

The Dealmaker's Guide to JV Waterfall Structuring

By Jordan Slater*

In this article, the author discusses the structuring of joint venture waterfalls to manage the distribution of profits between limited and general partners.

Real estate private equity thrives on creative dealmaking. Yet, when it comes to joint venture waterfalls — the mechanics of distributing profits between limited partners (LPs) and general partners (GPs) — structures often take a similar form. And rightfully so — the typical structure is designed to align the partners' interests and incentivize the GP to maximize investor returns. However, under these same structures, LP and GP interests diverge over time, often years into a project.

Waterfalls are not just math; they are negotiations that balance risk, reward and alignment of interests. Whether sitting in an LP's seat or the GP's seat, the following principles are intended to help refine dealmaking strategy and safeguard interests when negotiating the next deal.

THE BASICS

Real estate investing is a complex, capital-intensive business — so much so, that even the most talented and well-funded investors often seek external partnerships when pursuing opportunities. Industry participants will

often form real estate joint ventures (JVs) to bring partners together for the purpose of pooling capital, expertise and other resources needed to execute the investment strategy.

The JV is typically comprised of a GP (often named the “managing member” in a limited liability company (LLC) entity) and one or more LPs (or member(s) in an LLC). Most structures involve LPs funding the majority of capital needs, while the GP oversees strategy and day-to-day management. To align interests and incentivize performance, JV structures often include an opportunity for the GP to earn a “promote.” There are many names for promotes, such as profits interest, carried interest, carry or incentive fees, but they all generally mean the same thing: the GP's promoted interest refers to the GP's right to participate in an outsized share of the JV's profits relative to its pro rata share of capital contributions, based on the performance of the investments. Essentially, the GP may participate in JV profits in excess of its pro rata share upon the JV's achievement of a stated return hurdle to the LPs.

*The author, a senior director in FTI Consulting's Real Estate Solutions practice based in New York, may be contacted at jordan.slater@fticonsulting.com.

The Real Estate Finance Journal

Cash distributions in a typical “waterfall” promote structure will first go to the investing partners until the partners have fully recovered their capital contributions. Cash is usually distributed pro rata in proportion to each partner’s contributed capital or ownership interests in the JV. After the partners recoup their invested capital, distributions will continue in the same pro rata split until the investors reach a stated return hurdle. The difference between the amount necessary to recover capital and the amount to achieve the return hurdle is commonly referred to as preferred return or “pref.” The return hurdle can be the achievement of an investor’s internal rate of return (IRR), equity multiple (EM), a nominal dollar amount or any combination of these.

It is important to note that although pro rata distributions are most common at the top tier(s) of the waterfall, it is not uncommon for the LP’s capital to be repaid prior to the GP’s capital as a way to mitigate risk to the LP capital. In other words, 100% of distributions may first go to the LP until it has recovered capital (and perhaps its return hurdle) before the GP receives any distributions. This concession may be offered in exchange for a lower return hurdle, commensurate with the reduced risk to the LP.

Upon the achievement of the return hurdle, a portion of the distributions goes directly to the GP (e.g., 20% of distributions over and above the return hurdle), with the remainder going to the investors in the same proportions as the previous tiers. The portion going directly to the GP, as opposed to its share of the pro rata distributions, is the GP’s promote. It is common for waterfall structures to have multiple tiers, through which the GP will receive

increasing portions of the profits as investor returns reach greater heights.

To illustrate, consider the following waterfall structure:

Distributable cash shall be distributed to the partners in the following manner and priority:

Tier 1: First, to the partners in proportion to their respective ownership interests until the cumulative amount distributed to LP pursuant to this Tier 1 results in the LP realizing an 8% IRR;

Tier 2: Second, (x) 80% to the partners in proportion to their respective ownership interest and (y) 20% to the GP until the cumulative amount distributed to the LP pursuant to this Tier 2 and Tier 1 results in the LP realizing a 12% IRR; and Tier 3: Third, (x) 70% to the partners in proportion to their respective ownership interest and (y) 30% to the GP.

The amounts distributed to GP under clauses Tier 2 (y) and Tier 3 (y) above comprise the GP’s promote. In Tier 1, the return hurdle is an 8% IRR to the LP and the GP receives no promote. In Tier 2, the hurdle is a 12% IRR to the LP and, of the incremental distributions between the 8% IRR and the 12% IRR, 10% represents the GP’s promote. In Tier 3, after the venture achieves both return hurdles, the GP promote increases to 20% of all distributions over and above the 12% hurdle.

A shorthand way of describing the waterfall is that the GP receives a 20% promote above an 8% IRR and a 30% promote above a 12% IRR.

There is generally a direct relationship between the size of the hurdle rates and corresponding promotes in the following tier. Achieving a higher return justifies the GP’s increased participation in incremental profits. Of course, all of these rates, levels of participation and priorities are subject to negotiation.

The Dealmaker's Guide to JV Waterfall Structuring

TARGETING LP PROFITS

The term “return hurdle” refers to a benchmark or threshold return on investment and is generally stated as a percentage return (usually an IRR) or multiple on invested capital (MOIC or EM). Achievement of the return hurdle marks the point at which the GP is rewarded with additional profit participation.

Identifying an appropriate return hurdle is about striking a balance among risk, cost of capital and the expected returns of the underlying asset(s).

IRR Hurdles

Real estate development and ownership is a capital-intensive business. Because of this, the cost of capital and time value of money are key concepts that underpin a well-negotiated return hurdle. IRR-based return hurdles are the most commonly used method of capturing these concepts in the terms of the deal. (Note: to achieve a stated IRR, investors will receive a return of invested capital, plus a compounded return on invested capital. It is not uncommon for these two concepts to be bifurcated between two tiers — (1) capital recovery, and (2) the pref. For purposes of this discussion, the two are treated as a single tier.)

The return hurdle of the waterfall's first tier should reflect the investors' cost of capital, plus premiums for execution risk and illiquidity.

The cost of institutional LP capital is generally the preferred return owed within the underlying fund, while high-net-worth (HNW) individuals' cost of capital will be a function of their opportunity costs. Institutions may also come with reduced additional risk premiums,

given greater access to lower-cost capital and greater diversification within their portfolios, relative to HNW individuals. As a result of these factors, institutions, particularly those managing retirement funds and other long-term strategies, largely target core and core-plus investments with less risk compared to HNW that often target value-add and opportunistic investments through which expected returns justify the increased risk, although of course, there are exceptions for value-add and opportunistic funds.

The achievement of the waterfall's first hurdle can be likened to hitting a single in baseball. This baseline achievement signifies that the JV has met the minimum requirements to move forward into promote distributions. The venture needs to “get on base” before the GP is rewarded with extra profits.

Middle-tier distributions in a multi-tiered waterfall are comparable to hitting a double or triple. An extra-base hit exceeds the baseline performance thresholds and justifies the GP's profit participation. The final promote tier should represent home run performance, in which returns materially outperform the LP's required returns.

Equity Multiples

An equity multiple can be an alternative to the IRR threshold or a supplement to the IRR. Some investors may simply require a 1.5x multiple on invested capital. Savvy negotiators may require the greater of a stated IRR and EM. In these deals, the LP is using the EM as a duration hedge, ensuring promote thresholds fairly balance the investment horizon (i.e., the hold period) and return expectations. To that end, it is appropriate to align EM hurdles with

The Real Estate Finance Journal

corresponding IRR hurdles. When doing so, it is important to consider the projected investment horizon.

As an example, if partners forming a JV for development of a new project expect to exit via sale of the project after three years, investors requiring an 8% IRR may also require a minimum 1.25x EM. The math is pretty straightforward: $1.08 * 1.08 * 1.08 = 1.26$. For simplicity, rounding something like this to one and a quarter is common in negotiations.

When combined with an IRR hurdle, an appropriately sized EM hurdle can help mitigate reinvestment risk resulting from earlier-than-expected exits and shields from what would otherwise be excessive IRR-based promotes.

Expanding the previous example, this waterfall incorporates EM hurdles at each tier:

Tier 1: First, to the partners in proportion to their respective ownership interests until

the cumulative amount distributed to LP pursuant to this Tier 1 results in LP realizing the greater of (i) an 8% IRR and (ii) a 1.25x EM;

Tier 2: Second, (x) 80% to the partners in proportion to their respective ownership interest and (y) 20% to GP until the cumulative amount distributed to LP pursuant to this Tier 2 and Tier 1 results in Investor realizing the greater of (i) a 12% IRR and (ii) a 1.40x EM; and

Tier 3: Third, (x) 70% to the partners in proportion to their respective ownership interest and (y) 30% to GP.

The shorthand version: GP receives a 20% promote above an 8% IRR/1.25x EM and a 30% promote above a 12% IRR/1.40x EM.

Tables 1 and 2 present the corresponding equity multiples, based on a given IRR and hold period and vice versa.¹

The Dealmaker's Guide to JV Waterfall Structuring

Table 1
Corresponding Equity Multiples by IRR and Investment Horizon (Years)

		Investment Horizon (Years)									
		1	2	3	4	5	6	7	8	9	10
Multiple on Invested Capital (MOIC)	6.00%	1.06x	1.12x	1.19x	1.26x	1.34x	1.42x	1.50x	1.59x	1.69x	1.79x
	7.00%	1.07x	1.14x	1.23x	1.31x	1.40x	1.50x	1.61x	1.72x	1.84x	1.97x
	8.00%	1.08x	1.17x	1.26x	1.36x	1.47x	1.59x	1.71x	1.85x	2.00x	2.16x
	9.00%	1.09x	1.19x	1.30x	1.41x	1.54x	1.68x	1.83x	1.99x	2.17x	2.37x
	10.00%	1.10x	1.21x	1.33x	1.46x	1.61x	1.77x	1.95x	2.14x	2.36x	2.59x
	11.00%	1.11x	1.23x	1.37x	1.52x	1.69x	1.87x	2.08x	2.30x	2.56x	2.84x
	12.00%	1.12x	1.25x	1.40x	1.57x	1.76x	1.97x	2.21x	2.48x	2.77x	3.11x
	13.00%	1.13x	1.28x	1.44x	1.63x	1.84x	2.08x	2.35x	2.66x	3.00x	3.39x
	14.00%	1.14x	1.30x	1.48x	1.69x	1.93x	2.19x	2.50x	2.85x	3.25x	3.71x
	15.00%	1.15x	1.32x	1.52x	1.75x	2.01x	2.31x	2.66x	3.06x	3.52x	4.05x
	16.00%	1.16x	1.35x	1.56x	1.81x	2.10x	2.44x	2.83x	3.28x	3.80x	4.41x
	17.00%	1.17x	1.37x	1.60x	1.87x	2.19x	2.57x	3.00x	3.51x	4.11x	4.81x
	18.00%	1.18x	1.39x	1.64x	1.94x	2.29x	2.70x	3.19x	3.76x	4.44x	5.23x
19.00%	1.19x	1.42x	1.69x	2.01x	2.39x	2.84x	3.38x	4.02x	4.79x	5.69x	
20.00%	1.20x	1.44x	1.73x	2.07x	2.49x	2.99x	3.58x	4.30x	5.16x	6.19x	

Table 2
Corresponding IRRs by Equity Multiple and Investment Horizon (Years)

		Investment Horizon (Years)									
		1	2	3	4	5	6	7	8	9	10
Multiple on Invested Capital (MOIC)	1.1x	10.00%	4.88%	3.23%	2.41%	1.92%	1.60%	1.37%	1.20%	1.06%	0.96%
	1.2x	20.00%	9.54%	6.27%	4.66%	3.71%	3.09%	2.64%	2.31%	2.05%	1.84%
	1.3x	30.00%	14.02%	9.14%	6.78%	5.39%	4.47%	3.82%	3.33%	2.96%	2.66%
	1.4x	40.00%	18.32%	11.87%	8.78%	6.96%	5.77%	4.92%	4.30%	3.81%	3.42%
	1.5x	50.00%	22.47%	14.47%	10.67%	8.45%	6.99%	5.96%	5.20%	4.61%	4.14%
	1.6x	60.00%	26.49%	16.96%	12.47%	9.86%	8.15%	6.94%	6.05%	5.36%	4.81%
	1.7x	70.00%	30.38%	19.35%	14.19%	11.20%	9.25%	7.88%	6.86%	6.07%	5.45%
	1.8x	80.00%	34.16%	21.64%	15.83%	12.47%	10.29%	8.76%	7.62%	6.75%	6.05%
	1.9x	90.00%	37.84%	23.86%	17.41%	13.70%	11.29%	9.60%	8.35%	7.39%	6.63%
	2.0x	100.00%	41.42%	25.99%	18.92%	14.87%	12.25%	10.41%	9.05%	8.01%	7.18%
	2.1x	110.00%	44.91%	28.06%	20.38%	16.00%	13.16%	11.18%	9.72%	8.59%	7.70%
	2.2x	120.00%	48.32%	30.06%	21.79%	17.08%	14.04%	11.92%	10.36%	9.16%	8.20%
	2.3x	130.00%	51.66%	32.00%	23.15%	18.13%	14.89%	12.64%	10.97%	9.70%	8.69%
2.4x	140.00%	54.92%	33.89%	24.47%	19.14%	15.71%	13.32%	11.56%	10.22%	9.15%	
2.5x	150.00%	58.11%	35.72%	25.74%	20.11%	16.50%	13.99%	12.14%	10.72%	9.60%	

Dollar-Based Hurdles

Although IRRs and EMs are most common for determining LP return thresholds, LPs may require a stated dollar amount within a tier. These dollar-based hurdles are often a function of the amount contributed (similar to an EM), but there is no rule of thumb. Dollar-based hurdles are

The Real Estate Finance Journal

deal-specific hurdles and should be considered carefully in the context of expected overall returns.

DEFINING RETURNS AND OTHER KEY TERMS

Establishing terms that are consistent with the risk profile of the underlying investment is a major part of negotiating a good deal. Beneath the high-level deal points in the waterfall — hurdle rate, promote splits, etc. — lies considerable nuance that can help save (or earn) a material amount of money between the margins of those promote calculations and legal fees resulting from litigating the meaning of key terms underlying promote computation.

IRR Mechanics

When defining IRR in the JV agreement, it is important to stay grounded in the basics of Finance 101. Fundamentally, IRR represents the compound annual rate of return at which an investment grows, taking into account the timing and size of cash outflows (contributions) and inflows (distributions), making the present value of such cash flows equal to zero. Put another way, an investor achieves a certain IRR when they have recouped their invested capital and received a compounded return on that invested capital.

It is standard practice to assume annual compounding of returns in calculating IRR hurdles, but monthly or quarterly compounding may be appropriate, particularly when LPs are expecting monthly or quarterly distributions as part of the deal. Investors negotiating and defining terms in a JV agreement (JVA) would be wise to consider the effects and nuances of compounding returns when capturing the spirit of the deal. Regardless of what compounding frequency is agreed upon, using consistent language throughout the JVA will help to minimize confusion and ensure all parties are on the same page.

A useful tool for calculating IRRs and performing checks against return calculations is Microsoft Excel's XIRR function. Although there are other useful functions like the IRR function, XIRR provides for greater flexibility, so users can simply input cash flow amounts with corresponding dates (any date, with or without regular intervals) and Excel will calculate the IRR. XIRR is well-suited for real estate deals, in particular, because so many involve irregular cash flows at the equity level.

Many JVAs reference the XIRR function as the definitive method for calculating investor IRRs. It is important to note, however, that the function assumes annual compounding of returns. Because consistency is key to avoiding confusion within the deal, reference to the XIRR function is recommended only when the agreement's definition of IRR includes (or at least implies) annual compounding. As Eun Oh, CFA and Senior Managing Director at FTI Consulting, Inc., explains, "the fact that XIRR can generate daily results does not mean it compounds daily; in fact, XIRR compounds annually, but it simply has the ability to provide results based on inputs from any given day."²

The Dealmaker's Guide to JV Waterfall Structuring

If using monthly or quarterly compounding in the JVA, XIRR can still be useful. The XIRR function also assumes returns are calculated using an actual/365 day-count convention. To continue using XIRR, calculate the returns the same way:

Accrued return = $P * ((1 + r/n)^{(n * t)} - 1)$, where:

P = historical contributions plus accrued preferred returns, less historical distributions

r = hurdle rate

n = number of compounding periods per year (1 if annually, 4 if quarterly or 12 if monthly)

t = number of days since last contribution or distribution, divided by 365 (i.e., time)

Tip: Define IRR with great precision and don't be afraid to include the math in the JVA to avoid interpretation disputes down the road.

After returns are calculated, use XIRR as a check against the calculation by first calculating the IRR using XIRR. Then, adjust to capture the effects of compounding:

Quarterly compounded IRR = $4 * ((1 + XIRR)^{(1 / 4)} - 1)$

Monthly compounded IRR = $12 * ((1 + XIRR)^{(1 / 12)} - 1)$

Anchoring Returns – LPs Versus “The Partners”

Return hurdles generally apply to all invested capital, with limited exceptions for things like cost overruns. However, differences in timing of contributions from LPs and GPs can complicate return hurdle calculations and potentially shift the GP's promoted interest if the JVA's waterfall terms are not drafted carefully.

If the partners are contributing capital in the same proportion and timing from inception through the JV's last capital call, whether return hurdles are based on LP capital or all invested capital (i.e., the partners' capital) has no bearing on the value of the promote. The same goes for situations in which the LP contributes its share of required capital before the GP and in turn accrues a greater share of the accrued pref. But, if the GP contributes its share of required capital first, how the return hurdle is anchored matters.

Consider these simple waterfall structures:

Waterfall A

Tier 1: First, to the partners in proportion to their respective ownership interests until the cumulative amount distributed to the partners pursuant to this Tier 1 results in the partners realizing an 8% IRR;

Tier 2: Thereafter, (x) 80% to the partners in proportion to their respective ownership interest and (y) 20% to the GP.

Waterfall B

Tier 1: First, to the partners in proportion to their respective ownership interests until the

The Real Estate Finance Journal

cumulative amount distributed to the LP pursuant to this Tier 1 results in LP realizing an 8% IRR;

Tier 2: Thereafter, (x) 80% to the partners in proportion to their respective ownership interest and (y) 20% to the GP.

Assuming Waterfall A is to be interpreted to mean that the JV is to distribute to the partners, pro rata, until each individual partner achieves an 8% IRR (with 20% promote distributions thereafter), the partner's return that dictates when to move on to the next tier is the partner that contributed the largest share of their required capital the fastest. Remember: the sooner capital is contributed, the sooner preferred returns start to accrue. If the LP contributes capital in greater proportions than the GP earlier in the deal, it will require more cash distributions to satisfy the LP's return hurdle than it will the GP's return hurdle (relative to the size of their respective investments). Under this scenario, Waterfalls A and B both produce the same result.

If the GP were to contribute more capital instead, it would be the GP's return hurdle that will be achieved last. In other words, the JV would have to continue distributing pro rata until the GP gets its 8% IRR — even though the LP will surpass an 8% IRR in the process of making the GP “whole.”

A subtle but critical point: if promotes are tied to the GP's own IRR, misalignment occurs because the GP effectively competes against itself. The GP would rather move on to the next tier and collect a greater share of the remaining pie (i.e., its promote) than continue to distribute to the partners on a pro rata basis in the first tier. A savvy GP will make sure to anchor the waterfall's return hurdles to LP capital only.

Bifurcating Cash Flows

Achieving a particular IRR or EM over the life of the investment may not be an investor's only goal. Many invest in commercial real estate, stabilized properties in particular, for the yield — i.e., a steady stream of regular cash distributions. In these investments, LPs often rely on the GP to maximize rents and operating profits as part of the overall investment strategy.

To that end, strong execution of an operating profit-focused strategy may warrant a promote based on delivery of a current yield in addition to achieving an IRR and/or EM. This type of promote structure involves bifurcating (i) net cash flow (NCF) from operations (i.e., net operating income, less debt service and funding of replacement reserves), and (ii) net capital event proceeds (CEP) from a sale or refinance into separate, distinct waterfalls.

The operating profit waterfall is typically a single-tier waterfall, in which, upon delivery of the current yield, the GP earns a promote on remaining distributable operating cash flow, as illustrated below:

NCF shall be distributed to the partners in the following manner and priority:

The Dealmaker's Guide to JV Waterfall Structuring

NCF Tier 1: First, to the partners in proportion to their respective ownership interests until the cumulative amount distributed to LP pursuant to this NCF Tier 1 equals the accrued, unpaid 8% annually compounded return on LP contributions;

NCF Tier 2: (x) 80% to the partners in proportion to their respective ownership interest and (y) 20% to GP.

CEP shall be distributed to the partners in the following manner and priority:

CEP Tier 1: First, to the partners in proportion to their respective ownership interests until the cumulative amount distributed to LP pursuant to this CEP Tier 1 is equal to LP's unreturned capital contributions;

CEP Tier 2: Second, to the partners in proportion to their respective ownership interests until the cumulative amount distributed to LP pursuant to this CEP Tier 2 and NCF Tier 1 equals the accrued, unpaid 8% annually compounded return on LP contributions;

CEP Tier 3: Third, (x) 80% to the partners in proportion to their respective ownership interest and (y) 20% to GP until the cumulative amount distributed to LP pursuant to this

CEP Tier 3 and CEP Tier 1, CEP Tier 2, NCF Tier 1, and NCF Tier 2 results in Investor realizing the greater of (i) a 12% IRR and (ii) a 1.40x EM; and

CEP Tier 4: Fourth, (x) 70% to the partners in proportion to their respective ownership interest and (y) 30% to GP.

A few things to consider in this bifurcated waterfall:

1. The amounts paid to GP under clauses NCF Tier 2 (y), CEP Tier 3 (y) and CEP Tier 4 (y) represent the GP's promotes.
2. The combination LP contributions, NCF Tier 1 distributions, CEP Tier 1 distributions and CEP Tier 2 distributions will result in an 8% IRR. For purposes of tracking the different components of the aggregate cash flows, it can help to split the return of capital from the 8% return on capital.
3. CEP Tier 2 excludes the distributions made pursuant to NCF Tier 2 in this example. It is also reasonable to include NCF Tier 2 distributions in an 8% IRR calculation, particularly if CEP Tiers 1 and 2 are combined into a single, IRR-based tier. How the concept of accrued, unpaid 8% preferred return is defined within the agreement will play a role in what approach is best.
4. In the CEP waterfall, it is important to include the amounts included in all tiers of the NCF waterfall, especially for any IRR-based tiers.

TARGETING GP PROFITS

Catching Up — Targeting Profit Share

The GP's promote is fundamentally a share of profits. It is common for GPs, especially in a fund but also in some JVs, to target a share of total profits instead of just a share of profits over and above a certain return threshold. To that end, a GP may negotiate a catch-up tier within the waterfall. The catch-up tier will include an acceleration of promotes paid to the GP so that it "catches up" to its targeted share of total profits distributed through the catch-up tier. After the catch-up tier, it is typical for any remaining cash to be distributed such that the incremental profits will be split with the targeted profit share to go the GP and the balance to the LP.

Consider the following waterfall:

Tier 1: First, to the partners in proportion to their respective ownership interests until the cumulative amount distributed to LP pursuant to this Tier 1 is equal to LP's unreturned capital contributions;

Tier 2: Second, to the partners in proportion to their respective ownership interests until the cumulative amount distributed to LP pursuant to this Tier 2 and Tier 1 results in Investor realizing an 8% IRR;

Tier 3: Third, (x) 50% to the partners in proportion to their respective ownership interest and (y) 50% to the GP until the cumulative amount distributed to the GP pursuant to this Tier 3 equals 20% of the aggregate amount of distributions made pursuant to this Tier 3 and Tier 2; and

Tier 4: Fourth, (x) 80% to the partners in proportion to their respective ownership interests and (y) 20% to the GP.

When including a catch-up tier, it's helpful to isolate profits from the return of invested capital. In the above example, cash is first distributed to the partners to pay down unreturned capital and all distributions after that first tier represent profit to the investors. The difference between the total amount necessary to achieve an 8% IRR in Tier 2 and the amount necessary for the partners to recoup their invested capital is effectively an 8% (compounded) preferred return.

After the first two tiers are satisfied, it's time for the GP's promote to catch-up to the targeted 20% of total profits in Tier 3. In other words, the Tier 3 promote distributions should equal 20% of the total amount distributed in Tiers 2 and 3, which includes the distributions made to the LPs and the GP.

As an example, if \$100 of pref was paid to the LPs in Tier 2 (assuming the LPs comprise 100% of the ownership interest), the Tier 3 promote would equal \$33 (i.e., Tier 3 catch-up = 20% promote * (\$100 Tier 2 pref + \$33 Tier 3 catch-up + \$33 LP share of Tier 3)).

The Dealmaker's Guide to JV Waterfall Structuring

Many of those in the industry using Microsoft Excel to calculate the catch-up portion of the GP's promote use functions like Goal Seek. This method can work in a pinch if you don't know how to solve for it otherwise, but there is an algebraic solution for the catch-up problem:³

$$\sum_{n=1}^t MGR_{catch} = \frac{MGR_{\%} \sum_{n=1}^t INV_{pref}}{1 - MGR_{\%} \frac{INV_{split}}{MGR_{split}} - MGR_{\%}}$$

The Real Estate Finance Journal

MGR_{catch} = total catch-up promote to GP

$MGR_{\%}$ = targeted profit share (promote, expressed as a percentage)

INV_{pref} = total pref paid to LP

INV_{split} = share of total distributions to LP at catch-up tier

MGR_{split} = share of total distributions to GP at catch-up tier

Promote Crystallizations and Cash-Outs

The classic waterfall promote structure discussed herein is intended to align LP and GP interests and incentivize GP performance on behalf of the LP. However, the economic interests of the LP and GP can diverge over time. In many development projects and other value-add or opportunistic investments, the bulk of the value creation (and appreciation) occurs within the first few years of the investment. After that initial value is captured in the project, the accrual of the LP's preferred return may outpace the underlying asset's value accretion. The inflection point at which value appreciation no longer keeps pace with investors' preferred return is the point at which interests begin to diverge. Beyond that inflection point, LP preferred returns start to erode the value of the promote.

Consider a JV's development project in which the first hurdle rate to the LP is 8%. The value of the project increases at an average rate of 20% per year for the first three years. After completion of construction, lease-up and full stabilization of the property in year three, the value growth (combined with any current yield) slows to an average rate of 6% per year. The LP and GP agree that the JV will not sell the project before stabilization. Upon stabilization, which marks the end of the 20% annual return and the start of the 6% annual return, it is no longer economical for the GP to hold the asset. The LP may have different long-term investment goals from the GP, so it may be comfortable holding the asset for longer, but it is hard for the GP to justify paying 8% to the LP when the property is only generating a 6% return. The value of the GP's promote effectively reaches its height at that year three inflection point. And, if the JV fails to agree on a plan to sell the asset at the inflection point, the economic interests of the LP and GP diverge.

There is a way for the GP to protect the value of its promote. A promote crystallization provision in a JV agreement locks in the value of the GP's promote upon achievement of certain milestones (e.g., project stabilization). When the GP exercises its right to crystallize the promote, the parties to the JV:

1. First, agree on a hypothetical liquidation value of the asset (i.e., fair market value of the asset, net of any outstanding liabilities and hypothetical selling costs).
2. Determine the portion of the hypothetical liquidation value that would be distributed to the LP and GP pursuant to the waterfall, taking into account all historical contributions, distributions and preferred return accrual to date.
3. Divide each partner's portion by the total value. The resulting quotient becomes the partners'

The Dealmaker's Guide to JV Waterfall Structuring

go-forward ownership interest, and any distributions thereafter are distributed pro rata in proportion to the post-crystallization ownership interests. (The waterfall is then disregarded through the dissolution of the JV.)

As an example, say the LP owns 90% of a JV and the GP owns 10%. Upon stabilization of the underlying asset, the GP elects to crystallize its promote. The parties agree to a value and calculation of each partner's effective share of the asset on a hypothetical liquidation basis. Based on the waterfall calculation, the LP's effective share is 75% and the GP's share is 25%. Going forward, partners disregard the waterfall terms, and all distributions are split 75%/25% through disposition of the asset.

A promote cash-out is similar to a promote crystallization provision. The mechanics work the same way with respect to a hypothetical liquidation value run through the waterfall to determine how much each partner would receive. The difference is that, instead of adjusting the ownership interests, the JV simply distributes to the GP the cash value of the promote either at the time of the GP's cash-out election or at the next capital event (i.e., sale or refinance). After the cash-out, the waterfall is disregarded, and distributions are made pro rata in proportion to the partners' unchanged ownership percentages.

Dollar-Based Hurdles

Similar to dollar-based hurdles for LPs, GPs may receive a stated dollar amount upon achievement of the LP's return hurdles. Instead of a nominal profit return to the GP, these most often (but not exclusively) represent a fee or some other payment that might otherwise be earned by the GP. Common examples include acquisition fees (or a portion thereof) or deferred management fees.

Earnouts

Earnouts are deferred payment structures that make compensation contingent on the GP's performance. The performance can be measured in any number of ways — achievement of targeted occupancy level, net operating income or valuation, for example. The compensation can also take many forms. The GP may receive a one-time fee from the JV, a special distribution from profits or additional promote via the waterfall. The compensation amount may also represent a management or acquisition fee but does not have to; as with so many other deal terms, an earnout is subject to negotiation.

Cost Overruns

In development and value-add projects, GPs may be responsible for managing construction costs. If the project goes over budget, the excess is considered a cost overrun. Depending on the nature of and reason for the overruns, some portion of the amount may be reimbursed via the distribution waterfall. Cost overrun capital is usually treated as subordinated capital and reimbursed after satisfaction of the first tier(s) in the waterfall. Cost overrun capital rarely, if ever, earns additional returns upon contribution.

The Real Estate Finance Journal

CLAWBACKS, HOLDBACKS AND REVERSE WATERFALLS

LPs have ways to protect themselves from overpaying promotes, just as GPs have ways to secure promotes.

Clawbacks

One of the most common forms of protection for promote-paying LPs is through what is known as a “clawback.” Most helpful in American-style funds and programmatic JVs with promotes paid on a per deal basis, clawbacks require GPs to return excess promote distributions if the sum of the promote received from individual deals exceeds the promote the GP would receive if all deals in the fund or JV were treated as a single deal.

Assume that an LP and GP form a JV to develop five separate and distinct projects. The partners agree on a promote structure that is to be assessed on a per deal basis and includes a clawback provision. The first three projects perform well and generate a promote; the last two only break even and fail to generate a promote. The GP will receive the promotes from the first three deals; no promote will be paid on the fourth deal, and on the fifth, the partners will calculate the promote assuming all five deals were a single deal and clawback some portion of the promote from the first three deals. Because the last two deals dragged down the overall performance of the JV, the total promote paid to the GP exceeds the amount that would be earned assuming all five deals were a single deal.⁴

Holdbacks

JV partners can avoid significant clawbacks by holding back a portion of the deal-level promote and deferring payment. Some programmatic JVs hold back the promote until disposition of the final asset, while others hold back until the next promote calculation. The JV’s business plan and investment horizon help to inform how to treat promote holdback amounts.

Clawbacks and holdbacks are less common in single-asset JVs, as they would only be useful to the LP if the JV were to distribute enough to generate a promote and then call additional capital from the partners after — not unheard of, but rare.

Reverse Waterfalls

Reverse waterfalls serve a similar purpose to clawbacks, but instead of truing up at the end of the deal, the partners unwind the promote distributions with the next capital call. Two methods for achieving this reversal are a (i) dollar-for-dollar (or simple) reverse waterfall and (ii) hurdle-based (or true) reverse waterfall.

To illustrate, say a JV distributes enough cash to get to the third tier of the following waterfall:

Tier 1: First, to the partners in proportion to their respective ownership interests until the cumulative amount distributed to the LP pursuant to this Tier 1 results in the LP realizing an

The Dealmaker's Guide to JV Waterfall Structuring

8% IRR;

Tier 2: Second, (x) 80% to the partners in proportion to their respective ownership interest and (y) 20% to the GP until the cumulative amount distributed to the LP pursuant to this Tier 2 and Tier 1 results in the Investor realizing a 12% IRR; and

Tier 3: Third, (x) 70% to the partners in proportion to their respective ownership interest and (y) 30% to the GP.

Following the Tier 3 distribution, the JV calls additional capital. In a dollar-for-dollar reverse waterfall, the contributions would be made in the following manner:

1. First, in proportion of the Tier 3 distributions, up to the amount distributed in the third tier;
2. Second, in proportion of the Tier 2 distributions, up to the amount distributed in the second tier; and
3. Thereafter, in proportion of the partners' respective ownership interests.

Dollar-for-dollar reverse waterfalls effectively replace each dollar distributed at each tier. After the contribution, the next distribution is typically at the top of the waterfall.

In a hurdle-based reverse waterfall, the partners contribute capital down to the previous tier's hurdle rate:

1. First, in proportion of the Tier 3 distributions until the amount contributed results in the LP realizing a 12% IRR;
2. Second, in proportion of the Tier 2 distributions until the amount contributed results in the LP realizing a 8% IRR; and
3. Thereafter, in proportion of the partners' respective ownership interests.

Hurdle-based reverse waterfalls are more complex to model and administer, but they do help the partners continue the waterfall seamlessly after the contribution. Instead of restarting at the top of the waterfall, it is easier to justify picking up distributions at whichever tier the reverse waterfall contribution ends.

Reverse waterfalls tend to be more suitable for single-asset JVs, rather than programmatic JVs and comingled funds.

LET THE NUMBERS DO THE TALKING

Although attorneys understand the importance of defining and explaining terms precisely, even the tightest legal drafting can leave room for interpretation. JVAs sometimes include clauses that contradict each other, particularly when discussing the nuances of preferred return computation

The Real Estate Finance Journal

and compounding. Another potential pitfall could show up when discussing which contributions and/or distributions should be considered in the calculation of return hurdles at different tiers.

To avoid disputes, include clear, illustrative examples in exhibits. Using underwritten cash flows can help to memorialize the partners' expectations, but simple, more transparent cash flows help to show the math, which is most helpful in defining deal terms. Examples can be made even more illustrative when calculations and outputs are labelled consistent with the JVA's defined terms and specific distribution sections.

When there is grey area, it is often the numbers, not the words, that ultimately dictate fairness and enforceability.

A well-structured waterfall balances incentives and expectations between LPs and GPs. It should reward true outperformance while safeguarding investors against unintended outcomes. By focusing on clear definitions, fully conceptualized deal terms and transparent examples, both sides can walk away confident in the fairness of the structure.

NOTES:

¹Assumes a single contribution at period 0 and a single distribution at exit.

²Oh, Eun, "Confusion Compounds Confusion," FTI Consulting (October 10, 2025), www.fticonsulting.com/insights/articles/confusion-compounds-confusion.

³Oh, Eun, "Catching Up Elegantly: An Algebraic Solution," FTI Consulting, (November 2, 2020), <https://www.fticonsulting.com/insights/articles/catching-up-elegantly-algebraic-solution>.

⁴Clawbacks only recall promote distributions, so the clawback amount does not exceed the total promote paid.