

# Skin in the Game versus Skimming the Game: Governance, Share Restrictions, and Insider Flows

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# Motivation

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- ▶ Several recent SEC case filings

Inside information about investor flow of hedge funds

- ▶ For example, on February 4, 2010 State Street Bank and Trust, a manager of the Limited Duration Bond Fund, agreed to pay over \$500 million to settle a complaint brought by the SEC.

*"State Street's internal advisory groups subsequently decided to redeem or recommend redemption from the Fund and the related funds for their clients. State Street Corporation's pension plan was one of those clients. State Street sold the Fund's most liquid holdings and used the cash it received from these sales to meet the redemption demands of these better informed investors, leaving the Fund with largely illiquid holdings."*

# Share Restrictions

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- ▶ What are share restrictions?
  - Lockup periods, redemption-notice periods
- ▶ Why do hedge-fund managers implement them?
  - Investors: Ability to invest in illiquid assets while protecting the common interests of share holders
  - Managers: Protection of assets under management (AUM)
- ▶ What is the problem?

# Adverse Effects

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- ▶ Share restrictions induce information asymmetry between managers and their clients about future fund flow
- ▶ Not a problem, unless:
  - Managers act as investors in their own funds
  - Managers release information to privileged investors
- ▶ Yet, managers are often encouraged to invest in their own funds
- ▶ If flow predicts fund performance, then managers can front-run their clients!

# Outline and Main Findings

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- ▶ This paper highlights the potential moral-hazard problem induced by share restrictions
- ▶ Flow predicts fund performance among share-restricted funds
  - Return spread of 5.6% annually over 1998–2008
  - Effect mainly present in outflows
- ▶ The flow effect is stronger in
  - Funds managing insider wealth
  - Funds with weak corporate governance
- ▶ A conservative estimate of potential profits amounts to \$215M per year, collectively

# Share Restriction and Flow

Table 2

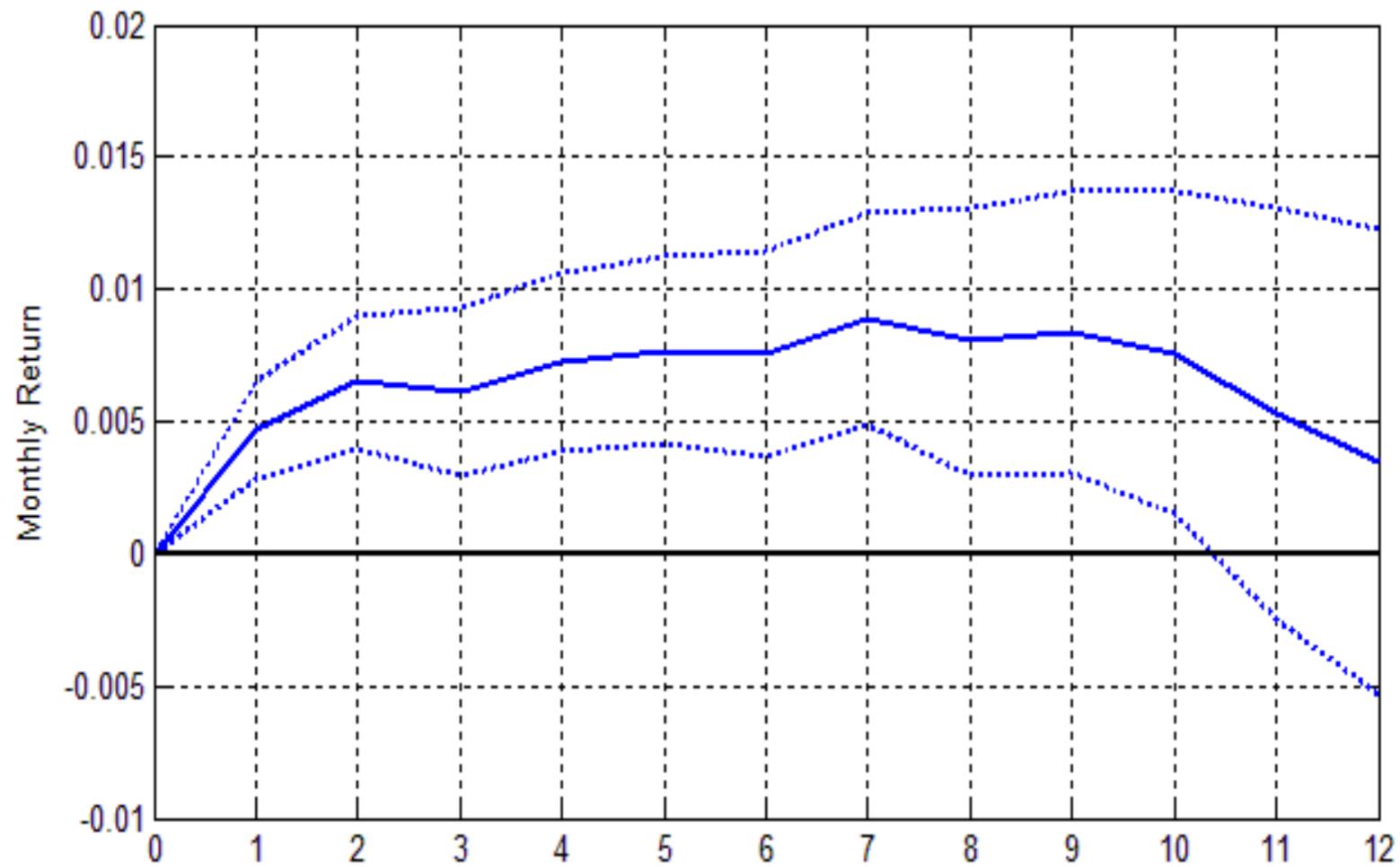
	All funds (N=7,280)	Non-Restricted (N=1,454)	Restricted (N=5,826)
F1	-0.25% [-4.23]	-0.39% [-2.77]	-0.22% [-3.80]
F2	-0.13% [-2.38]	-0.55% [-3.60]	-0.08% [-1.46]
F3	-0.15% [-2.45]	-0.41% [-3.04]	-0.07% [-1.23]
F4	-0.02% [-0.54]	-0.28% [-2.13]	0.01% [0.40]
F5	0.18% [2.79]	-0.21% [-1.50]	0.24% [3.65]
F5 - F1	Return		
	0.43% [4.75]	0.18% [1.01]	0.47% [4.94]
	Alpha		
	0.40% [4.58]	0.13% [0.71]	0.44% [4.90]

▶ A “smart money effect” is share-restricted fund



# Long-Run Performance

Figure 2, Panel A

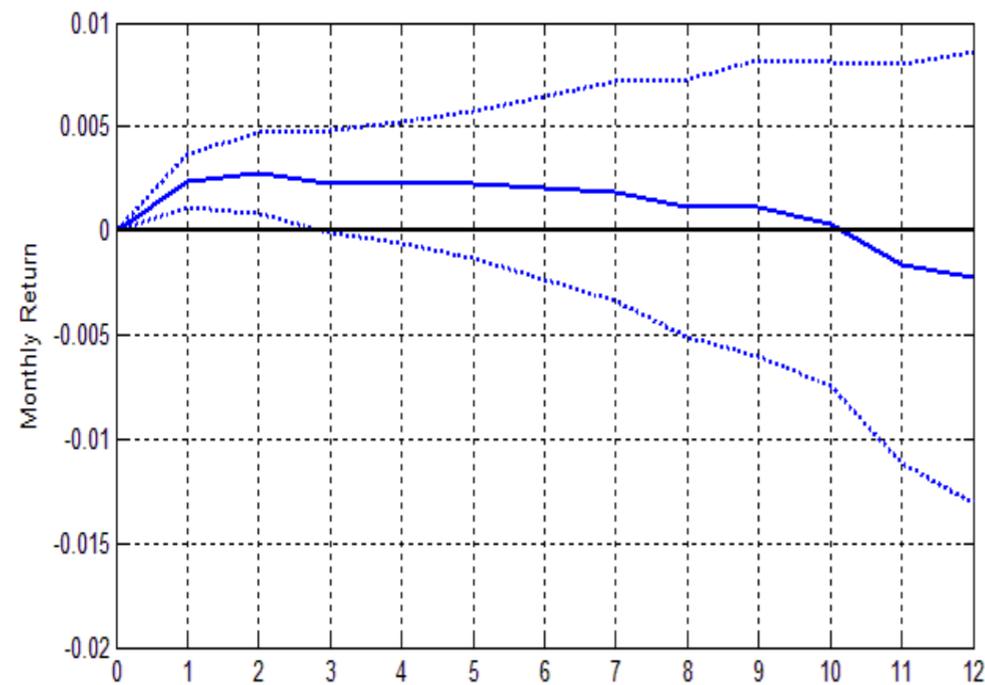


- ▶ The effect seems permanent

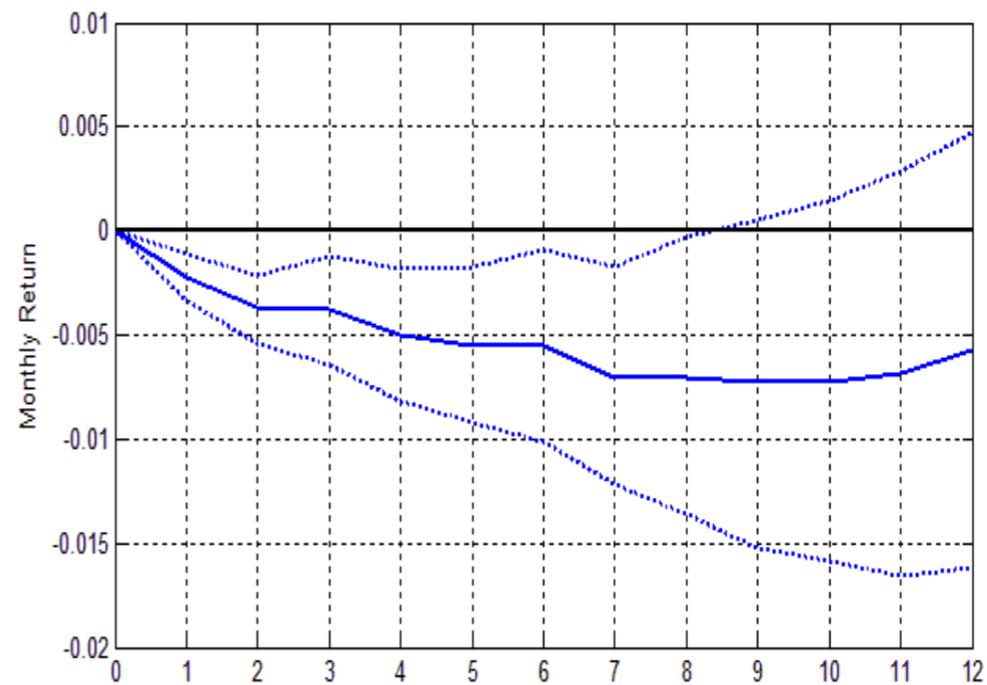
# Long-Run Performance

Figure 2, Panel B, and C

Inflows



Outflows



- ▶ The effect seems to stem mainly from outflows

# Personal Investment and Flow

Table 4

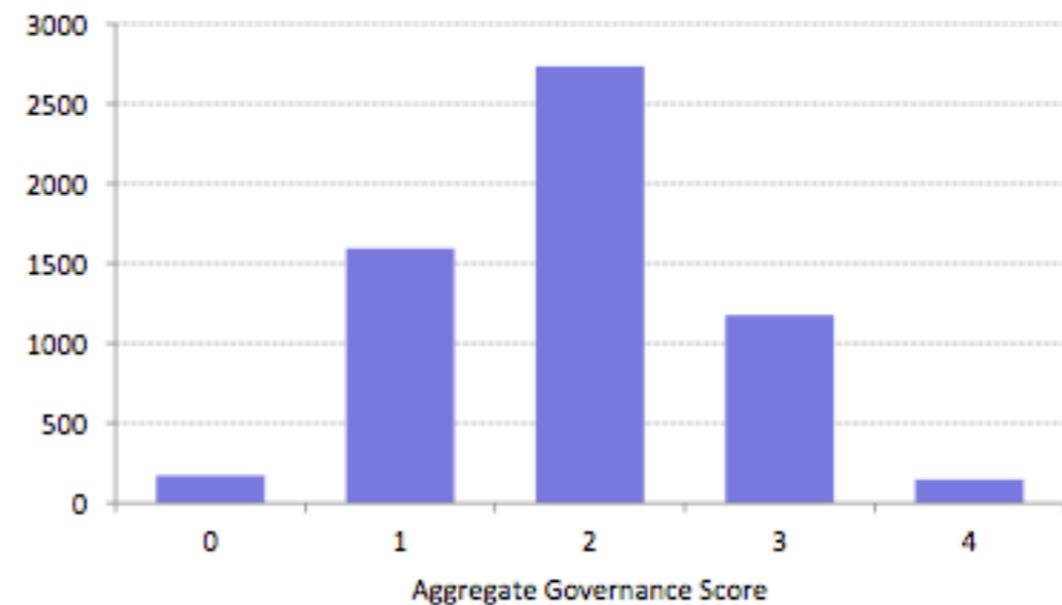
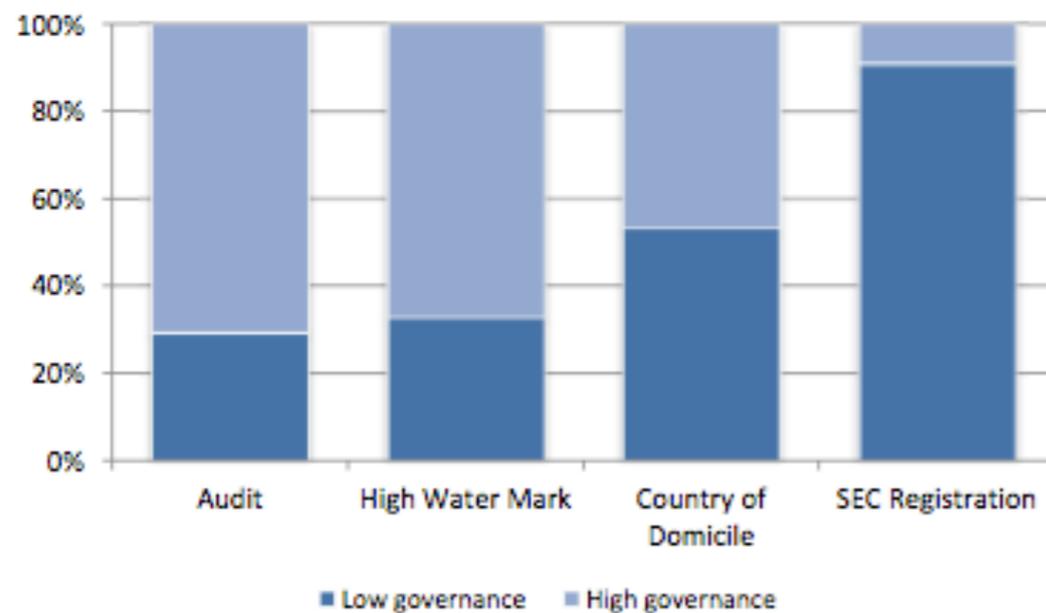
	Personal Investment				Personal Investment	High Personal Investment
	Zero (N = 1,242)	Positive (N = 440)	Low (N = 220)	High (N = 220)	minus Zero Personal Investment	minus Low Personal Investment
F1	-0.19% [-2.18]	-0.33% [-1.75]	0.06% [0.24]	-0.36% [-1.57]	-0.14% [-0.72]	-0.43% [-1.11]
F5	0.18% [2.37]	0.62% [3.33]	0.43% [1.65]	0.58% [2.21]	0.45% [2.69]	0.15% [0.37]
F5 - F1 Return	0.37% [3.39]	0.96% [4.17]	0.37% [1.16]	0.95% [3.09]	0.58% [2.58]	0.57% [1.18]
Alpha	0.39% [3.90]	0.97% [4.20]	0.23% [0.71]	1.03% [3.33]	0.58% [2.49]	0.80% [1.62]

- ▶ The effect is more pronounced for funds managing insider wealth

# Fund Corporate Governance

- ▶ What is the flow return spread among funds with relatively low levels of investor protection?

Figure 3



- ▶ Fund corporate governance displays a cross-sectional variation

# Corporate Governance and Flow

Table 6

Score	Aggregate Corporate Governance			
	Low [0,1] (N = 1,766)	Medium [2] (N = 2,735)	High [3,4] (N = 1,325)	Low minus High
F1	-0.35% [-4.47]	-0.27% [-3.09]	0.08% [0.78]	-0.43% [-4.08]
F5	0.28% [1.61]	0.21% [2.80]	0.32% [3.65]	-0.04% [-0.18]
F5 - F1 Return	0.63% [3.35]	0.48% [3.92]	0.24% [1.60]	0.39% [1.82]
Alpha	0.61% [3.13]	0.48% [3.85]	0.18% [1.39]	0.43% [1.99]

- ▶ The flow return spread decreases with corporate governance

# Cross Sectional Regressions

Table 7

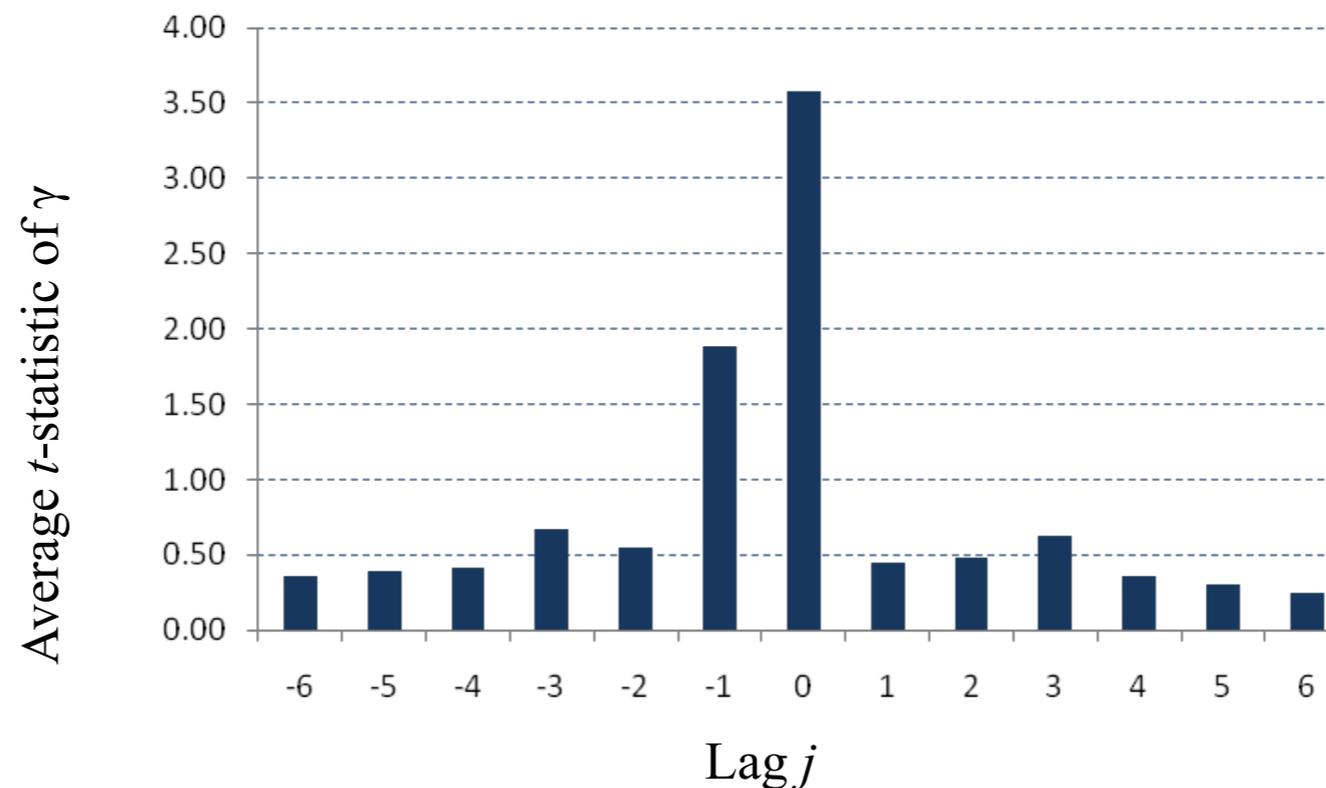
Model	Intercept	Flow	Size	Leverage	Management Fees	Incentive Fees	Personal Investment	Low Governance	Flow × Personal Investment × Low Governance
(1)	0.59% [3.70]	0.66% [2.49]							
(4)	0.58% [3.64]	0.66% [2.47]					0.17% [2.29]		
(5)	0.93% [2.55]	0.99% [2.35]	-0.03% [-1.43]	-0.05% [-0.94]	0.00% [1.44]	1.06% [3.20]	0.16% [1.97]		
(6)	0.70% [4.19]	0.64% [2.41]						-0.15% [-3.07]	
(7)	1.10% [3.09]	1.00% [2.38]	-0.03% [-1.58]	-0.03% [-0.53]	0.00% [0.64]	0.96% [2.83]		-0.15% [-3.21]	
(8)	0.69% [4.15]	0.64% [2.40]					0.08% [1.22]	-0.15% [-2.96]	
(9)	1.09% [3.04]	1.00% [2.37]	-0.03% [-1.56]	-0.03% [-0.56]	0.00% [0.62]	0.95% [2.81]	0.07% [0.93]	-0.15% [-3.19]	
(10)	0.56% [3.56]	0.68% [2.56]							0.14% [3.04]
(11)	0.95% [2.61]	1.04% [2.45]	-0.03% [-1.54]	-0.05% [-0.96]	0.00% [2.29]	1.07% [3.22]			0.16% [3.28]
(12)	1.10% [3.06]	1.03% [2.42]	-0.03% [-1.64]	-0.03% [-0.57]	0.00% [1.11]	0.95% [2.78]	-0.02% [-0.29]	-0.15% [-3.14]	0.14% [2.51]

- ▶ Results robust to using operational risk to measure governance
- ▶ Results hold after controlling for return smoothing

# Intra-Family Flow

- ▶ Identify asset management companies with multiple funds

$$Flow_{i,t}^{HighFee} = a_i + \gamma_i Flow_{i,t+j}^{LowFee} + \varepsilon_{i,t}$$



- ▶ Low-fee shares lead high-fee shares in the same fund family

# Additional Tests

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- ▶ Investment style

the flow-return spread is present in most investment styles

- ▶ Return continuation/smoothing

main results hold after controlling for return smoothing

- ▶ Illiquidity - the effect is stronger in illiquid funds

- ▶ Liquidity risk - outflow funds have a higher liquidity beta

- ▶ Economic significance

multiplying total share-restricted AUM by the flow return spread the following month and by fraction of insider wealth amounts to \$214.48 M annually or \$2.4B over the entire sample period

# Conclusions

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- ▶ This paper highlights the potential moral-hazard problem induced by share-restrictions.
  - induce information asymmetry about fund flow between managers and their clients
- ▶ The effect is economically significant and potentially stronger in
  - funds managing insider wealth
  - funds with weak corporate governance
- ▶ Implications
  - managers should disclose insider trading
  - tighter share restrictions on insider

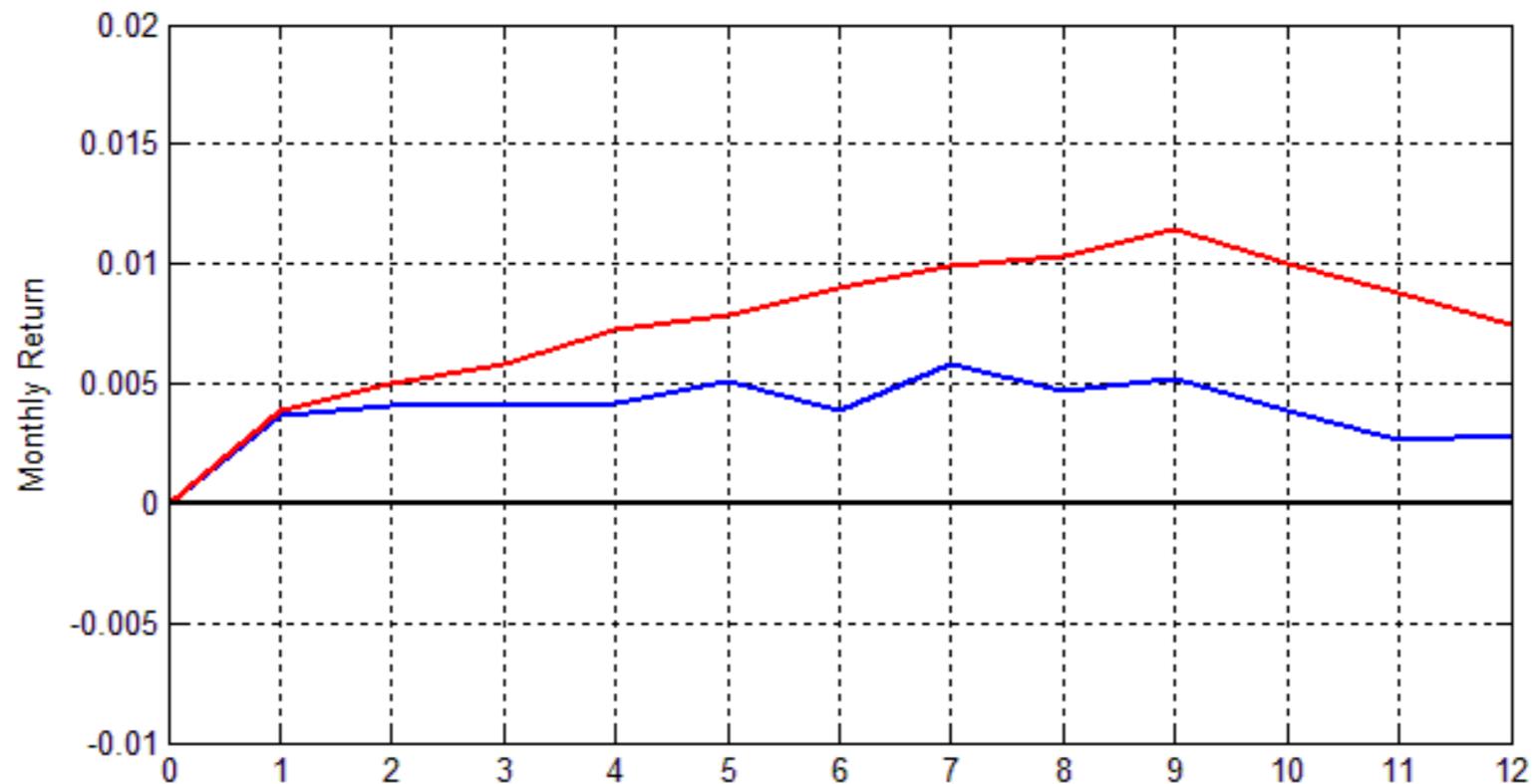
# Investment Style

Table 8

Style	N	F1	F3	F3 - F1	
		Return	Return	Return	Alpha
Convertible Arbitrage	162	-0.10% [-1.01]	-0.08% [-0.79]	0.03% [0.18]	0.05% [0.34]
Emerging Markets	300	-0.08% [-0.55]	-0.15% [-1.15]	-0.07% [-0.37]	-0.02% [-0.11]
Equity Market Neutral	325	-0.24% [-2.80]	-0.06% [-0.81]	0.19% [1.64]	0.13% [1.08]
Event Driven	464	-0.27% [-4.75]	-0.02% [-0.31]	0.25% [2.94]	0.22% [2.44]
Fixed Income Arbitrage	229	-0.26% [-3.44]	0.21% [1.56]	0.47% [3.05]	0.40% [2.80]
Fund of Funds	1,537	-0.09% [-2.28]	0.03% [0.78]	0.13% [1.89]	0.08% [1.17]
Global Macro	241	-0.29% [-2.77]	0.28% [2.07]	0.56% [3.35]	0.50% [2.88]
Long/Short Equity	1,760	-0.25% [-3.37]	0.09% [1.57]	0.35% [3.30]	0.31% [3.26]
Managed Futures	381	-0.39% [-2.47]	0.46% [1.43]	0.85% [2.38]	0.83% [2.22]
Multi-Strategy	377	-0.18% [-2.73]	-0.15% [-2.25]	0.03% [0.30]	0.04% [0.46]
Not Long/Short Equity	4,066	-0.20% [-3.66]	0.10% [1.94]	0.30% [3.88]	0.30% [3.82]
ARB	855	-0.24% [-5.24]	0.04% [0.86]	0.28% [4.42]	0.26% [4.15]

# Flow Return Spread and Liquidity

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- ▶ The flow return spread is stronger in illiquid funds
- ▶ Outflow funds have a higher liquidity beta

# Economic Significance

- The fraction of positive values of personal investment among share-restricted funds is  $440 / (440 + 1,242) = 26\%$
- Conditional on a positive personal investment, the amount is 9.51% of fund AUM
- Thus, unconditional fraction of total AUM is  $26\% \times 9.51\% = 2.5\%$
- Multiplying total share-restricted AUM by the flow return spread the following month and by 2.5% amounts to \$214.48 million annually, or 2.4 billion over the entire sample period

# Fund Corporate Governance

- What is the flow return spread among funds with relatively low levels of investor protection?
- Governance measures
  - *Audit*
  - *High water mark*
  - *Domiciliation (on-shore, off-shore)*
  - *SEC registration*
- Aggregate index per fund