An Inconvenient Fact:
Private Equity Returns & The Billionaire Factory

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20th Century Investing

- Enterprise Value split 80% equity – 20% debt
- Costs:
  - 7% IPO of the equity, amortized over many years, and some transaction costs (price impact) when rebalancing/trading
  - 2% for the debt plus some transaction costs
  - Some additional financial intermediation

- Economists long puzzled at high-cost, especially of IPOs, but also of mutual funds and other financial intermediaries
- Pressure on costs (rise of low-cost transparent alternatives) and on regulation to level the playing field as academic empirical evidence accumulated

21st Century Investing: Let's go private

The world of LBOs

E. Entry Earnings		60bn	
EV. Enterprise value	10*E	600bn	
Eq. Equity Value	33%*EV	200bn	Coincides with $1 trillion of Assets Under Management
D. Debt Value	66%*EV	400bn	
Ca. Acquisition cost	3.3%*EV	20bn	Inc. due diligence, legal costs, charges by GPs
Cb. Borrowing cost	2.5%*D	10bn	Payment to lenders (inc. bridge loans, rate mark-up)
Cd. Debt provision	5%*D	20bn	Debt comes from institutional investors at a fee
Ce. Equity provision	25%*Eq	50bn	Inc. organizational and fund expenses, fund fees

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A sustainable industry?

Financial Intermediation Cost		100bn	Ca+Cb+Ce+Cd
Of which carry		23bn	Payment to few individuals. 230bn over a decade
Number of people		100,000	$1mn p.p.
Break-even point			
EEq. Exit Equity		400bn	(Eq+Ca+Ce)*1.5=400; 1.5x is public equity MoM
ED. Exit Debt		500bn	(D*(1+4.1%)+Cb+Cd)=500bn
EEV. Exit EV	EEq+ED	900bn	
EF. Exit Earnings	EEV/10	90bn	Assumed no Multiple expansion
Growth in earnings		11%	Annualized organic growth over four years

Four years starting at $60bn of EBITDA needs to support $100bn of financial intermediation cost!!
For it, requires unrealistic organic growth
➔ Cannot fly!

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Did it fly so far?

- Yes – Public equity returns = Private equity returns after all fees
- How come?
  - Growth in earnings (more than peers, or not) and expansion multiples
  - Skills or luck?
    - We cannot tell
    - If going forward earnings do not grow as much and multiples don't expand, can't fly!
  - Some innovative models have been growing and may eventually take over, but before they really do, most people need to see and understand a few facts presented here. Currently, many do not.

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What is the key thing people might not get?

	2006-2019	1996-2009	2010-2019
Vanguard S&P 500 index fund	10.3%	7.6%	14.3%
CRSP Value Weighted index	10.1%	8.2%	13.4%
Fama-French US stock-market index	10.6%	7.9%	14.5%
Fama-French US largest decile index	10.4%	7.2%	14.4%
MSCI World	8.6%	6.9%	11.0%
Russell 2000 index	8.5%	7.3%	11.8%
T-Rowe Price (active) small-cap mutual fund	12.1%	10.5%	16.0%
DFA (passive) micro-cap mutual fund	10.0%	11.5%	14.1%
Fama-French US ex-largest decile index	10.7%	11.2%	14.0%

Summary

- Only the largest stock decile performed badly over 1996-2009 period, hence all value-weighted indices have bad returns, others have done well (hence rise of ‘smart Beta’)
- Over that time period, rest of the stocks returned as much as long term averages (11% p.a.) even after transaction costs, except for some poorly constructed indices (Russell 2000)
- From 2006, irrespective of size all US stocks performed the same and in line with long term averages.
- From 2006, USD went up and emerging market went down hence any World index underperform US stocks.

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PE funds invest in American small cap companies.
Now you can understand any report of PE performance

Public equity annualised net returns to 31 December 2018	%
3 years	10.0
5 years	9.1
10 years	10.6

Private equity annualised net returns to 31 December 2018	%
3 years	14.5
5 years	17.6
10 years	13.9

		Preqin					Burgiss	Camb.Assoc.[16]	
	Vintage	Russell 2000	MSCI World	DFA Micro	TRowe-Price Small	Vanguard S&P 500	S&P 500	S&P 500	S&P 600 Small
PE	1996-2005	1.21	1.23	1.04	1.05	1.29	1.25	1.28	1.07
	2006-2015	1.12	1.16	1.04	0.96	1.03	0.99	1.01	0.99
LBO	1996-2005	1.33	1.36	1.13	1.15	1.43	1.33	1.38	1.10
	2006-2015	1.19	1.24	1.11	1.01	1.09	1.05	1.07	1.05

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Good Outcome

(in the past)

Everyone happy!?

Panel C: Funds in the carry, Burgiss data

	Amounts ($ bn)	
	Private Equity MoM=1.78, 70% in the carry	Leveraged Buy-Out MoM=1.77, 77% in the carry
Paid-in capital	1,182	568
Total Net Value	2,104	1,005
Net profit	922	437
Carry due	230	109
Gross profit	1,152	547

70%+ of the PE funds are in-the-money
Charged $230bn of carry (over 10 years)
Overall performance matches public equity

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Additional Data Points

Table 5: Investor Performance – Public Pension Funds

	Multiple of Money in PE
California (CalPERS)	1.51
Washington (WISB)	1.56
Pennsylvania (PSERS)	1.49
Florida (FSBA)	1.51
Oregon (OPERF)	1.53

Meanwhile: Millions of pensioners are told that pension is still under-funded, wages stagnated, but billions in fees to 100,000 professionals have been paid and they created multi-billionaires (17x)
Most of the billionaires are from the big four – how did these firms perform for their investors?

	Invested	Gross MoM	MoM net of carry
Apollo	52569	1.73	1.55
Blackstone	62921	1.89	1.67
Carlyle	46725	1.68	1.51
KKR	34886	1.92	1.67
Total	302,260	1.80	**1.60**

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What else people might not get?

- Founded in 1990, Apollo presents itself as follows in its 10K filings: "As of December 31, 2019, we had total AUM of $331 billion, including approximately $216 billion in credit, $77 billion in private equity and $39 billion in real assets. We have consistently produced attractive long-term investment returns in our traditional private equity funds, generating a 39% gross IRR and a 25% net IRR on a compound annual basis from inception through December 31, 2019."
- Similarly, KKR, in its 10K filings prominently states: "From our inception in 1976 through December 31, 2019, our investment funds with at least 24 months of investment activity generated a cumulative gross IRR of 25.6%, compared to the 11.8% and 9.1% gross IRR achieved by the S&P 500 Index and MSCI World Index, respectively, over the same period, despite the cyclical and sometimes challenging environments in which we have operated."
- The IRR of Apollo's first fund is the same as Apollo's since-inception IRR: 39%.
- The IRR of the 'legacy' funds of KKR, i.e. those raised before 1996, is 26%.
- And in 2007: "From our inception through March 31, 2007, our first ten traditional private equity funds achieved a multiple of invested capital of 2.7x and a cumulative gross IRR of 26.3%, compared to the 13.6% gross IRR achieved by the S&P 500 Index over the same period."
- If everyone understands IRR is BS, why is it flashed so prominently everywhere, even when it is often it is BS?

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What else might be wrong?

- Why are trustees, investment teams, external managers, consultants, …not seeing it?
  - Livelihood of 100,000 people in the PE industry mainly depends on one thing: that net-of-fee performance of PE funds is perceived to be great; if it is not, they will be terminated or have their compensation and employment opportunities substantially reduced.
  - Many individuals want to avoid embarrassment; think of a pension fund board admitting paying billions of Carry for obtaining the same returns as public equity markets.
  - Self selection
- Why are people, who are not in the PE industry, not objecting?
  - Those who know enough about PE are easily outnumbered, and even they may not know all the tricks
  - Even when they understand the tricks, presenting a solid case against a myth perpetuated by thousands of clever people, who are well financed and in powerful positions (e.g., PE professionals often sit on Endowment investment committees) is still an uphill battle.
- The incomplete nature of PE data has made it easier to dismiss ignoring inconvenient facts.

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Although we were warned

Paying 20 percent of the profits to the general partner instead of 20 percent of the value added drives a meaningful wedge between the result for the general partners and limited partners. Poor incentive schemes cause buyout fund managers to benefit by placing limited partner assets at risk, creating an extraordinarily valuable option for the general partner that comes at the expense of the providers of the funds(…) If private manager compensation depended on generating returns in excess of marketable investment opportunities, most would fail to receive a profits interest as results for the majority of private funds fall short of traditional equity alternatives (…) Because the investment management industry receives compensation far in excess of levels justified by the degree of value created…"

(David Swensen, pp. 232-233 and 286, Pioneering Portfolio Management, 2000).

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Rebuttal – Best off

- Cannot compare to stock-market, real estate and especially energy underperformed as industries → Yes, but then we should not reward for good pick of industries (e.g. Hotel) – Comparing PERE to REITs (usually core and low leverage) might not be pertinent – difficulty of good benchmarking and sensibility of results to choice of benchmark shows that underperformance is not obvious just like it shows that outperformance is also far from obvious (unlike what is being marketed).
- NAV is conservative → Academic research shows it is not so for funds outside of investment period (but was in the past)
- No account for diversification benefits → Indeed, I do not know how, did not account for cost of credit line (commitment), and any extra risk
- PE funds changed from being US to being International, hence benchmark should be S&P 500 before 2007 and MSCI World after 2007 →

S&P 500 particularly bad as driven by five stocks → Agree, that's why I argued against it when everyone was using it. Argument should apply pre-2007! Similarly saying that S&P500 has exceptionally high returns post 2010 hence should not be used. And it was ok to use it when it had exceptionally low returns in the 2000s??!

- We fundamentally disagree with your portrayal of public pension officials. These are exceptionally sophisticated investors who would not continue to allocate to this asset class if they didn't believe in its value to their beneficiaries. The sophistication of these pension fund investors is augmented by an established industry of pension advisors, which supplement their diligence and serve as an additional check on the prudence and wisdom of investing in the alternative asset class. → Are all trustees versed in IRRs? Why do they quote these figures if they are? Can it not be that people are more receptive to rhetoric that optimize their salary and career (or self selection)?
- 2020 Preqin study found that 87% of LPs said that private equity "returns either met or exceeded their expectations" and 86 percent intend to allocate "as much or more to the asset class" than they did in the preceding year. This reflects their well-informed view – as outlined by CalPERS, Yale, and many other of the world's most sophisticated and successful investors – that private equity has and continues to deliver substantial excess returns compared to public markets net of all fees → We have no proof of the success of Yale as they have only reported IRRs (and recently average yearly returns for VC, but this is also problematic; no MoMs!), CalPERS does and we saw outcome. People may want something that is not good for their organization (actually, this is often a PE thesis – interests are not aligned!).

Key take away

- What you saw was a set of facts, which you can replicate (all publicly available data).
- It was not broken down by different approaches, fund size and strategies
- What you have also not seen is an interpretation of these facts. No investment advice was given. You can conclude in different ways.

- A key learning point is that the impossibility to conclude on whether past and expected returns are disappointing means that it is equally impossible to conclude on the superiority of PE either in the past or in the future for pension funds (contrary to common belief).

But the storm is coming and cannot be stop, better to anticipate and act

- L’Her et al. (2016)
- Harris, Jenkinson, and Kaplan (2016)
- Ennis (2020)
- Ilmanen, Chandra, and McQuinn (2020)
- See tvpiadvisors.com, *etc.*

And many investors and fund managers have developed and are actively testing alternative models, approaches,…

An important Law of Physics

The amount of energy required to combat a unit of *BS* increases exponentially with the amount of energy used to generate that unit of *BS*

For this and much more

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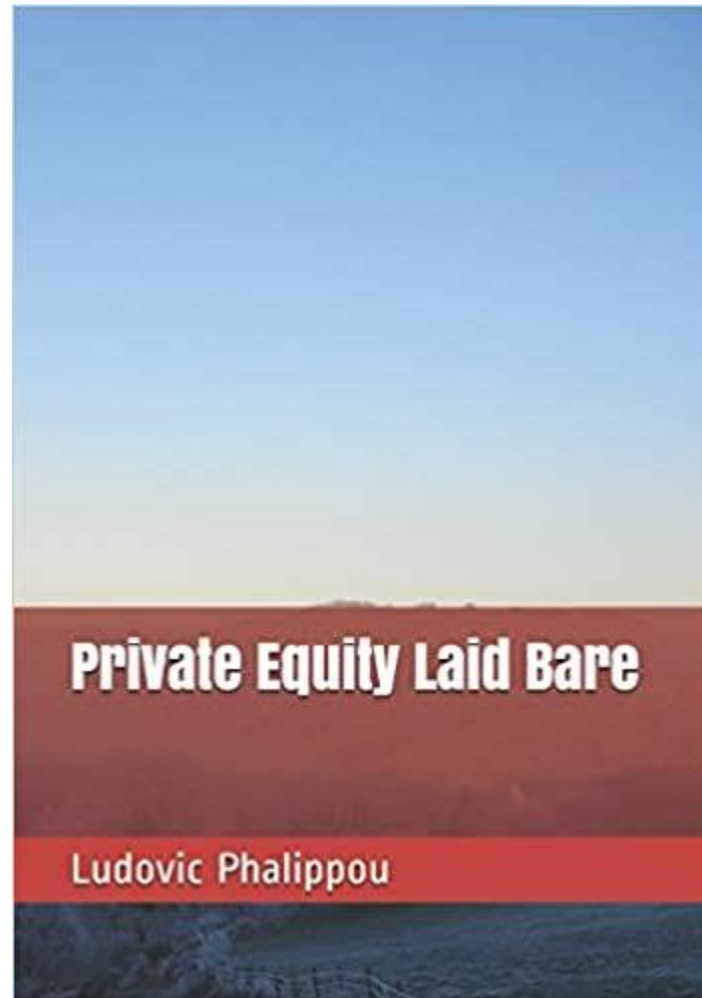

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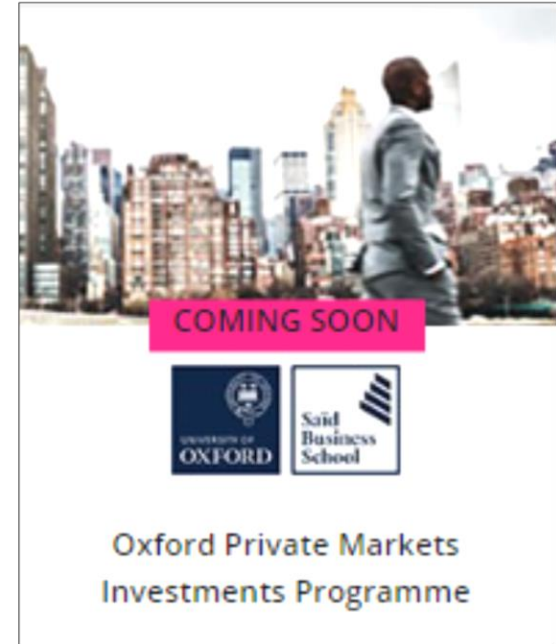

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