Performance and Capital Flows in Private Equity

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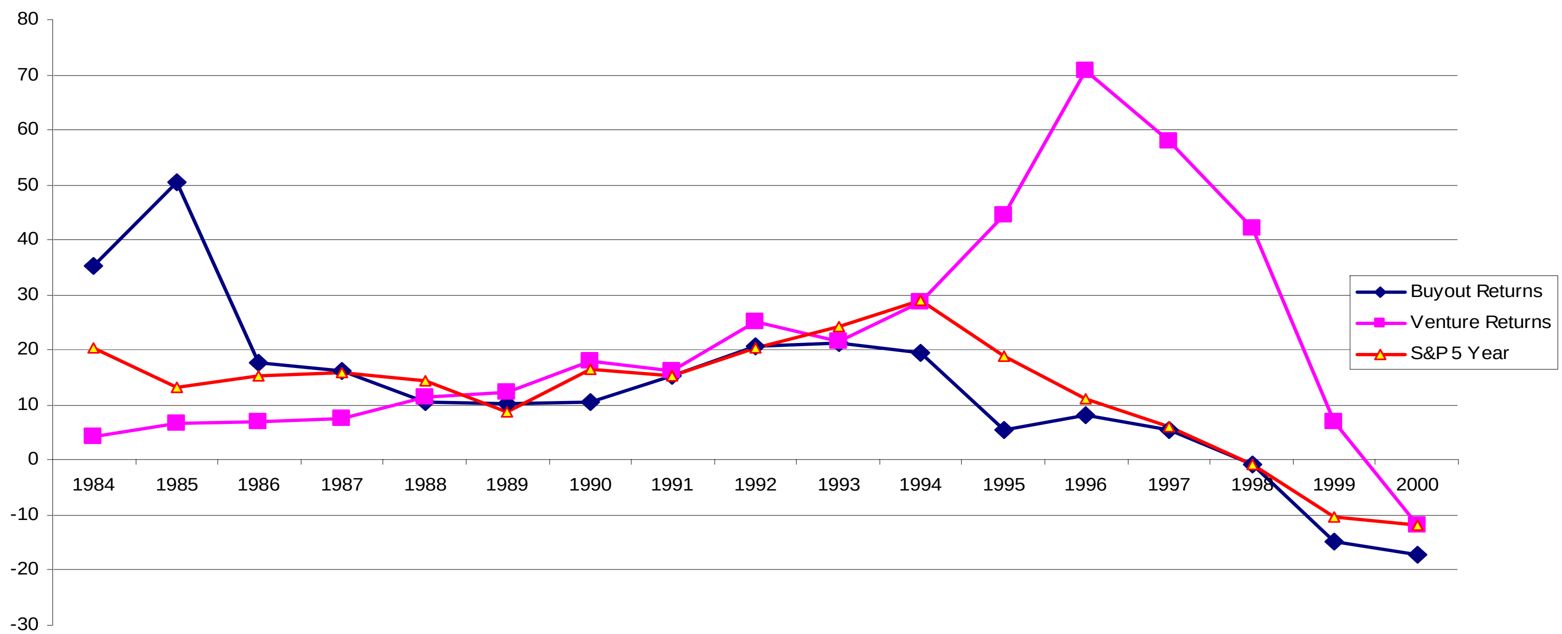
Overview

- Is private equity an asset class?
- True story lies beyond the aggregates
  - Large variance and persistence in returns
  - Idiosyncratic risk matters
- Implications for risk management

Aggregate PE returns are pro-cyclical

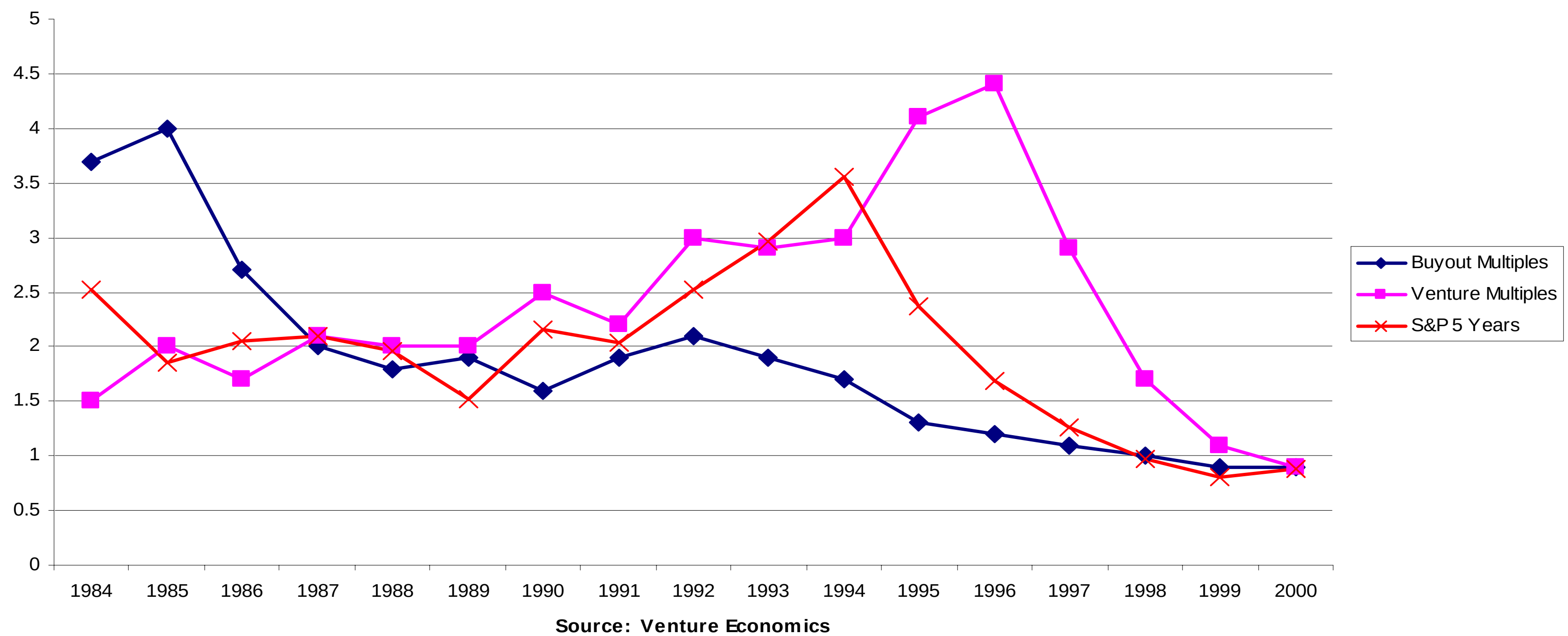
Venture returns versus 6-year cumulative S&P



Source: Venture Economics

Multiples are pro-cyclical

Venture multiples versus 6-year S&P



Not too surprising …

- Valuations are driven by exit markets
  - IPO and M&A valuations are strongly pro-cyclical
- Large capital inflows in years after high returns
  - Funds raised in years with large capital inflows have poor subsequent performance and vice versa
    - Young funds and funds with worse track record are especially negatively affected
    - Established funds are better able to weather industry cycles

Idiosyncratic risk matters

- The three pillars of public equity markets
  - Non predictability of returns
  - Diversification
  - Arbitrage

- All three are violated in Private Equity
  - Entry limitations
  - Ticket size
  - Illiquidity of investments
  - Large information asymmetries

Persistence of performance

	Bottom	Medium	Top
Bottom Tercile	**61%**	**22%**	**17%**
Medium Tercile	**25%**	**45%**	**30%**
Top Tercile	**27%**	**24%**	**48%**

Kaplan and Schoar, Journal of Finance, 2005

- High likelihood that the next funds of a given partnership stays in the same performance bracket

  ➔Persistence
  - Larger for the top quartile
  - More persistence for top quartile funds in market downturns

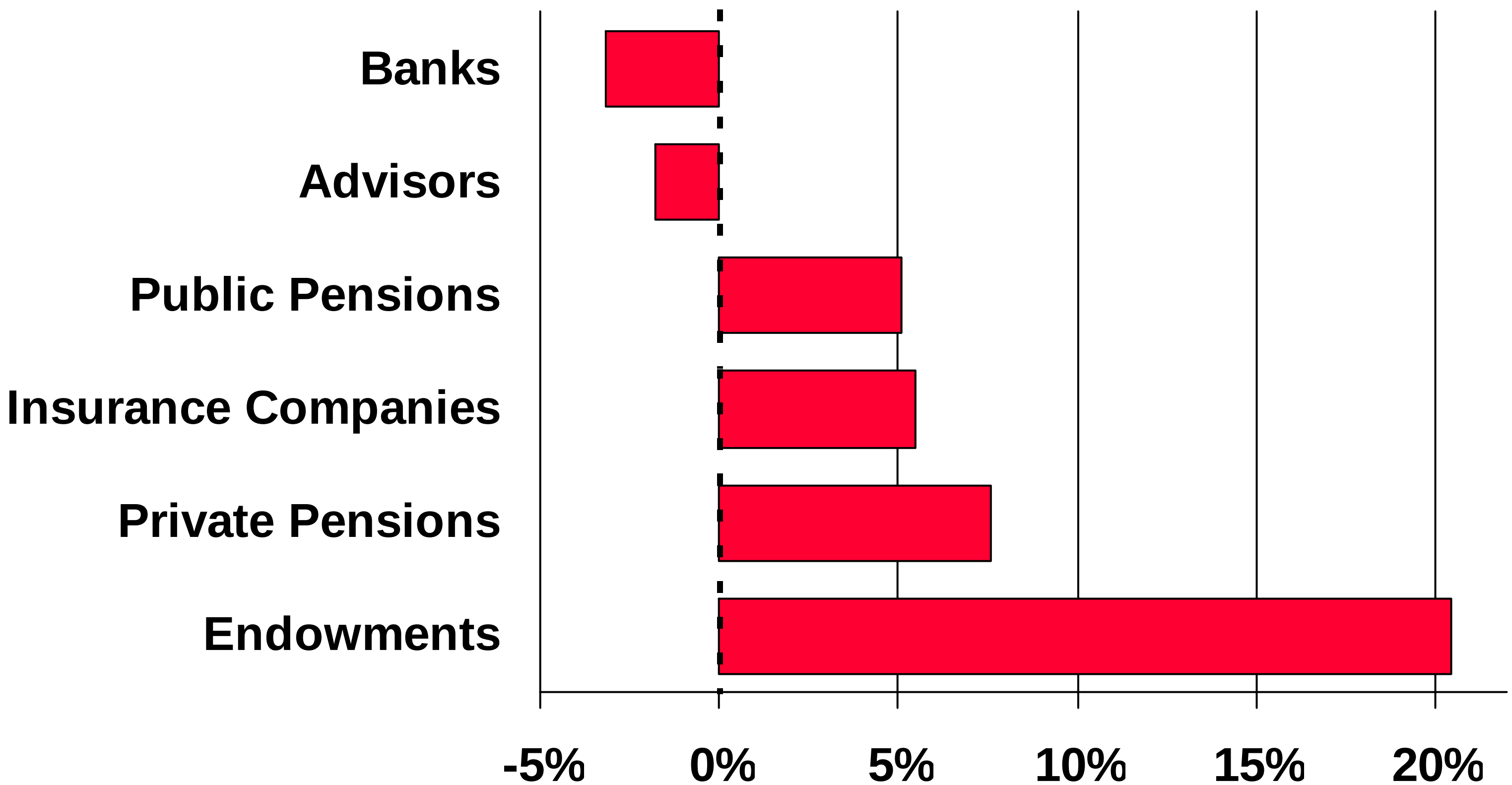
Individual funds returns

	All Funds	VC Funds	Buyout
IRR	0.12 (0.17) [.04, 0.20]	0.11 (0.17) [.03, 0.19]	0.13 (0.19) [.06, 0.24]
PME	0.74 (0.96) [.45, 1.17]	0.66 (0.96) [.43, 1.13]	0.80 (0.97) [.46, 1.14]

Kaplan and Schoar, Journal of Finance, 2005

- The average fund does not outperform the S&P 500
- Enormous differences in performance between the top and bottom quartile
- Skewness of returns

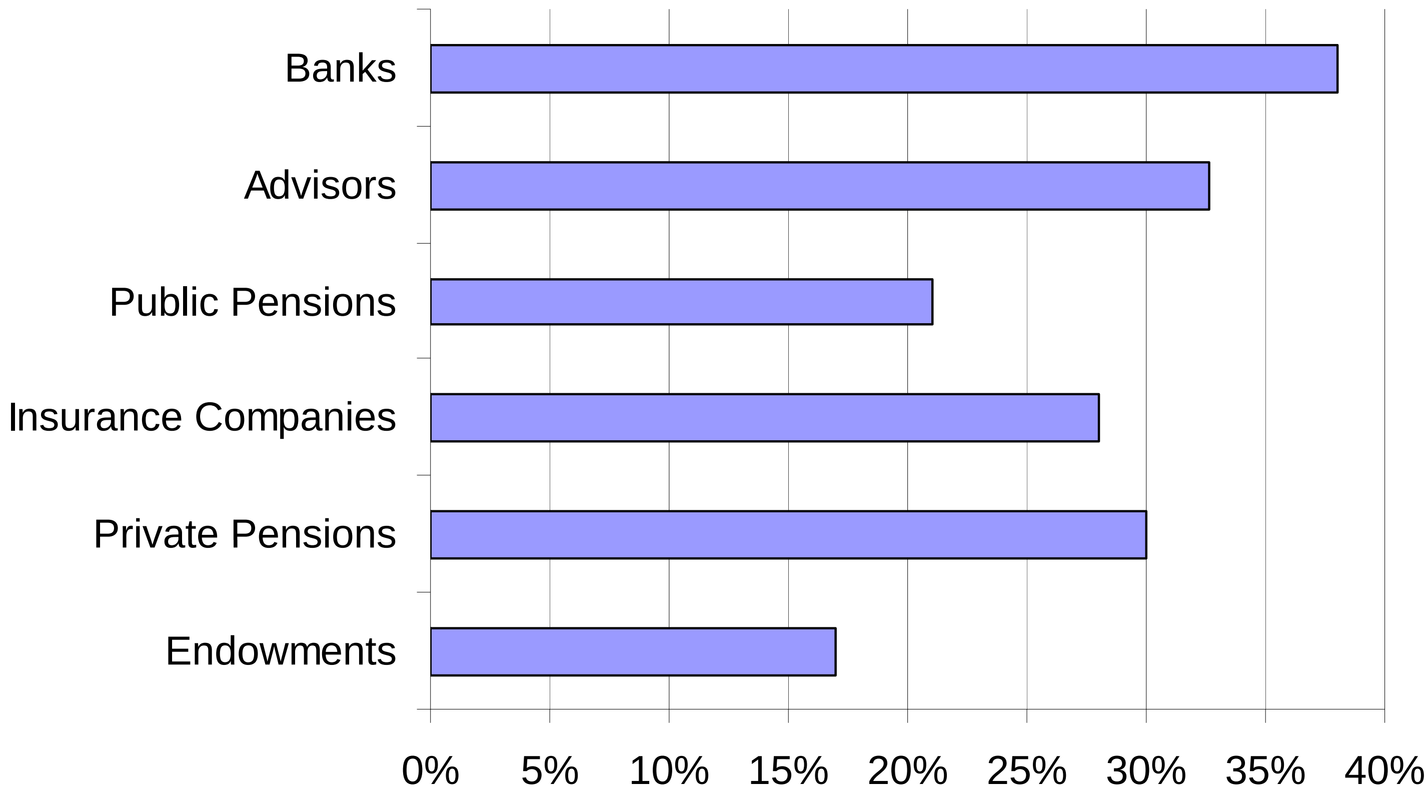
Sharp and persistent differences in LP returns over 1990s



Source: Lerner, Schoar and Wang [2007]

But Idiosyncratic risk is lowest for high return investors

Value at Risk: % of funds in lowest quartile

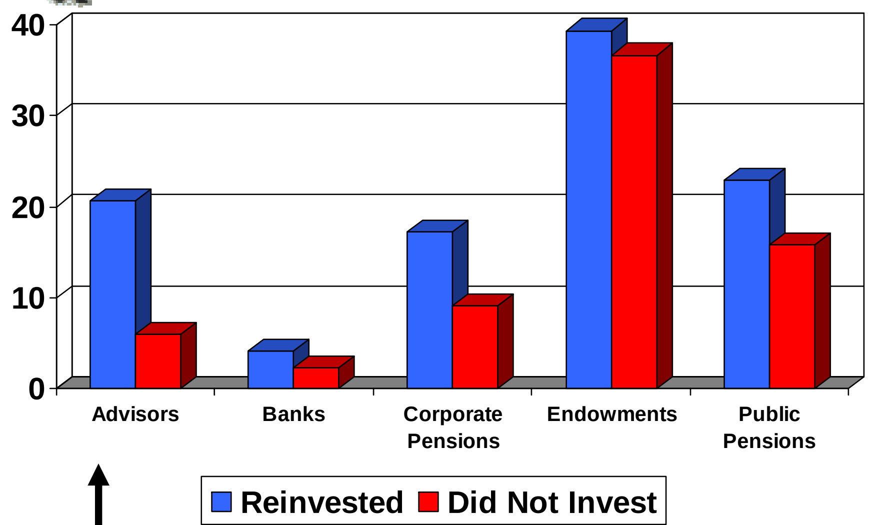


Source: Lerner, Schoar and Wang [2007]

Interpreting the differences

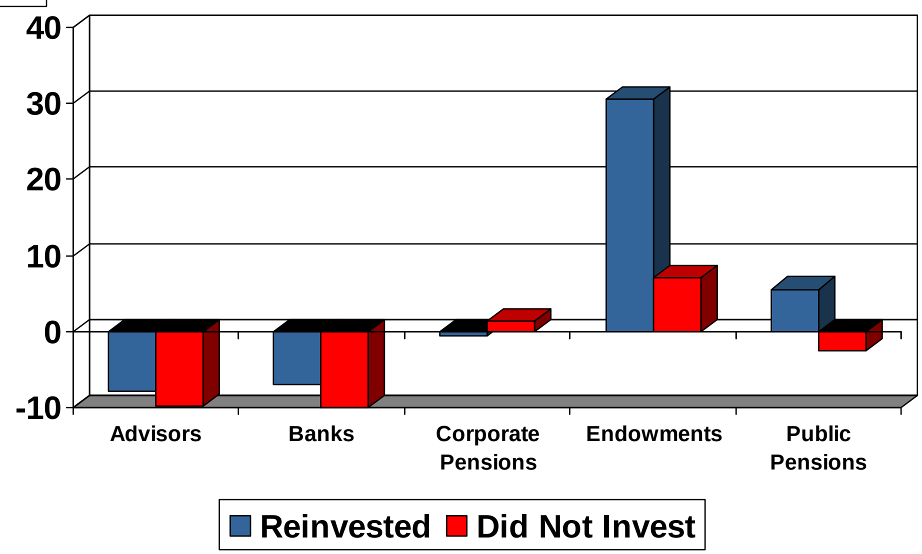
- Do these just reflect timing or investment mix?
  - No… robust to various controls.
- Are these differences due to fund access?
  - Look at reinvestment process, where access is much less critical:
    - Pension funds and advisors tend to invest when *current* returns are high.
    - But much more dramatic difference in *future* returns from endowments.

Reinvestment and returns



IRR of previous fund

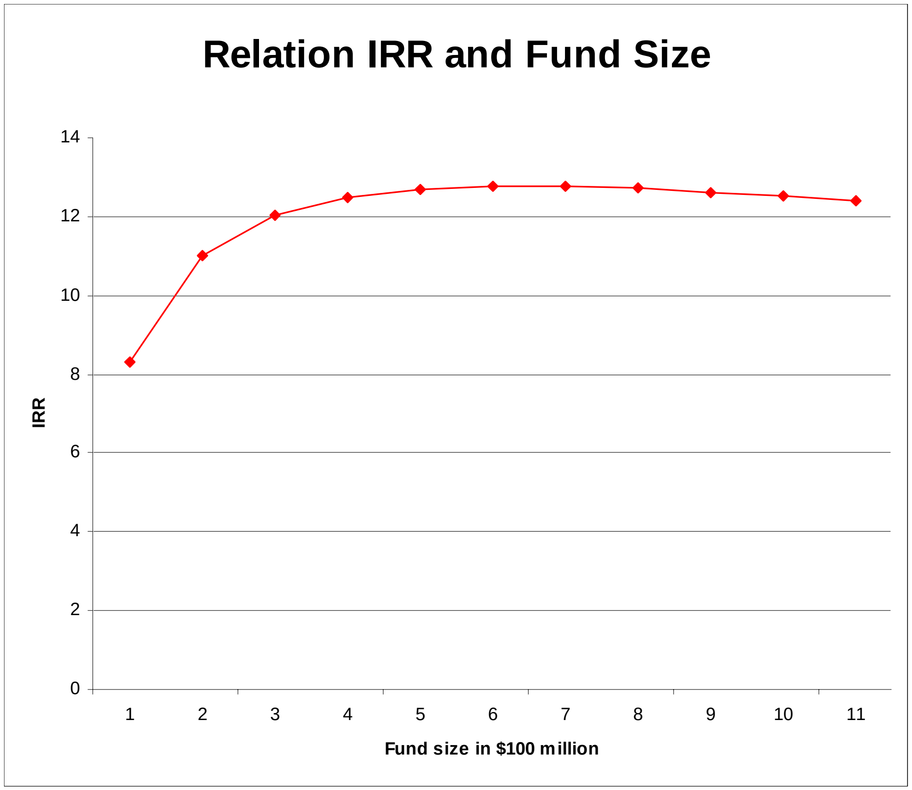
IRR of next fund



What do endowments know that others don’t?

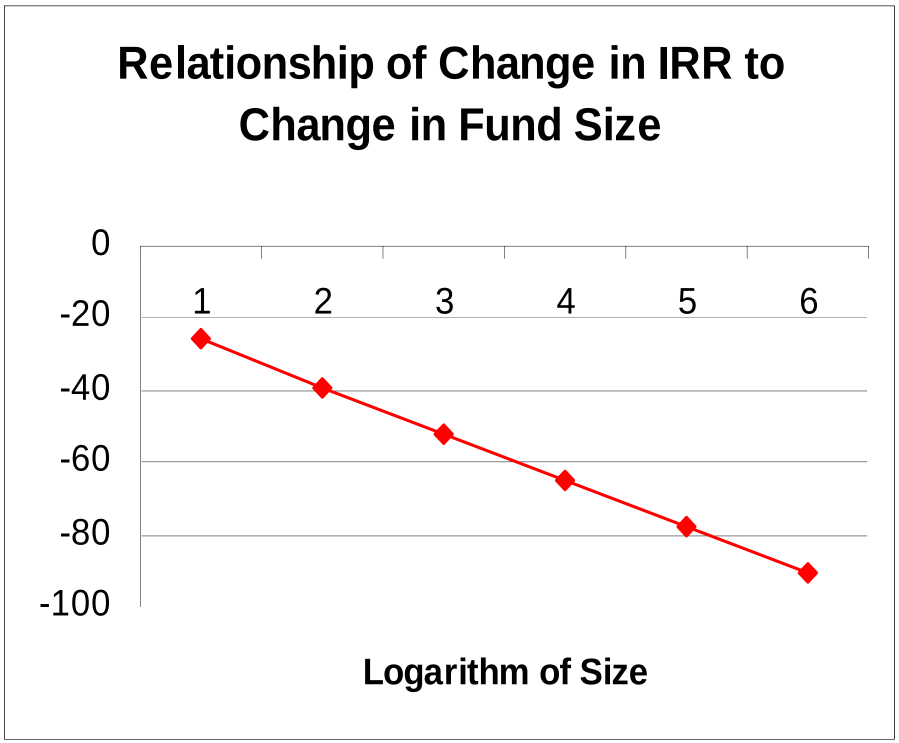
- Suggests differences in ability to identify or act on inside information.
- Systematically obey a few simple rules that can be observed by most investors
  - Monitor fund size and partnership growth

Fund Size



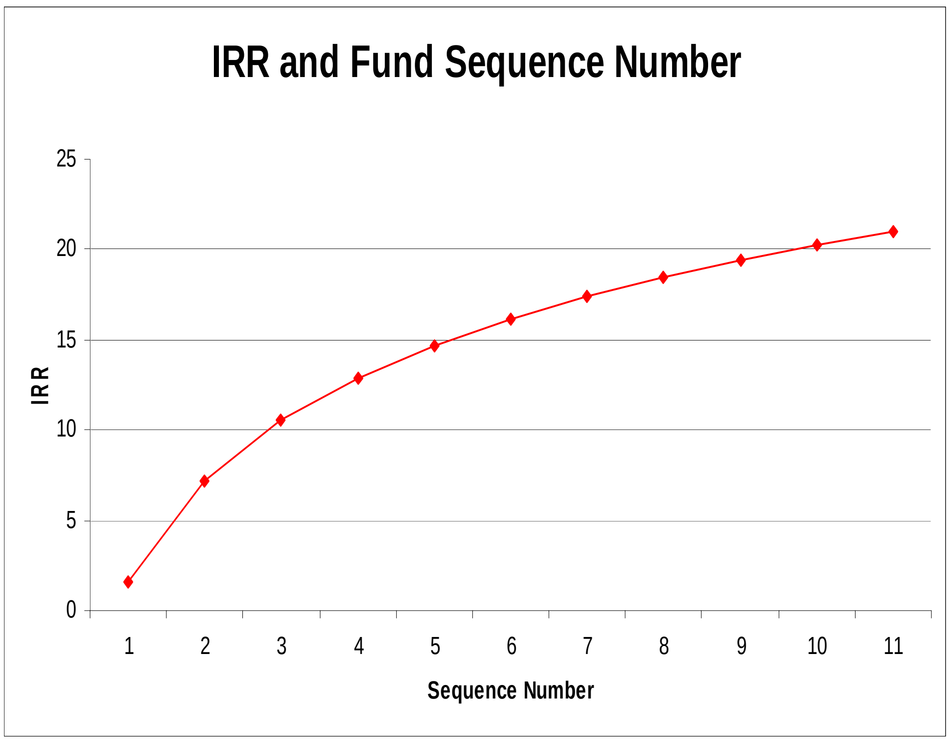
- Concave relationship between IRR and fund size
- Fund size is measured as capital committed at closing
- Regression results control for vintage year, fund category

Change in Fund Size



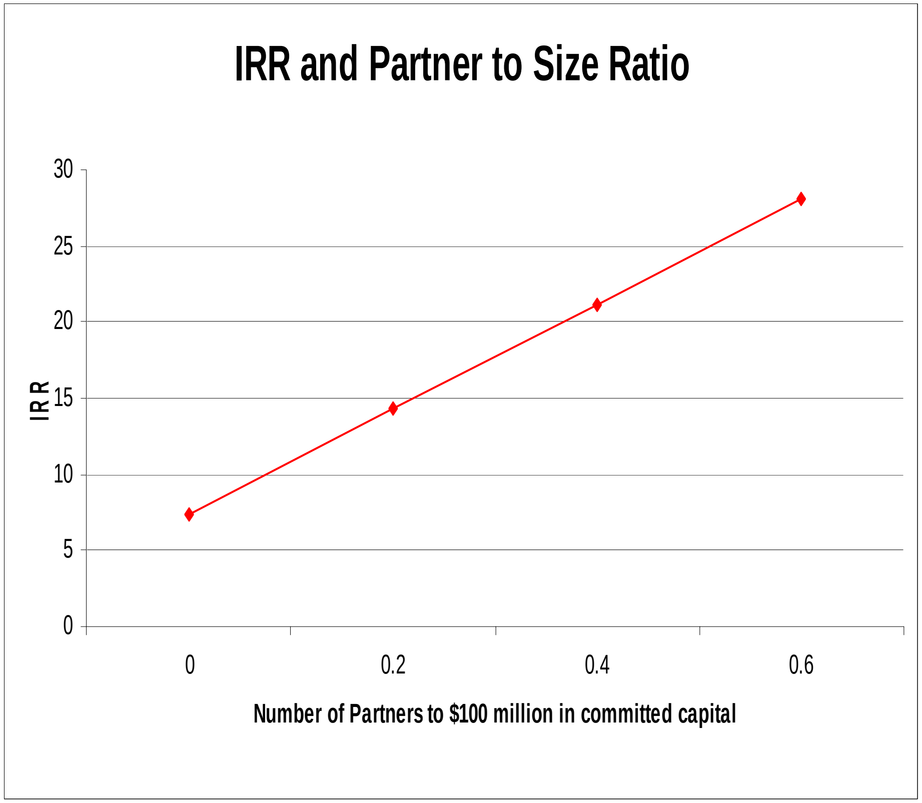
- Negative relationship between change in IRR and change in fund size for a given firm
- Fund size is measured as capital committed at closing
- Regression results control for vintage year effect, fund category, and firm fixed effects

Fund Sequence Number



- Positive relationship between IRR and fund sequence number
- First time funds perform especially bad
- Regression results control for vintage year effect, fund category and fund size

Partner to Size Ratio



- Positive relationship between IRR and the ratio of partners to committed capital
- Regression results control for vintage year effect, fund category and fund size

Summary

- PE differs from other asset classes
  - Vast heterogeneity across funds
  - Strong persistence of returns
  - Top quartile funds have less idiosyncratic risk than the rest of the funds
- Focus on relationships with top funds not ex ante asset allocation
  - Manage investment process opportunistically
  - Bottom-up approach rather than fixed asset allocation targets
  - Incentives for deployment of capital are detrimental to returns

Thank you!