

Monetary Policy and Reaching for Income

Online Appendix

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Table 1: Mutual Fund Flows, Income Yields, and Monetary Policy (with Fund Fixed Effects)

This table reports the coefficient estimates from panel regression :

$$\text{Flows}_{i,t} = \beta_1 \text{High Income}_{i,t} + \beta_2 \Delta \text{FFR}_t \times \text{High Income}_{i,t} + \tau_t + \gamma' X_{i,t} + \varepsilon_{i,t},$$

where $\text{Flows}_{i,t}$ represents flows into mutual fund i at time t ; ΔFFR_t represents the three-year change in Fed Funds rates from year $t - 3$ to year t ; $\text{High Income}_{i,t}$ is a dummy variable that equals 1 if the income yield of a fund is in the top decile for a given month, and 0 otherwise; and $X_{i,t}$ is a set of control variables including: *Volatility*, $\Delta \text{FFR} \times \text{Volatility}$, $\Delta \text{Tax} \times \text{High Dividend}$, *Return*, *Size*, *Turnover*, and *Expense*. *Return* is fund return over the preceding month; *Volatility* is the standard deviation of fund returns for the past year; ΔTax is the difference between the maximum individual income tax rate and the capital gains tax rate; *Size* represents the assets under management (log); and *Expense* represents the expense ratio. The sample includes all the equity or bond mutual funds in the United States from 1991 to 2016. Each observation is a fund share class-month combination. Columns 1 and 2 include the whole sample. Columns 3 and 4 include only the retail share classes. Columns 5 and 6 include only the institutional share classes. Standard errors are in parentheses, with *, **, and *** denoting significance at the 10%, 5%, and 1% levels. Standard errors are clustered at month levels.

	All		Retail		Institution	
	(1) Equity	(2) Bond	(3) Equity	(4) Bond	(5) Equity	(6) Bond
High Income	-0.467*** [0.088]	-0.293*** [0.110]	0.130 [0.163]	0.008 [0.125]	-0.373*** [0.133]	-0.044 [0.217]
$\Delta \text{FFR} \times \text{High Income}$	-0.128*** [0.029]	-0.046 [0.030]	-0.170*** [0.042]	-0.102*** [0.038]	-0.009 [0.041]	-0.000 [0.047]
Volatility	0.280 [0.199]	-1.971*** [0.284]	0.817** [0.359]	-2.358*** [0.408]	0.691** [0.277]	-2.784*** [0.599]
$\Delta \text{FFR} \times \text{Volatility}$	0.015 [0.048]	-0.614*** [0.062]	0.107 [0.071]	-0.550*** [0.079]	0.083 [0.054]	-0.931*** [0.118]
$\Delta \text{Tax} \times \text{High Dividend}$	0.041 [0.025]	0.098*** [0.025]	0.246*** [0.055]	0.123** [0.057]	0.168*** [0.045]	0.343*** [0.065]
Fund Controls	Yes	Yes	Yes	Yes	Yes	Yes
Time F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Fund F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1063673	1206502	499973	572624	388327	293804
Adj. R-squared	0.077	0.056	0.086	0.082	0.066	0.042

Table 2: Stock Holdings: Non-frequent vs. Frequent Traders

This table reports the coefficient estimates from panel regression:

$$\Delta \text{Holding}_{i,j,t} = \beta_1 \Delta \text{FFR}_t + \beta_2 \text{High Div}_{i,j,t} + \beta_3 \Delta \text{FFR}_t \times \text{High Div}_{i,j,t} + \gamma' X_{i,j,t} + \varepsilon_{i,j,t}.$$

where $\Delta \text{Holding}_{i,j,t}$ is defined as the change in stock position over the past 6 months scaled by the average position at the beginning and at the end of the period. ΔFFR_t represents the three-year change in Fed Funds rates from year $t - 3$ to year t ; $\text{High Div}_{i,j,t}$ is a dummy variable that equals 1 if the income yield of a stock is in the top decile for a given month and 0 otherwise; and $X_{i,j,t}$ is a set of control variables. The first subset of control variables are stock characteristics including high repurchase dummy and its the interaction with the 3-year change in deposit rates, market beta and its interaction with the 3-year change in deposit rates, book-to-market ratio and its interaction with the 3-year change in deposit rates, past 1-year and 3-year returns, log market capitalization, profit margin, and ROE. The second set of characteristics are demographic variables such as home-ownership, marital status, and gender. The sample includes all the stock positions in the LBD data from 1991 to 1996. Column 1 includes all the individuals. Columns 2 and 3 include non-frequent traders and frequent traders respectively. *Non-frequent Traders* represents individuals whose trading frequency is below median. Standard errors are in parentheses, with *, **, and *** denoting significance at the 10%, 5%, and 1% levels. Standard errors are clustered at household and month levels.

	(1) All	(2) Non-frequent Trader	(3) Frequent Trader
$\Delta \text{ FFR}$	-0.303*** [0.105]	-0.184** [0.0921]	-0.487*** [0.138]
High Dividend	9.491*** [1.143]	9.456*** [1.165]	9.537*** [1.307]
$\Delta \text{ FFR} * \text{High Dividend}$	-0.946*** [0.338]	-0.841** [0.341]	-1.097*** [0.385]
High Repurchase	0.292 [0.490]	0.526 [0.451]	-0.0177 [0.815]
$\Delta \text{ FFR} * \text{High Repurchase}$	0.433*** [0.126]	0.398*** [0.113]	0.499** [0.219]
Stock Characteristics	Yes	Yes	Yes
Demographics	Yes	Yes	Yes
Observations	1,759,502	1,057,975	701,527
Adj. R-squared	0.015	0.023	0.010

Table 3: Fed Funds Rates and Excess Returns of Dividend Decile Portfolios (Time-Varying Factor Loadings)

This table reports the coefficient estimates from panel regression:

$$\alpha_{i,t} = \beta_1 \Delta \text{FFR}_t + \beta_2 \Delta \text{FFR}_t \times \text{DivDecile}_i + \zeta_i + \varepsilon_{i,t},$$

where $\alpha_{i,t}$ represent the risk-adjusted return on the dividend portfolio i in month t . ΔFFR_t represents the three-year change in Fed Funds rates from year $t-3$ to year t ; DivDecile_i is a dummy variable that equals 1 for dividend decile portfolio i and 0 otherwise; and ζ_i is decile fixed effects. Each of the four columns corresponds to alphas from the CAPM, the Fama-French 3-factor model, the Fama-French 4-factor model, and the Fama-French 5-factor model. The observations are in monthly frequency. The sample period is from July 1963 to June 2016. Standard errors are in parentheses, with *, **, and *** denoting significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)
	CAPM Alpha	FF3 Alpha	FF4 Alpha	FF5 Alpha
$\Delta \text{ FFR}$	-0.003 [0.018]	0.002 [0.011]	0.002 [0.010]	0.005 [0.010]
$\Delta \text{ FFR}^* \text{ Dividend Decile}$	-0.006** [0.003]	-0.006*** [0.002]	-0.004** [0.002]	-0.005** [0.002]
Decile Fixed Effects	Yes	Yes	Yes	Yes
Observations	6,360	6,360	6,360	6,360
Adj. R^2	0.003	0.007	0.004	0.004