CAN INVESTORS TIME PE EXPOSURE?

David T Robinson

Duke University
National Bureau of Economic Research
UNC Institute for Private Capital

This Research is Based On:

- Can investors time their exposure to private equity (with Greg Brown, Bob Harris, Wendy Hu, David Robinson and Steve Kaplan). Journal of Financial Economics, 2021

- Paper available on SSRN: https://ssrn.com/abstract=3241102

- Private Equity Research Consortium Working Paper

- http://uncipc.org

Timing: One of the Biggest Concerns in Private Markets

- Should I be increasing or decreasing my allocation to private equity?
- Are valuations / dry powder / leverage too high?
- This is a perennial concern:
  - 2021: when valuations were high
  - Today: when the concerns are dry powder, lack of exits, and worries about interest rates
- Strong negative relationship between fundraising and performance, as measured by IRRs and multiples

Fundraising and subsequent performance (Table II)

The relationship to PMEs is, however, generally insignificant – reflecting the high correlation between PE fundraising and general market conditions

Fundraising Measure:	**IRR**		
	(1)	(2)	(3)
Mkt. Adjusted Current	-13.76***		
	[-4.18]		
Current/3yr Trailing Average		-1.87**	
		[-2.10]	
Current/Overall Trailing Average			-1.93***
			[-4.42]
Constant	21.73***	19.00***	22.06***
	[12.47]	[9.78]	[12.77]
Observations	27	27	27
R-Square	0.41	0.15	0.44

Bottom Line Up Front

① The gains from market timing for buyouts are limited; potential gains for VC are greater but may not be achievable in practice

② The reason: Investing in private equity involves commitment risk. The investor pledges capital but does not control when it is put to work or returned

③ Underlying investment fundamentals drive GP decisions on capital calls and distributions – this will generally 'undo' much of any LP timing decision

④ Steady as she goes policies are simple, have been profitable, and delegate timing to GPs

- Important: note that constant dollar implies fighting/ignoring the denominator effect…

Timing strategies

We analyze different types of timing strategies:

1. Fixed allocation each vintage year

2. Strategies that require foresight (and are thus infeasible)
   - Provide bookends for the best/worst you could expect to do

3. Strategies that are investible in a statistical sense, but may be difficult to implement (involving large swings in allocations)

4. Strategies that are feasible from a statistical and organizational perspective

Steady as she goes strategies

We first analyze various versions of constant $ strategies

- Allocate a constant $ amount, no matter the market conditions

Since distributions are pro-cyclical, assuming that distributions are re-invested immediately will result in pro-cyclical commitments, as well as being impractical, so we explore 2 cases

- Distributions held in cash until next commitment to GP
- Distributions held in the index until next commitment to GP

Strategies requiring foresight

Such strategies are not investible but allow us to establish bounds on the potential gains from timing private equity commitments

¶Foresight strategy: invest double in the best half of the vintages and nothing in the worst half

¶Anti-foresight strategy: do the reverse

¶Note, in practice we have seen far more extreme timing than this (e.g. Calpers committed $27bn to the 2007 & 2008 vintages and $2.2bn to the 2009 & 2010 vintages

Cyclical strategies

We then explore investible strategies, based upon information that was available at the time. We estimate how 'hot' the private market is for each vintage year using two measures:

- Current and prior year total commitments to PE (buyout and VC) scaled by CRSP total market index at the start of the vintage year
- Capital commitments to buyout and VC (separately) relative to average of last 3-years' commitments

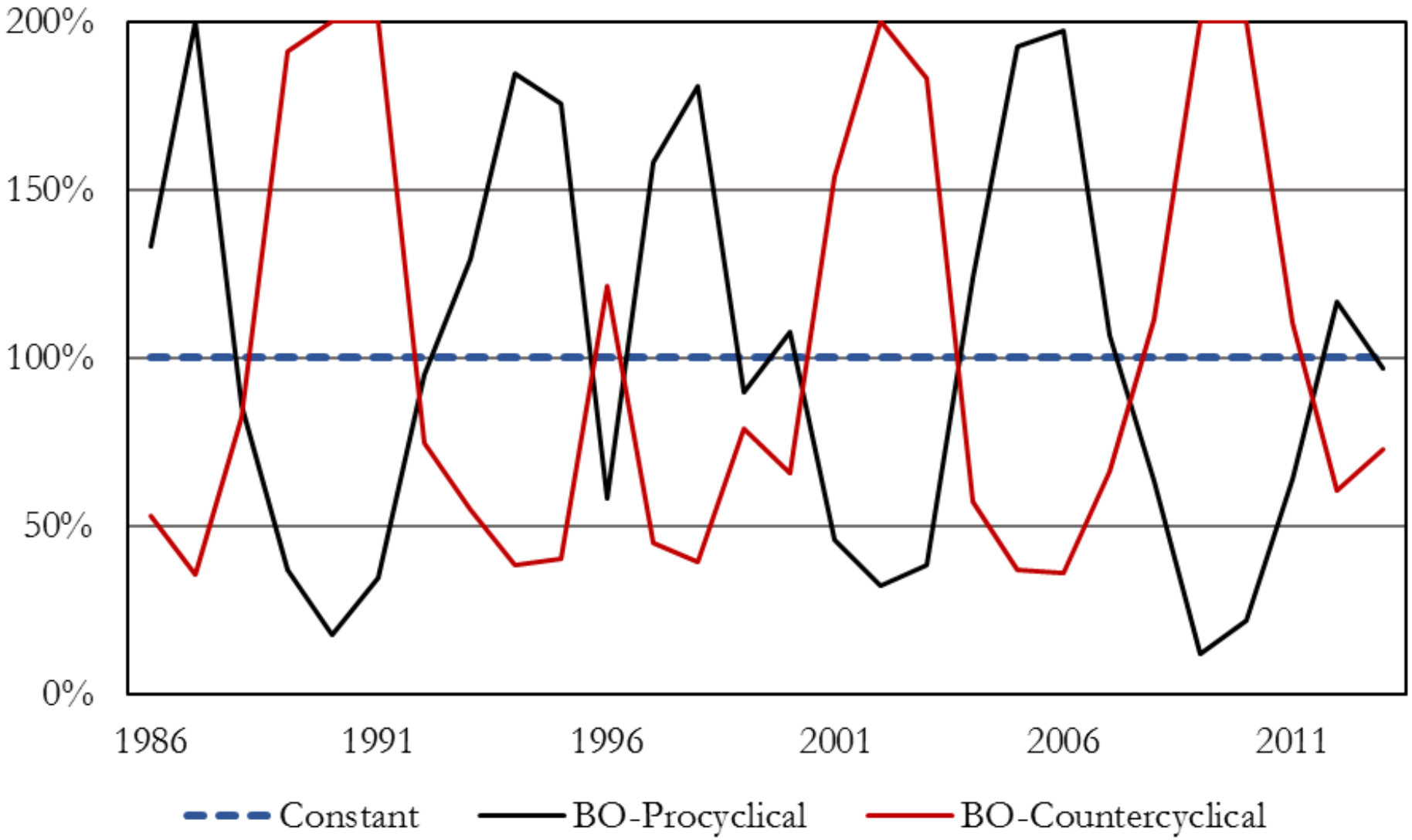
Such strategies may present organizational challenges regarding dynamic asset allocation

Commitment strategies

(Table I)

Allocation Strategy	Definition
Fixed Allocation	$100 per year regardless of past or future market conditions.
Foresight	$200 in best half of PME years, $0 otherwise. (see Figure 1.)
Anti-foresight	$0 in best half of PME years, $200 otherwise. (see Figure 1.)
Pro-cyclical	Using a 3-yr rolling average of fundraising, allocate more in hot markets than cold markets. (see Figures 2 and 3.)
Counter-cyclical	Using a 3-yr rolling average of fundraising, allocate more in cold markets than hot markets. (see Figures 2 and 3.)

Allocations over time



Data

- We use Burgiss data, from 1987 – 2016Q3
  - Includes the complete transactional history
  - We focus on buyout and VC funds
  - We focus on vintage years up to 2013, although the more recent vintages will be largely un-realized
  - In total we have 1,826 buyout funds and 1,845 VC funds

- All returns are net of fees and carried interest, and so represent the returns received by investors

Buyout returns, by timing strategy

(Table III)

	Panel A: Buyout Funds			
Commitment Strategy	PME	Direct-α	IRR	MOIC
Fixed Annual Commitment	1.15	2.8%	16.5%	1.80
Strategies relying on foresight				
Foresight	1.25	4.3%	16.7%	1.91
Anti-foresight	1.03	0.8%	16.3%	1.68
Fundraising relative to prior 3 years				
Pro-cyclical	1.10	1.8%	14.3%	1.74
Counter-cyclical	1.20	4.0%	18.9%	1.89
Fundraising scaled by public market cap				
Pro-cyclical	1.12	2.3%	14.9%	1.68
Counter-cyclical	1.16	3.2%	18.1%	1.91

VC returns, by timing strategy

(Table III)

	Panel B: Venture Funds			
Commitment Strategy	PME	Direct-α	IRR	MOIC
Fixed Annual Commitment	1.54	10.2%	29.1%	2.52
Strategies relying on foresight				
Foresight	2.01	19.2%	42.1%	3.40
Anti-foresight	1.07	1.5%	15.1%	1.65
Fundraising relative to prior 3 years				
Pro-cyclical	1.62	11.9%	31.2%	2.54
Counter-cyclical	1.43	8.7%	27.2%	2.38
Fundraising scaled by public market cap				
Pro-cyclical	1.47	9.5%	27.8%	2.23
Counter-cyclical	1.57	10.6%	29.9%	2.77

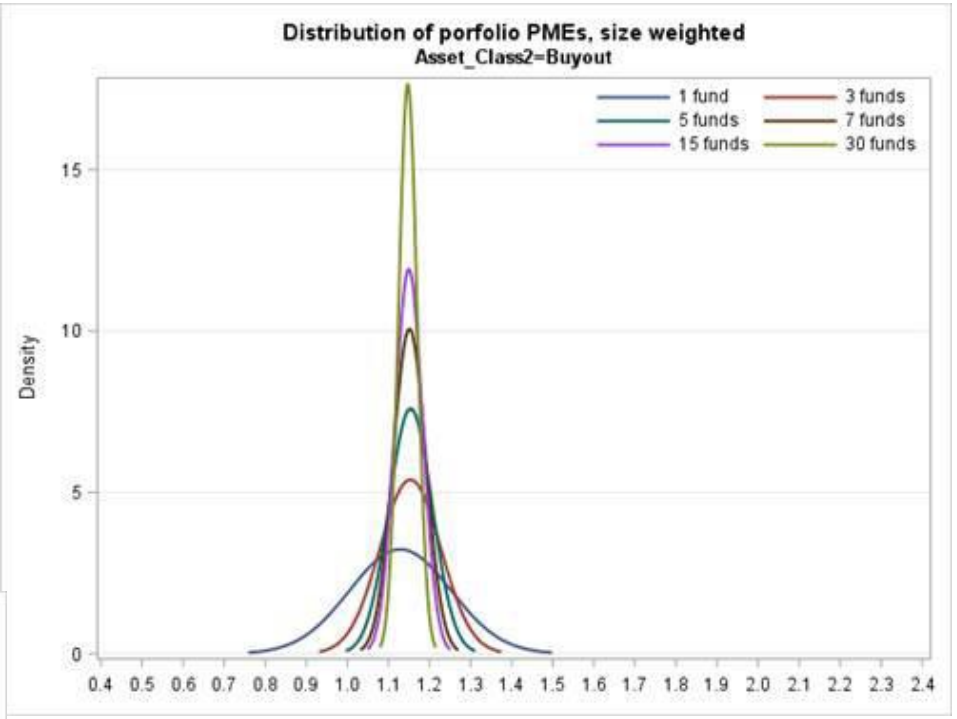
Alternative strategies

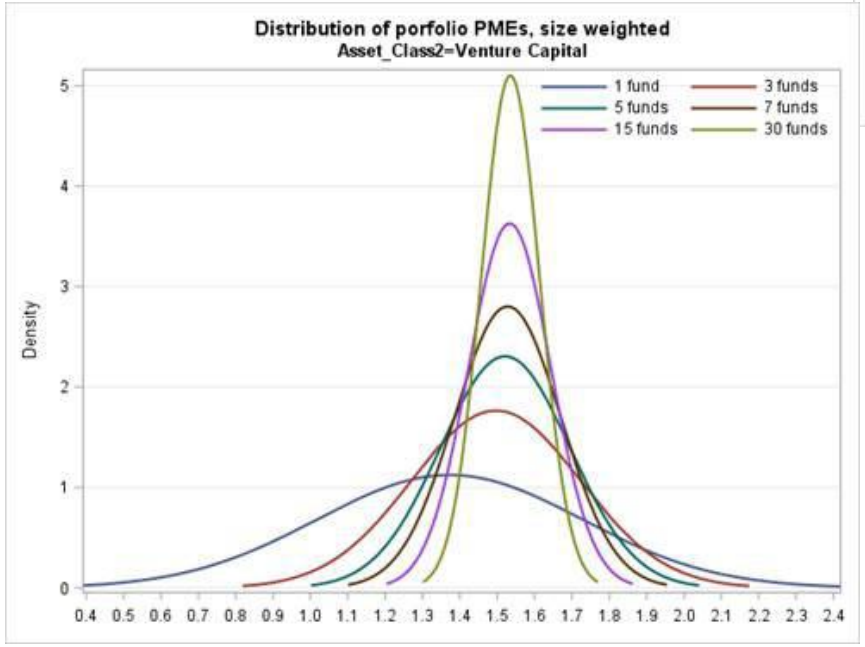
For buyouts there is a modest gain from allocating to more established GPs, whereas for VC such a strategy yields large retuns … but may not be feasible

Commitment Strategy	Buyout PME	Venture PME
Fixed Annual Allocation (funds value-weighted)	1.15	1.54
Fixed Annual Allocation (funds equal weighted)	1.13	1.37
Growing Annual Allocation (5%)	1.16	1.50
Reinvest Distributions (hold in index)	1.17	1.28
Varied Commitment to annual fundraising	1.14	1.20
GPs with two or more prior funds	1.23	1.71
"New" GPs	1.13	1.15
Larger than median-sized funds	1.16	1.61
Smaller than median-sized funds	1.09	1.27

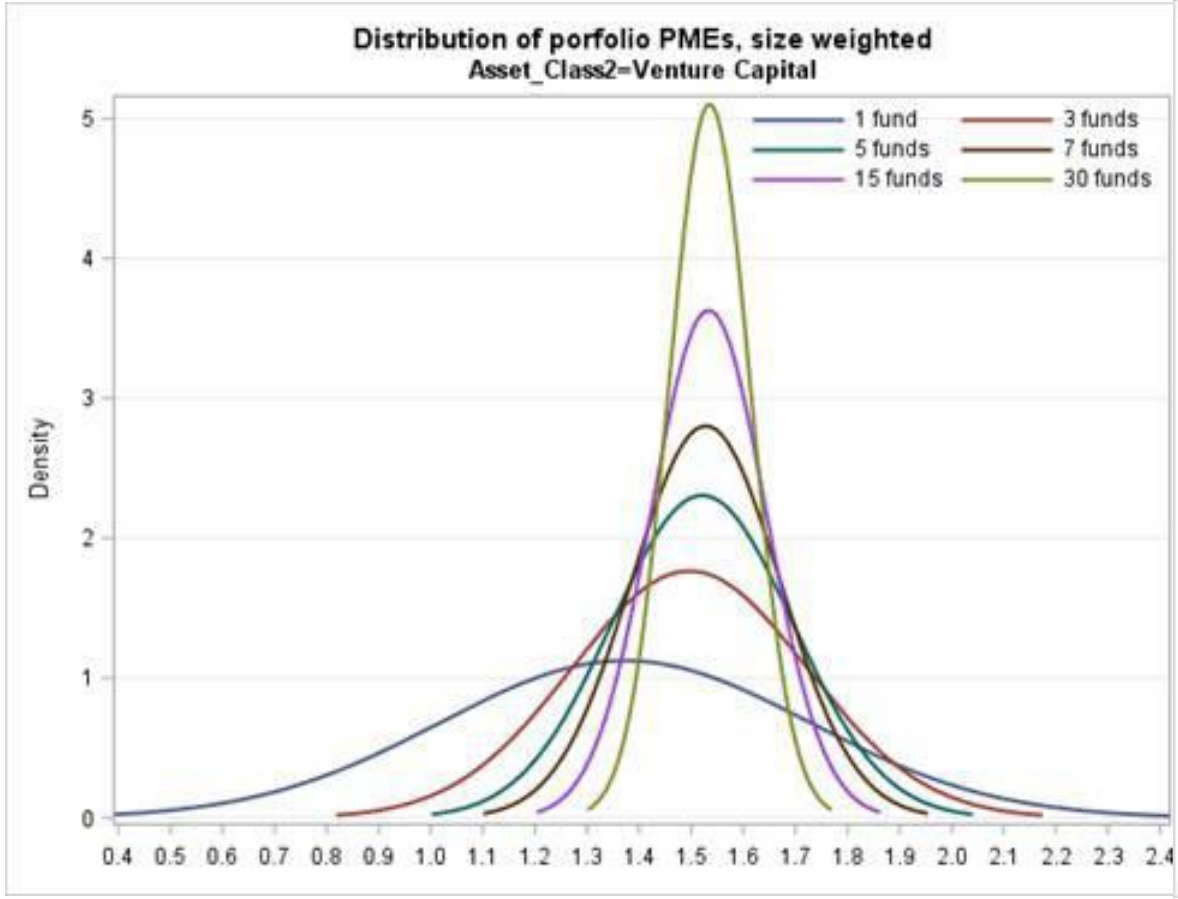
Smaller portfolios

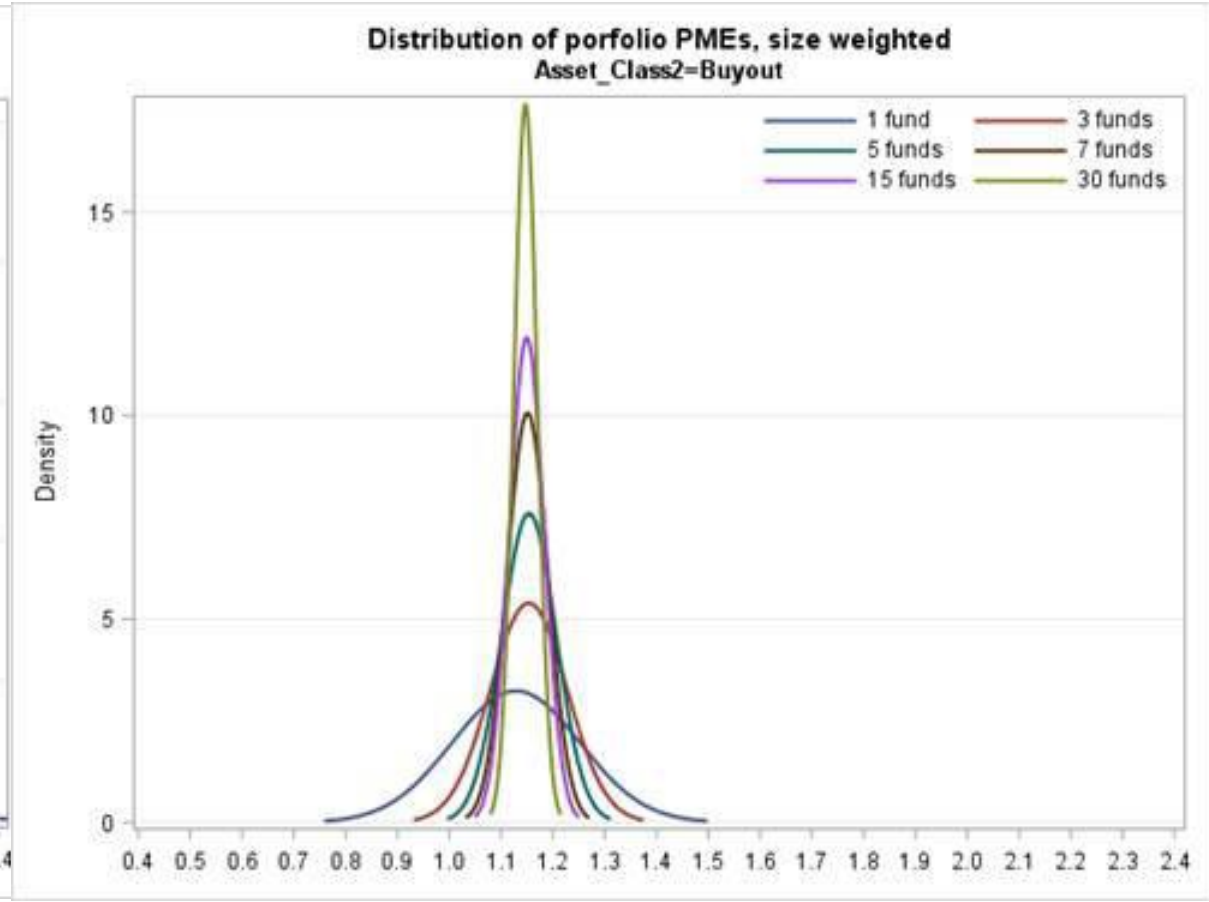
- These results assume investors allocate to all funds in a vintage, which is clearly infeasible
- But the distributions of randomly selected funds suggest that reasonable sized random portfolios may generate similar results, especially for buyouts





Smaller Portfolios Perform Similarly, especially for Buyouts





Why are timing benefits weak?

- The gains over a constant $ allocation rule are surprisingly limited

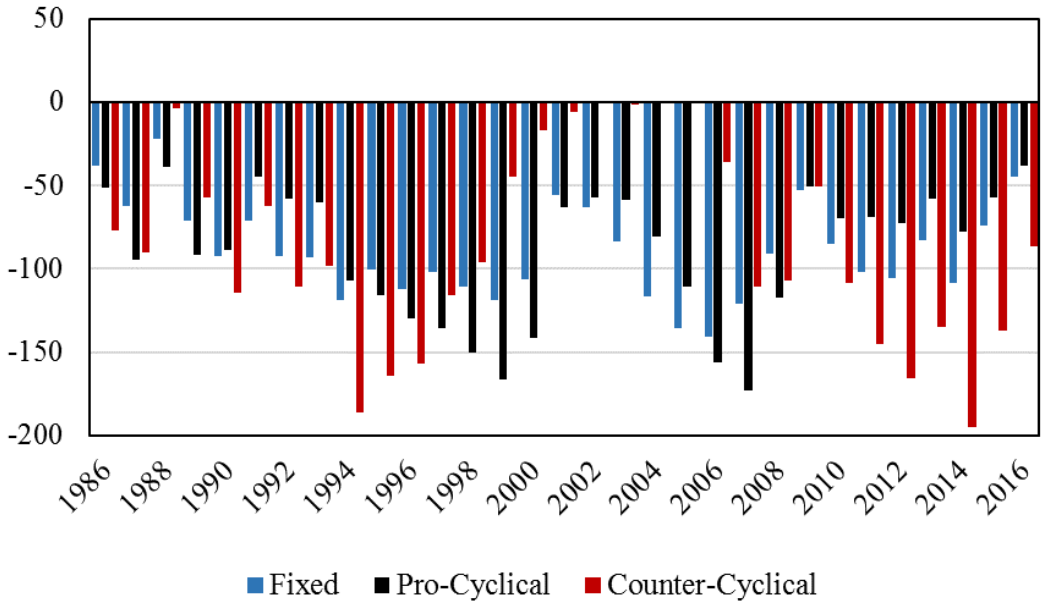
- Why?
  - Diametrically opposed commitment strategies lead to patterns of capital calls that are only modestly negatively correlated; and distributions are highly positively correlated

- LPs control when they make commitments; GPs control entry and exit decisions, which are endogenously determined and influenced by market movements

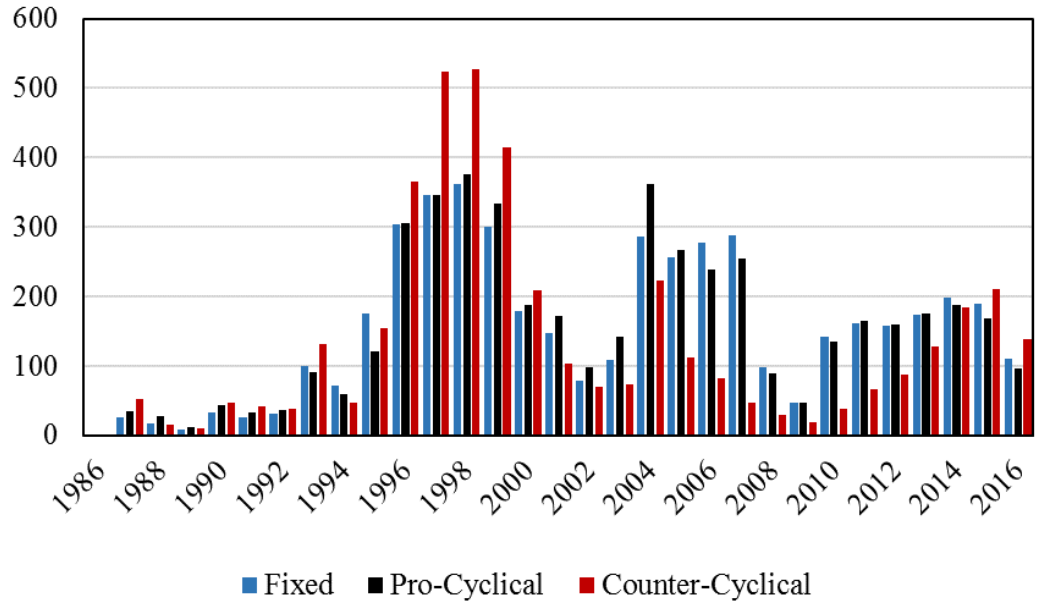
- And public and private returns are highly correlated – so less impact on PME

The Rub

Actual Contributions (capital calls)



Actual Distributions (capital return)



Correlations

Panel B: Correlation(Counter-cyclical, Pro-cyclical)

	$X = 1.0$	$X = 1.5$	$X = 2$	$X = 2.5$
Buyout Contribution	0.39	0.05	-0.15	-0.28
Buyout Distribution	0.82	0.85	0.75	0.46
Venture Capital Contribution	-0.54	-0.43	-0.13	-0.13
Venture Capital Distribution	0.28	0.48	0.35	0.35

Entry and exit decisions
(Table VII)

- GP decisions on when to invest and divest are driven by the market
- The potential gains from delegating the entry/exit decision are significant

Panel A: Buyout Funds	Value Weighted			Equally Weighted		
Strategy/Benchmark	Mean	Std	Corr	Mean	Std	Corr
Fixed Commitment	44.80	20.92	1.00	43.05	19.14	1.00
Fixed Holding Period Benchmark:						
Three-year	33.40	18.64	0.35	33.17	14.31	0.48
Five-year	39.30	26.82	0.17	38.39	20.40	0.23
Seven-year	43.40	29.48	0.22	42.97	23.48	0.09
Fixed Investment/Fixed Holding Period Benchmark:						
Schedule 1/3 yr	30.87	9.63	0.52	30.87	9.63	0.58
Schedule 1/5 yr	37.37	15.79	0.37	37.37	15.79	0.38
Schedule 1/7 yr	42.33	20.10	0.24	42.33	20.10	0.21
Schedule 2/3 yr	34.29	10.70	0.52	34.29	10.70	0.58
Schedule 2/5 yr	41.73	17.56	0.36	41.73	17.56	0.38
Schedule 2/7 yr	47.11	23.01	0.26	47.11	23.01	0.22
Schedule 3/3 yr	34.29	10.70	0.52	34.29	10.70	0.58
Schedule 3/5 yr	41.13	17.73	0.39	41.13	17.73	0.39
Schedule 3/7 yr	45.67	22.76	0.24	45.67	22.76	0.20

Conclusions

① Investing in private equity involves commitment risk:

- The investor pledges capital but does not control when it is put to work or returned.

② Actual entry and exit decisions depend on market conditions

- GP decisions on capital calls and distributions ‘undo’ much of any LP timing decision
- Diametrically opposed commitment strategies involve correlated calls and distributions
- Endogeneity is an important source of value creation

③ The gains from market timing for buyouts are limited

- Potential gains for VC are greater but may not be achievable in practice

CAN INVESTORS TIME THEIR EXPOSURE TO PRIVATE EQUITY?

Gregory Brown, Robert Harris, Wendy Hu, Tim Jenkinson, Steve Kaplan and David T. Robinson

UNC Kenan-Flagler, UVA Darden School, Burgiss Group, University of Oxford, University of Chicago, and Duke University

Paper available on SSRN: https://ssrn.com/abstract=3241102

Private Equity Research Consortium Working Paper

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