

# Co-ownership, Managerial Taxes, and Risk-Taking Decisions

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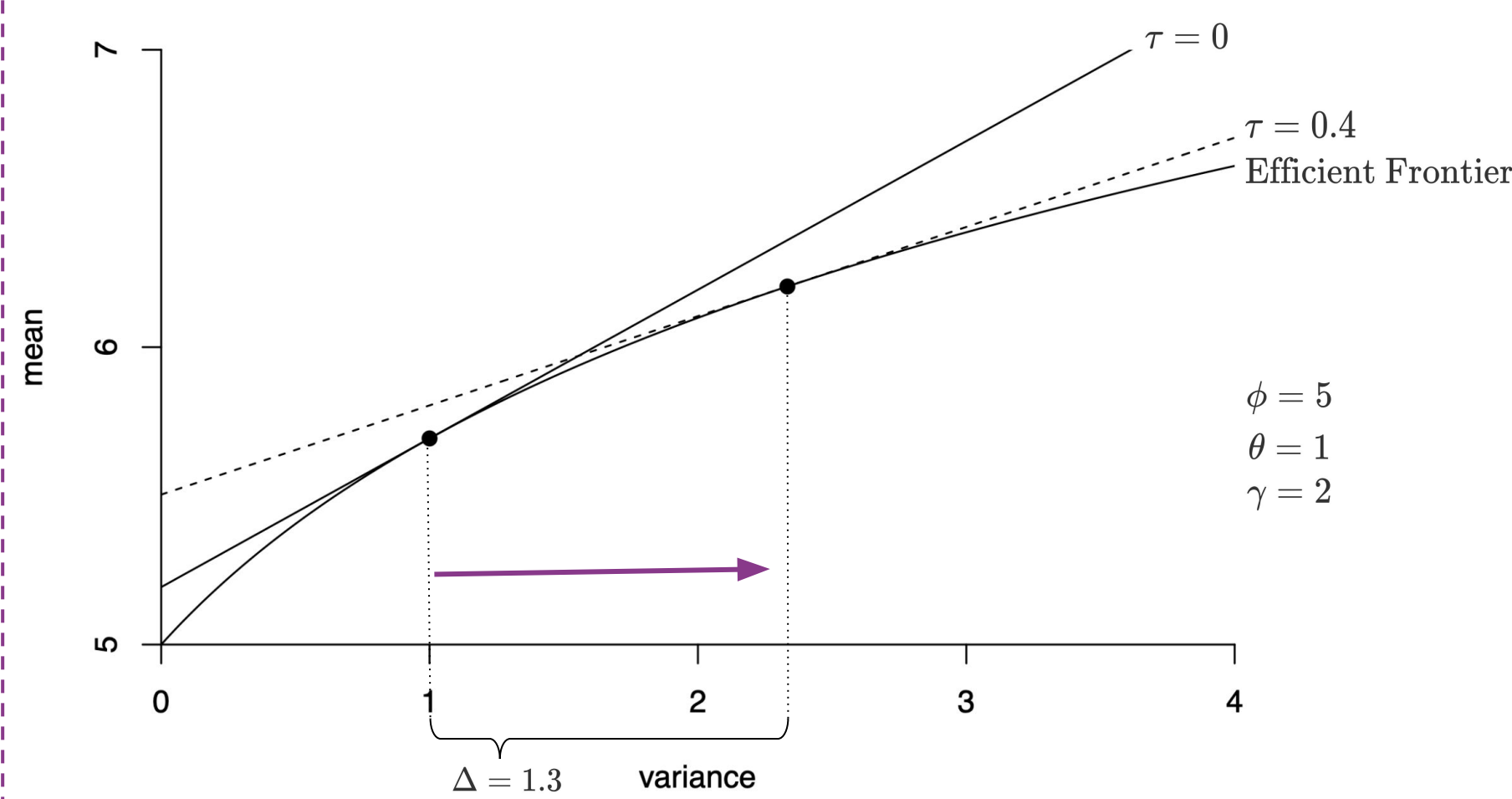
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## ⚠ Skin-in-the-game as an agency problem?

Do fund managers with **co-ownership** cater to their own **tax preferences**, thereby deviating from the **risk-taking** level desired by the majority of their investors?

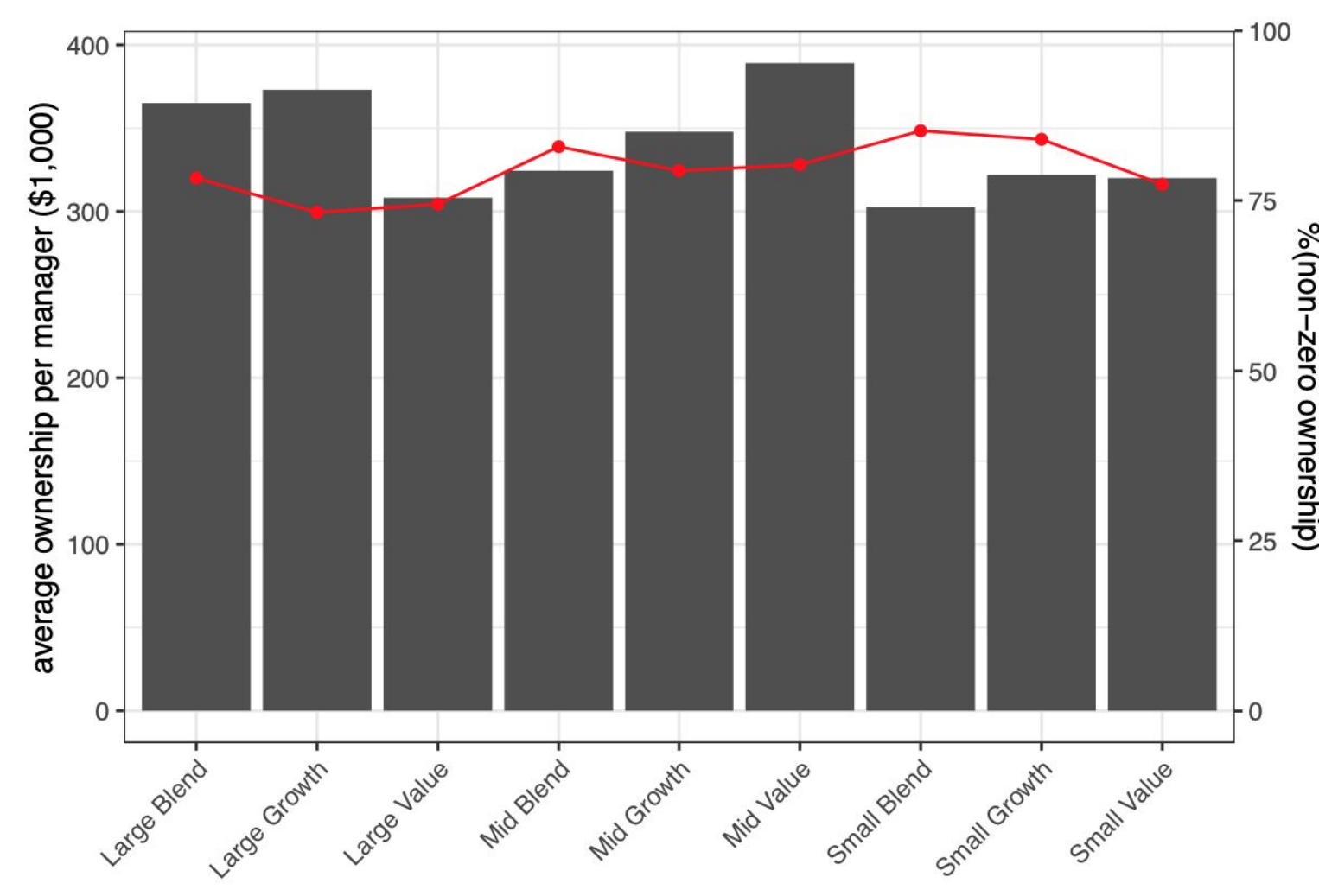
### 1 Tax induces risk-taking

Since capital losses can be offset against capital gains tax liabilities, higher taxation thus reduces the downside of risk-taking, motivating a risk-averse agent takes more risk.



### 2 Co-ownership is common

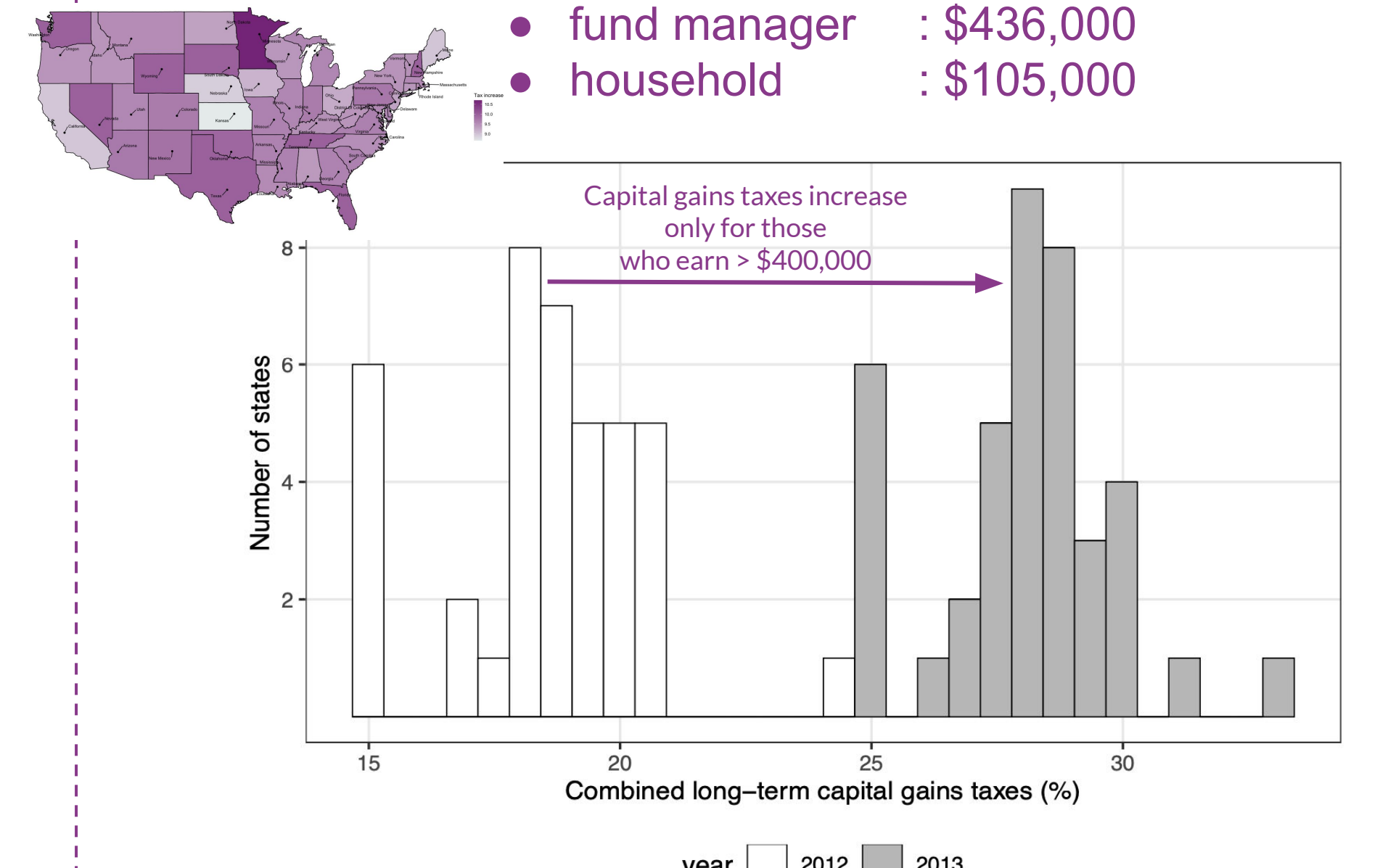
- More than 70% fund managers have co-ownership
- An average fund manager invests \$346,702 in the fund they manage



### 3 Event: tax increase

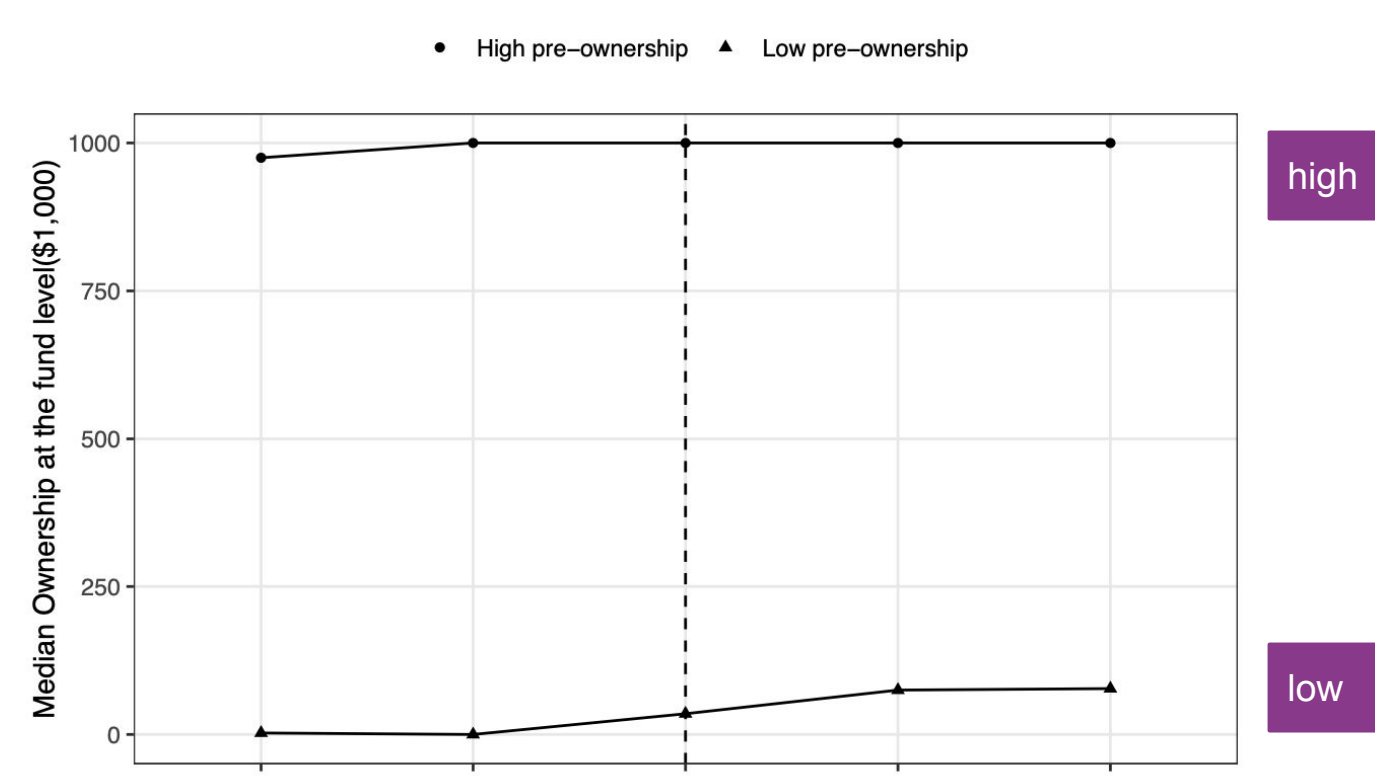
The American Taxpayer Relief Act of 2012 (ATRA)

- fund manager : \$436,000
- household : \$105,000



⚠ We find that:  
**Fund managers with high co-ownership take more risk, as personal taxes increase.**

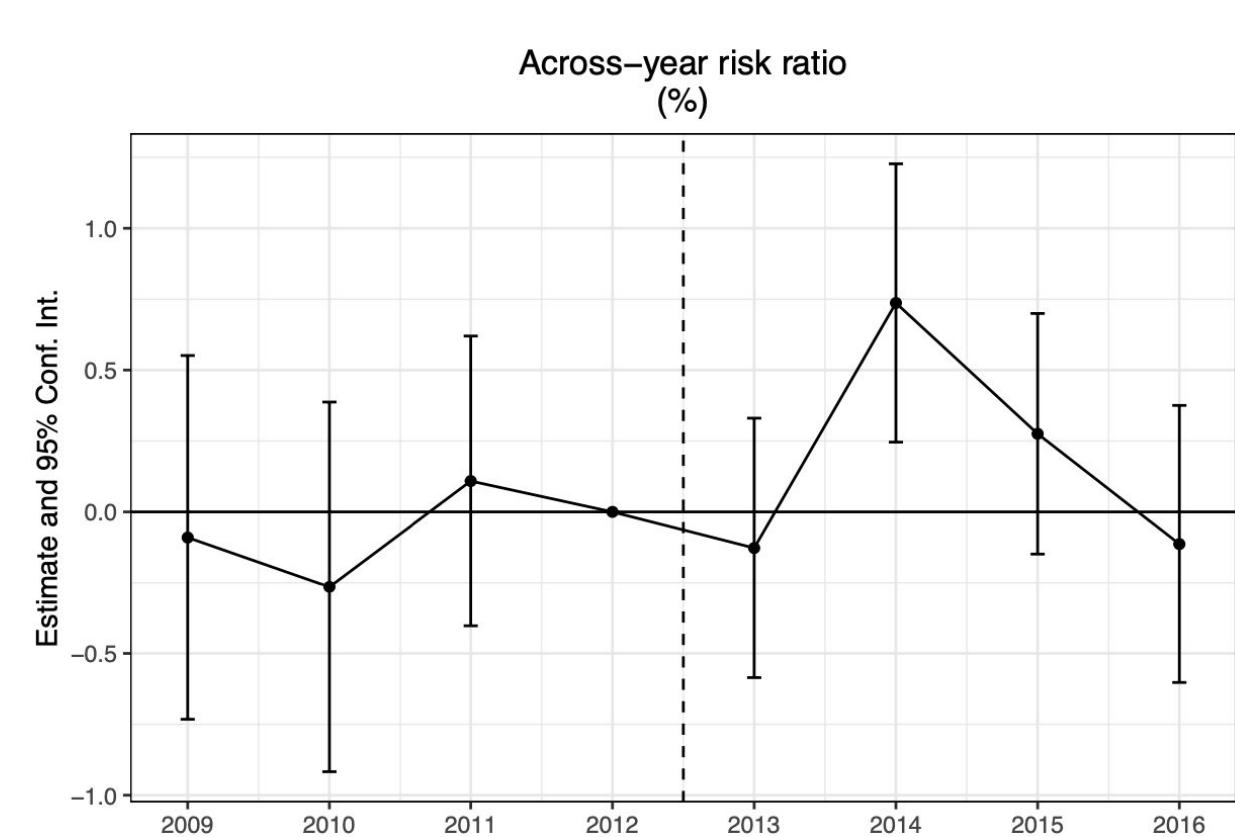
### 4 Research Design: DiD



$$Risk - Taking_{i,t} = \alpha + \beta_1 Post_t + \beta_2 Treat_i + \beta_3 Post_t \times Treat_i + Controls_{i,t-1} + FundFE + YearFE + \epsilon_t$$

- **Difference-in-differences analysis (DiD)**
  - Post := 1 after 2013, multiplying the tax change magnitude
  - Treat := 1 for funds with above-median (pre) co-ownership
- Nearest neighbor matching
- Taxes do not drive co-ownership
- S.E. Clustered by the fund level

### 5 Result: Δ Risk-taking

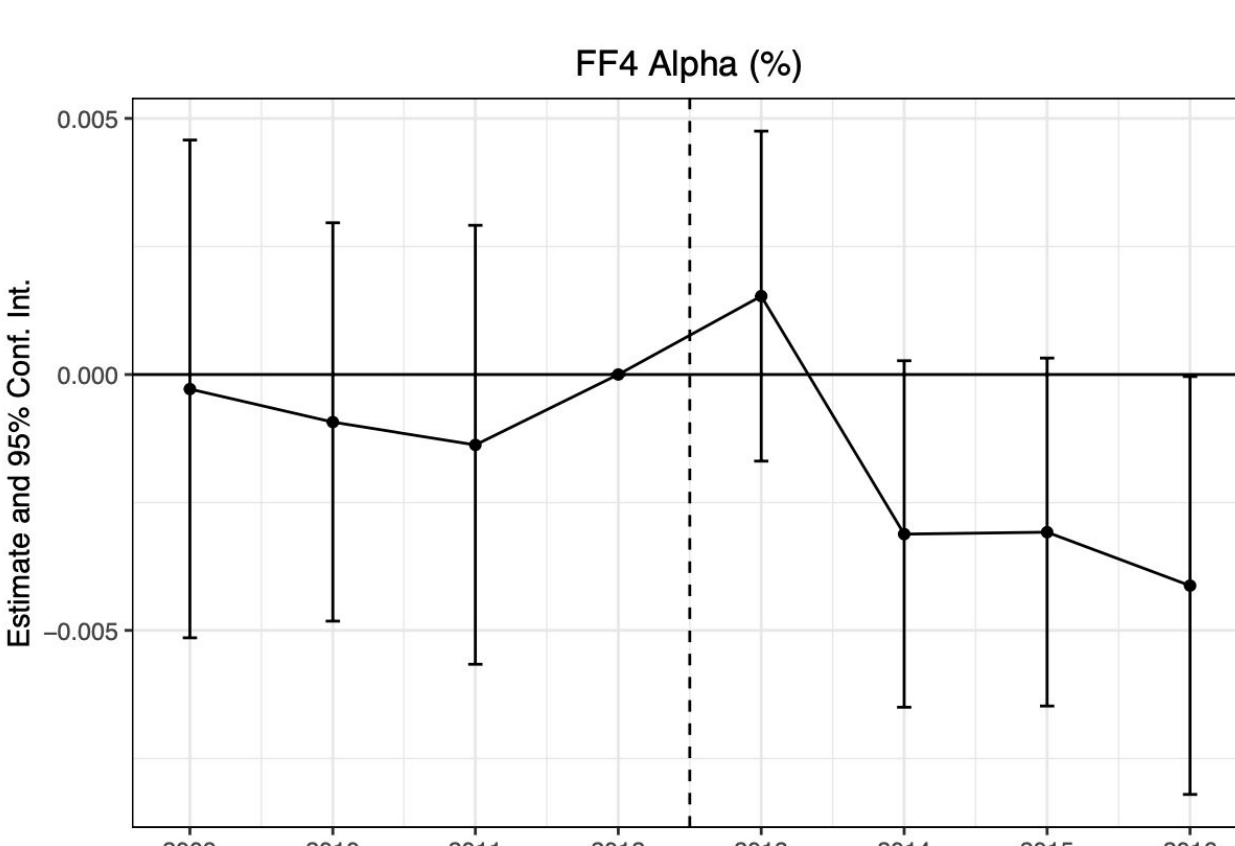


Funds with higher co-ownership increase Δintended risk, after the ATRA tax hike

	Treat	(1)	(2)	(3)	(4)	(5)
Post ATRA tax increase x High pre-ownership		0.74***				
		(3.84)				
Post ATRA tax increase x I(pre-ownership > 0)		0.66**				
		(2.40)				
Post ATRA tax increase x Ownership dummy			0.73**			
			(2.19)			
Post ATRA tax increase x log(pre-ownership)				0.06***		
				(2.94)		
Post ATRA tax increase x log(Ownership)					0.06**	
					(2.54)	
Observations		3,173	2,769	2,777	2,769	2,777
Adj. R2		0.22	0.2	0.21	0.2	0.21
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

### 6 Result: Performance



We find negative fund alpha in the subsequent years

- “Betting against beta” as a plausible explanation?
- Constrained fund managers take more systematic risk, leading to a lower alpha

	(1) Total risk change	(2) Sys. FF4 risk change	(3) Idio. FF4 risk change
Post ATRA tax increase x High pre-ownership	0.74***	0.54***	0.87
	(3.84)	(3.06)	(1.40)
Observations	3,173	3,173	3,173
Adj. R2	0.22	0.22	0.04
Year FE	Yes	Yes	Yes
Fund FE	Yes	Yes	Yes

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

### 7 Result: Heterogeneity

The effect is stronger for

- funds with higher rate of returns per unit risk taken
  - lower expense ratio

	(1) Full sample	(2) Above	(3) Below
Post ATRA tax increase x High pre-ownership	0.74***	0.42	1.03***
	(3.84)	(1.15)	(3.18)
Observations	3,173	1,583	1,590
Adj. R2	0.22	0.23	0.24
Year FE	Yes	Yes	Yes
Fund FE	Yes	Yes	Yes

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

- better investment sets (structural estimate of the slope of efficient frontier)

	(1) Full sample	(2) Above	(3) Below
Post ATRA tax increase x High pre-ownership	0.74***	1.30***	0.47
	(3.84)	(3.26)	(1.36)
Observations	3,173	1,562	1,611
Adj. R2	0.22	0.21	0.28
Year FE	Yes	Yes	Yes
Fund FE	Yes	Yes	Yes

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

- managers with lower risk aversion
  - Shorter tenure

	(1) Full sample	(2) Above	(3) Below
Post ATRA tax increase x High pre-ownership	0.74***	0.45	0.78*
	(3.84)	(1.15)	(1.87)
Observations	3,173	1,577	1,596
Adj. R2	0.22	0.16	0.31
Year FE	Yes	Yes	Yes
Fund FE	Yes	Yes	Yes

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

### 8 Policy Implications

- Investors**
  - should be aware of such tax-induced risk-taking, because it harms performance
- Fund families**
  - should consider the tax factor and design an optimal incentive contract accordingly, to mitigate the detrimental risk-taking behavior driven by taxation.
- Tax policymakers**
  - should take into account the tax response of mutual fund managers

⚠ We call for a greater awareness on the impact of personal taxation on asset management.

