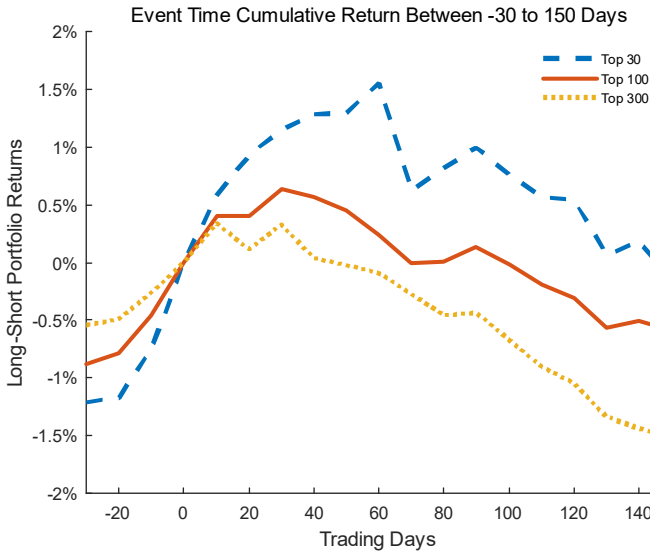


## Appendix

### A1. Cumulative Abnormal Returns during Cash Mergers



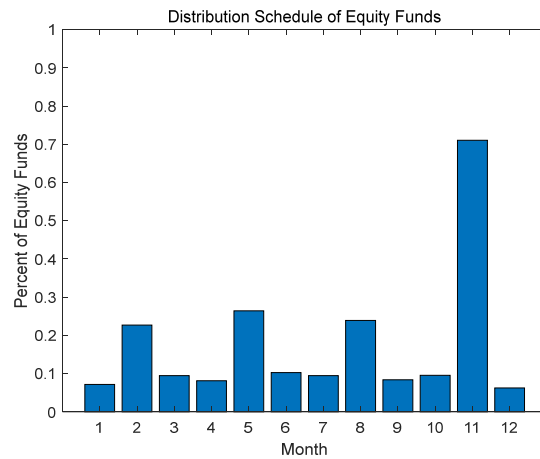
This figure plots the long-short event-time cumulative abnormal returns (CAR) of equal-weighted longing (shorting) stocks with (without) *InducedBuy*. Stocks in the long-portfolio are stocks purchased by merger-cash-redeploying investors, whereas the short portfolio are the unpurchased stocks. The y-axis, Long-Short Return, is the cumulative abnormal return of a portfolio consisting of equal-weighted long positions in *InduceBuy* stocks and equal-weighted short positions in non-*InduceBuy* stocks normalized to zero percent at the event date. The blue dashed line is the average cumulative abnormal returns for the top 30 cash mergers, the red solid line is for the top 100 cash mergers, and the yellow dotted line is for the top 300 cash mergers.

## A2. Investor Flow Calculated Using Total Fund Returns and Flow Calculated Using NAV Returns

Capital gains and dividend distributions calculated by comparing the difference between total returns and NAV price return per share of mutual funds:

$$Distribution_{j,t} = (Ret_{j,t} - Ret_{j,t}^{NAV}).$$

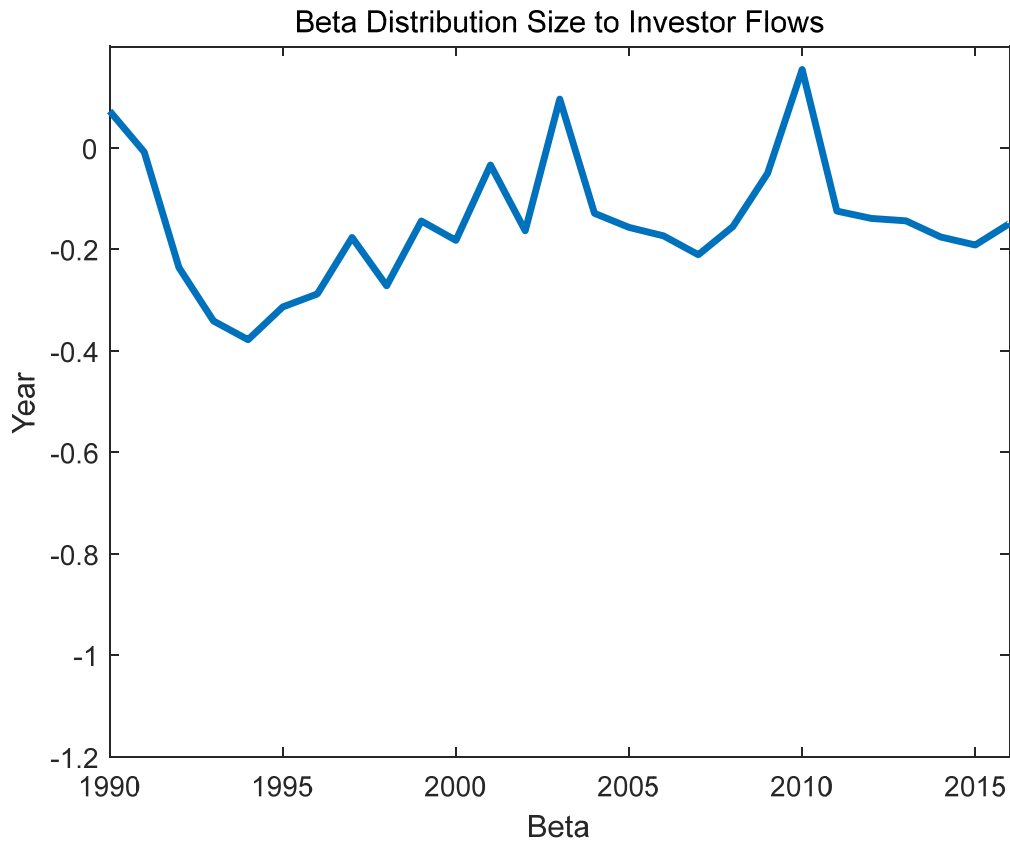
Monthly distribution schedule of equity open-ended mutual funds in the CRSP database over 1990 through 2016.



$Ret_{i,t}^{NAV}$  is adjusted for splits and mergers in shares. Here, for \$1 invested in fund  $j$ ,  $Ret_{j,t}$  is the net return that includes the price return of the share plus the distribution amount. The distribution amount can be taken as cash by the investor or can be reinvested as new shares of the fund  $j$ . Investor flow can be defined as the outflow due to distribution plus other residual investor flows:

$$Inv\_Flow_{j,t} = ResFlow_{j,t} + \beta \cdot Distribution_{j,t}.$$

$\beta$  can be estimated by assuming  $ResFlow_{j,t}$  is uncorrelated with  $Distribution_{j,t}$ . Coefficient is  $-0.153$  ( $t = -9.16$ ) for this sample period for mutual funds with at least \$10 million under management. That is, 15.3% of the distributions are returned to investors, whereas 84.7% is retained by the portfolio. The top panel plots time series of the beta. The bottom panel describes the panel regression.



$Distribution_{j,t}$	$Inv\_Flow_{j,t}$		
		-0.153 (-9.16)	-0.178 (-10.74)
<i>Month Fixed</i>	No	Yes	Yes
<i>Fund Fixed</i>	No	No	Yes
$R^2$	0.16%	1.34%	8.37%
$N$	1,572,254	1,572,254	1,572,254

### A3. Cash Return Induced Demand, Fama-MacBeth

Assuming proportional reinvestment to initial fund values, cash returns are aggregated at the stock level. Specifically, dividend- and buyback-induced demand to stock  $i$  is calculated as

$$DID_{i,t} = \sum_j \frac{SharesHeld_{i,j,t-1}}{\sum_j SharesHeld_{i,j,t-1}} Div\_Flow_{j,t}$$

and

$$BID_{i,t} = \sum_j \frac{SharesHeld_{i,j,t-1}}{\sum_j SharesHeld_{i,j,t-1}} Buy\_Flow_{j,t}.$$

This table records the Fama-MacBeth regression coefficients of average quarter excess returns on  $DID_{i,t-1}$ ,  $BID_{i,t-1}$ , and various controls.  $Log\_ME_{i,t-1}$  is the log market capitalization.  $BooktoMarket_{i,t-1}$  is the book-to-market ratio from 1 quarter prior.  $Ret12_{i,t-1}$  is the prior 12-month return.  $Issue_{i,t-1}$  is the percentage increase in shares outstanding over the past 5 years.  $FIPP$  is the contemporaneous flow-induced price pressure to the period of the excess returns. Only non-dividend-paying stocks that have not had any repurchasing events over the past 5 years are used in the regression. All the regressor variables are standardized by their unconditional standard deviation. The t-statistics in the first 3 columns are *Newey-West* with a single lag. t-statistics in the next 3 columns are *Newey-West* with 4 lags to account for overlapping returns.

	1 Quarter Excess Returns			4 Quarter Excess Returns		
	$(Ret_i - Rf)_{t-1 \rightarrow t}$			$1/4 \cdot (Ret_i - Rf)_{t-1 \rightarrow t+3}$		
$DID_{i,t-1}$	0.366%	0.548%	0.363%	0.476%	0.549%	0.501%
	(0.96)	(1.57)	(1.15)	(1.55)	(1.96)	(1.91)
$BID_{i,t-1}$	1.100%	1.259%	1.369%	0.568%	0.586%	0.775%
	(2.55)	(3.10)	(3.57)	(1.84)	(2.12)	(2.92)
$Log\_Me_{i,t-1}$		-0.306%	-0.186%		-0.213%	-0.160%
		(-1.07)	(-0.70)		(-0.96)	(-0.79)
$BooktoMarket_{i,t-1}$		-0.194%	-0.190%		-0.200%	-0.145%
		(-0.79)	(-0.81)		(-1.04)	(-0.83)
$Ret12_{i,t-1}$		0.450%	0.295%		-0.041%	-0.195%
		(0.78)	(0.51)		(-0.08)	(-0.39)
$Issue_{i,t-1}$		-0.740%	-0.726%		-0.623%	-0.632%
		(-4.49)	(-4.42)		(-4.10)	(-4.14)
$FIPP_{i,t-1 \rightarrow t-1+k}$			3.039%			2.017%
			(8.38)			(4.91)
$Avg\ N$	803	797	797	803	797	797
$Avg\ R^2$	1.62%	3.87%	4.37%	1.59%	3.53%	4.41%

#### A4. Cash Return Induced Demand, Calendar Portfolios Sort

This table records monthly returns of calendar-time strategies based on dividend and buyback induced demand. Dividend- and buyback induced demand to stock  $i$  is calculated as

$$DID_{i,t} = \sum_j \frac{SharesHeld_{i,j,t-1}}{\sum_j SharesHeld_{i,j,t-1}} Div\_Flow_{j,t},$$

$$BID_{i,t} = \sum_j \frac{SharesHeld_{i,j,t-1}}{\sum_j SharesHeld_{i,j,t-1}} Buy\_Flow_{j,t}.$$

Panel A. This panel records the monthly excess returns and risk-adjusted alphas of market-cap value-weighted portfolios sorted on  $DID_{i,t}$ . Non-cash-paying stocks are sorted into quintile portfolios, and the table reports the returns of overlapping portfolio strategies that hold each portfolio for a varying number of quarters. The sample period of returns is from January 1990 through December 2016.

	Q1 Holding Period				Q1 to Q4 Holding Period				
	Raw Rx	CAPM	3-Factors	4-Factors	Raw Rx	CAPM	3-Factors	4-Factors	
DID	1	0.39%	-0.62%	<b>-0.36%</b>	<b>-0.43%</b>	0.53%	-0.49%	-0.24%	-0.25%
		(0.79)	(-1.88)	<b>(-2.00)</b>	<b>(-2.33)</b>	(1.07)	(-1.58)	(-1.49)	(-1.54)
	2	0.51%	-0.47%	-0.25%	-0.28%	0.49%	<b>-0.50%</b>	<b>-0.28%</b>	<b>-0.27%</b>
		(1.12)	(-1.83)	(-1.62)	(-1.81)	(1.09)	<b>(-2.05)</b>	<b>(-2.15)</b>	<b>(2.02)</b>
	3	0.58%	-0.37%	-0.20%	-0.24%	0.65%	-0.29%	-0.13%	-0.12%
	(1.34)	(-1.53)	(-1.23)	(-1.41)	(1.56)	(-1.41)	(-0.98)	(-0.91)	
	4	<b>1.09%</b>	0.18%	<b>0.32%</b>	<b>0.36%</b>	<b>0.87%</b>	-0.02%	0.13%	0.20%
		<b>(2.73)</b>	(0.91)	<b>(2.01)</b>	<b>(2.22)</b>	<b>(2.26)</b>	(-0.11)	(0.90)	(1.44)
	5	<b>0.92%</b>	0.12%	0.14%	<b>0.31%</b>	<b>0.93%</b>	0.13%	0.18%	<b>0.29%</b>
		<b>(2.65)</b>	(0.72)	(0.86)	<b>(1.98)</b>	<b>(2.78)</b>	(0.98)	(1.40)	<b>(2.27)</b>
	LS	0.52%	<b>0.73%</b>	<b>0.50%</b>	<b>0.73%</b>	0.40%	<b>0.62%</b>	<b>0.42%</b>	<b>0.54%</b>
	5-1	(1.46)	<b>(2.10)</b>	<b>(2.01)</b>	<b>(3.04)</b>	(1.31)	<b>(2.11)</b>	<b>(2.03)</b>	<b>(2.59)</b>

Panel B. This panel record the monthly excess returns and risk-adjusted alphas of market-cap value-weighted portfolios sorted on  $BID_{i,t}$ . Non-cash-paying stocks are sorted into quintile portfolios, and the table reports the returns of overlapping portfolio strategies that hold each portfolio for a varying number of quarters. The sample period of returns is from January 1990 through December 2016.

	Q1 Holding Period				Q1 to Q4 Holding Period				
	Raw Rx	CAPM	3-Factors	4-Factors	Raw Rx	CAPM	3-Factors	4-Factors	
BID	1	0.39%	<b>-0.67%</b>	<b>-0.52%</b>	<b>-0.57%</b>	0.44%	<b>-0.61%</b>	<b>-0.42%</b>	<b>-0.43%</b>
		(0.76)	<b>(-2.19)</b>	<b>(-2.60)</b>	<b>(-2.84)</b>	(0.90)	<b>(-2.22)</b>	<b>(-2.66)</b>	<b>(-2.65)</b>
	2	0.56%	<b>-0.45%</b>	<b>-0.34%</b>	<b>-0.33%</b>	0.55%	<b>-0.43%</b>	<b>-0.31%</b>	<b>-0.29%</b>
		(1.26)	<b>(-2.00)</b>	<b>(-2.06)</b>	<b>(-1.97)</b>	(1.29)	<b>(-2.10)</b>	<b>(-2.52)</b>	<b>(-2.32)</b>
	3	0.68%	-0.28%	-0.19%	-0.08%	0.76%	-0.15%	-0.07%	0.02%
	(1.63)	(-1.37)	(-1.25)	(-0.53)	(1.95)	(-0.82)	(-0.55)	(0.14)	
	4	<b>0.82%</b>	-0.01%	0.05%	0.12%	<b>0.83%</b>	-0.01%	0.06%	0.09%
		<b>(2.23)</b>	(-0.06)	(0.33)	(0.72)	<b>(2.30)</b>	(-0.08)	(0.46)	(0.70)
	5	<b>1.05%</b>	0.31%	<b>0.36%</b>	<b>0.47%</b>	<b>1.05%</b>	<b>0.30%</b>	<b>0.35%</b>	<b>0.40%</b>
		<b>(3.22)</b>	(1.93)	<b>(2.36)</b>	<b>(3.17)</b>	<b>(3.30)</b>	<b>(2.16)</b>	<b>(2.71)</b>	<b>(3.10)</b>
	LS	<b>0.67%</b>	<b>0.98%</b>	<b>0.87%</b>	<b>1.05%</b>	<b>0.61%</b>	<b>0.92%</b>	<b>0.77%</b>	<b>0.83%</b>
	5-1	<b>(2.01)</b>	<b>(3.14)</b>	<b>(3.48)</b>	<b>(4.20)</b>	<b>(2.17)</b>	<b>(3.52)</b>	<b>(3.85)</b>	<b>(4.09)</b>

## A5. Cash-Induced Demand, Calendar Portfolios Sort on All Stocks

This table records monthly returns of calendar-time strategies based on dividend and buyback induced demand on all stocks. Specifically, cash-induced demand for stock  $i$  is calculated as

$$CID_{i,t} = \sum_j \frac{SharesHeld_{i,j,t-1}}{\sum_j SharesHeld_{i,j,t-1}} Cap\_Flow_{j,t}.$$

The columns record the monthly excess returns and risk-adjusted alphas of market-cap value-weighted portfolios sorted on  $CID_{i,t}$ . All stocks with market caps greater than the 10th percentile of NYSE firms and in the top 9 deciles of the percentage of mutual fund holdings are sorted into quintile portfolios. The table reports the returns of an overlapping portfolio strategy that holds each portfolio for 1 or 4 quarters. The sample period of returns is from January 1990 through December 2016.

		Q1 Holding Period				Q1 to Q4 Holding Period			
		Raw Rx	CAPM	3-Factors	4-Factors	Raw Rx	CAPM	3-Factors	4-Factors
CID	1	0.53% (1.17)	-0.46% (-1.86)	<b>-0.28%</b> <b>(-2.07)</b>	<b>-0.33%</b> <b>(-2.42)</b>	0.54% (1.22)	-0.44% (-1.88)	<b>-0.26%</b> <b>(-2.21)</b>	<b>-0.27%</b> <b>(-2.20)</b>
	2	0.59% (1.69)	-0.25% (-1.87)	-0.20% (-1.95)	-0.17% (-1.63)	<b>0.67%</b> <b>(1.98)</b>	-0.15% (-1.23)	-0.10% (-1.08)	-0.06% (-0.67)
	3	<b>0.83%</b> <b>(2.92)</b>	0.14% (1.34)	0.12% (1.15)	0.14% (1.30)	<b>0.82%</b> <b>(2.94)</b>	0.14% (1.41)	0.13% (1.35)	0.14% (1.36)
	4	<b>0.82%</b> <b>(3.28)</b>	<b>0.23%</b> <b>(2.14)</b>	0.19% (1.90)	0.20% (1.90)	<b>0.80%</b> <b>(3.22)</b>	<b>0.20%</b> <b>(2.16)</b>	<b>0.17%</b> <b>(1.96)</b>	0.17% (1.91)
	5	<b>0.63%</b> <b>(2.92)</b>	0.13% (1.29)	0.27% (0.43)	0.07% (1.06)	<b>0.66%</b> <b>(3.09)</b>	0.17% (1.66)	0.06% (0.91)	0.08% (1.31)
	LS	0.10%	0.59%	0.31%	<b>0.40%</b>	0.13%	0.61%	<b>0.32%</b>	<b>0.35%</b>
	5-1	(0.27)	(1.78)	(1.81)	<b>(2.34)</b>	(0.34)	(1.89)	<b>(2.04)</b>	<b>(2.19)</b>

## A6. Fund Portfolio-Level Flow and Capital Return

Summary statistics on quarterly capital returns and percentage flows per mutual fund portfolio.  $Inv\_Flow_{j,t}$  is the percentage of investor flows into mutual fund  $j$ , that is,  $Inv\_Flow_{j,t} = (TNA_{j,t} - TNA_{j,t-1} \cdot (1 + ret_{j,t}) - MGN_{j,t-1})/TNA_{j,t-1}$ . Dividend-induced capital flow for portfolio  $j$  is defined as

$$Div\_Flow_{j,t} = \sum_i Weight_{i,j,t-1} \cdot Dividends_{i,t}.$$

Pro-rata buyback flow for portfolio  $j$  is defined as

$$Buy\_Flow_{j,t} = \sum_i Weight_{i,j,t-1} \cdot |Buyback_{i,t}|.$$

$Weight_{i,j,t-1}$  is the portfolio weight of asset  $i$  by portfolio  $j$  at  $t-1$ .  $|Buyback_{i,t}|$  is the percentage decrease in shares outstanding of asset  $i$  between  $t-1$  and  $t$ .  $Dividend_{i,t}$  is the dividend yield of asset  $i$  between  $t-1$  and  $t$ .  $\rho_{t,t-1}$  and  $\rho_{t,t-4}$  are the autocorrelation coefficients at 1 and 4 quarters lags, respectively.

	Mean	Std	Q1	Median	Q3	$\rho_{t,t-1}$	$\rho_{t,t-4}$	N
$Inv\_Flow_{j,t}$ (1990 to 2016)	0.46%	23.62%	-4.37%	-1.42%	2.61%	0.344	0.161	81,822
$Div\_Flow_{j,t}$ (1990 to 2016)	0.35%	0.23%	0.18%	0.31%	0.48%	0.836	0.783	81,822
$Buy\_Flow_{j,t}$ (1990 to 2016)	0.43%	0.26%	0.23%	0.39%	0.58%	0.616	0.466	81,822
$Inv\_Flow_{j,t}$ (1990 to 2002)	2.17%	23.77%	-3.60%	-0.50%	4.23%	0.389	0.107	19,746
$Div\_Flow_{j,t}$ (1990 to 2002)	0.28%	0.23%	0.10%	0.24%	0.40%	0.933	0.849	19,746
$Buy\_Flow_{j,t}$ (1990 to 2002)	0.26%	0.18%	0.13%	0.23%	0.35%	0.402	0.284	19,746
$Inv\_Flow_{j,t}$ (2003 to 2016)	-0.09%	23.55%	-4.58%	-1.68%	2.10%	0.318	0.181	62,076
$Div\_Flow_{j,t}$ (2003 to 2016)	0.37%	0.22%	0.20%	0.34%	0.50%	0.798	0.762	62,076
$Buy\_Flow_{j,t}$ (2003 to 2016)	0.48%	0.25%	0.29%	0.46%	0.63%	0.581	0.412	62,076

## A7. Use of Cash Returns by Passive and Active Mutual Funds

This table describes how cash return programs induce redeployment by passive and active mutual funds between 1990 and 2015. Dividends received are directly used to increase holdings, whereas stock buybacks exchange cash for shares with mutual fund portfolios.

Panel A. Change in portfolio holdings for funds sorted on dividend exposure. Passive (left) and active (right) mutual funds are sorted into 3 groups by the size of dividends received relative to their total net assets. This table tabulates the pooled average of (1) dividends received each quarter, (2) percentage of funds that increased their total share holdings, (3) percentage of funds that reduced their total share holdings, (4) change in total share-holding size (using end-of-quarter prices), and (5) residual change in total share-holding after compensating for investor inflow and outflow (residuals from quarterly regressions of change in total share holdings on inflow and outflow).

<i>Passive Funds</i>						<i>Active Funds</i>					
	Average Div Flow	% Funds Increasing Holdings	% Funds Reducing Holdings	$\Delta Holdings^{all}$	Residual $\Delta Holdings^{all}$		Average Div Flow	% Funds Increasing Holdings	% Funds Reducing Holdings	$\Delta Holdings^{all}$	Residual $\Delta Holdings^{all}$
Lowest Div Funds	0.241%	59.7%	40.3%	2.94%	0.217%	Lowest Div Funds	0.130%	39.7%	60.3%	-0.315%	-0.611%
				(12.3)	(1.75)					(-3.12)	(-8.26)
2	0.451%	61.3%	38.7%	3.20%	0.600%	2	0.307%	40.4%	59.6%	-0.230%	-0.144%
				(13.9)	(4.84)					(-2.39)	(-2.01)
Highest Div Funds	0.633%	58.1%	41.9%	3.34%	0.850%	Highest Div Funds	0.564%	43.1%	56.9%	0.312%	0.400%
				(13.4)	(7.36)					(2.86)	(4.45)

Panel B. Stocks sorted on percentage buybacks. Stocks with detectable buybacks are sorted into quintiles. Stocks without any buybacks are also grouped into a single bin. This table tabulates the pooled average of (1) buyback size, (2) percentage of mutual funds that increased their holdings, (3) percentage of mutual funds that reduced their holdings, and (4) percentage of mutual funds that liquidated their holdings of the stock in the same quarter.

	Average Buyback	% Passive Funds Increased Position	% Passive Funds Reducing Position	% Passive Funds Liquidated Position	% Active Funds Increased Position	% Active Funds Reducing Position	% Active Funds Liquidated Position
Stocks without Buyback	0.000%	44.017%	19.786%	4.916%	35.324%	32.391%	15.855%
Lowest Buyback Stocks	0.057%	43.583%	23.431%	4.604%	33.164%	32.119%	13.944%
2	0.301%	43.667%	24.333%	3.809%	32.875%	32.391%	13.112%
3	0.730%	43.145%	25.699%	3.538%	32.908%	33.443%	13.490%
4	1.515%	42.330%	26.718%	3.601%	32.527%	34.232%	14.158%
Highest Buyback Stocks	4.062%	39.138%	28.503%	4.251%	32.834%	35.447%	16.071%

Panel C. This table describes the panel-regression coefficients of the buying of stocks by index mutual funds in each capital returning bin on the ex-ante percentage shares held in each bin on the full panel of stocks between 1990 and 2015. That is,

$$BuyPassive_{i,t,bin} = \frac{\sum_j Max(\Delta Holding_{i,j,t,0})(PassiveDum_j)|j \in bin_t}{\sum_j Holding_{i,j,t-1}}, BuyActive_{i,t,bin} = \frac{\sum_j Max(\Delta Holding_{i,j,t,0})(ActiveDum_j)|j \in bin_t}{\sum_j Holding_{i,j,t-1}}, \text{ and}$$

$$PerchHold_{i,t,bin} = \frac{\sum_j Holding_{i,j,t-1}|j \in bin_t}{\sum_j Holding_{i,j,t-1}}.$$

Coefficients are clustered quarterly. The largest coefficient per column is highlighted in bold.

	$BuyPassive_{i,t,1}$	$BuyPassive_{i,t,2}$	$BuyPassive_{i,t,3}$	$BuyActive_{i,t,1}$	$BuyActive_{i,t,2}$	$BuyActive_{i,t,3}$
$PerchHold_{i,t-1,1}$	<b>0.0248</b>	<b>0.0323</b>	0.0042	<b>0.1415</b>	0.0333	0.0048
	(4.88)	(3.14)	(6.36)	(21.43)	(7.35)	(2.77)
$PerchHold_{i,t-1,2}$	0.0043	0.0213	0.0017	0.0595	<b>0.0520</b>	0.0213
	(1.24)	(5.53)	(1.40)	(4.85)	(7.98)	(7.81)
$PerchHold_{i,t-1,3}$	0.0045	0.0020	<b>0.0127</b>	0.0136	0.0370	<b>0.0609</b>
	(1.55)	(0.95)	(3.11)	(1.78)	(3.43)	(9.16)
$R^2$	0.0091	0.0092	0.0087	0.0695	0.0260	0.0438
$N$	285,654	297,559	257,522	285,654	297,559	257,522



## A8. Gross Purchasing Patterns of Funds Sorted by Investors Flows

This table describes the panel regression coefficients of buying of stocks by mutual funds in the 5 investor flow bins on the ex-ante percentage shares held in each bin on the full panel of stocks between 1990 and 2016. That is:

$$Buying_{i,t,bin} = \frac{\sum_j Max(\Delta Holding_{i,j,t,0})|j \in bin_t}{\sum_j Holding_{i,j,t-1}}, \text{ and } PercHold_{i,t,bin} = \frac{\sum_j Holding_{i,j,t-1}|j \in bin_t}{\sum_j Holding_{i,j,t-1}}.$$

Coefficients are clustered quarterly. The *largest* coefficient per column is highlighted in bold.

	<i>Buying</i> <sub><i>i,t,1</i></sub>	<i>Buying</i> <sub><i>i,t,2</i></sub>	<i>Buying</i> <sub><i>i,t,3</i></sub>	<i>Buying</i> <sub><i>i,t,4</i></sub>	<i>Buying</i> <sub><i>i,t,5</i></sub>
<i>PercHeld</i> <sub><i>i,t-1,1</i></sub>	0.208 (4.05)	<b>0.739</b> <b>(3.31)</b>	0.781 (1.96)	0.481 (2.59)	0.558 (3.79)
<i>PercHeld</i> <sub><i>i,t-1,2</i></sub>	0.070 (1.26)	0.022 (-0.37)	-0.090 (-0.45)	0.020 (0.13)	-0.035 (-0.67)
<i>PercHeld</i> <sub><i>i,t-1,3</i></sub>	0.230 (1.50)	0.218 (1.13)	0.083 (0.49)	0.455 (2.47)	0.273 (2.44)
<i>PercHeld</i> <sub><i>i,t-1,4</i></sub>	<b>0.427</b> <b>(2.62)</b>	0.549 (3.02)	0.261 (1.09)	<b>0.885</b> <b>(2.81)</b>	0.269 (3.43)
<i>PercHeld</i> <sub><i>i,t-1,5</i></sub>	0.417 (3.41)	0.451 (3.18)	<b>2.225</b> <b>(1.75)</b>	0.672 (3.42)	<b>0.644</b> <b>(4.10)</b>
<i>R</i> <sup>2</sup>	2.54%	2.39%	3.36%	2.35%	3.24%
<i>N</i>	316,960	308,133	334,968	349,440	341,487

## A9. Cash Returns and Investor Flow Calculations

Dividend yield per stock is the difference between the total return ( $Ret_{i,t}$ ) and price return ( $Retx_{i,t}$ ) each quarter:

$$Divy_{i,t} = Ret_{i,t} - Retx_{i,t}.$$

I use the reduction in shares outstanding as the measure of percentage buybacks. This value is readily available and comprehensive in the cross section of equities. To deal with mergers that reduce shares outstanding but are not part of a share repurchase program, the lower limit for the reduction is restricted to -10%. Changing this threshold to values such as -20% or -5% has no significant effect on my results:

$$Buyback_{i,t} = |\Delta SharesOutstanding_{i,t} \cdot (\Delta SharesOutstanding_{i,t} \in [-10\%, 0])|,$$

where  $\Delta SharesOutstanding_{i,t}$  is the percentage change in split-adjusted shares outstanding. See Greenwood and Hanson (2012) for a histogram of yearly net changes in shares outstanding. The dollar values of dividends and buybacks per stock are estimated by multiplying the stock's buyback and dividend yields by its lagged market capitalization.

The dollar investor flows into equity mutual funds are calculated as

$$\sum_i (TNA_{i,t} - TNA_{i,t} \cdot (1 + Ret_{i,t}) - MGN_{i,t}),$$

where  $MGN_{i,t}$  is a compensating term for fund mergers. This important measure of investor demand serves as a benchmark throughout to compare cash flows.

The paper examines the implications of dividend and buyback dollars for institutional investor portfolios and tests for price pressure in accordance with the cash return induced demand channel.

## A10. Changes in Buyback, Dividend Yield, and Issuance for 1-Year, 2-Year, and 3-Year horizons

This table records Fama-MacBeth regression coefficients of changes in quarterly buyback, dividend payments, and issuances over N (4, 8, and 12) quarter horizons on  $CID_{i,t-1}$  and various controls. The regressors are normalized so that their standard deviations are 1.  $\Delta\text{Buyback}$  is the difference between the average N quarter future buybacks and the average buyback from the past 5 years:

$$N \text{ Quarter } \Delta\text{Buyback} = \frac{1}{N} \sum_{i=1}^N \text{Buyback}_{i,t+i} - \frac{1}{20} \sum_{i=1}^{20} \text{Buyback}_{i,t-i}.$$

$\Delta\text{Dividend}$  and  $\Delta\text{Issuance}$  are calculated in the same way. The t-statistics are *Newey-West* corrected with N lags to account for overlapping observations.

Future quarterly average buybacks, dividends, and issuances are regressed on various characteristics.

Panel A. Over 4-Quarters

	4-Quarter $\Delta\text{Buyback}$		4-Quarter $\Delta\text{Dividend}$		4-Quarter $\Delta\text{Issuance}$	
$CID_{i,t-1}$	0.040%	0.021%	0.019%	0.023%	0.270%	0.642%
	(4.29)	(2.74)	(4.09)	(3.94)	(2.46)	(5.67)
$\text{Log\_ME}_{i,t-1}$		0.009%		-0.007%		-0.225%
		(2.26)		(-3.31)		(-3.29)
$BM_{i,t-1}$		0.009%		0.005%		-0.192%
		(2.52)		(1.13)		(-2.37)
$\text{Ret12}_{i,t-1}$		-0.010%		0.006%		-0.111%
		(-2.80)		(1.16)		(-0.62)
$\text{Issue}_{i,t-1}$		-0.113%		-0.076%		4.364%
		(-6.69)		(-0.13)		(36.39)
$FIPP_{i,t-1}$		-0.028%		0.009%		-0.316%
		(-3.65)		(1.61)		(-1.59)
<i>Avg N</i>	637	633	637	633	637	633
<i>Avg R<sup>2</sup></i>	0.49%	4.02%	0.41%	1.79%	0.18%	29.21%

Panel B. Over 8-Quarters

	8-Quarter $\Delta$ Buyback		8-Quarter $\Delta$ Dividend		8-Quarter $\Delta$ Issuance	
$CID_{i,t-1}$	0.050%	0.025%	0.023%	0.025%	0.328%	0.617%
	(3.35)	(2.22)	(4.56)	(4.32)	(3.28)	(4.57)
$Log\_ME_{i,t-1}$		0.017%		-0.004%		-0.231%
		(3.14)		(-1.81)		(-2.77)
$BM_{i,t-1}$		0.012%		0.006%		-0.178%
		(2.46)		(1.92)		(-1.74)
$Ret12_{i,t-1}$		0.001%		0.009%		-0.195%
		(0.22)		(1.81)		(-1.12)
$Issue_{i,t-1}$		-0.180%		-0.003%		4.067%
		(-4.90)		(-0.27)		(16.29)
$FIPP_{i,t-1}$		-0.027%		0.006%		-0.346%
		(-3.24)		(0.99)		(-1.33)
$Avg N$	586	583	586	583	586	583
$Avg R^2$	0.83%	7.03%	5.24%	1.84%	0.18%	22.32%

Panel C. Over 12-Quarters

	12-Quarter $\Delta$ Buyback		12-Quarter $\Delta$ Dividend		12-Quarter $\Delta$ Issuance	
$CID_{i,t-1}$	0.054%	0.024%	0.029%	0.030%	0.389%	0.628%
	(2.83)	(1.76)	(4.75)	(4.20)	(3.61)	(4.41)
$Log\_ME_{i,t-1}$		0.024%		-0.004%		-0.262%
		(3.09)		(-1.49)		(-2.97)
$BM_{i,t-1}$		0.014%		0.009%		-0.223%
		(2.40)		(2.98)		(-1.71)
$Ret12_{i,t-1}$		0.004%		0.009%		-0.217%
		(0.97)		(2.01)		(-1.26)
$Issue_{i,t-1}$		-0.210%		-0.003%		3.759%
		(-4.02)		(-0.32)		(11.07)
$FIPP_{i,t-1}$		-0.028		0.010%		-0.361%
		(-3.05)		(1.83)		(-1.27)
$Avg N$	542	539	542	539	542	539
$Avg R^2$	1.02%	8.81%	0.76%	1.67%	0.17%	20.14%