Distribution Waterfalls: Three Nuances

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Distribution waterfalls are ubiquitous in the private investment world. They determine participation in cash flows or profits that is not in proportion to invested capital. One such disproportion is the incentive element (aka "promote" or "carry") of equity arrangements, typically after the return of capital and a priority return. The term priority return is here used broadly – different methods of expressing it are addressed below. In its simplest form, a distribution waterfall looks like this:

Tier 1:	Return of Invested Capital
Tier 2:	Priority Return on Invested Capital
Tier 3:	Split between Invested Capital and Incentive Equity

While the basic concept remains the same across investment funds and portfolio companies, the implementation and details frequently vary widely. The resulting complexity may simply reflect the underlying business understanding, but sometimes also different drafting approaches. This Insight explores the nuances of three drafting alternatives with respect to the return of capital and the priority return in the context of a distribution waterfall of a portfolio company structured as a limited liability company ("LLC"). These nuances have the potential to shift economics between investor and management. For purposes of the following illustrations, assume that the investor holds its capital interest in the form of Class A Units (and is thus a Class A Member) and management holds its profit interests (incentive equity) in the form of Class B Units (and is thus a Class B Member).

I. Return of Capital

Consider the following versions of the first tier of the waterfall:

Version 1	**Version 2**	**Version 3**
"*First, to the Class A Members pro rata in accordance with their Unreturned Capital, until the Unreturned Capital of each Class A Member has been reduced to zero; …"*	*"First, to the Class A Members pro rata in accordance with the number of Class A Units held by them, until the Unreturned Capital of each Class A Unit has been reduced to zero; …"*	*"First, to the holders of Class A Units with Unreturned Capital pro rata in accordance with the number of Class A Units held by them, until the Unreturned Capital of each Class A Unit has been reduced to zero; …"*
Does it make a difference?		

Yes, it can, in scenarios involving (i) issuances of Class A Units at different prices over time, or (ii) distributions to Class A Units followed by additional issuances of Class A Units.

Assume that two Class A Units were issued at different times to two separate members, initially one Class A Unit at $100 to Member 1 and subsequently another Class A Unit at $200 to Member 2 to reflect an increase in the portfolio company's valuation. What are the amounts that must be distributed to pay the first tier in full?

Version 1	**Version 2**	**Version 3**
*"… to the Class A Members pro rata in accordance with **their Unreturned Capital,** until the Unreturned Capital of each Class A Member has been reduced to zero …"*	*"… to the Class A Members pro rata in accordance with **the number of Class A Units** …, until the **Unreturned Capital of each Class A Unit** has been reduced to zero …"*	*"… to the **holders of Class A Units with Unreturned Capital** pro rata in accordance with **the number of Class A Units** …, until the **Unreturned Capital of each Class A Unit** has been reduced to zero …"*
⇓	⇓	⇓
One Class A Unit must receive $100 and the other Class A Unit must receive $200, for total distributions in this tier of $300.	Each Class A Unit must receive $200, for total distributions in this tier of $400.	One Class A Unit must receive $100 and the other Class A Unit must receive $200, for total distributions in this tier of $300.

In effect, the first tier of Version 2 returns more than invested capital, because it distributes proceeds at that tier pro rata to all Class A Units until the Class A Unit with the highest price has received its invested capital. Version 1 distributes proceeds to the members in accordance with their unreturned capital rather than the number of Class A Units held by them, such that aggregate distributions in the first tier will not exceed invested capital. Version 3 prorates proceeds in accordance with Class A Units (like Version 2), but then distributes them to each Class A Unit only so long as it has unreturned capital. Proceeds are initially distributed to Member 1 and Member 2 equally because each investor holds one Class A Unit, but once Member 1 receives $100 (at which point it no longer holds a Class A Unit "with Unreturned Capital"), all subsequent proceeds will go to Member 2 until the unreturned capital of Member 2 is reduced to zero. Version 3 appears at first to be identical to Version 1, but it differs in the pace of distributions, which matters in a downside scenario, as we will illustrate below.

While Version 2, which can return more than invested capital, may appear unfair at first, there are other scenarios where the result is more intuitive. Assume that a Class A Unit is issued at $200, and subsequently the issuer incurs leverage and distributes $100 to the Class A Unit, reducing its unreturned capital to $100. Then another Class A Unit is issued at $200. At that point, a total of $400 must be distributed to pay the first tier in full, despite the $100 previously

distributed. But this would be exactly the result in a customary corporate capital structure, which requires that each share of the same class receives the same price per share in a liquidity event.

Assume the same facts as above, but now consider what amounts each investor will receive in the first tier in a downside, break even and upside scenario.

Version 1	**Version 2**	**Version 3**
Downside Scenario – $200 Distribution		
Member 1: $66.67 Member 2: $133.33	Member 1: $100 Member 2: $100	Member 1: $100 Member 2: $100
Break Even Scenario – $300 Distribution		
Member 1: $100 Member 2: $200	Member 1: $150 Member 2: $150	Member 1: $100 Member 2: $200
Upside Scenario – $400 Distribution		
Member 1: $100 Member 2: $200 Next $100 will go through subsequent tier(s) of waterfall.	Member 1: $200 Member 2: $200	Member 1: $100 Member 2: $200 Next $100 will go through subsequent tier(s) of waterfall.

The table above illustrates that the pace (or rate) at which capital is returned to the two investors in the first tier may impact their returns in different exit scenarios. In Version 1, capital is returned based on unreturned capital contributions, such that every dollar is split 1/3 to Member 1 and 2/3 to Member 2. In Version 2 and Version 3, capital is returned based on Class A Units held, such that every dollar is split 50/50 between Member 1 and Member 2. In a downside scenario in Version 1, the two Members receive different amounts even though they hold the same number of Class A Units. The different return amounts between Version 2 and Version 3 in the break even and upside scenarios are, as indicated above, due to Version 3 stopping distributions to the Class A Unit held by Member 1 once the capital contributed for this Class A Unit has been returned.

II. Order of Return of Capital and Priority Return

Consider the following versions of the order of the first two tiers of the waterfall:

Version 1	**Version 2**
1. Return of Capital 2. Priority Return	1. Priority Return 2. Return of Capital
Does it make a difference?	

Yes, it can, in a scenario involving (i) a priority return expressed as a preferred return, calculated like interest, with periodic compounding, and (ii) an interim distribution within the compounding period that does not pay both tiers in full.

Assume that a Class A Unit was issued at $100 with an 8% preferred return, compounding annually. After six months, $100 gets distributed, and after one year, another $20. The distribution for each tier is as follows:

	Version 1	**Version 2**
6 Months	Tier 1: $100 Tier 2: $0	Tier 1: $4 Tier 2: $96
12 Months	Tier 1: $0 Tier 2: $4 [Subtotal: $104] Tier 3: $16	Tier 1: $0.16 Tier 2: $4 [Subtotal: $104.16] Tier 3: $15.84

What is happening here? Compounding accrues preferred return on previously accrued preferred return (in debt terms: accrues interest on previously accrued interest) and, thus, in effect adds accrued preferred return to invested capital (accrued interest to principal). However, it does so only on the compounding date, while the underlying invested capital (principal) accrues preferred return (interest) continuously.

In Version 1, after the first distribution, the invested capital has been returned in full, so it no longer accrues preferred return, while the unpaid preferred return is not yet compounding. In Version 2, after the first distribution, the preferred return has been paid in full, while the invested capital has not been returned and continues to accrue preferred return on a daily basis.

Does that mean investors should prefer Version 2? Not necessarily. The differences, if any, are typically marginal, can be minimized by utilizing shorter compounding periods, and are irrelevant if there is only one, final distribution. Distribution waterfalls that return invested capital at the first tier have the advantage of clarity and avoid confusion if the waterfall has more complex or multiple priority return and carry tiers.

III. Preferred Return v. IRR

The priority return can be expressed as a preferred return on unreturned capital, calculated like interest on outstanding principal, or as an internal rate return ("IRR") threshold.

IRR thresholds in distribution waterfalls typically use the following definition for the IRR itself:

*"**IRR** means the discount rate, expressed as an annual percentage, at which the net present value of all capital contributions made by any Class A Member equals the net present value of all distributions made to such Class A Member, calculating by using the X-IRR function of Microsoft Excel."*

The IRR calculation captures all cash flows, i.e., all capital contributions and all distributions (regardless of whether they constitute a return of or a return on capital), and as far as the formula itself is concerned, a separate tier for the return of capital is not necessary. Thus, a waterfall including an IRR threshold can take one of two basic forms:

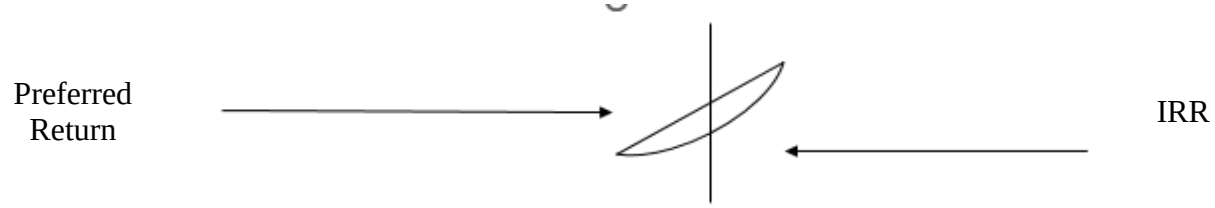
1. Return of Capital 2. IRR Threshold	1. IRR Threshold

Against this background, consider these versions:

Version 1	**Version 2**	**Version 3**
1. [Return of Capital] 2. *"… to such Class A Member, until such Class A Member has received cumulative distributions pursuant to this clause equal to an annual rate of return of 8%, compounded [quarterly] [semi-annually] [annually], on its unreturned capital contributions;"*	1. [Return of Capital] 2. *"… to such Class A Member, until such Class A Member has received cumulative distributions necessary to achieve an IRR of 8% on its aggregate capital contributions; …"*	1. *"… to such Class A Member, until such Class A Member has received cumulative distributions necessary to achieve an IRR of 8% on its aggregate capital contributions; …"*
Does it make a difference?		

Yes, it can, in scenarios involving (i) a distribution within the compounding period, or (ii) a distribution followed by a capital call for a new investment.

The definition of IRR quoted above, which has become popular in legal documents that use an IRR threshold, defines IRR by reference to the X-IRR function of Excel. The X-IRR function has a unique compounding feature that is rigid and cannot be modified. The X-IRR function uses daily compounding to arrive at an effective annual rate of return. Over the course of a 12-month period, it slopes upwards, while a preferred return accrues in equal increments along a straight line. If the preferred return uses annual compounding, the result is the same on each anniversary, but differs within each annual period:



Let's compare a $100 investment with an 8% preferred return, compounded annually, with the same investment with an 8% IRR. After one year, return of capital plus priority return equals $108 in each case. At six months, however, a return of capital plus a preferred return equals $104 while a return of capital plus an IRR threshold equals $103.90.

More significantly, the IRR calculation, whether based on the X-IRR function or a different IRR formula, can result in unintended overpayments to management if additional capital is contributed after a distribution by the portfolio company. The underlying reason is that the IRR calculation captures all cash flows going back to the original investment and does not reset the clock for later contributions, while in the preferred return calculation every new contribution has to earn its own return, just like interest on borrowings under a revolving credit facility.

Assume an investor makes a commitment to a development company. The investor contributes capital to Project I, which gets sold after completion a year later. The investor then contributes capital to Project II, which also gets sold after completion a year later. Cash flows are:

Day 1	$(100 million)
First Anniversary	$150 million
Second Anniversary	$(25 million)
Third Anniversary	$35 million

The waterfall alternatives are:

Version 1	**Version 2**	**Version 3**
1. Return of Capital 2. Preferred Return of 10% 3. 80% / 20%	1. Return of Capital 2. IRR of 10% 3. 80% / 20%	1. IRR of 10% 2. 80% / 20%

The following table shows the distributions under each waterfall version:

	Version 1	**Version 2**	**Version 3**
First Anniversary Distribution	$ 150	$ 150	$ 150
Return of Capital	$ 100	$ 100	N/A
Preferred / IRR (10%)	$ 10	$ 10	$ 110
Carry Split (Total) - Investor (80%) - Manager (20%)	$ 40 $ 32 $ 8	$ 40 $ 32 $ 8	$ 40 $ 32 $ 8
Third Anniversary Distribution	$ 35	$ 35	$ 35
Return of Capital	$ 25	$ 25	**ZERO**
Preferred / IRR (10%)	$ 2.5	**ZERO**	**ZERO**
Carry Split (Total) - Investor (80%) - Manager (20%)	$ 7.5 $ 6.0 $ 1.5	$ 10 $ 8 $ 2	$ 35 $ 28 $ 7
Total Distributions to Investor	$ 175.5	$ 175.0	$ 170.0

What is happening here? The crucial aspect is that even after the second capital contribution of $25 million, the IRR remains above 10%, so the clock does not reset as a result of the second capital contribution. In Version 2, which applies the IRR threshold after the return of capital, the IRR preference was previously satisfied by the first distribution, so the gain remaining after the return of capital goes directly to the carry split. More dramatically, in Version 3, which only uses an IRR threshold, the entire distribution goes directly to the carry split.

Investors should be aware of the difference between preferred return and IRR calculations, particularly for portfolio companies that may call capital after exits of projects or assets. In addition, attorneys drafting waterfalls should not approach preferred return and IRR thresholds as interchangeable.

Conclusion

Distribution waterfalls can reflect various business understandings and drafting approaches. What they should not do is cause somebody who applies the waterfall to quote HAL from *2001: A Space Odyssey*: "It can only be attributable to human error."