** (-6.79)	-0.047*** (-4.08)	0.005 (0.43)
RED FREQ	-0.027 (-1.48)	-0.049*** (-2.94)	-0.079*** (-4.37)	-0.045*** (-2.72)	0.053*** (3.24)
YOUNG	-0.02 (-0.95)	-0.055** (-2.36)	-0.121*** (-5.07)	-0.045** (-2.20)	0.099*** (4.71)
BAD	-0.008 (-0.30)	-0.038 (-1.46)	-0.092*** (-3.43)	0.003 (0.10)	0.069*** (2.74)
Stock Fixed Effects	Yes	Yes	Yes	Yes	Yes

Table A24: Mutual Funds and Other Financial Constraints

The table studies the effect of two other measures of financial constraints on mutual funds' trades before and after earnings announcements. We estimate Eq. (18)

$$\begin{aligned} trades_{i,j,t} = & a + b_1 * Constrained_{i,t} \times EarningDay_{j,t} \\ & + b_2 * Constrained_{i,t} + b_3 * EarningDay_{j,t} + v_j + \varepsilon_{i,j,t}, \end{aligned}$$

using each individual measure of financial constraint for mutual funds. We use minus the ln age of the fund (YOUNG) and the reverse of the past quarter performance rank (BAD) for this regressions analysis, and we use ln manager tenure in years (OLD MGR) to measure (low) risk-taking. Panel A reports the regressions results. Since the age of a fund and the tenure of the fund manager are positively correlated (with a correlation of 0.347) and young funds and new fund managers have different trading incentives, we do a multivariate regression (Eq. (18)) in Panel B including both "YOUNG" fund and "OLD MGR" and their interaction terms with $EarningDay_{j,t}$. We standardize each variable (YOUNG, BAD, and OLD MGR) to a mean of zero and a standard deviation of one, and we only report the coefficients of their interaction terms. Robust standard errors are clustered by day and t -statistics are reported in parentheses. Asterisks denote significance levels: *** 0.01, ** 0.05, and * 0.1.

Dependent Variable:	Signed Trading Volume (Fund-Stock-Day Level)				
	Coefficients of "Constrained \times Earning Day"				
	[-3]	[-2]	[-1]	[0]	[1]
Panel A: Regressions of individual measures					
YOUNG	-0.002 (-0.21)	-0.011 (-1.18)	-0.012 (-1.36)	-0.017** (-2.00)	-0.013 (-1.50)
BAD	-0.005 (-0.56)	-0.011 (-1.14)	-0.018* (-1.94)	-0.020** (-2.18)	0.000 (0.01)
OLD MGR (low risk-taking)	-0.028*** (-2.95)	-0.027*** (-2.76)	-0.027*** (-2.75)	-0.010 (-1.00)	-0.021** (-1.99)
Stock Fixed Effects	Yes	Yes	Yes	Yes	Yes
Panel B: Multivariate reg. for "YOUNG" fund and "OLD" manager (Corr = - 0.347)					
YOUNG \times EarningDay	-0.015 (-1.50)	-0.022** (-2.11)	-0.026*** (-2.59)	-0.022** (-2.23)	-0.024** (-2.38)
OLD MGR \times EarningDay	-0.035*** (-3.39)	-0.036*** (-3.39)	-0.038*** (-3.53)	-0.017 (-1.47)	-0.031*** (-2.60)
Other Controls	Yes	Yes	Yes	Yes	Yes
Stock Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	869,578	869,649	870,957	884,350	888,679
Adjusted R^2	0.01	0.01	0.01	0.01	0.01

Table A25: Abnormal Trades of Hedge Funds and Mutual Funds by Flow Volatility Quintiles

The table studies the abnormal signed trading volume of hedge funds and mutual funds in days [-3, 1] around firms' earnings announcements by flow-volatility quintiles. At the beginning of every quarter, we sort hedge funds (mutual funds) into quintiles based on their past 2-year (year) monthly flow volatility. Panel A is for hedge funds, and Panel B is for mutual funds. Abnormal institutional trades are calculated using Eq. (3) with stock fixed effects. We use the 331 mutual funds with fund-level as well as transaction-level data for the analysis in panel B. Robust standard errors are clustered by day and t -statistics are reported in parentheses. Sig. lvl: *** 0.01, ** 0.05, and * 0.1.

Panel A: Abnormal Trades of Hedge Funds by Flow Volatility Quintiles

Dependent Variable: Signed Trading Volume (Fund-Stock-Day Level)

	[-3]	[-2]	[-1]	[0]	[1]	Flow Volatility
Q1 (low flow vol)	0.039 (0.51)	0.146* (1.81)	0.122 (1.52)	0.108 (1.34)	-0.166** (-2.20)	0.016
2	0.046 (0.51)	0.067 (0.74)	0.180* (1.75)	0.025 (0.29)	-0.016 (-0.17)	0.040
3	0.035 (0.41)	0.024 (0.24)	0.107 (1.21)	0.072 (0.88)	0.170** (2.14)	0.059
4	0.066 (0.91)	-0.093 (-1.10)	-0.113 (-1.12)	0.045 (0.58)	0.117 (1.53)	0.098
Q5 (high flow vol)	-0.090 (-1.19)	-0.017 (-0.23)	-0.423*** (-5.58)	0.010 (0.17)	0.169*** (2.62)	0.134
Stock Fixed Effects	Yes	Yes	Yes	Yes	Yes	

Panel B: Abnormal Trades of Mutual Funds by Flow Volatility Quintiles

Q1 (low flow vol)	-0.014 (-0.75)	-0.038** (-2.10)	-0.043** (-2.38)	-0.021 (-1.22)	0.000 (0.02)	0.005
2	-0.035** (-1.94)	-0.053*** (-3.07)	-0.019 (-1.07)	-0.031 (-1.64)	0.045** (2.48)	0.009
3	-0.005 (-0.24)	-0.033* (-1.75)	-0.032** (-1.67)	-0.005 (-0.23)	0.069*** (3.24)	0.017
4	-0.036 (-1.51)	-0.043* (-1.82)	-0.084*** (-3.63)	-0.063*** (-2.63)	0.036 (1.56)	0.036
Q5 (high flow vol)	-0.027 (-1.14)	-0.045* (-1.90)	-0.095*** (-3.97)	-0.038* (-1.65)	0.026 (1.11)	0.108
Stock Fixed Effects	Yes	Yes	Yes	Yes	Yes	

Table A26: Summary Statistics of Flow Volatility Measures

The table reports the summary statistics of the quarterly measures of funds' flow volatility for hedge funds (in Panel A) and mutual funds (in Panel B) separately. We use hedge fund's past 2-year (mutual fund's past year) monthly flows to calculate the flow volatility $FlowVol_{i,t}$ used in the regression analyses in Table 6. Hedge funds usually have a redemption notice period of one to three months and a redemption frequency varying from a month to a year, whereas open-ended mutual funds' redemption notice periods are much shorter than hedge funds' and their redemption frequencies are much higher. Therefore, we choose two years for hedge funds and one year for mutual funds to calculate this flow volatility. Summary statistics both before and after the standardization are reported.

Panel B: Summary statistics of hedge funds' past 2-year monthly flow volatility

	# of obs.	Mean	Std	Min	Max
Flow volatility (in %)	2,556	0.065	0.043	0.001	0.219
FlowVol (standardized)	2,556	0	1	-1.48	3.56

	p10	p25	p50	p75	p90
Flow volatility	0.016	0.030	0.060	0.091	0.128
FlowVol (standardized)	-1.14	-0.82	-0.12	0.60	1.46

Panel B: Summary statistics of mutual funds' past year flow volatility

	# of Obs.	Mean	Std	Min	Max
Flow volatility	5,329	0.028	0.040	0.001	0.285
FlowVol (standardized)	5,329	0	1	-0.67	6.44

	p10	p25	p50	p75	p90
Flow volatility	0.004	0.006	0.013	0.031	0.069
FlowVol (standardized)	-0.60	-0.54	-0.38	0.08	1.02