

The Subsidy to Infrastructure as an Asset Class

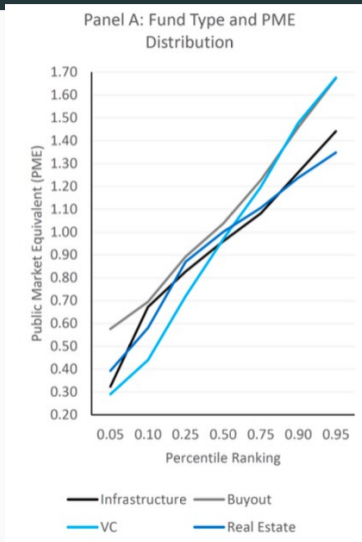
Aleksandar Andonov, Roman Kräussl, Joshua Rauh

Discussant: Arpit Gupta (NYU Stern)

Jan 31, 2020

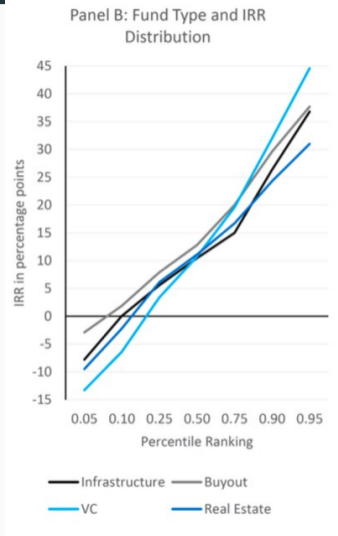
Infrastructure PE Funds do not Lie on Institutional Investor Efficient Frontier

1. Infrastructure Funds do not offer marketing benefits of stable cash flows or diversification.
 - Similar fund performance on PME, IRR, Multiples
 - Comparable cash flow profiles
2. Public Pensions have Worse Returns Compared to Private Investors.
3. Public Pensions Overinvest, and provide a “subsidy” for infrastructure.



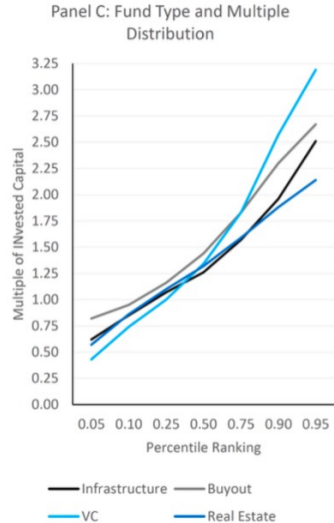
Infrastructure PE Funds do not Lie on Institutional Investor Efficient Frontier

1. Infrastructure Funds do not offer marketing benefits of stable cash flows or diversification.
 - Similar fund performance on PME, IRR, Multiples
 - Comparable cash flow profiles
2. Public Pensions have Worse Returns Compared to Private Investors.
3. Public Pensions Overinvest, and provide a “subsidy” for infrastructure.



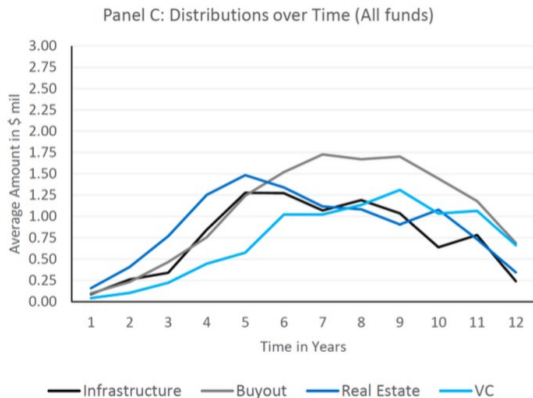
Infrastructure PE Funds do not Lie on Institutional Investor Efficient Frontier

1. Infrastructure Funds do not offer marketing benefits of stable cash flows or diversification.
 - Similar fund performance on PME, IRR, Multiples
 - Comparable cash flow profiles
2. Public Pensions have Worse Returns Compared to Private Investors.
3. Public Pensions Overinvest, and provide a “subsidy” for infrastructure.



Infrastructure PE Funds do not Lie on Institutional Investor Efficient Frontier

1. Infrastructure Funds do not offer marketing benefits of stable cash flows or diversification.
 - Similar fund performance on PME, IRR, Multiples
 - Comparable cash flow profiles
2. Public Pensions have Worse Returns Compared to Private Investors.
3. Public Pensions Overinvest, and provide a “subsidy” for infrastructure.



Infrastructure PE Funds do not Lie on Institutional Investor Efficient Frontier

1. Infrastructure Funds do not offer marketing benefits of stable cash flows or diversification.
 - Similar fund performance on PME, IRR, Multiples
 - Comparable cash flow profiles
2. Public Pensions have Worse Returns Compared to Private Investors.
3. Public Pensions Overinvest, and provide a “subsidy” for infrastructure.

	%Exited deals		PME	
	(1)	(2)	(3)	(4)
Public Investor	-0.020*** [0.007]		-0.027*** [0.010]	
U.S. Public PF		-0.039*** [0.009]		-0.027** [0.012]
Non U.S. Public PF		0.003 [0.011]		-0.028 [0.018]

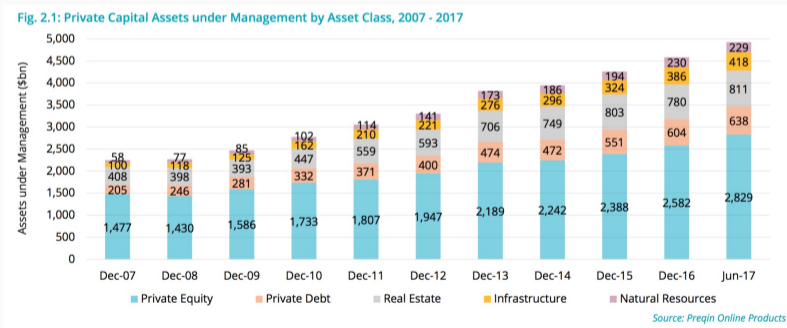
Infrastructure PE Funds do not Lie on Institutional Investor Efficient Frontier

1. Infrastructure Funds do not offer marketing benefits of stable cash flows or diversification.
 - Similar fund performance on PME, IRR, Multiples
 - Comparable cash flow profiles
2. Public Pensions have Worse Returns Compared to Private Investors.
3. Public Pensions Overinvest, and provide a “subsidy” for infrastructure.

	%Exited deals		PME	
	(1)	(2)	(3)	(4)
Public Investor	-0.020*** [0.007]		-0.027*** [0.010]	
U.S. Public PF		-0.039*** [0.009]		-0.027** [0.012]
Non U.S. Public PF		0.003 [0.011]		-0.028 [0.018]

Assessment

- Great paper! Sheds light on “Alternative” part of PE Universe (now ~ half).
- Ultimately we all pay if public pensions are underfunded; paper highlights important concerns about Public Pension investment strategy.



Roadmap of Discussion

1. Replicate some results in Preqin

Roadmap of Discussion

1. Replicate some results in Preqin ✓

Roadmap of Discussion

1. Replicate some results in Preqin ✓
2. Assess Risk and Return of Infrastructure Funds

Roadmap of Discussion

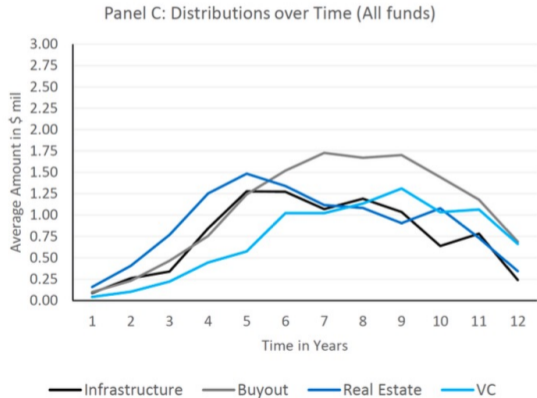
1. Replicate some results in Preqin ✓
2. Assess Risk and Return of Infrastructure Funds
3. Contrast Public Pension Returns Across Categories

Roadmap of Discussion

1. Replicate some results in Prequin ✓
2. Assess Risk and Return of Infrastructure Funds
3. Contrast Public Pension Returns Across Categories
4. Why do Institutional Investors, and Public Pensions Particularly, do Badly?

1. Paper Shows Infrastructure Fund Distributions Are Similar to Other Categories

Figure 1: Paper



1. I find Similar Results in Preqin

Figure 2: Paper

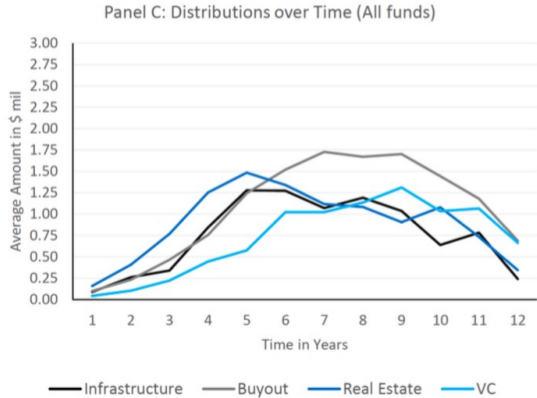
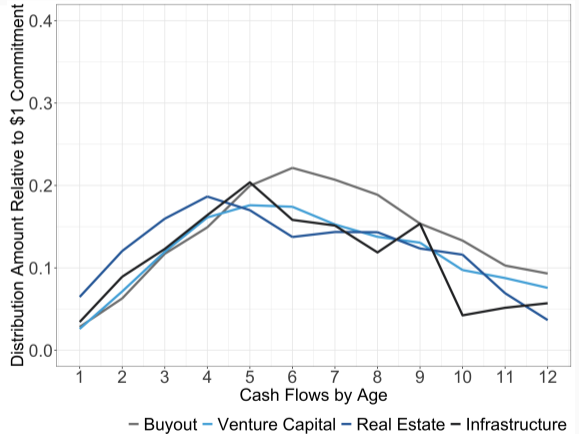
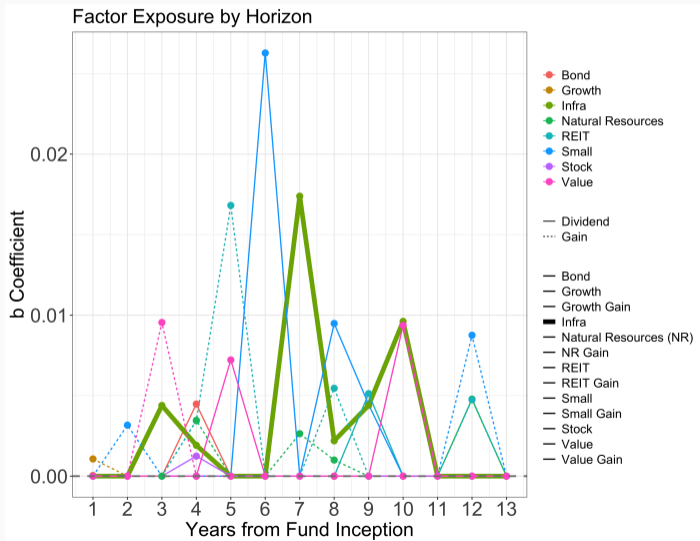


Figure 3: Replication



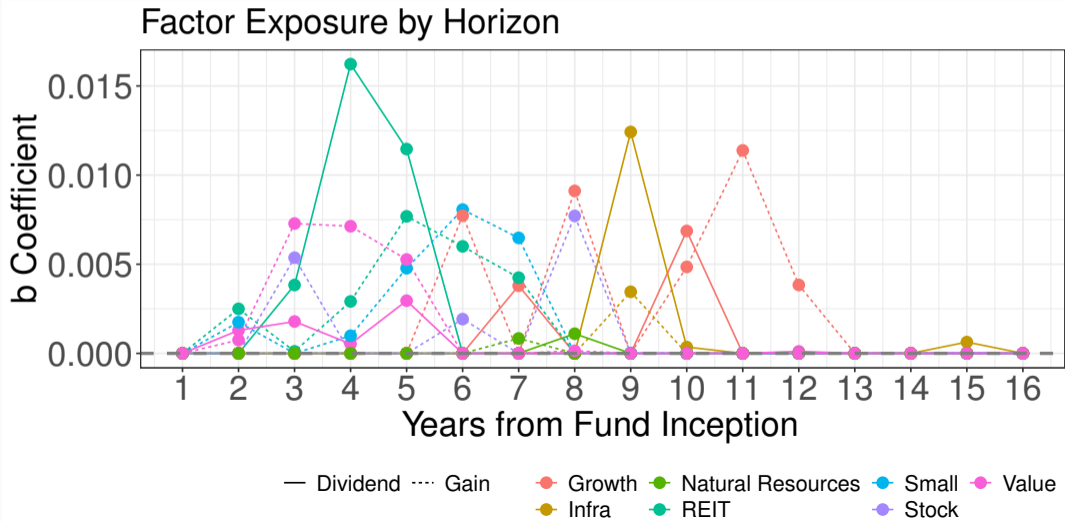
2. Gupta Van Nieuwerburgh (2019) find Infrastructure Funds Have Different Risks



2. Real Estate Funds by Comparison

Venture Capital

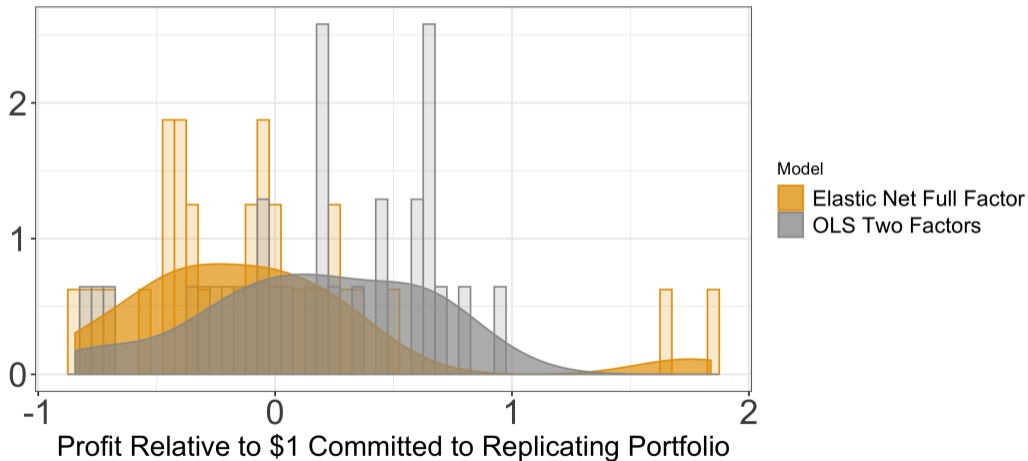
Buyout



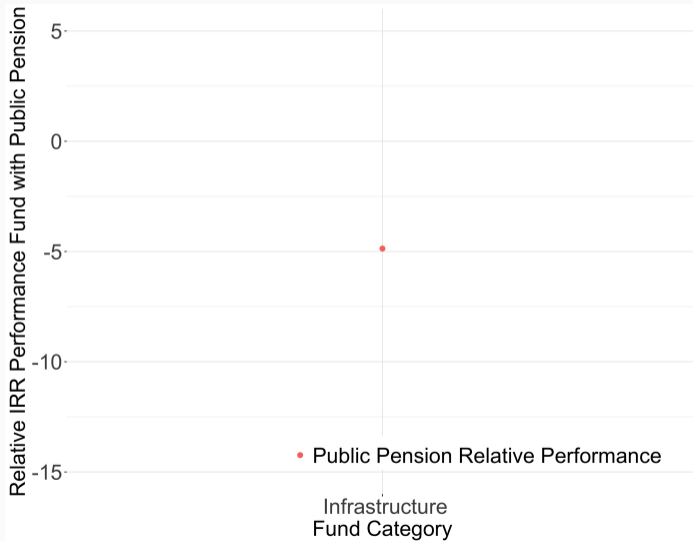
2. However, Risk-Adjustment only Adds to Puzzle of Infra Underperformance

Histogram of Fund-Level Profit Relative to Replicating Portfolio

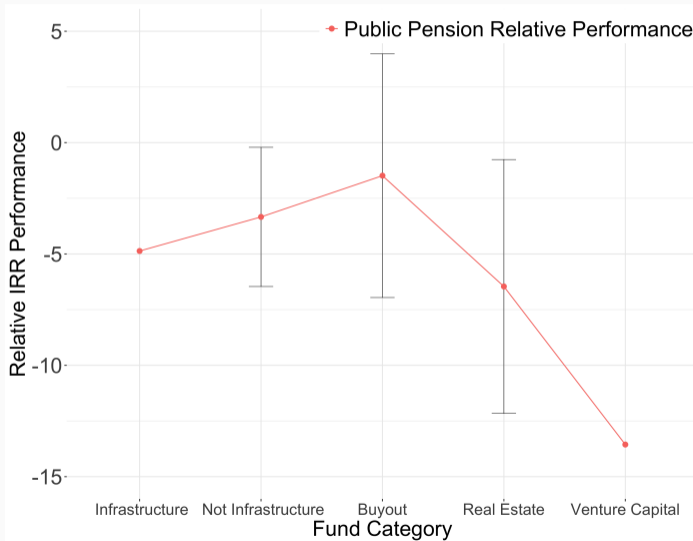
TVPI is:0.125 Risk-Adj Profit is:-0.102 Risk Adj Fraction above 10% is:0.273



3. Replicating Result that Infra Funds with more Public Pensions Underperform..



3. ... However the Same is True Across Fund Categories



4. Taking Stock So Far

- PE does not seem to offer great returns (on an after-fee basis) to many institutional investors.

4. Taking Stock So Far

- PE does not seem to offer great returns (on an after-fee basis) to many institutional investors.
- Caveat: Preqin data is sourced to large extent from public pensions, so I would suggest the authors verify that their pension results remain true in Burgiss.

4. Taking Stock So Far

- PE does not seem to offer great returns (on an after-fee basis) to many institutional investors.
- Caveat: Prequin data is sourced to large extent from public pensions, so I would suggest the authors verify that their pension results remain true in Burgiss.
- Though different alternative PE categories may offer different factor exposures, this doesn't help account for the poor returns or help explain the puzzle of why public pensions are so invested in sector.

4. Taking Stock So Far

- PE does not seem to offer great returns (on an after-fee basis) to many institutional investors.
- Caveat: Prequin data is sourced to large extent from public pensions, so I would suggest the authors verify that their pension results remain true in Burgiss.
- Though different alternative PE categories may offer different factor exposures, this doesn't help account for the poor returns or help explain the puzzle of why public pensions are so invested in sector.
- So what *does* account for heavy Public Pension investment in PE?

4. The Horse's Mouth:

- Calpers Chief Investment offer, Ben Meng: “we need private equity, we need more of it, and we need it now.”

4. The Horse's Mouth:

- Calpers Chief Investment offer, Ben Meng: “we need private equity, we need more of it, and we need it now.”
- “In private markets, since it's private and not traded on an exchange, so they are marked, they [private investments] are reporting less frequently, the valuation is really based on a model valuation and not really a market transaction, and many times the valuation is delayed, so not timely valuation. So when it's not a timely valuation it provides a time diversification as well, so the risk reduction from private markets really coming from two folds: one is alpha components that it's diversifiable, the idiosyncratic risk, **and the other one is beta, the valuation, the marking is less frequent and is marked based on the model, appraisal based, not so much about market transaction based.**”

4. The Horse's Mouth:

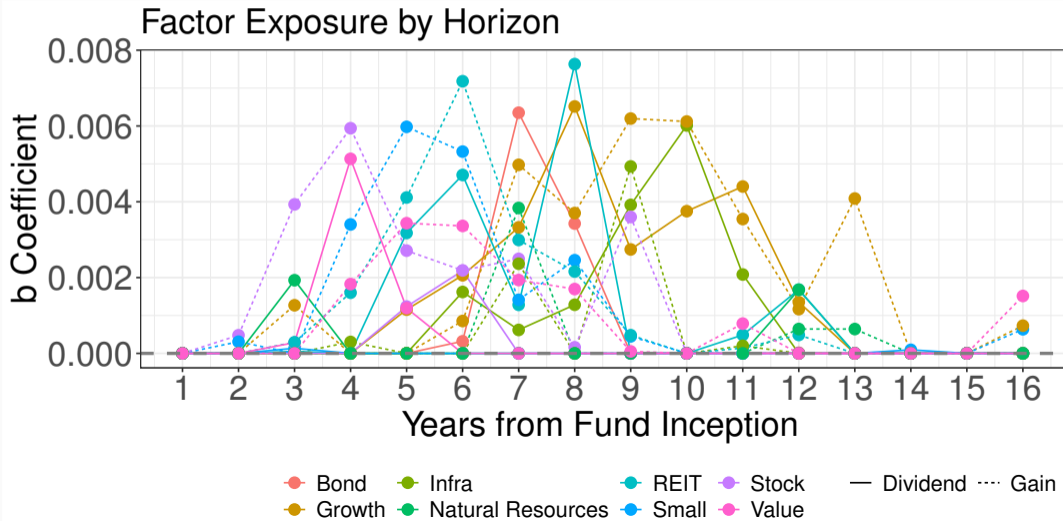
- Calpers Chief Investment offer, Ben Meng: “we need private equity, we need more of it, and we need it now.”
- “In private markets, since it's private and not traded on an exchange, so they are marked, they [private investments] are reporting less frequently, the valuation is really based on a model valuation and not really a market transaction, and many times the valuation is delayed, so not timely valuation. So when it's not a timely valuation it provides a time diversification as well, so the risk reduction from private markets really coming from two folds: one is alpha components that it's diversifiable, the idiosyncratic risk, **and the other one is beta, the valuation, the marking is less frequent and is marked based on the model, appraisal based, not so much about market transaction based.**”
- If you equate volatility with risk, investors may accept negative expected return in order to not see prices!

Conclusion

- Great paper which sheds light on opaque but important corner of market.
- Raises novel issues about why many institutional investors, particularly public pensions, appear at first glance to be making sub-optimal investment decisions.
- More work to be done to better understand risk-return characteristics of private vehicles, and the institutional frictions that explain why people hold them.

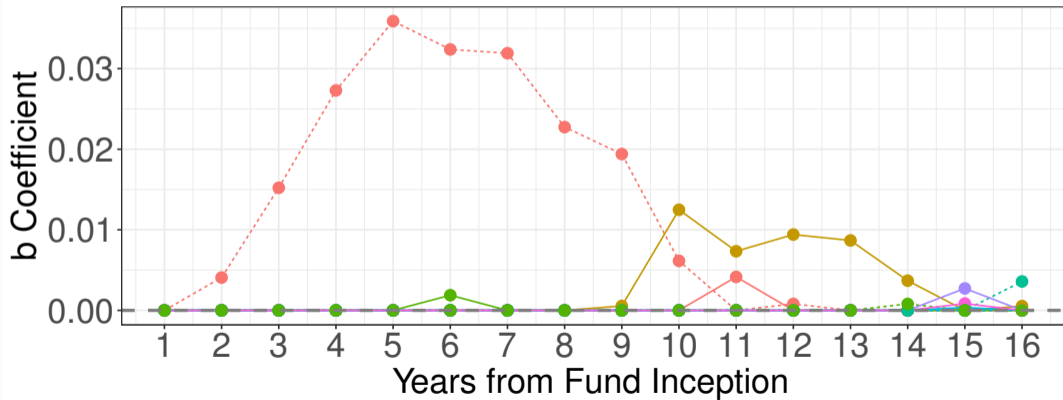
Thanks!

Back



Back

Factor Exposure by Horizon



— Dividend ··· Gain - - - Growth ● Natural Resources ● Small ● Value
● Infra ● REIT ● Stock