UNIVERSITY OF OXFORD

Saïd Business School

The Trillion Dollar Bonus of Private Capital Fund Managers

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Carried Interest: The big picture

- Carry is subject to a lot of debate
- Perhaps oddly, we lack an estimate of the total amount
  - E.g. debate on whether Carry should be taxed at, say, 20% versus 45%, but we do not know the dollar amount this difference in rates would make
- We do not know the cross-sectional distribution
  - Do most funds earn it? Depends on strategy or geography?
  - Skewness is key because it determines the overall effective rate paid by investors
- What is the relationship between performance and Carry?
  - Are we in a Berk-Green-vanBisbergen type world in which Carry depends on fund size rather than return per dollar invested? Is it primarily related to a firm NPV?

Important caveat

- We do not know how much fees are paid by investors (so far)
- Investors have not tracked Carry until recently. Those who do now, usually report only Carry paid in a given year rather than total Carry (accrued and paid), and do not report Carry since inception
- A first question is: Can we obtain a reasonable estimate of total Carry with publicly available data?
  - I propose a methodology, but by definition it is difficult to validate (since we do not know the truth)
  - Only Apollo seems to report since inception Carry for its funds, and there we have a close match
  - Method is intuitive and makes apparently relatively mild assumptions
  - It is however only feasible to obtain a total Carry estimate, and not the amount actually paid so far. The latter would require detailed deal level information and detailed information on the waterfall (e.g. European versus American). Hence estimates that are calculated are the amount due and paid as of today, or what would be earned if all funds were liquidated today (at NAV).

Key terms by fund strategies

STRATEGY	N_obs	ρ(CR, size)	Av. CR	25%CR	50%CR	75%CR	Av. HR	25%HR	50%HR	75%HR	Av. CU	25%CU	50%CU	75%CU
Buyout	654	0.07	20.1	20.0	20.0	20.0	8.0	8.0	8.0	8.0	68.8	27.5	80.0	100.0
Growth	137	0.25	19.9	20.0	20.0	20.0	8.2	8.0	8.0	8.0	71.3	61.3	82.5	92.5
Fund of Funds	112	-0.19	10.1	8.0	10.0	10.0	8.6	8.0	8.0	8.5	100.0	100.0	100.0	100.0
Real Asset Value Added	93	0.05	19.6	20.0	20.0	20.0	8.6	8.0	8.0	9.0	39.9	20.0	50.0	50.0
Natural Resources	91	0.03	19.0	20.0	20.0	20.0	8.0	8.0	8.0	8.0	80.0	80.0	80.0	80.0
Real Asset Opportunistic	78	-0.09	20.0	20.0	20.0	20.0	8.3	8.0	8.0	9.0	56.3	50.0	50.0	60.0
Mezzanine	72	0.05	20.0	20.0	20.0	20.0	8.0	8.0	8.0	8.0	43.1	24.7	43.1	61.6
Venture (General)	72	0.18	20.1	20.0	20.0	20.0	7.8	8.0	8.0	8.0	100.0	100.0	100.0	100.0
Direct Lending - Senior	60	-0.20	17.7	15.0	20.0	20.0	7.9	6.0	8.0	8.0	100.0	100.0	100.0	100.0
Distressed Debt	58	-0.56	20.6	20.0	20.0	20.0	7.8	8.0	8.0	8.0	80.0	80.0	80.0	80.0
Special Situations	55	-0.18	20.1	20.0	20.0	20.0	8.3	8.0	8.0	8.0	100.0	100.0	100.0	100.0
Co-Investment	31	-0.19	18.7	20.0	20.0	20.0	8.3	8.0	8.0	8.0	100.0	100.0	100.0	100.0
Real Asset Debt	26	-0.25	18.3	15.0	20.0	20.0	8.0	6.0	8.0	8.0	52.1	50.0	50.0	50.0
Expansion / Late Stage	25	-0.13	19.4	20.0	20.0	20.0	8.0	8.0	8.0	8.0	100.0	100.0	100.0	100.0
Direct lending - Junior	24	0.05	18.0	18.8	20.0	20.0	7.7	8.0	8.0	8.0	85.0	85.0	85.0	85.0
Secondaries	22	-0.12	14.3	10.5	13.8	16.9	7.8	7.0	7.5	8.0	100.0	100.0	100.0	100.0
Balanced	20	0.00	19.8	20.0	20.0	20.0	7.8	8.0	8.0	8.0	100.0	100.0	100.0	100.0
Early Stage	20	0.40	20.3	20.0	20.0	20.0	3.2	0.0	0.0	8.0	100.0	100.0	100.0	100.0
Infrastructure Core	20	-0.12	18.3	20.0	20.0	20.0	8.8	8.0	8.0	8.0	60.0	50.0	80.0	80.0
Venture Debt	12	-0.05	18.3	20.0	20.0	20.0	7.3	7.3	8.0	8.0	100.0	100.0	100.0	100.0
Timber	11	0.02	17.3	15.0	15.0	20.0	8.3	7.5	8.0	9.0	100.0	100.0	100.0	100.0
Turnaround	10	0.08	19.6	20.0	20.0	20.0	8.4	8.0	8.0	8.0	80.0	80.0	80.0	80.0
Real Estate Core	9	0.00	18.3	20.0	20.0	20.0	7.8	7.8	8.0	8.1	45.0	37.5	50.0	57.5
All funds	1712	0.07	19.0	20.0	20.0	20.0	8.0	8.0	8.0	8.0	61.8	50.0	60.0	80.0

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- Largest dataset on key terms (1712 funds)
- Carry rate is uncorrelated with fund size except for Growth and Early Stage – it is negatively correlated with size for FoFs and private debt
- Key terms are nearly always the same within a certain strategy.
- Only FoFs (including secondaries) deviate from 20% carry rate
- Hurdle rate is 8% across all strategies (except early stage) even though risk profiles differ
- Catch up rate differs across strategies and all within strategies

Methodology – key assumptions

- Net Asset Value (NAV) is net of Carry.
  - On the one hand, NAV is the sum of all estimated market values of all the investments in the portfolio, and, as such, NAV should be gross of Carry and transaction costs.
  - On the other hand, Jenkinson et al. (2020) show that NAVs are lower than the sum of subsequent cash flows, and thus lower to the sum of future distributions net of all fees and transaction costs. In addition, and most importantly, the academic literature on fund performance evaluation treats NAV as a final residual payment to investors, and thus treats NAV as a net of carry and transaction cost figure. Every investor reporting their performance in private capital also treats NAV as a net of fees figure.

- Funds without fee information are assigned the average terms of funds in the same strategy.

- Trigger rate for Carry payment is against the net IRR in the fund currency. In practice, the hurdle is not always based on the fund net IRR, but we would expect it to be near IRR.

- Funds with a net IRR below their HR are assumed to have no Carry. This is a conservative assumption. In addition, the hurdle should be compared to IRR gross of Carry (but net of other fees), and we use the net IRR, which also slightly underestimate Carry.

- Duration computation assumes no intermediary cash flows. As there are intermediary cash flows, the effective duration of a fund should be lower than the one we compute, hence the HA should be lower and the Total Carry should be higher than the one we compute. Duration hardly affects the computations though.

- We do not make any inflation adjustments.

- We assume that net multiple is the same in USD as it is in the fund currency. We thus implicitly assume that currency fluctuations cancelled one another out over the life of the fund.

- We abstract from the effect of recycling provisions, margin lending and other distorting techniques on TVPI, as we assume that PI is the total amount invested by the fund.

Largest Carry Earners

	HQ	N_funds	Invested	TVPI	IRR	% Catching-up	% Full-carry	Total Carry
Blackstone	USA	57	266,925	1.54	13%	7.02	76.15	33,630
Carlyle	USA	66	166,601	1.51	11%	5.03	64.34	19,801
CVC	Lux.	13	86,372	1.86	18%	-	88.84	17,921
KKR	USA	37	123,977	1.54	12%	0.59	70.31	15,892
Bain Capital	USA	49	107,043	1.63	14%	1.80	77.01	15,610
Warburg Pincus	USA	13	81,945	1.71	11%	-	87.39	14,150
Brookfield	Canada	23	102,144	1.58	14%	21.33	72.88	13,916
Hellman & Friedman	USA	6	49,350	2.06	18%	-	100.00	13,145
Advent	USA	13	63,387	1.82	18%	1.97	90.09	13,044
TPG	USA	29	116,075	1.52	13%	19.25	49.53	12,923
Apollo	USA	30	116,485	1.46	12%	12.20	71.35	12,917
EQT	Sweden	33	70,801	1.73	17%	13.59	76.06	12,402
Thoma Bravo	USA	14	38,593	2.27	25%	-	100.00	12,281
Goldman Sachs	USA	31	133,862	1.46	11%	27.01	40.63	12,168
Apax	UK	11	59,706	1.75	14%	29.40	70.60	11,208
Vista Equity Partners	USA	19	52,649	1.82	14%	34.33	58.40	10,726
Silver Lake	USA	6	44,729	1.96	17%	-	93.96	10,624
Insight Partners	USA	15	30,804	2.44	21%	2.46	93.27	10,347
TA Associates	USA	13	32,458	2.27	24%	13.83	83.59	10,234
Leonard Green & Partners	USA	7	34,086	2.19	15%	-	100.00	10,139
Permira	UK	14	51,182	1.83	14%	2.93	68.42	9,962
Clayton Dubilier & Rice	USA	5	26,485	2.36	26%	-	100.00	8,984
Oaktree Capital	USA	48	97,797	1.45	10%	3.08	58.98	8,745
Summit Partners	USA	15	26,414	1.92	19%	5.52	90.18	7,925
Ardian	France	50	85,943	1.48	13%	-	84.85	7,611
Lone Star Funds	USA	17	76,600	1.40	13%	5.59	64.07	7,402
Fortress	USA	29	62,342	1.48	10%	-	57.26	7,150
Ares Management	USA	60	84,618	1.42	11%	2.04	66.36	6,815
HarbourVest	USA	81	59,107	1.78	17%	-	91.43	6,080
Cinven	UK	4	28,165	1.85	19%	-	100.00	5,970
Other private capital firms	-	10,019	5,316,792	1.58	12%	5.83	61.10	678,290
Total	-	10,827	7,694,439	1.62	13%	6.50	65.90	1,038,022

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Total	-	10,827	7,694,439	1.62	13%	6.50	65.90	1,038,022

- Dispersion of performance is often presented as a fact. The largest Carry earners have very similar TVPI and IRR at 1.6x and 12% resp.
- Hence largest firms have similar headline performance figures. Only partial exceptions are firms that specialize in Tech (and thus did better over last 10-15 years)
- Correlation between total Carry earned and performance is slightly negative among large firms

Panel D: By investment strategy

	Invested	TVPI	% Catching-up	% Full-carry	Total Carry	Carry/ Invested
Buyout	2,883,888	1.77	5.02	78.65	536,537	19%
Growth	394,024	1.75	3.14	67.64	73,754	19%
Real Asset Opportunistic	551,039	1.35	6.79	56.54	50,137	9%
Real Asset Value Added	482,761	1.41	19.88	39.70	43,499	9%
Venture (General)	218,051	1.72	-	56.17	38,844	18%
Distressed Debt	309,064	1.52	3.74	66.92	36,586	12%
Fund of Funds	431,852	1.81	-	76.18	34,129	8%
Infrastructure Core/Core Plus	381,985	1.49	8.63	48.67	32,702	9%
Early Stage	119,317	1.90	-	70.31	30,207	25%
Secondaries	329,382	1.57	-	90.41	30,195	9%

About 85% of buyout and FoFs funds are in the money, for venture it is about 60-70%, and for real assets about 50%

Interpretion? Does it mean it’s easier to earn carry for BOs thus incentives are less steep?

Carry/invested is an interesting statistic: it is highest for early stage due to no hurdle rate and more dispersion in performance

Ben-David, Birru, and Rossi (2020)

- Conduct a similar analysis for the U.S. hedge fund industry.
- They find that the effective incentive fee rate (equivalent to the Carry) is around 50%. The main reason is that hedge funds doing well in a given year charge a fee on that profit, but if they lose money afterwards and never go back to their so-called high watermark, investors do not get back the performance-fee they paid.
- Something similar could happen in PE but with a different mechanism
  - Example. Investors give 25 to funds that lose all the money and 75 to funds that double the money. Thus, 100 is invested in total
  - Total carry paid is 20%*75=15, and the total capital returned is 135 (abstracting from other fees).
  - In this case, Carry represents 15/35= 43% of the net gains.
- Hence, it is an empirical question, one on fund performance distribution, to know what fraction of the profits PE investors pay in Carry. For LBOs it is close to 20 but that’s because funds perform similarly and nearly all are in the money. More dispersion (e.g. early stage VC) means more Carry distributed relative to profits, on aggregate

Private Equity Billionaires

	NUMBER OF OBSERVATIONS	TOTAL WEALTH
PE professionals with more than $4bn	31	263
PE professionals between $1bn and $4bn	57	134
PE professionals no longer active	5	15
Total	93	412

Source: Forbes website as of April 2024; own calculations.