Private Equity Fund of Funds & Secondaries – Certification Quiz Questions

Module FOF-03 – Multi-Fund Analysis and More Advanced Cash Flow Modeling (4-Hour Case Study)

7. You are analyzing a single fund (Fund IV) of a PE firm with five previous funds. As part of this analysis, you have built a waterfall schedule to calculate the Realized Carried Interest for a single company using the "American waterfall" structure.

   The PE fund invested $70 million in this company in Year 0 (FY 20), sold a majority stake for $100 million in Year 3, and sold the entire remaining stake for $20 million in Year 4.

   The waterfall schedule uses an 8% Hurdle Rate, 20% GP / 80% LP investment profit split, and 2% Management Fees allocated to specific portfolio companies. You can see the first 3 tiers of the waterfall schedule in the image below this question.

   Based on **JUST THESE NUMBERS**, what appears to be the main **PROBLEM** in this waterfall schedule?

	C	D	E	F	G	H	I	J	K
16									
17	**Step 1: Return of Capital**		**2019-12-31**	**2020-12-31**	**2021-12-31**	**2022-12-31**	**2023-12-31**	**2024-12-31**	**2025-12-31**
18	Beginning Balance:	$ M	-	-	73.3	75.6	77.3	-	-
19	(+) Capital Call:	$ M	-	73.3	2.4	1.7	0.4	-	-
20	(-) Current Paydown:	$ M	-	-	-	-	(77.7)	-	-
21	**Ending Balance:**	$ M	-	**73.3**	**75.6**	**77.3**	-	-	-
22									
23	**Cash Flow Available After Return of Capital:**	$ M	-	-	-	-	**22.3**	**20.0**	-
24									
25	**Step 2: Preferred Hurdle**								
26	Beginning Balance:	$ M	-	-	-	5.9	12.4	-	-
27	(+) Accrual:	$ M	-	-	5.9	6.5	7.2	-	-
28	(-) Current Paydown:	$ M	-	-	-	-	(19.6)	-	-
29	**Ending Balance:**	$ M	-	-	**5.9**	**12.4**	-	-	-
30									
31	**Cash Flow Available After Preferred Hurdle:**	$ M	-	-	-	-	**2.7**	**20.0**	-
32									
33	Cash Flow to Limited Partners (LPs):	$ M	-	(73.3)	(2.4)	(1.7)	96.9	-	-
34	*Hurdle Rate Check:*	%	*8.0%*						
35									
36	**Step 3: GP Catch-Up**								
37	GP-Catch Up:	$ M	-	-	-	-	2.7	4.9	-
38									
39	**Cash Flow Available After GP Catch-Up:**	$ M	-	-	-	-	-	**15.1**	-

a. The “Capital Call” line in Step 1 (row 19) should not factor in the Management Fees – only the actual $70 million invested into this company.

b. The “Accrual” line in the Preferred tier (row 27) is incorrect because it appears to be based on (Beginning Balance in Step 1 PLUS Beginning Balance in Step 2) * Hurdle Rate – but it should be based on the Beginning Balance in Step 1 * Hurdle Rate.

c. The Preferred tier “Current Paydown” line (row 28) is incorrect because there’s not enough in proceeds in Year 3 (FY 23) to return all the LPs’ capital *and* pay their 8% Preferred Return; it should be extended over 2 years.

d. The GP Catch-Up Return formula (row 37) is incorrect because it does not subtract previous Catch-Up distributions, which produces an overpayment in Year 4 (FY 24).

8. You are completing a multi-fund analysis and reviewing the GP’s Track Record over its 5 previous funds. A summary of your findings is shown in the image below this question.

   Some of these numbers are estimates, while others are sourced directly from the fund data.

   For example, the Invested Capital and Total Value columns are pulled directly from the data, but “Fund Sizes” are estimates based on Invested Capital / % Invested.

   The Management Fees are based on Fund Size * 1.5% * 10 years, while the Carry is based on (Total Value – Management Fees – Invested Capital), with a check to ensure the Gross IRR is above the Hurdle Rate.

   The Net MOIC (TVPI) follows the standard calculations based on these estimated Management Fee and Carry numbers, and most of the Net IRR numbers are approximations based on the assumption that the Net IRR is always 6 – 8% lower than the Gross IRR. If the Gross IRR is below the Hurdle Rate, the Net IRR is 3 – 4% lower than the Gross IRR.

   Based on this information, what is likely to be the **BIGGEST** problem with these estimates?

GP Track Record:

Fund	Vintage	Fund Size	Invested Capital	Total Value	% Invested	(Estimated) Carry	(Estimated) Mgmt Fees	Gross MOIC	Gross IRR	Net MOIC	Net IRR
Fund I	2007	$ 200.0	$ 160.0	$ 571.1	80.0%	$ 76.2	$ 30.0	3.6 x	23.5%	2.6 x	15.5%
Fund II	2011	300.0	240.0	799.4	80.0%	102.9	45.0	3.3 x	20.8%	2.4 x	12.8%
Fund III	2015	500.0	425.0	1,317.1	85.0%	163.4	75.0	3.1 x	20.1%	2.3 x	14.1%
Fund IV	2019	750.0	642.9	1,628.3	85.7%	174.6	112.5	2.5 x	25.0%	2.0 x	19.6%
Fund V	2022	1,232.0	1,108.8	2,229.0	90.0%	187.1	184.8	2.0 x	24.8%	1.6 x	18.8%

a. The "% Invested" assumptions are likely incorrect because larger funds do not necessarily become more capital-efficient.

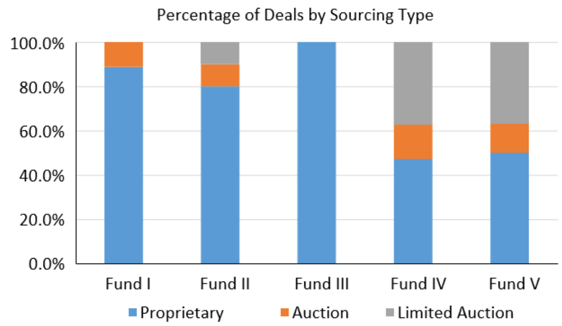
b. The Gross – Net gap assumption is likely too large because there shouldn't be an ~8% difference for a fund that performs decently.

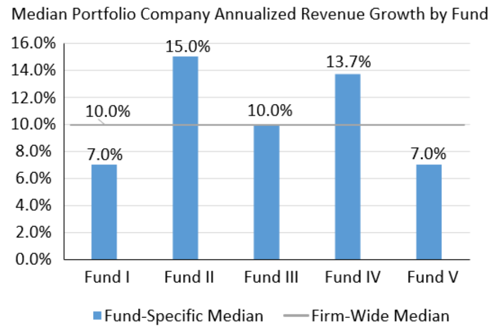
c. The Management Fees are off by significant percentages because the 2% * Fund Size fee in the investment period normally scales down to 1% * Net Invested Capital afterward.

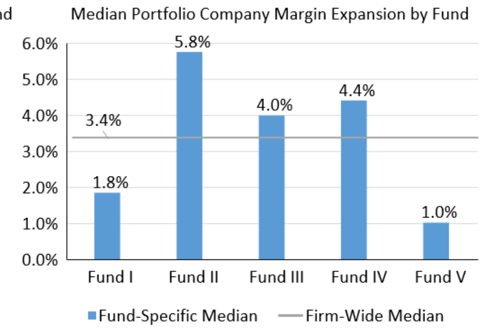
d. The Hurdle Rate check is not quite correct because Carry should be awarded based on the IRR of the Realizations vs. the Called Capital, not the Realizations vs. Invested Capital.

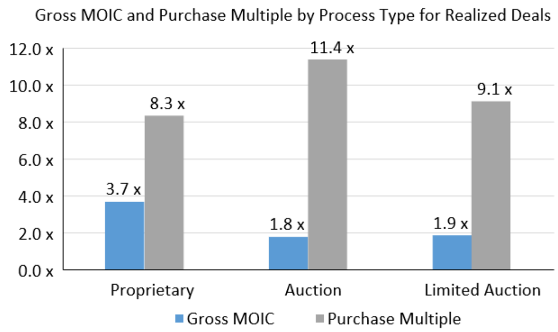
9. After reviewing the historical performance of this PE firm's previous funds, you are leaning towards a "Yes" recommendation for a commitment to its new, upcoming fund (Fund VI), but you still have some concerns about its performance and deal sourcing.

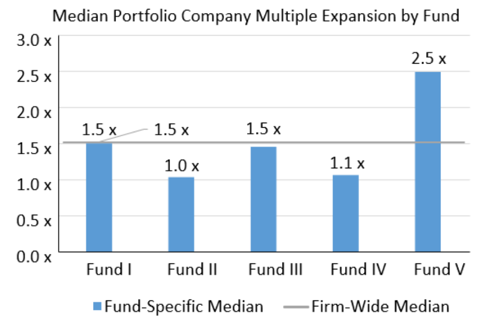
   Based on the data in the images below, which of the following changes represents the most **REALISTIC** shift that would address some of the potential risk factors in this deal?

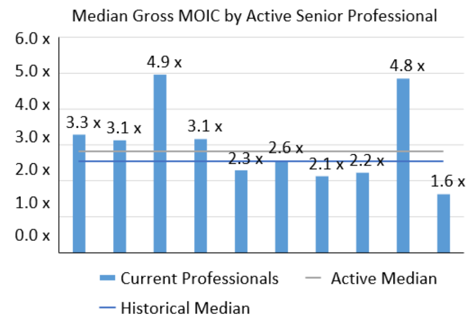












a. Less aggressive Multiple Expansion for each fund would make it easier to "buy" the performance of Funds IV and V (which have mostly unrealized companies), reducing our concerns around Fund VI.

b. If the PE firm had stuck with its original strategy of sourcing 80%+ of its deals via proprietary channels, we would be more optimistic about the Gross MOIC and IRR for Funds IV and V, which would reduce concerns around Fund VI.

c. If the results for "limited auctions" were significantly better than auction deals, such as a Gross MOIC in the 2.5 – 3.0x range, we would be less concerned about Fund VI even if the firm continues to use auction-like deals extensively.

d. If the PE firm had relied equally on Revenue Growth and EBITDA Margin Expansion for the portfolio companies across its previous funds rather than heavily emphasizing Revenue Growth, we would be less concerned about Fund VI.