Investing Outside the Box: Evidence from Alternative Vehicles in Private Capital

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Revisiting the "Private Equity Puzzle"

- Earlier research documents a surprising anomaly in private equity: some LPs earn large and predictable alphas:
  - PE returns are persistent; top funds grew slowly, Kaplan and Schoar (2005).
  - Fees do not vary significantly across funds or LPs in the same fund: Gompers and Lerner (1999).

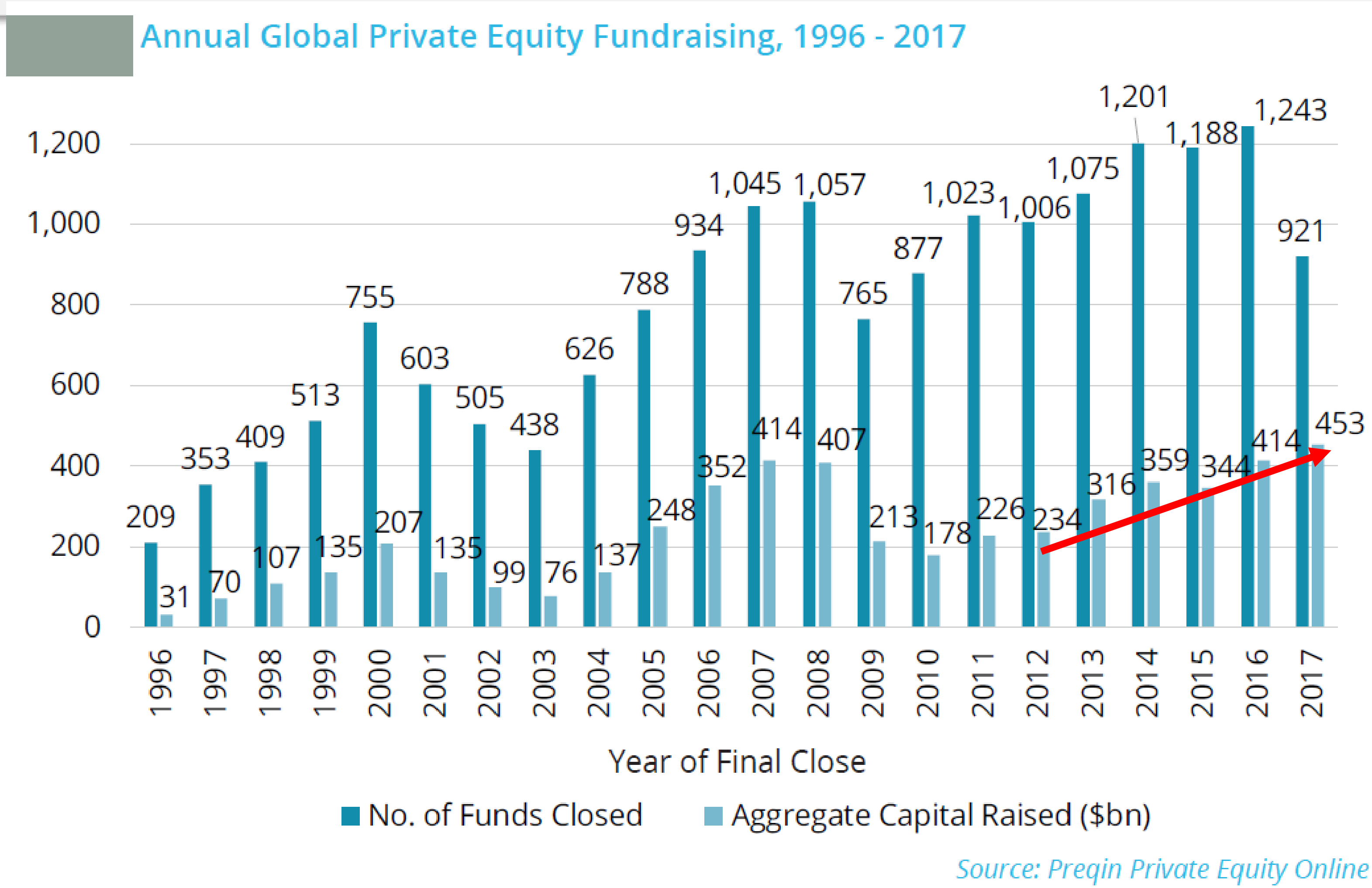
- Berk and Green (2004) argue if managers differ in their skill and technology is decreasing returns-to-scale, higher skill managers should manage larger funds and extract more rents:
  - If LPs also differ in their attractiveness and sophistication, there will be heterogeneity in the bargaining power of both LPs and GPs. More powerful and attractive LPs should match with better GPs.
  - And within the fund offerings of a given GP, we would expect differentiation in the structures that are offered to LPs of different types.

The “Private Equity Puzzle” (2)

- Academics and asset owners alike have expressed similar concerns about the nature of fund manager compensation:
  - Mercer (1996); Gompers and Lerner, 1999; Metrick and Yasuda, 2010; Phalippou, Rauch, and Umber, 2016.
  - Despite concerns, there has been limited historical competition across private capital managers in the pricing of their main funds.

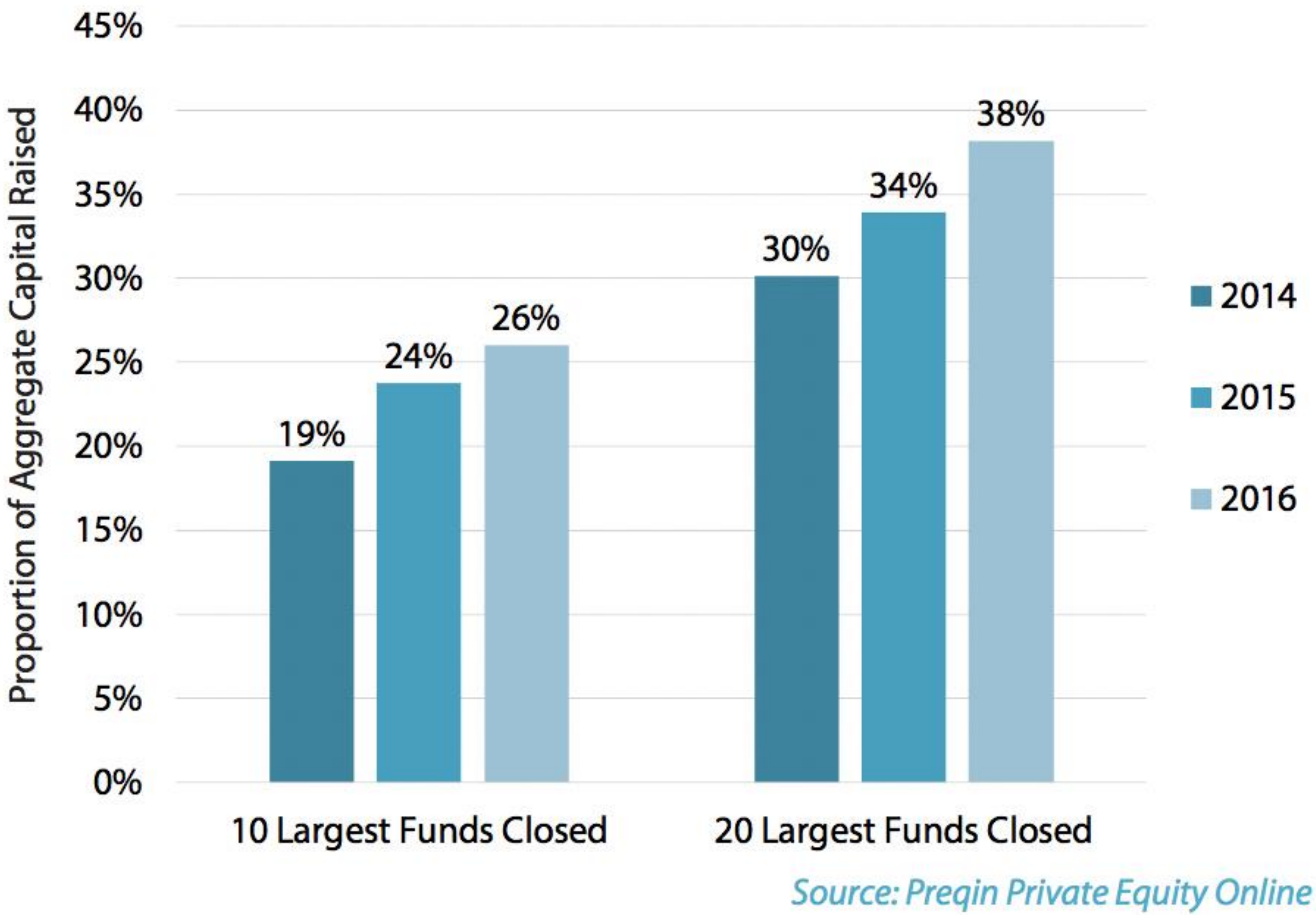
- Puzzling since widespread belief that individuals matter in private capital:
  - GP skills drive performance and allow some funds to persistently outperform the industry:
    - Kaplan and Schoar, 2005; Metrick and Yasuda, 2006.
  - LPs differ in desirability, e.g., deeper pockets provide GPs with “liquidity insurance” in bad times, e.g., Lerner and Schoar, 2004.

Large Amounts of Fundraising

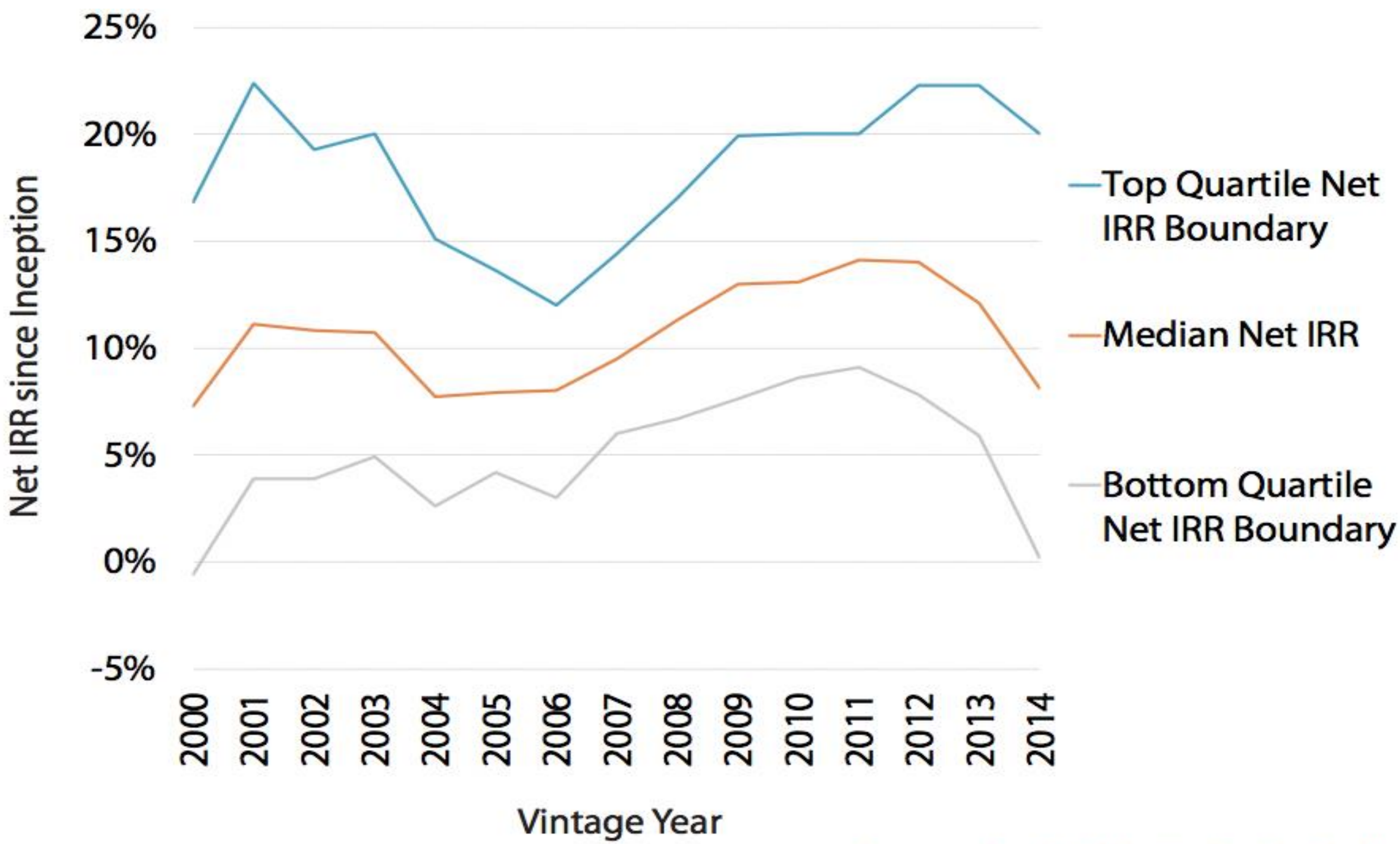


Source: 2018 Preqin Global Private Equity and Venture Capital Report

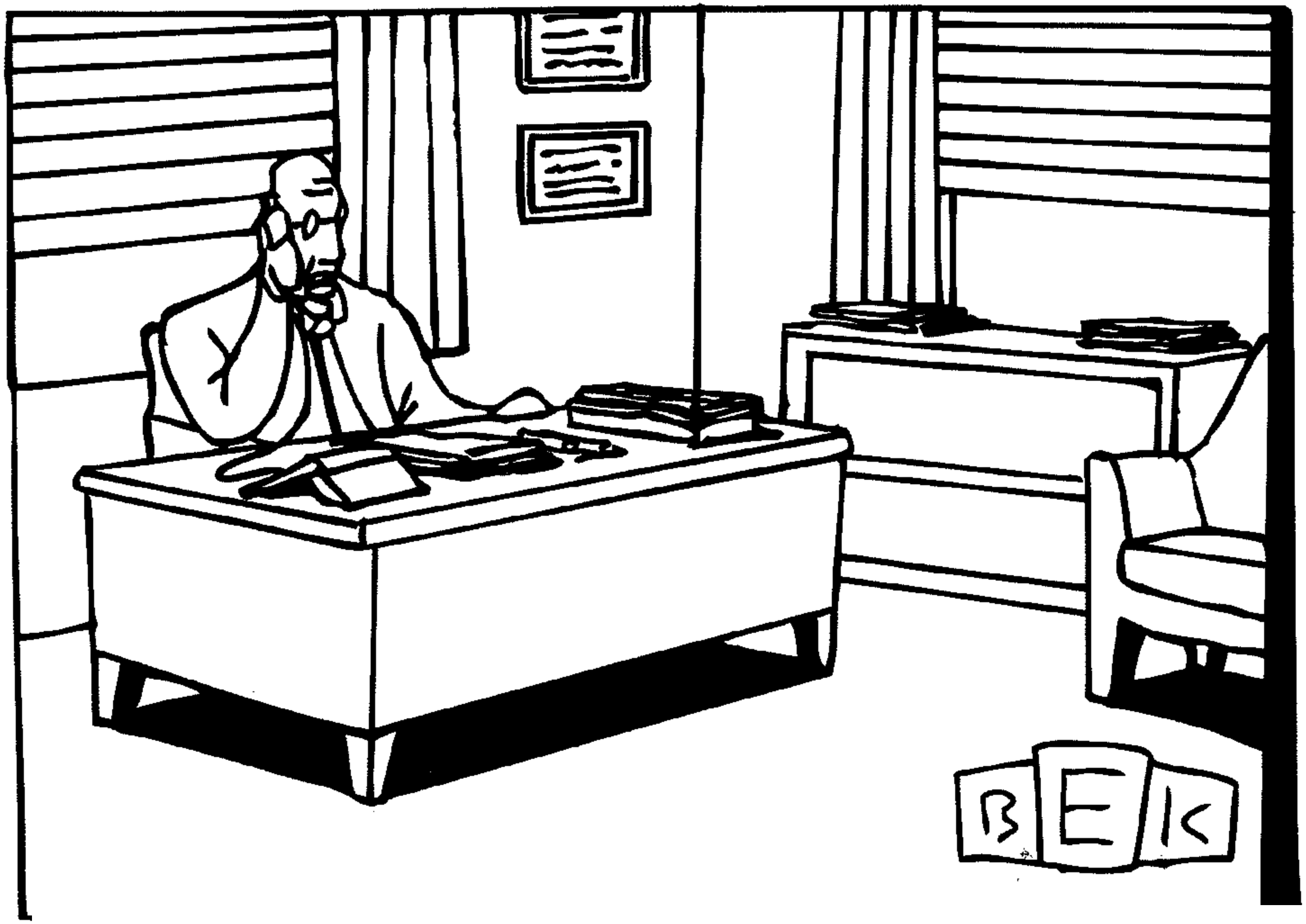
Increasing Capital Concentration



Interquartile Ranges Still Very High



Source: Preqin Private Equity Online



"We structured the LPA so it won't make any sense to you."

Is the Old Puzzle Disappearing?

- Private capital groups could achieve the differentiation of fund returns suggested by theory, if they adjust:
  - Transaction fees across investment vehicles, or
  - Asset quality across investment vehicles.

- The best groups may be capitalize on their reputation and offer differentiated products:
  - Groups with excess demand by LPs might be willing to set up alternative vehicle for less premier LPs to invest with them.
  - These LPs might be willing to accept slightly lower returns, since their outside options are also lower than for the top LPs.
  - Some LPs may not understand, they are being offered inferior opportunities

June 24, 2012 5:35 pm

Direct approach challenges private equity

USS targets direct infrastructure

Preqin Special Report: LP Appetite for Private Equity Co-Investments

WALL STREET 6/04/2014 @ 3:09PM | 652 views

Co-Investment Catching On In European Private Equity

CalPERS and OMERS crush it on direct investments

Abu Dhabi sovereign wealth fund eyes direct investment in Indian real estate

NY State: Interested In More Direct Private Equity Investments

China's CIC Buys 8.68% Stake in U.K.'s Thames Water Utilities

Rich Families Cut Back on Buyout Firms for Direct Deals

South Carolina to Start an Investment Firm for Its Private Equity Bets

Barriers to Academic Assessment

- Despite the intense real-world interest, study is challenging:
  - Even the services that track these markets, such as Burgiss, Cambridge Associates, and Preqin, focus on documenting the performance of main funds rather than alternative vehicles.

- Only exception are studies which focus on select samples of direct investments by limited partners:
  - Fang, Ivashina, and Lerner (2015) analyzed co-investments and solo investments using information from only seven large LPs.
  - Braun, Jenkinson, and Schemmerl (2017) looked at co-investments recorded in the CapitalIQ database, which only captures a (potentially non-random) selection of transactions.

Our Data

- Work with State Street Bank, one of largest custodians in the world:
    - 112 global LPs investing in PE between 1980 and mid-2017:
    - Over half a trillion dollar of capital commitments (5-10% of total, depending on decade).
    - Over 20 thousand distinct investments.
    - Mix between main funds and alternative vehicles.

What Do Custodians Do?

Document Collection	Data Input & Validation	Custody and Record Keeping	Information Delivery
• Cash flow notices, financial statements, tax files, LPAs and other documents	• Capital contributions, capital distributions, capital accounts, underlying holdings, etc.	• Cash Transaction settlement, FX trades, fund accounting and record keeping	• Performance calculations, holdings exposure, fees disclosure and other analysis

Identifying Main Funds

- Identify vehicles associated with the main funds of private capital groups
  - TPG Global Advisors' July 2017 filing of Firm ADV with the U.S. Securities and Exchange Commission identified in Section 7B nearly 100 affiliated entities. While some of these were clearly identifiable from their titles (e.g., TPG Parallel III), many had far less obvious names (e.g., Arrow Ridge Capital Master Fund, FoF Partners III-B, and MLS (B&C) AIV 1-B).

- We identify 3,620 "main funds": typically, eight-to-ten year limited partnerships.
- Using State Street's "standardized name convention" process, we identified 6,068 unique investment vehicles with associated LP and GP names.

GP-Directed Vehicles

- Of the remaining entities, we identify 819 GP-directed vehicles.

- GP-directed vehicles typically invest in similar securities as the main funds and the GP retains key decision-making powers.
  - But these vehicles contain special features to cater to certain LPs, e.g.:
    - More favorable economics
    - Avoid domestic tax obligations for non-domestic investors.
    - Allow the GP to continue to finance firms when they are running out of capital in the main fund,
    - Not use using capital call lines to address investors’ concerns about risk.

Discretionary Vehicles

- We also identify 883 discretionary vehicles, where LPs have some discretion to invest in one or more transactions.

- These allow the LP to invest in one or more transactions:
  - Co-investments into individual companies by one or more LPs.
  - Solo investments by LPs in previously private capital-financed companies.
  - Pledge fund structures .
  - Co-investment or overage funds that are raised alongside a main fund
  - Co-sponsored transactions between LPs and GPs.

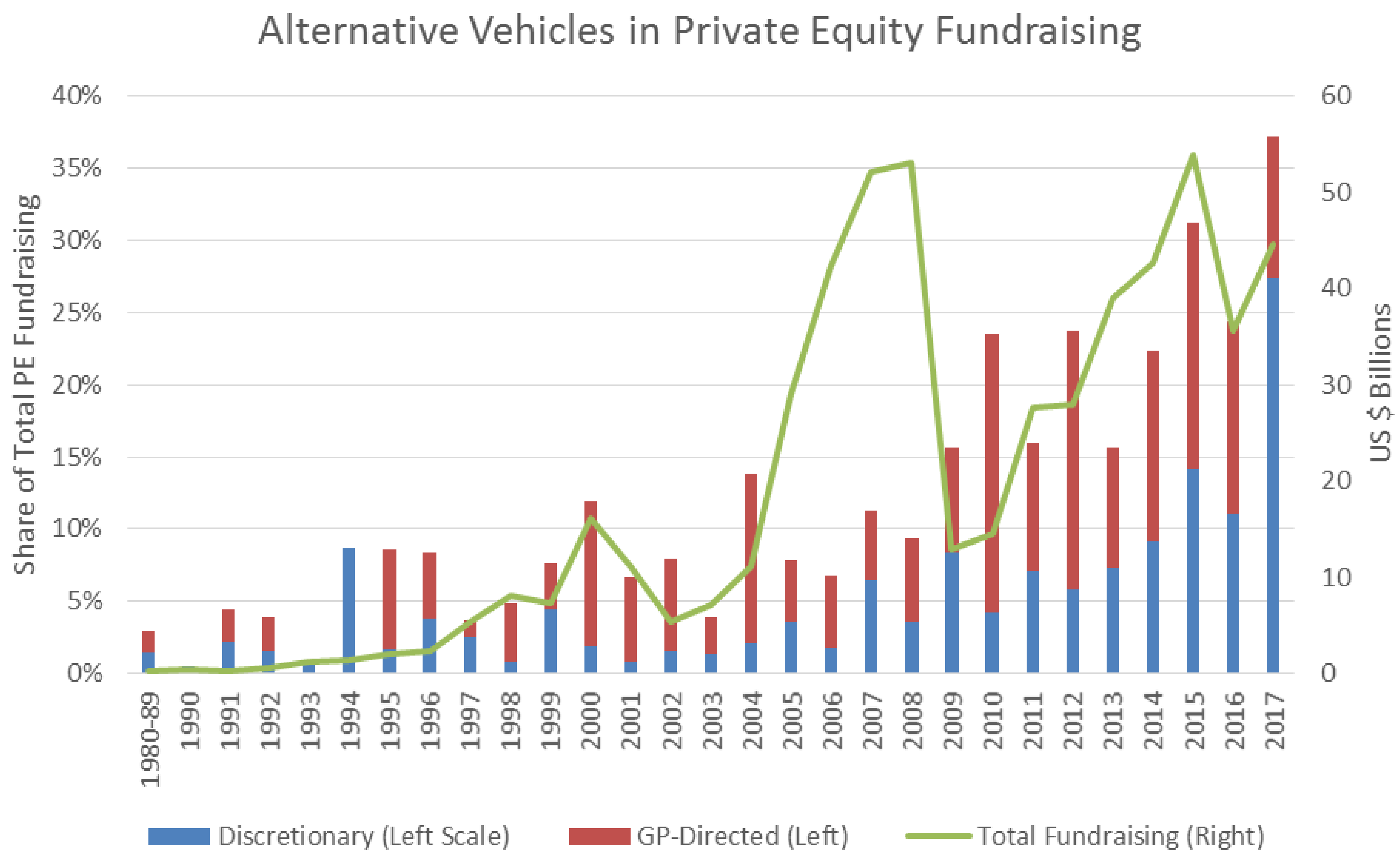
Assessing Sample Representativeness

- Harris et al. (2016) reports performance from Burgiss data.

- Replicate calculations by only using U.S. funds in vintage years through 2010 and comparing performance against the S&P 500, but calculating performance through mid-2017.

- Obtain very similar numbers to theirs:
  - Our average PME for buyout funds across all vintage years (calculated using 944 funds, to their 781) is 1.22, as compared to their 1.20.
  - Our average PME for venture funds (computed using 669 funds, to their 1095) is 1.44, as compared to their 1.35.

Basic Patterns Over Time



Note: 1980-89 and 2017 (partial year) fundraising totals are annualized.

Differences in Alternative Vehicle Use

- Substantial disparity between VC groups and the other classes:
  - 62% and 72% of the vehicles raised by buyout- and private debt-focused GPs were in main funds.
  - 80% of those by venture capital-focused groups were.
  - Similarly, 90% of the total capital, as opposed to 82% and 83% for buyout- and private debt-focused groups.
- The smallest tercile was far less likely to make use of alternative vehicles:
  - Only 7% of the vehicles they offered and 2% of capital raised.
  - The corresponding numbers for the largest tercile were 40% and 18%.
- North American-based GPs are far more likely to employ alternative vehicles:
  - 33% of the vehicles and 17% of the capital.
  - For groups outside of Europe and North America, 21% of the entities and 5% of the capital raised.

Performance Relative to Main Fund

- Comparison of the performance of the alternative vehicles against the main fund of the same partnership:
  - Compute the difference in the PME between the performance of each alternative and that of the main fund(s) raised by the same group immediately prior to the launch of the alternative vehicle.
  - 58% of the alternative vehicles are matched to a main fund begun in the same year as the vehicle

- The results are robust to the use of alternative methodologies:
  - Shorter matching window.
  - Using average of prior main funds.
  - Excluding private debt, offshore funds, and recent funds.

Performance Related to Main Funds

Vehicle type	N	Weighted average	p-value	Average	p-value	median
All	1433	-0.079	0.000	-0.008	0.715	0.003
Discretionary	725	-0.022	0.521	0.006	0.869	0.009
GP-Directed	708	-0.117	0.000	-0.022	0.343	0.002

Heterogeneity in Performance

- The identity of the LP matters:
  - Funds-of-funds had consistently negative relative performance across all three measures.
  - Public pensions were also consistent underperformers.
  - Insurance and finance institutions, in contrast did quite well in their alternative investments.

- In regressions, LPs with historically high performance also do better in selecting alternative vehicles, which may suggest the persistence of skill effect:
  - Consistent with Cavagnaro et al. 2017.

- For the top tercile of largest funds, performance of GP-directed funds is significantly lower than the main fund.

Excess PME of Alternative Vehicles By LP

LP type	Vehicle type	N	Weighted Average	p-Value	Average	p-Value	Median
FoF	Discretionary	35	-0.144	0.025	-0.107	0.385	-0.075
	GP-Directed	89	-0.106	0.088	-0.078	0.374	-0.021
Foundation & Endowment	Discretionary	53	0.064	0.420	0.026	0.773	-0.039
	GP-Directed	74	-0.028	0.319	0.002	0.949	0.005
Insurance & Financial institution	Discretionary	162	0.177	0.002	0.247	0.000	0.081
	GP-Directed	390	0.013	0.677	0.050	0.187	0.020
Private Pension	Discretionary	29	0.195	0.002	-0.041	0.723	0.027
	GP-Directed	54	-0.001	0.985	-0.045	0.567	-0.016
Public Pension	Discretionary	390	-0.083	0.205	-0.044	0.470	0.038
	GP-Directed	120	-0.065	0.122	0.023	0.606	0.013
Sovereign Wealth Fund	Discretionary	102	0.082	0.093	-0.005	0.933	-0.086
	GP-Directed	100	-0.213	0.004	-0.220	0.004	-0.063

Matching Between LPs and GPs

- Dependent variable is PME of each investment by an individual LP in an alternative vehicle.

- PME of an alternative vehicle where the LP and the GP are above median performers is 0.38 points higher than the base category of a below-median GP–LP pair.:
  - The dummies on the uneven matches is 0.18 points higher than the base category.
  - Larger for the discretionary vehicles, but also significant for the GP-directed vehicles.

- These results are in line with a bargaining explanation:
  - Top LPs receive better returns, even conditional on the performance of the GPs with which they invest.

PMEs of Alternative Vehicles Vary by Match

Variables	All alternative vehicles		Discretionary		GP-Directed	
GP_size_{Middle}	0.229		-0.069		0.424	
	(0.312)		(0.649)		(0.294)	
GP_size_{Top}	0.149		-0.309		0.437	
	(0.306)		(0.637)		(0.288)	
$GP\_strategy_{VC}$	0.025		-0.053		0.116	
	(0.043)		(0.080)		(0.044)***	
$GP\_strategy_{Debt}$	0.002		0.167		-0.100	
	(0.033)		(0.061)***		(0.034)***	
$LP\_PME(+)GP\_PME(-)$	0.181	0.023	0.246	0.082	0.174	0.007
	(0.039)***	(0.027)	(0.083)***	(0.062)	(0.037)***	(0.025)
$LP\_PME(-)GP\_PME(+)$	0.185	0.141	0.274	0.339	0.162	0.042
	(0.034)***	(0.034)***	(0.073)***	(0.076)***	(0.032)***	(0.031)
$LP\_PME(+)GP\_PME(+)$	0.376	0.155	0.588	0.003	0.263	0.143
	(0.034)***	(0.030)***	(0.072)***	(0.071)	(0.033)***	(0.027)***
$GP\_fixed\_effects$	No	Yes	No	Yes	No	Yes
Observations	3615	3364	1544	1468	2071	1896
Adjusted R-squared	0.041	0.307	0.064	0.346	0.036	0.439

Wrapping Up

- Broad look at transactions involving assets outside the traditional fund structure:
  - Alternative vehicles have been a major—and rapidly growing—portion of these investors' portfolios over the past four decades.
  - Document the disparity in the performance across the limited and general partners participating in such vehicles.
  - Consistent with a bargaining story: GPs seem to differentiate the returns in the vehicles they offer their LP, based on the LPs' outside options .

- Avenues for future research follow naturally from this paper:
  - Contractual terms versus asset quality in these vehicles

Thank you!