

# Private Equity and the Public Pension Investor

Josh Lerner

Harvard Business School

My research has highlighted both the potential and challenges of private equity

**Buyouts Are Good. Unless You're the Target**  
*- Bloomberg Businessweek*

Quick flips tend to flop, says private equity study  
*- Financial Times Business*

**Co-Investments Aren't Paying Off for Limited Partners**  
*- Private Equity & Venture Capital, Dow Jones*

**Pension Funds Lambaste Private-Equity Fees**  
*- Wall Street Journal*

**With Private Equity Under Attack, Academia Tries to Quantify Its Value.**  
*- New York Times*

**The True Value—and A Possible Weakness—of Angel Investors**  
*- CBS News*

**Top-tier performance linked to high alternatives allocation**  
*- Pensions & Investments*

**Academics Test Some Of Private Equity's Most Deeply Held Beliefs**  
*But PE Finds Little Use for "Propeller Heads" Research*  
*- Private Equity Analyst, Dow Jones*

**At Sovereign Funds, a History of Bad Timing**  
*- New York Times*

**Gluttons At The Gate**  
How private equity is using slick new tricks to gorge on corporate assets  
*- BusinessWeek*

**Barbarians at the gates: the balance of pros and cons**  
*- Financial Times*

**Private equity buyouts get split review on job losses**  
*- International Herald Tribune*

# This presentation

1. Measuring the performance of private equity.
2. Measuring the performance of different classes of LPs.
  - a. The factors behind the changing patterns.
  - b. The implications of these changing patterns.

Appendix: The viability of going it alone.

# Measuring the performance of private equity

# Buyout funds outperformed public markets, and have increasing outperformance

**Public market equivalents** compare proceeds generated by investing in the private equity fund with those from investing in a public market index.

- If ratio of proceeds from PE investments to public investment is  $> 1$ , PE is considered superior.

	Buyout Funds PME			
	Funds	Average	Median	Wtd. Avg.
Average 2000s	411	1.27	1.25	1.29
Average 1990s	157	1.27	1.17	1.34
Average 1980s	30	1.04	1.03	1.11

Note: Private equity returns in this study are compared to equivalently timed investments in the S&P 500.

Source: Robert S. Harris, Tim Jenkinson, and Steven Kaplan, "Private Equity Performance: What Do We Know?" *Journal of Finance* 69 (5), October 2014.

## But PME only solve part of the “returns” problem

- Private equity funds’ risk may differ from public markets.
- Risks may vary across venture and buyout and geographies.
- Risk may vary across time.
  - PMEs calculated using the S&P 500 index implicitly assume a beta of one.
- It is important therefore to look at other measures of (explicitly) risk-adjusted returns:
  - Robinson and Sensoy (2013) and subsequent authors use other benchmarks to estimate the effects of alternative betas.
  - Axelson et al. (2013) does more complex, “cutting edge” adjustment:
    - Both continue to find outperformance.

Note: Some theory work (Sorensen and Jagannathan (2013)) *does* suggest that PMEs are robust irrespective of risk, but research on this topic is limited.

Sources: David T. Robinson and Berk A. Sensoy, “Cyclicality, Performance Measurement, and Cash Flow Liquidity in Private Equity,” Working Paper No. 2010-03-021, Fisher College of Business, September 2013; Ulf Axelson, Morten Sorensen, and Per Stromberg, “The Alpha and Beta of Private Equity,” Unpublished Working Paper, London School of Economics, 2013; Morten Sorensen and Ravi Jagannathan, “The Public Market Equivalent and Private Equity Performance,” *Financial Analysts Journal*, July 15, 2015.

# The performance of private equity

## – The bottom line

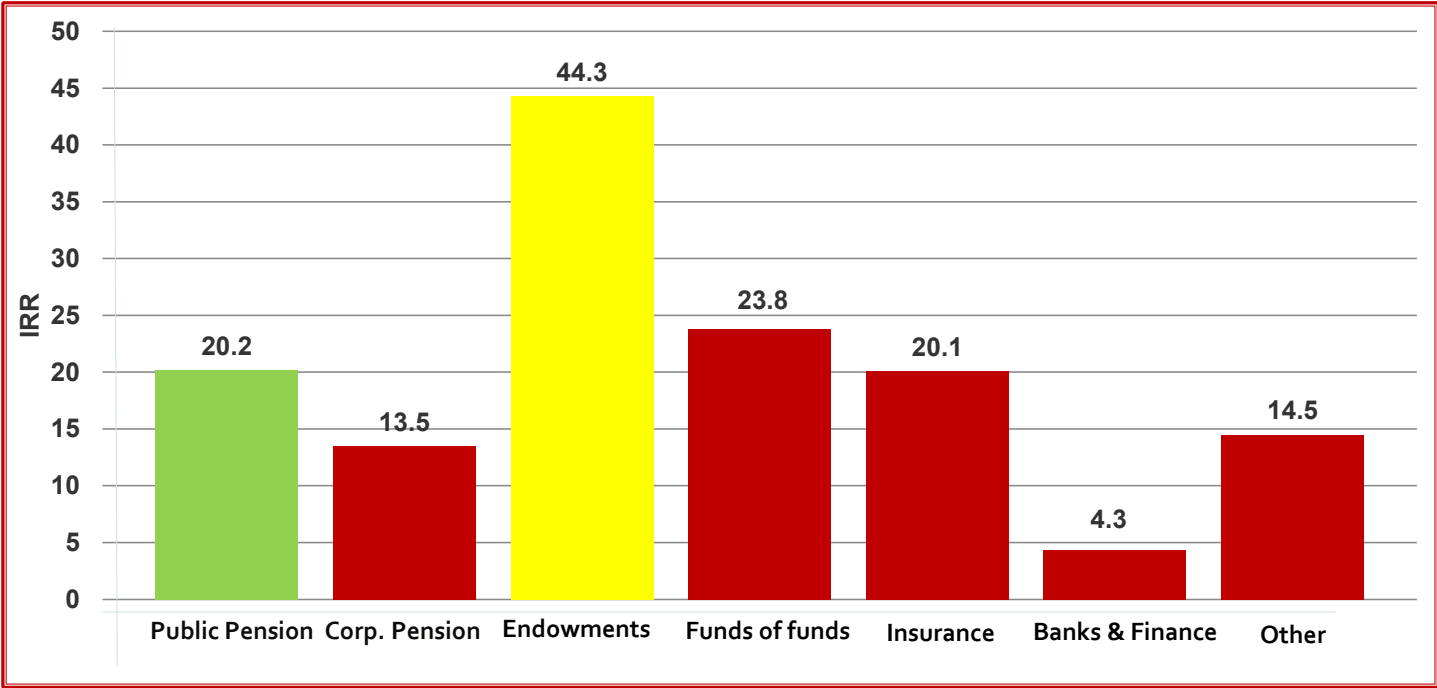
- Research on the alpha and beta of private equity has evolved over the past 10 years.
  - Improvements in data (e.g., moving beyond Venture Economics).
  - Improvements in methodology.
- Outperformance seems to be robust:
  - Not every study tells the same story.
  - Once returns are risk-adjusted, less outperformance than simple PME analysis suggests.
  - While not definite answers, consensus of literature would suggest betas clearly greater than one, and very modest outperformance.
    - Raises question as to whether a PE program worth it, if only getting average returns (*to be continued...*).

# Measuring the performance of different classes of LPs



# Well-established pattern: certain LPs do better and worse

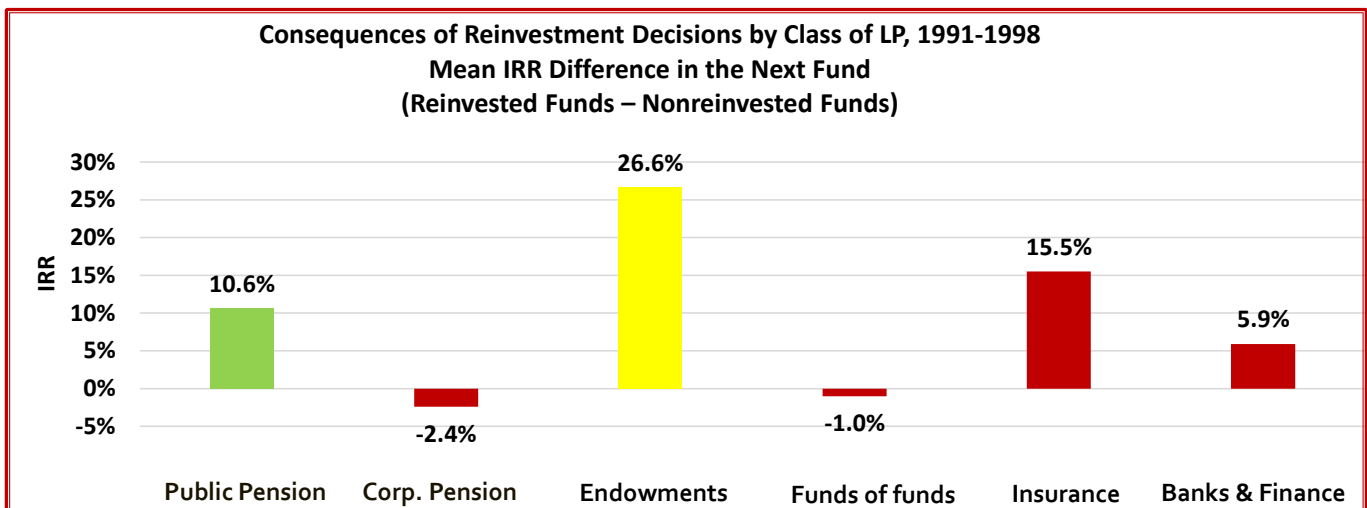
Performance (IRR) by investor type, funds formed between 1991 and 1998.



Source: Josh Lerner, Antoinette Schoar, and Wan Wongsunwai, "Smart Institutions, Foolish Choices: The Limited Partner Performance Puzzle," *Journal of Finance* 62 (2), 2007.

# What are the drivers behind the historical outperformance of endowments?

- Lerner et al. (2007) found that the historic outperformance of endowment funds extended beyond access!
  - Endowments knew how to select funds for reinvestment that maintained high performance.
  - They avoided those with lower performance far better than other LPs.



Source: Josh Lerner, Antoinette Schoar, and Wan Wongsunwai, "Smart Institutions, Foolish Choices: The Limited Partner Performance Puzzle," *Journal of Finance* 62 (2), 2007.

# But do endowments still outperform?

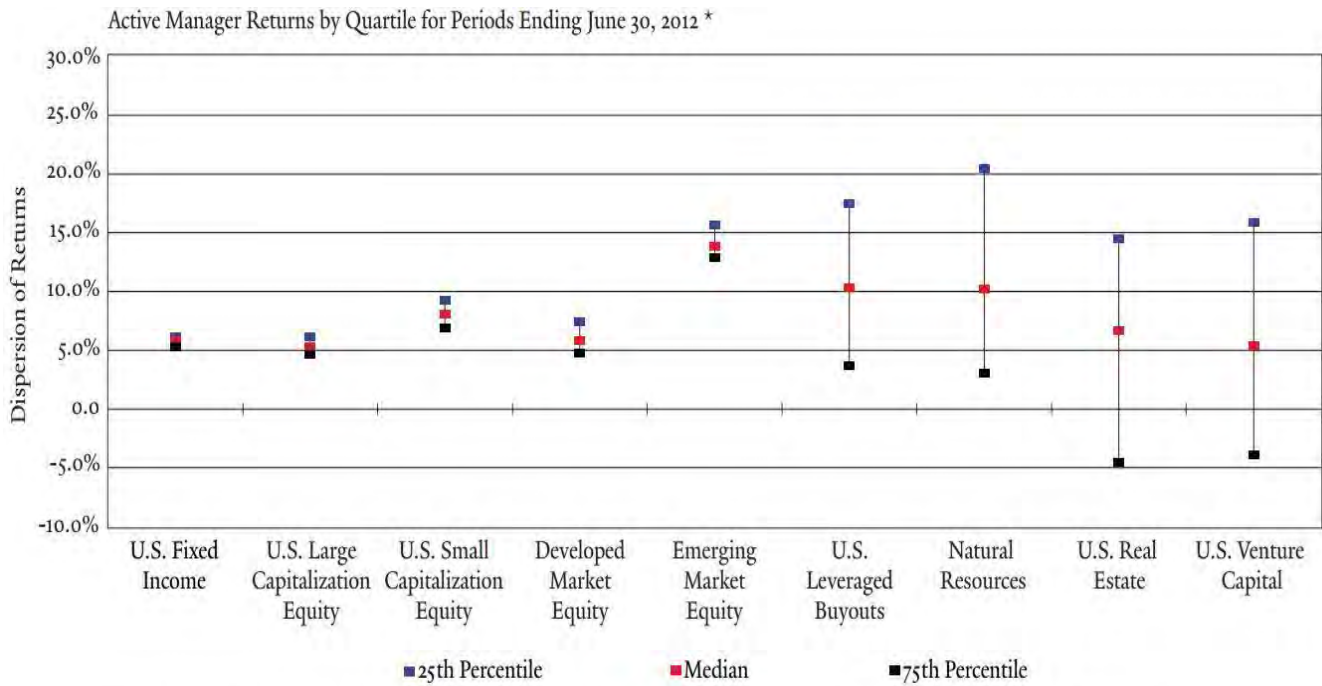
- Sensoy, Wang, and Weisbach (2013) find that endowments no longer outperformed other LPs from 1999 to 2006.
- In fact, the authors found no statistically or economically significant differences in returns across LP types.
- During this period, reinvestment decisions of endowments were not statistically unusual relative to other institutional investors.
- Still large disparity across investors, but not across *investor types*!

Source: Berk A. Sensoy, Yingdi Wang, and Michael S. Weisbach, "Limited partner performance and the maturing of the private equity industry," *Journal of Financial Economics* 112 (3), 2014.

# Why might this effect have diminished?

- PE and VC has wide dispersion.
- PE and VC has historically has lots of persistence.
- These twin facts has been key to success of Yale and other elite investors.
  - But persistence effect appears to have diminished.

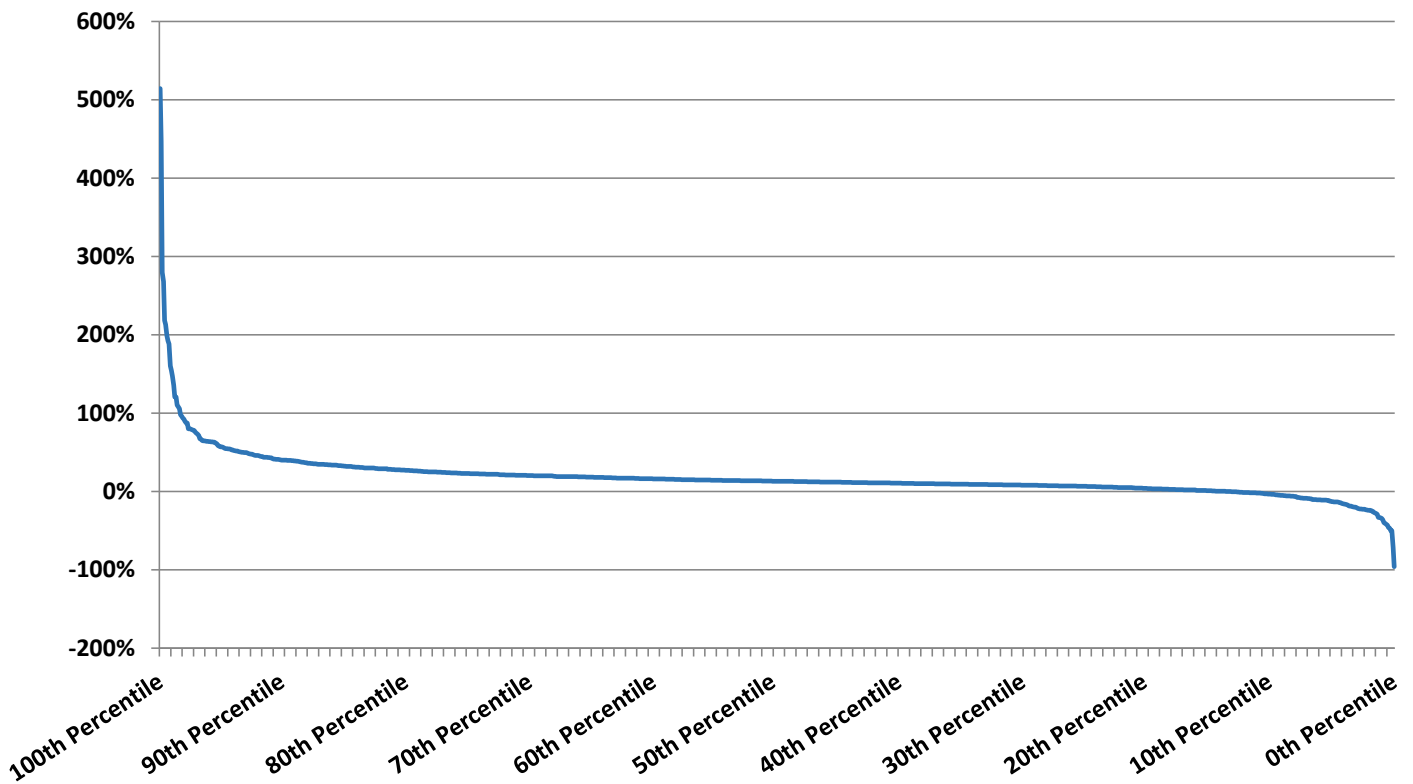
# Inter-quartile ranges and medians for asset classes



\* Fixed income and marketable equity performance based on annualized ten-year returns of BNY Mellon manager universes, adjusted for fees.  
 Venture capital, LBO, real estate, and natural resources returns based on annualized since-inception IRRs of Cambridge Associates manager universes.

Source: 2012 Yale Endowment Report. [http://investments.yale.edu/images/documents/Yale\\_Endowment\\_12.pdf](http://investments.yale.edu/images/documents/Yale_Endowment_12.pdf)

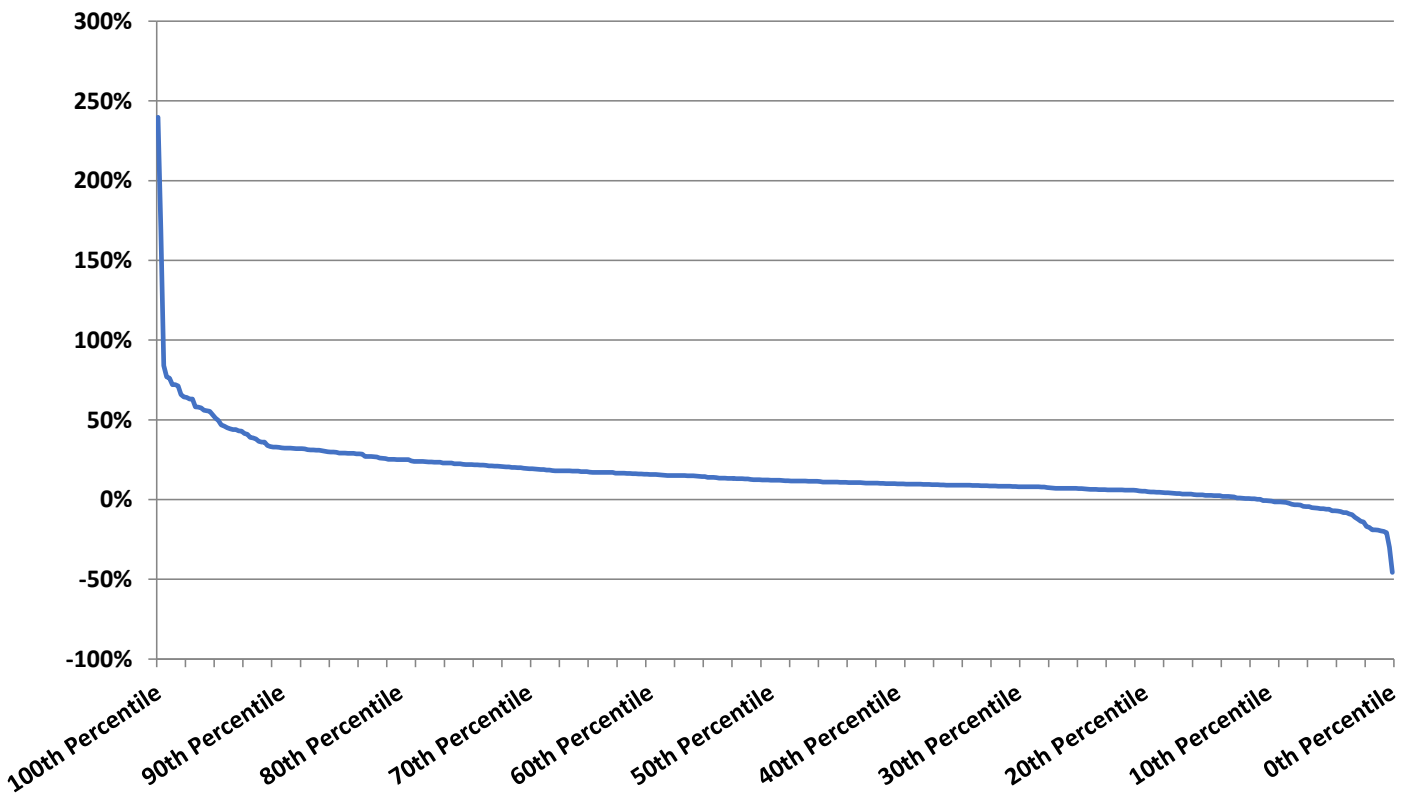
# U.S. private equity fund returns



Source: Preqin database. Includes 1,087 funds with vintage of 2012 or earlier. Returns are from inception to June 30, 2015.

Proprietary & Confidential

# European private equity returns



Source: Preqin database. Includes 430 funds with vintage of 2012 or earlier. Returns are from inception to June 30, 2015.

# Persistence of performance

- Kaplan and Schoar (2005) found persistence in performance:
  - High likelihood that the next funds of a given partnership stay in the same performance bracket.
  - 1% boost in past performance → 0.77% boost in performance of subsequent funds.

	<b>Bottom</b>	<b>Medium</b>	<b>Top</b>
<b>Bottom Tercile</b>	49%	31%	20%
<b>Medium Tercile</b>	30%	38%	32%
<b>Top Tercile</b>	21%	31%	48%

Source: Steven N. Kaplan and Antoinette Schoar, "Private Equity Performance: Returns, Persistence, and Capital Flows," *Journal of Finance*, August 2005.



# But is persistence effect decaying?

- Recent research has found that this persistence effect has eroded.
- Harris et al. (2014): Found the persistence effect for buyout funds has weakened since 2001, but VC persistence remains strong.
  - **68.5%** of top quartile VC managers remain above the median in their next VC fund.
  - Only **50.8%** of top quartile LBO managers remain above the median in their subsequent LBO fund.

## **BUT**

- Korteweg and Sorensen (2014): Found the persistence effect for buyout funds remains strong, but VC persistence has weakened.
  - Sample of 1,924 funds raised from 1969-2011 confirms historical persistence effect but recent evidence shows future VC funds are now no more likely to remain in quartile.
  - The top quartile is populated by both skilled, and simply lucky GPs, making “investable persistence” difficult for investors to identify, particularly in VC.

Sources: Robert S. Harris, Tim Jenkinson, Steven N. Kaplan, and Rüdiger Stucke, “Has Persistence Persisted in Private Equity? Evidence From Buyout and Venture Capital Funds,” Darden Business School Working Paper, 2014; Arthur G. Korteweg and Morten Sorensen, “Skill and Luck in Private Equity Performance,” Rock Center for Corporate Governance at Stanford University Working Paper, October 2014.

## What are the implications of these changes?

- Data suggest that an “index fund” approach is likely to yield OK performance.
- But modest returns likely to result are unlikely to be worth the time and effort.
- Suggests that to be worthwhile, PE programs must have outperformance.
- The good news is that outperformance is not longer largely confined to one class of investor!
- Instead, we must look at the features of top performers and seek to emulate.

## Characteristics of the top-performing LPs

- Clear strategy wide agreed-upon across the organization, which plays to its strengths.
- Effort to communicate to GPs why a desirable LP.
- Staff has considerable experience and has often worked together for many years.
- Active investing committees, typically drawn from the industry.
  - Committees set broad policy and do not micromanage the decisions of investment staff.
- Staff make conscious efforts to learn from their fund histories.
  - They stop to consider the processes that led them to make investments that proved particularly successful/problematic.

Source: Josh Lerner, Antoinette Schoar, and Jialan Wang, "Secrets of the Academy: The Drivers of University Endowment Success," *Journal of Economic Perspectives* 22 (3), 2008.