Internal Rates of Return and Preferred Returns: What Is the Difference?

In a recent negotiation, two parties met to discuss a real estate partnership in which one of the partners would earn a “promote” after the partners recouped their investment and received a 12% annual return, compounded annually. They each drafted term sheets to reflect their understanding, but one drafted the “promote hurdle” as the achievement of a 12% annual IRR and the other drafted the promote hurdle as the receipt of a 12% annual preferred return and a return of all capital. What is the difference? This Article will examine these two alternative approaches and explain where and how they may diverge. The author has assumed that the reader has a basic knowledge of promote calculations in the context of a real estate venture.

Overview

Promote hurdles are often structured in one of the following two ways:

- the “IRR approach” (which, for purposes of this Article, means using a promote hurdle based on payment that achieves an IRR); and
- the “preferred return approach” (which, for purposes of this Article, means using a promote hurdle based on payment of a preferred return and return of capital).

Assuming certain conventions are adopted consistently, these alternative approaches are comparable and will generally yield the same results. However, this assumption is at odds with the author’s experience. In particular, these alternative approaches often adopt different conventions to make the following two calculations (as indicated in the chart below): (1) how the rates and multiple IRRs. See Stevens A. Carey, Real Estate JV Promote Calculations: Rates of Return Part 6 – Calculating the Promote Hurdle, REAL EST. FIN. J., Fall 2012 [hereinafter, Carey, Rates of Return Part 6], which includes citations to parts 1 through 5; Stevens A. Carey, Effective Rates of Interest, REAL EST. FIN. J., Winter 2011; Stevens A. Carey, Real Estate JV Promote Calculations: Avoiding Multiple IRRs, REAL EST. FIN. J., Spring 2012 [hereinafter, Carey, Multiple IRRs].

For convenience, this Article will use partnership terminology, but it applies equally to limited liability companies.

3 For further background, see, for example, Stevens A. Carey, Real Estate JV Promote Calculations: Basic Concepts and Issues (Updated 2013), REAL EST. FIN. J. (forthcoming 2013) (on file with author) [hereinafter, Carey, Basic Concepts and Issues].
hurdle calculation takes into account “Surplus Distributions” (i.e., distributions, and the portions of distributions, that are not needed at the time made to achieve the promote hurdle); and (2) how the return accrues for a partial compounding period.

<table>
<thead>
<tr>
<th>IRR Approach</th>
<th>Preferred Return Approach</th>
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<tbody>
<tr>
<td>(1) Surplus Distributions</td>
<td>Often Included</td>
</tr>
<tr>
<td>(2) Accrual for Partial Compounding Periods</td>
<td>Usually Equivalent Continuously Compounded Rate</td>
</tr>
</tbody>
</table>

These potential disparities can sometimes lead to materially different results. The first difference (relating to Surplus Distributions) is relevant only if capital contributions are made (or taken into account) after Surplus Distributions have been made; and in many, if not most, deals (particularly single-asset deals), this rarely happens. When it does happen, it is often addressed with clawbacks or reserves. But sometimes it is overlooked, and sometimes it is addressed with clawbacks that are flawed; and in either case, can lead to surprising distortions. The second difference (relating to partial compounding period accruals) is often irrelevant because cash flows and calculations may occur only as of (or sufficiently close to) the beginning of a compounding period (so there are no partial compounding periods to address). But when it is relevant, it too can lead to unexpected results.

This Article will explain the IRR and preferred return approaches, and certain common situations when they match and when they do not. For each of these alternative approaches, a running account balance will be created that reflects the amount that must be received at any given time to achieve the hurdle. By comparing these accounts, it should be easier to appreciate the two potential differences described in the chart above, namely: (1) whether Surplus Distributions are included or excluded in the hurdle calculation; and (2) whether the return during a partial compounding period grows in an exponential or a linear fashion. Before proceeding with the comparison of these accounts, this Article will establish a simple partnership promote structure to serve as a framework for the discussion; provide definitions and sample distribution language for each of the IRR and preferred return; and explain the key concepts underlying the differing conventions identified above.

Assumptions – Hypothetical Facts

As a framework for our discussion, unless otherwise indicated, assume the following hypothetical facts (the “Hypothetical Facts”): A financial partner (“Investor”) and a service partner (“Operator”) form a partnership. Investor is responsible for 100% of the capital contributions. Distributions are made as follows:

First, 100% to Investor until it receives what the partners loosely refer to as Investor’s “12% annual promote hurdle”; and Second, the balance is distributed 50/50.

Under these facts, the amount described in the first level is Investor’s promote hurdle, and the distributions to Operator under the second level represent Operator’s promote. Depending on which partner you ask, the “12% annual promote hurdle” may mean achieving a 12% annual IRR or receiving all of its capital and a 12% annual return, compounded annually, or either because these alternatives may be perceived as equivalent.

4 It is difficult, if not impossible, to come up with a precise definition without all the facts. Given the myriad ways in which distribution waterfalls may be crafted, the concepts in this Article may not apply in all circumstances. The particular facts of each transaction must of course be analyzed to determine the applicability of these concepts or the extent to which they require modification so that they do apply. For simplicity, the definition of “Surplus Distributions” in this Article assumes that all distributions to the investor are applied first to the amount, if any, then required to achieve the investor’s hurdle. Thus, for example, if there is a $3 million distribution to the investor at a time when the amount that must be distributed to achieve the investor’s hurdle is $1 million, then $2 million of such distribution would be a Surplus Distribution. See Stevens A. Carey, Real Estate JV Promote Calculations: Recycling Profits, REAL EST. FIN., Summer 2006 [hereinafter, Carey, Recycling Profits]; Carey, Multiple IRRs, supra note 1.

5 Two nominal rates for a stated period (e.g., 21% per annum and 20% per annum) but with different compounding periods (e.g., compounded annually and compounded semiannually, respectively) are “equivalent” if they yield the same effective rate for the stated period (e.g., in the cases noted, 21% per annum); and for purposes of this Article, if there is a nominal rate for a stated period, then an equivalent simple rate for the stated period means the effective rate for the stated period is the same effective rate for the stated period calculated on a simple basis (i.e., calculated on a proportionate basis for other periods). For example, the following rates per annum are equivalent because they all yield 21% for a one-year period: (1) a 21% simple annual rate; (2) a 21% nominal annual rate, compounded annually; (3) a 20% nominal annual rate, compounded semiannually (because $1 + 10\% \times [1 + 10\%] = [1 + 21\%]$); and (4) a 19.062% nominal annual rate, compounded continuously (because $e^{0.21} = 1 + 21\%$ approximately). For more on equivalent rates, see, for example, Stevens A. Carey, Real Estate JV Promote Calculations: Rates of Return Part 1 – The Language of Real Estate Finance, REAL EST. FIN., J., Spring 2011.

6 See id.

7 Although in practice daily and other timing conventions are adopted, unless otherwise stated, this Article assumes a continuous approach so that the beginning of a compounding period is a point in time (rather than the first day of the compounding period) and the end of a compounding period is a point in time (rather than the last day of the compounding period) that is the same as the beginning of the next compounding period. Sometimes the partners may try to avoid the partial compounding accrual issue by timing conventions under which all cash flows and hurdle calculations are deemed to occur at the beginning of a compounding period. However, this solution can create its own problems. See, e.g., Carey, Rates of Return Part 6, supra note 1.
Internal Rate of Return

What is an internal rate of return? An internal rate of return (or IRR) for an investment is typically defined as a discount rate that makes the net present value of the investment cash flows equal to zero, or equivalently as a rate that equalizes:

- the present value of the cash flows to the investor from the investment (“cash inflows”); and
- the present value of the cash flows from the investor to the investment (“cash outflows”).

Sample Definition for Partnership. In a real estate partnership, the cash flows for a partner usually consist of the contributions by the partner to the partnership (the partner’s cash outflows) and the distributions by the partnership to the partner (the partner’s cash inflows). As a result, the IRR for Investor as of any moment in time is often defined in a manner similar to the following:

The “IRR” for Investor as of any moment in time is the rate at which the present value of all contributions made by Investor at or before such moment equal (B) the present value of all distributions received by Investor at or before such moment.

Illustration. To illustrate an application of this definition to specific facts, consider the following example: Example 1. Under our Hypothetical Facts, also assume the following: Investor contributes $100X to the partnership upon formation; one year later, Investor receives a $112X distribution; and Investor makes no other contributions and receives no other distributions. Given these facts, Investor would have achieved, when it receives the $112X distribution, a 12% annual IRR. This IRR is achieved because (when using a 12% annual discount rate, compounded annually) the present value of Investor’s contributions equals the present value of Investor’s distributions.

<table>
<thead>
<tr>
<th>SAMPLE IRR DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present Value of Contributions</td>
</tr>
<tr>
<td>$100X</td>
</tr>
</tbody>
</table>

Sample Distribution Waterfall. Using an IRR approach, the distribution provisions in the partnership agreement might be worded as follows (where the underscored, bold language, which will be discussed later, and the example at the end, may or may not be included):

A. First Level. First, 100% to Investor until it has achieved a 12% annual IRR; and

B. Second Level. The balance, if any, 50% to Investor and 50% to Operator.

Compare the following definitions located randomly by the author on the Internet. One limited partnership agreement sample made available on the Internet by TechAgreements provides the following definition: ‘’IRR’ means the annual discount rate that results in a difference of zero (0), when subtracting the sum of the present values of all amounts contributed to the Partnership by the General Partner and the Class A Limited Partner . . . using such rate from the sum of the present values of all amounts distributed to such Partner . . . using such rate.’’ Limited Partnership Agreement, TechAgreements (2011), http://tinyurl.com/d6dv9g9. From an actual agreement in a 10-Q filing: ‘’IRR’ means the annual rate, compounded annually, at which the net present value (as of the date of the first Capital Contribution by such Partner) of the Capital Contributions made by such Partner to the Partnership (discounted at such rate from the dates such Capital Contributions were made by such Partner), is equal to the net present value (as of the date of the first Capital Contribution by such Partner) of the Capital Contributions made available on the Internet by TechAgreements provided the following definition: ‘’IRR’ means the annual discount rate that results in a difference of zero (0), when subtracting the sum of the present values of all amounts contributed to the Partnership by the General Partner and the Class A Limited Partner . . . using such rate from the sum of the present values of all amounts distributed to such Partner . . . using such rate.’’ Limited Partnership Agreement, TechAgreements (2011), http://tinyurl.com/d6dv9g9. 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Investor shall be deemed to have achieved a 12% annual IRR if and only if (1) the present value of all distributions received by Investor under subsection A above equals or exceeds (2) the present value of all contributions made by Investor, where such present value is determined using a 12% annual discount rate, compounded annually.

As an example, if Investor makes an initial contribution in the amount of $100X and there are no other contributions or distributions during the following 180 days, then the amount necessary for Investor to achieve a 12% annual IRR as of the last day of such 180-day period would be $105.74X (i.e., $100X multiplied by 1.12180/365).12

Preferred Return

What is a preferred return? As the name suggests, a partner’s preferred return is usually a return on such partner’s investment that has some preference or priority over other distributions:

“The term preferred return means a preferential distribution of partnership cash flow to a partner with respect to capital contributed to the partnership by the partner . . .”13

Sample Definition for Partnership. In the author’s experience, the calculation of a preferred return in real estate partnerships is similar to the calculation of interest in real estate mortgage loans (where, for this purpose, each contribution is viewed as a loan advance and each distribution is viewed as a loan payment). Thus, the preferred return is usually calculated on the outstanding balance of a partner’s contributions. The author has often encountered preferred return definitions similar to the following:

\[
\text{Preferred Return} = \frac{\text{Amount Invested}}{\text{Number of Days}} \times \text{Annual Rate of Return}
\]

The 12% annual IRR here would be achieved by a distribution to Investor of $105.74X because the present value of this amount, using an annual discount rate equal to 12%, compounded annually, or an equivalent daily rate (as described below), compounded daily, is $100X. This example uses an equivalent daily rate, compounded daily, namely 1.036531/365, which is as follows:

\[
1.036531/365 = 1.000000 - 1, \text{ an equivalent annual rate, compounded daily, namely 11.33463\%} = 365 \times (1.036531/365 - 1), \text{ which as will be explained later in this Article, should not change the IRR as it is generally formulated. This daily rate is used rather than a continuously compounded rate because it is also assumed that all cash flows occur at the same time of day (and this daily rate is equivalent to the continuously compounded rate that yields a 12% annual effective rate). This daily convention/assumption is common in IRR calculations and implicit in the XIRR function in Excel.}
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\]


SAMPLE PREFERRED RETURN DEFINITION

The “Preferred Return” for Investor for any particular period means the amount that accrues at an annual rate of __ percent (%), compounded annually, on the outstanding balance, from time to time during such period, of the capital contributions made by Investor.14

Illustration. To illustrate an application of this definition to specific facts, consider the following example:

**Example 2.** Assume, under our Hypothetical Facts, the following: Investor contributes $100X to the partnership upon formation; and there are no other contributions to, or distributions by, the partnership during its first year. Given these facts, Investor’s accrued preferred return for that year would be $12X.

**SAMPLE PREFERRED RETURN CALCULATION**

<table>
<thead>
<tr>
<th>Outstanding Contributions for Year</th>
<th>Preferred Return Rate for Year</th>
<th>Preferred Return for Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100X</td>
<td>0.12</td>
<td>$12X</td>
</tr>
</tbody>
</table>

Return “of” Capital. As indicated by Examples 1 and 2 above, a fundamental difference between the IRR and the preferred return is that the IRR includes a return of capital:

- Investor earns a 12% annual return and recoups all of its capital when it achieves a 12% annual IRR; but
- Investor gets only a 12% annual return when it receives a 12% annual preferred return.

Thus, to make the preferred return hurdle (which itself is a return “on” capital) comparable to the IRR hurdle (which is both a return “of” and a return “on” capital), the preferred return may be (and often is) accompanied by a return “of” capital hurdle. To repeat, this Article will be comparing:

- a hurdle based on an IRR; and

14 See, e.g., Amended and Restated Limited Partnership Agreement of New Century Seattle Partners, L.P., dated July 14, 1994, filed by Ackerley Group Inc. as Exhibit 10 to Form 10-Q on Nov. 14, 1994, at § 1.1 (available at http://tinyurl.com/c2ifcenz) (“‘ASDP/LP Preferred Return’ means an amount equal to 18% per annum, computed on the basis of twelve thirty-day months, cumulative and compounded annually, of the ASDP/LP Adjusted Capital Contribution from time to time commencing on the date hereof.”); El Conquistador Partnership L.P., S.E. Amended and Restated Venture Agreement, dated 1999, filed by El Conquistador Partnership L.P., S.E., as Exhibit 3.3 of Form S-11/A on May 12, 1999, at § 1.57 (available at http://www.secinfo.com/dsvRa.6vh.c.htm#ehpe) (“‘PREFERRED RETURN’ means for any Fiscal Year or part thereof an 8.5% annual rate of return on the amount [of] each Partner’s Unrecovered Capital calculated based upon the amount of each Partner’s Unrecovered Capital from day to day [with separate provisions to address compounding in § 1.19].”); see also John C. Murray, A Real Estate Practitioner’s Guide to Delaware Series LLCs (With Form), PRAC. REAL EST. LAW., Nov. 2005, at 32 (“Preferred Return” means an amount that accrues at a per annum rate of ___ percent (%) on all of a Member’s Capital Contributions. The Preferred Return shall accrue on all Capital Contributions from the date such contributions are made until they are returned to the contributing Member. The Preferred Return shall be cumulative and shall compound annually.”).
a hurdle based on a preferred return and a return of capital.

For convenience, references in this Article to the “preferred return approach” will (as noted earlier) mean that there is both a preferred return and a return of capital.

Order of Application. As discussed in Appendix A, it is possible to apply distributions to recoup contributions before paying the preferred return. However, unless otherwise stated, it is assumed that the preferred return approach applies distributions first to pay the accrued preferred return and then it applies the balance to reduce the capital. The order of application may be important if the preferred return accrues on a proportionate basis for a partial compounding period, as it often does.

Sample Distribution Waterfall. Using a preferred return approach, the distribution provisions in the partnership agreement might be worded as follows (where the underscored, bold language, which will be discussed later, and the example at the end, may or may not be included):

A. First Level. First, 100% to Investor until it has received under this subsection A an amount equal to a 12% annual return, compounded annually, on all of Investor’s outstanding capital contributions (i.e., the portion of Investor’s capital contributions that has not been received under subsection B below):

B. Second Level. The balance, if any, 100% to Investor until it has received under this subsection B all of its capital contributions; and

C. Third Level. The balance, if any, 50% to Investor and 50% to Operator.

As an example, if Investor makes an initial contribution in the amount of $100X and there are no other contributions or distributions during the following 180 days, then the amount necessary for Investor to receive as of the last day of such 180-day period a 12% annual preferred return and a return of all its capital would be $105.92X (i.e., $100X multiplied by (1 + .12 x (180/365))).

Promote Hurdles

Both IRRs and preferred returns may be used to establish promote hurdles (i.e., for any given promote, the distributions16 that must be made as a condition to pay-

15 This example assumes, as is common in the author’s experience, that the preferred return accrues proportionately for partial compounding periods. It also assumes a daily convention (which is also common in the author’s experience) under which cash flows are treated the same regardless of what time of the day they occur.

16 For convenience, in many partnership agreements, and generally in this Article, the focus is only on the distributions to Investor that must be made before the promote is paid. In that event, it is the required distributions to Investor that may be called the promote hurdle. (Keep in mind that Investor is making 100% of the contributions under our Hypothetical Facts, so that distributions that go 100% to Investor are in effect being made to the partners in accordance with their capital interests.) This focus on the contributions of, and distributions to, Investor only (rather than those of both partners) is common in deals where non-promote distributions are made pro rata in accordance with capital contributions and each partner’s share of capital contributions remains fixed. If the partners’ shares of capital contributions change, then the partner

ing that promote). Indeed, in the experience of the author, that is the primary function of the preferred return. The IRR, on the other hand, is also (and perhaps more frequently) used to evaluate the historical or prospective performance of an investment (or to compare potential or actual investments), where the applicable IRR is yet to be determined. It is not known until the relevant calculation is made. But in the context of promote hurdles, a specified IRR is predetermined (like a specific preferred return) and promote distributions are not made until the specified IRR is achieved. (If there are multiple hurdles, some promote distributions may be made before a subsequent hurdle has been achieved, but for simplicity, this Article assumes, unless otherwise stated, that there is only one promote hurdle.) The preferred return approach may be equivalent (in terms of results) to an IRR approach, but it may also be different.17

Key Underlying Concepts

The biggest differences between the IRR and preferred return approaches encountered by the author were previewed in the chart in the “Overview” provided at the beginning of this Article and relate to Surplus Distributions and partial compounding period accruals. To rephrase in slightly different terminology, these differences result from conflicts in the manner in which the alternative approaches address these two questions:

Does the approach allow or not allow “recycling of profits”? This is basically a choice between including or excluding Surplus Distributions in the hurdle calculation. Equivalently, using the account balance construct discussed below, it is a choice between allowing or not allowing the hurdle balance to go negative.18

Does the approach use the “theoretical method” or the “practical method” to determine how the return accures within each of the originally stated compounding periods? This is basically a choice, for partial compounding periods, between continuously compounded returns and simple returns.
Before proceeding with the comparative analysis, each of the above-quoted concepts will be explained.

### Recycling of Profits

The underscored, bold language in the Sample Distribution Waterfalls above makes it clear that Surplus Distributions (which, under our Hypothetical Facts, are the 50/50 distributions) are irrelevant (i.e., they are excluded) in determining whether the promote hurdle is (subsequently) met. But that is not always how the distribution waterfall works. Sometimes, Surplus Distributions are taken into account in determining whether the hurdle is met,19 which, as will be explained below, means that the hurdle balance is, in effect, reduced below (or if it is already negative, further below) zero by the amount of each Surplus Distribution to Investor. A negative hurdle balance effectively offsets all or a portion of contributions that are subsequently made (or taken into account).

**Terminology.** The following terminology may be used:

- **recycling of profits:** The offset described above is sometimes called “recycling of profits”: the profits represented by Investor’s Surplus Distributions, and any return on Investor’s Surplus Distributions, are in a sense being “recycled” or refunded to repay the contributions subsequently taken into account.20 Some find it more descriptive to say such profits are “reclassified” (as hurdle distributions) to recoup contributions subsequently taken into account.21

- **When Surplus Distributions are included** in the hurdle calculation (so that the hurdle balance is allowed to go, or if it is already negative, to become more, negative by the amount of each Surplus Distribution), it is sometimes said that recycling of profits is permitted or allowed.22

- **When Surplus Distributions are excluded** from the hurdle calculation (so that the hurdle balance may not go negative), it is sometimes said that recycling of profits is not permitted or allowed.23 To illustrate these concepts in a simple fashion, consider the following example:

**Example 3.** Assume that, under our Hypothetical Facts, there is an annual rate of return of 0% (as opposed to 12%) so that the promote hurdle is merely a return of capital. Assume further that there are only three cash flows in the following order: a $100X contribution by Investor to acquire an asset; a $120X distribution from a refinancing ($100X of which goes to Investor to achieve the hurdle and the remaining $20X of which is shared 50/50, resulting in a total $110X refinancing distribution to Investor); and a $10X contribution by Investor for leasing costs to fill an unexpected vacancy. Under these facts, $10X of the refinancing distribution would be a Surplus Distribution to Investor, and Investor’s hurdle balance after each cash flow would be as follows:

<table>
<thead>
<tr>
<th>Investor Cash Flow</th>
<th>Investor’s Hurdle Balance Immediately After Cash Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling Permitted</td>
<td>Recyling Not Permitted</td>
</tr>
<tr>
<td>$100X Acquisition Contribution</td>
<td>$100X</td>
</tr>
<tr>
<td>$120X Refinancing Distribution</td>
<td>($10X)</td>
</tr>
<tr>
<td>$10X Subsequent Contribution</td>
<td>$0</td>
</tr>
</tbody>
</table>

If recycling were permitted in Example 3, then as indicated in the chart above, $10X of profits would have been recycled: the $10X Surplus Distribution to Investor would be recycled to repay (by offset) the subsequent $10X contribution by Investor (bringing the hurdle balance back up to $0).

Thus, whether or not recycling is permitted in Example 3 means a $10X difference in the hurdle balance after the third cash flow (the difference between a $10X hurdle balance and $0 hurdle balance). This represents a 100% reduction in the hurdle balance and more than 9% of the total investment.24 To further appreciate the consequences of this disparity, consider the following example:

**Example 4.** Assume the facts of Example 3 and that there is a subsequent distribution by the partnership of $10X upon sale. In that event, 100% of the subsequent distribution would go to Investor when recycling is not permitted whereas only 50% of it would go to Investor if recycling of profits is permitted:

<table>
<thead>
<tr>
<th>Total Cash Flow</th>
<th>Investor Cash Flow</th>
<th>Operator Cash Flow</th>
<th>Investor Hurdle Balance Immediately After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling Permitted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$100X Acquisition Contribution</td>
<td>$100X C</td>
<td>$0 C</td>
<td>$100X</td>
</tr>
<tr>
<td>$120X Refinancing Distribution</td>
<td>$10X D</td>
<td>$10X D</td>
<td>($10X)</td>
</tr>
<tr>
<td>$10X Subsequent Contribution</td>
<td>$10X C</td>
<td>$0 C</td>
<td>$0</td>
</tr>
<tr>
<td>$10X Final Sale Distribution</td>
<td>$5X D</td>
<td>$5X D</td>
<td>($5X)</td>
</tr>
</tbody>
</table>

24 Regardless of whether recycling of profits is permitted, the additional $10X contribution means that there are only $10X of profits: $120X of distributions - $110X of contributions = $10X of profits. Operator has received 100% of those profits instead of its intended 50% share. As will be discussed later, partners often use a clawback to address this unintended disparity, although some clawbacks encountered by the author don’t work (as shown in Example 5). But if there are sufficient distributions and recycling of profits is not permitted, then, as Example 4 illustrates, a clawback may not be necessary.

---

19 By contrast, with typical loan amortization there would be no Surplus Distributions at all, because a borrower does not typically pay more than the outstanding balance of principal and interest.

20 See Carey, Recycling Profits, supra note 4. Note that the phrase “recycling of profits” is not intended to refer to all profits: the recycling involves only Surplus Distributions.

21 Altshuler Schneiderman, Overpayment of Manager Incentive Fees—When Preferred Returns and IRR Hurdles Differ, 17 J. REAL EST. PORTFOLIO MGMT. 181, 184 (2011).

22 See supra note 18.

23 As one may surmise from note 18 (which discusses the possibility of temporarily excluding Surplus Distributions from the hurdle balance calculation, and keeping separate track of them so that they might be taken into account later), exclusion of a Surplus Distribution means, for purposes of this Article, permanently disregarding the Surplus Distribution for purposes of the hurdle calculation. But, as they say, never say “never”: Although Surplus Distributions may not be taken into account in determining the current or any subsequent hurdle, they may still be relevant for a clawback.
In Example 4, when recycling is permitted, Investor ends up with $5X less! See Appendix B for a more detailed example (with a positive rate of return), which illustrates a more extreme disparity.

Using Underscored Language. To repeat, if the underscored, bold language is deleted under recycling is permitted. But without further information it is far from clear, as explained in Appendix C.

If the underscored, bold language is deleted under the preferred return Sample Distribution Waterfall, then recycling of profits might be permitted. But without further information it is far from clear, as explained in Appendix C.

If the underscored, bold language is deleted from the IRR Sample Distribution Waterfall, then, unlike the preferred return Sample Distribution Waterfall, there is no ambiguity. Recycling of profits will be permitted because the IRR in the IRR Sample Distribution Waterfall involves "all distributions," which would include Surplus Distributions.

Custom and Practice. In the author’s experience, many transactions involving preferred returns do not allow recycling of profits. By contrast, while the author has encountered and drafted IRR formulations that do not permit recycling of profits, in the author’s experience, the IRR approach typically allows recycling of profits. Therefore, to determine how to share Surplus Distributions, recycling of profits may result in the double-counting of Investor’s share of 50/50 distribution, first as Investor’s Surplus Distributions, and later as distributions taken into account in achieving the hurdle.25 This double-counting occurs in Examples 3 and 4 above, where it results in profit splits of 0/100 and 25/75, respectively, instead of the intended 50/50 split.

Addressing the Problem: Flawed Clawbacks? Of course, even under the IRR approach, one can avoid the recycling/double-counting problem by not permitting recycling of profits. However, if partners use the IRR approach, then, in the author’s experience, the recycling/double-counting problem is usually addressed in other ways.26 Sometimes reserves are used to reduce the likelihood of subsequent contributions, but that may be far from a complete solution. More often than not, the apparent solution encountered by the author is a clawback.27 But some clawbacks may not work as anticipated. Consider, for example, the following clawback, similar versions of which the author has encountered on more than one occasion when recycling of profits is permitted:

<table>
<thead>
<tr>
<th>Flawed Clawback</th>
</tr>
</thead>
<tbody>
<tr>
<td>(when recycling of profits is permitted)</td>
</tr>
<tr>
<td>&quot;If Investor has not achieved the promote hurdle as of the liquidation of the partnership, then Operator shall return the promote distributions, if any, it has received up to the amount necessary to cause Investor to achieve its promote hurdle.&quot;</td>
</tr>
</tbody>
</table>

To illustrate the problems with this formulation, consider the cash flows in Example 3 (with a slight variation in the assumed facts):

Example 5. Using our Hypothetical Facts, assume the facts of Example 3, except that the $10X subsequent contribution is made to fund a payment to the lender in connection with a deed in lieu of foreclosure (to obtain a release from recourse guaranties); so that liquidation occurs at the time of the second contribution, there is nothing further to distribute, and Operator ends up with all the profits ($10X). Thus, the promote hurdle is simply a return of capital and the cash flows (and profits) are as follows:

25 See Carey, Multiple IRRs, supra note 1.
26 Id. 27 Of course, clawbacks typically address the more general problem of returning unearned promote distributions. The recycling/double-counting issue is just a special case of the unearned promote issue. However, unearned promote distributions may occur even if recycling of profits is not permitted. For example, imagine a partnership which has separate distribution waterfalls for operating cash flow and capital proceeds (and capital is recouped only from the capital proceeds waterfall) and which does not permit recycling of profits. There could be promote distributions from operating cash flow and then the partners fail to recoup all of their capital on sale (even though recycling of profits is not permitted). Also, see Example 3, in which there are different hurdle balances depending on whether recycling of profits is permitted, but in either case Operator ends up with 100% of the profits (50% of which may be viewed as unearned promote distributions) if the deal ends when the third cash flow is made (as Example 5 indicates).
How does the quoted clawback provision above work under these facts? If recycling is permitted, then Investor’s 50% share of the $20X of Surplus Distributions results in a negative hurdle balance (i.e., -$10X), and the subsequent $10X contribution results in a $0 hurdle balance. As a result, the hurdle is achieved as of the liquidation of the partnership. Therefore, the clawback does not result in any adjustment! Obviously, it is not intended that Operator get $10X profits and Investor get $0. The subsequent contribution effectively eliminated $10X of the prior profits, which the partners shared equally, so Investor may expect Operator to bear 50% of that loss. Thus, a payment by Operator to Investor of $5X would achieve the intended result (so that each partner would end up with $5X of the profits, and profits would be shared 50/50). This result could be accomplished in other ways, including a clawback of $10X followed by a 50/50 distribution.28

Practical vs. Theoretical Methods

In order to understand how any promote hurdle works, it may also be necessary to know how the return accrues during partial compounding periods (i.e., after the beginning and before the end of each of the originally stated compounding periods). There are two alternative approaches that are typically utilized29:

- The theoretical method; and
- The practical method.

Theoretical Method. Under the theoretical method, the return accrues during each of the original compounding periods (and at all times) in an exponential manner (based on the equivalent nominal annual rate that compounds continuously). For example, under the Hypothetical Facts, the theoretical method daily rate (assuming a 365-day year) would be a proportionate part of the annual rate, namely 12%/365, which is approximately 0.0328767%; and this rate would accrue on a simple basis (i.e., without compounding), like simple interest, during each annual compounding period (to achieve an effective annual rate of 12%).

Practical Method. Under the practical method, the return accrues during each of the original compounding periods in a linear manner (based on a proportionate amount of the originally stated nominal annual rate). For example, under the Hypothetical Facts, the practical method daily rate (assuming a 365-day year) would be a proportionate part of the annual rate, namely 12%/365, which is approximately 0.0328767%; and this rate would accrue on a simple basis (i.e., without compounding), like simple interest, during each annual compounding period (to achieve an effective annual rate of 12%).

Comparison; Illustration. The theoretical method daily rate is 0.0018229% less than the practical method daily rate. But the theoretical method rate is continuously compounding, and the practical method rate is not compounding at all (during the compounding period), so growth under the theoretical method catches up with growth under the practical method by the end of the compounding period. To get a rough picture of how this works, imagine a shallow lemon wedge with a straight side on top, and angle it so the straight side is rising from left to right.

Growth under the theoretical method arcs its way up exponentially underneath while growth under the practical method takes the straight path on top. They both get to the same place at the end of the compounding period.

The author does not have a sophisticated graphing function, but using Excel, the graph below is an attempt to provide a more precise illustration. Given an annual rate of 100%, compounded annually, the following graph shows: (1) the theoretical method (i.e., continuously compounded growth during each compounding period) with the exponential curve on the bottom; and (2) the practical method (i.e., simple growth during each compounding period) with the straight-line segments on the top.

28 The reverse waterfall described in Carey, Multiple IRRs, supra note 1, would require Operator to fund $5X of the $10X contribution, which also gets to the right result. The author has also seen flawed clawbacks in deals in which recycling is not permitted. For example, one could provide that Operator pays its promote distributions to Investor to the extent of any deficiency in Investor’s promote hurdle upon liquidation. This formulation would require Operator to pay Investor $10X under Example 5, which would give Investor 100% of the profits and leave Operator with nothing. Although not entirely clear, the quoted clawback provision above could reach the same result if recycling of profits is not permitted.


30 This example uses a daily rate to facilitate a comparison with the practical method. This daily rate, compounded daily, is equivalent to the nominal annual rate, compounded continuously, which yields an effective annual rate of 12%, as indicated below in the discussion of “Equivalent Rates”.
In the chart above, the two methods reach the same point at the end of each year. The common result reflects the fact that the effective annual rate is not changed by the method chosen. More generally, the choice of the theoretical and practical methods does not alter the effective rate for the stated compounding period. It merely changes how the return accrues during each compounding period (i.e., for a partial compounding period). By contrast, what would happen if one started with a 100% annual rate and then graphed both a 100% simple annual rate and a continuously compounded rate which yields 100% for one year? In that event, one would get the same exponential curve one sees in the chart above, and the new chart would be the same as the chart above for the first year. But after the first year, the line segment for the first year would be extended to create a single straight line and the two graphs would never meet again.

Intermediate Cash Flows. Under the Hypothetical Facts (with annual compounding), the daily rate for the theoretical method is less than the daily rate for the practical method, but because of the daily compounding of the theoretical method daily rate, these methods will accrue the same amount of return for an entire annual compounding period (on an amount that remains invested for the entire annual compounding period). Thus, both the daily rates noted above (for the theoretical method and the practical method) yield 12% for an entire year. More generally, the choice of methods is irrelevant when each cash flow occurs at (and each hurdle calculation is made as of) the beginning of one of the originally stated compounding periods. This Article will sometimes refer to a cash flow that does not occur at the beginning of one of the originally stated compounding periods as an "Intermediate Cash Flow." Similarly, a hurdle calculation that does not occur at one of the originally stated compounding times is sometimes called an "Intermediate Hurdle Calculation."

Equivalent Rates. When the theoretical method is adopted, and the effective annual rate is known, then the so-called equivalent nominal annual rates for different compounding periods all yield the same effective rate, not only for a full year, but also for a half year, a quarter, a month or a day:

<table>
<thead>
<tr>
<th>Equivalent Nominal Annual Rates</th>
<th>Full Year</th>
<th>Semiannual Period</th>
<th>Quarter</th>
<th>Month</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>12% compounded annually</td>
<td>12.0000%</td>
<td>5.83005%</td>
<td>2.87373%</td>
<td>0.94888%</td>
<td>0.03105%</td>
</tr>
<tr>
<td>11.66010% compounded semiannually</td>
<td>12.0000%</td>
<td>5.83005%</td>
<td>2.87373%</td>
<td>0.94888%</td>
<td>0.03105%</td>
</tr>
<tr>
<td>11.49494% compounded quarterly</td>
<td>12.0000%</td>
<td>5.83005%</td>
<td>2.87373%</td>
<td>0.94888%</td>
<td>0.03105%</td>
</tr>
<tr>
<td>11.38655% compounded monthly</td>
<td>12.0000%</td>
<td>5.83005%</td>
<td>2.87373%</td>
<td>0.94888%</td>
<td>0.03105%</td>
</tr>
<tr>
<td>11.33463% compounded daily</td>
<td>12.0000%</td>
<td>5.83005%</td>
<td>2.87373%</td>
<td>0.94888%</td>
<td>0.03105%</td>
</tr>
<tr>
<td>11.33287% compounded continuously</td>
<td>12.0000%</td>
<td>5.83005%</td>
<td>2.87373%</td>
<td>0.94888%</td>
<td>0.03105%</td>
</tr>
</tbody>
</table>

In fact, they yield the same result for any period because growth under the theoretical method for an effective annual rate \( r \) is reflected by the exponential curve \((1 + r)^t\), and each of the rates that are equivalent to \( r \) merely reflects points on that same curve. Thus, the rates in each row of the first (far left) column of the above chart are truly equivalent under the theoretical method. This is important for the IRR, because most calculators and many computer programs require a uniform cash flow period; while it is always possible to find a uniform cash flow period (e.g., the greatest common divisor of the actual cash flow periods), only the theoretical method (with continuous compounding) assures that the equivalent rate for any uniform period will be the same substantive rate regardless of the period chosen.

However, under the practical method, the rates in each row of the first (far left) column of the above chart may yield different results from the compounded nominal annual rate if the period in question is less than a full compounding period (or is not an integral multiple of a compounding period):
In summary, in the chart for the theoretical method, the rates in each column (after the first column) are the same. But with the practical method, the rates in each column are the same only from the shaded diagonal entry down. The rates above the shaded diagonal entry (reflecting partial compounding periods) are different.

**Practical Method – Fixed vs. Separate Compounding.** If the practical method is adopted, then there is yet another set of alternatives to consider in the hurdle calculation. When does each compounding period commence? The author has encountered two types of discrete compounding used in practice (although, in the author’s experience, neither is typically spelled out in the partnership agreement):

- **Separate Compounding.** One, which may be called “separate compounding,” provides separate consecutive compounding periods of the stated duration for each cash flow (or each cash outflow, in the case of a preferred return or similar-type hurdles) commencing when the cash flow occurs. For example, with an annual rate that compounds annually, using the practical method with separate compounding, the accrued and unpaid return on each contribution would compound on each anniversary of the time such contribution was made.

- **Fixed Compounding.** The other, which may be called “fixed compounding,” provides for the same compounding periods for all cash flows commencing at the same fixed specific times. For example, the compounding times might be the end of each calendar year or each anniversary of the initial cash flow.

For simplicity, unless otherwise stated, it will be assumed that when the practical method is adopted, there will be fixed compounding that starts with the time of the first cash flow.

**Custom and Practice.** Even though the author has seen some so-called "IRR" formulations to the contrary, the textbooks, calculators, computer programs and partnership agreements involving IRRs encountered by the author indicate that IRR formulations usually (and almost always) adopt the theoretical method. Unless otherwise stated, this Article will assume that when the IRR is used, the theoretical method has been adopted. By contrast, in the author’s experience, most (but not all) transactions involving preferred returns have used the practical method. The practical method may also be consistent with the way U.S. mortgage loans are treated.

### When Promote Hurdles Match

If the theoretical method is adopted and there are no Surplus Distributions prior to the final cash flow, it is easily proven (assuming a stated annual rate of return compounded over a unit fraction of a year) that the IRR and preferred return approaches yield the same results. From this conclusion, it follows that if the theoretical method is adopted and recycling is not permitted, then (assuming a stated annual rate of return compounded over a unit fraction of a year), the IRR and preferred return approaches yield the same results.

Even if there are Surplus Distributions prior to the final cash flow and recycling is permitted, as long as the theoretical method is adopted, the IRR and preferred return times of day and then uses a daily rate that is equivalent to the continuously compounded rate. It then generates an effective annual rate.

32 The author does not recall encountering United States loans with a stated compounding period and a more frequent payment period (although some cash flow mortgages may have been structured this way). The author has encountered many U.S. loan documents indicating that the interest for a partial month is to be calculated using a proportionate per diem amount, which suggests simple interest, and therefore the practical method. Moreover, in the author’s experience, it is common for a U.S. loan not to state any compounding period. All that may be stated is an annual interest rate and monthly payments. As long as interest is payable currently, there may be no need for compounding except in the context of default interest. See Carey, Rates of Return Part 4, supra note 29.

33 A "unit fraction" is a fraction where the numerator is 1 and the denominator is a positive integer. Thus, the unit fractions are 1/1, 1/2, 1/3, 1/4, and so on.

34 See Carey, Rates of Return Part 4, supra note 29, app. 4E.

35 Not allowing recycling of profits yields a modified set of cash flows for the hurdle calculation with Surplus Distributions excluded.

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31 The XIRR function in Excel is somewhat different because it uses a timing convention to regularize the cash flows. Basically, it assumes that all the cash flows occur at the same
turn approaches will have the same balances if negative balances are allowed and they accrue a return at the hurdle rate.\textsuperscript{36}

If the theoretical method is not adopted under the preferred return approach (as is frequently the case in the author’s experience), then the IRR and preferred return approaches may yield different results (assuming, as is often, if not usually, the case, that there is at least one Intermediate Cash Flow or Intermediate Hurdle Calculation).\textsuperscript{37} As noted earlier, it is assumed that the theoretical method has been adopted for the IRR (which is typically the case anyway); this will make it easier to compare the IRR and the preferred return approaches. It is time to proceed with that comparison.

\textbf{Comparison to Bank Accounts}

Comparing the IRR and preferred return approaches may seem like comparing apples and oranges. The preferred return approach may appear both familiar (because of its similarity to a loan) and simple, while the IRR approach may appear both foreign and convoluted. Can these two approaches be repackaged in a way that makes them easier to contrast?

The answer is yes. One may recast Investor’s promote hurdle through a hypothetical account (like a bank account, but with its own set of algorithms) which, at any point in time, has a balance equal to the distribution amount Investor\textsuperscript{38} must receive to achieve the hurdle. (If, however, negative hurdle balances are allowed, then a negative balance as of any point in time indicates that the hurdle has already been achieved, and is exceeded, as of that time, and the amount of the negative balance equals the amount Investor must contribute to achieve, but not exceed, the hurdle at that time.)

Now, let’s construct hypothetical accounts that will generate the ongoing outstanding IRR or preferred return (with return of capital) hurdle balance.

\textbf{IRR Account}

For the IRR approach, the notion of a running account balance may seem confusing and cumbersome if the cash flows must be discounted rather than grown. The good news is that (assuming the theoretical method is adopted for the IRR calculation as it typically is and as is being assumed in this Article) one may equate the time value of the cash flows in the future (or as of any time, and not just as of time zero):

“The internal rate of return (IRR) for the transaction is the interest rate at which the value of all cashflows out is equal to the value of cashflows in. Any valuation point can be used in setting up an equation of value to solve for an internal rate of return on a transaction, although there will usually be some natural valuation point, such as the starting date or the ending date of the transaction.”\textsuperscript{39}

Thus, an IRR may be defined as a rate that equalizes the future value of the cash inflows and the future value of the cash outflows (where future value is determined as of the relevant calculation time); and the IRR hurdle balance as of a particular time for a given rate may be viewed as the future value of the cash outflows less the future value of the cash inflows (where the future value is calculated as of such time using the given rate and the balance may or may not be allowed to go negative). By growing forward in this way (rather than discounting backward), the IRR account is relatively easy to construct.

Although a single account will suffice when the theoretical method is adopted, the following two subaccounts will be utilized, which should make it easier to see that the proposed account approach does, in fact, generate the IRR hurdle balance\textsuperscript{40}, one for contributions and one for distributions so that the IRR account balance is simply the balance of the contribution subaccount less the balance of the distribution subaccount (assuming recycling of profits is permitted).

\begin{itemize}
  \item Both subaccounts begin with a zero balance;
  \item The contribution subaccount is increased by the amount\textsuperscript{41} of each contribution by Investor when made;
  \item The contribution subaccount is continuously increased by the 12% annual return;
  \item The distribution account is increased by the amount of each distribution to Investor when made; and
  \item The distribution subaccount is continuously increased by the 12% annual return.
\end{itemize}

Before noting qualifications to be added if recycling of profits is not permitted, here is an example of how the IRR subaccounts work:

\textbf{Example 6}. Under our Hypothetical Facts, assume that recycling is permitted, and that Investor has annual cash flows in the same amounts as the Investor cash flows in Example 3:

\textsuperscript{36} See Carey, Rates of Return Part 4, supra note 29, app. 4E.
\textsuperscript{37} Id.
\textsuperscript{38} See supra note 16.
Remember, the calculation of the contribution and distribution subaccount balances is straightforward: each subaccount is simply increased by contributions and distributions, respectively, and grows at 12% per annum, using the theoretical method. The IRR hurdle balance is simply the difference between the subaccount balances (as indicated). Thus, at the end of 30 months, the Investor IRR account balance would be $12.95X, meaning that a distribution to Investor at that time in the amount of $12.95X would result in Investor having a 12% annual IRR at that time. Example 6 is very similar to Examples 3 and 5, but in Example 6, there is a 12% (as opposed to 0%) annual return and the hurdle balance after two years is $12.24X instead of $0. In Example 6, the hurdle balance does not go negative; but had the $110X distribution been more than $112X, then there would have been a negative balance from that time until the $10X contribution. The operation of the theoretical method is apparent at the half-year marks (after 6, 18 and 30 months), but due to the fact that there are no Intermediate Cash Flows, there are no distinguishing consequences (resulting from the use of the theoretical method) unless the hurdle calculation occurs as of an intermediate time.

If, contrary to the assumption above, recycling of profits is not permitted, then the IRR account balance would not be allowed to go negative. Accordingly, the distribution subaccount balance would never be allowed to exceed the contribution subaccount. To the extent any distribution would cause such an excess, that portion of the distribution would simply be ignored (and would be permanently disregarded even if the IRR hurdle later becomes positive).

### Preferred Return (With Return of Capital) Account

The preferred return approach already seems similar to a bank account: each contribution of Investor is like a deposit, the return is like interest, each distribution to Investor is like a withdrawal, and the balance is the then amount that must be received by Investor under the promote hurdle before there are any promote distributions. For convenience, assume that there are two subaccounts, one for capital and one for accrued return before it is added to capital. When the theoretical method is adopted, capital and return (principal and interest) are fungible, so these subaccounts could be collapsed into a single account. When the practical method is adopted, the uncapitalized return (i.e., the current return that has not yet been compounded) must be tracked separately. In any case, the hurdle (account) balance as of any given time is the sum of the two subaccounts. In practice, daily conventions are likely to be utilized, but for simplicity, unless otherwise indicated, continuous accrual and accounting are assumed. The rules governing the two subaccounts would be as follows (assuming recycling of profits is not permitted):

- Both subaccounts begin with a zero balance;
- The capital subaccount is increased by the amount of each contribution by Investor when made;
- The accrued return subaccount is increased continuously by a 12% annual return on the outstanding positive balance, if any, of Investor’s capital subaccount;
- The accrued return subaccount is reduced (but not below zero) by the amount of each distribution to Investor when made;
- The capital subaccount is reduced (but not below zero) by the remaining portion, if any, of each distribution after the accrued return subaccount is reduced to zero; and
- At the end of each compounding period (remember that fixed compounding is assumed in this Ar-

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42 As noted earlier, it is assumed for simplicity that when the practical method is adopted, there are fixed compounding times for all cash flows, which begin with the time of the first cash flow. It is possible, of course, to have fixed compounding periods that start at a time other than the first cash flow. It is also possible to have separate compounding periods for each cash flow (in which event one might need a separate account for each contribution, with its own two subaccounts, and allocation rules for application of distributions to subaccount balances). See Stevens A. Carey, Real Estate JV Promote Calculations: Rates of Return Part 3 – Compound Interest to the Rescue?, REAL EST. FIN. J., Fall 2011, apps. 3A.1–3A.3.

43 Assuming continuous accrual does not mean there is continuous compounding. A simple interest rate may accrue continuously and it obviously does not compound.

44 To avoid any confusion, it is the positive amount of the contribution that is added to the account, as noted previously for the IRR account. See supra note 41.

45 The portion of each distribution that is not taken into account is permanently disregarded in this formulation even if the capital subaccount later becomes positive (which, as observed in note 23, is consistent with the notion of not allowing recycling of profits). If the excess distribution were later taken into account (to reduce a subsequently positive capital subaccount), then the result would be the same as allowing the account balance to go negative (although, unless otherwise stated, there may be no interest factor applied to the equivalent negative balance).
ticle if the practical method is adopted\textsuperscript{46}, the balance of the accrued return subaccount is transferred to the capital subaccount.

Before noting qualifications to be added if recycling of profits is permitted, here is an example of how these subaccounts work.

\textsuperscript{46} See supra note 42.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>$100X Contribution</td>
<td>$100.00X</td>
<td>$0</td>
<td>$100.00X</td>
</tr>
<tr>
<td>6</td>
<td>$0</td>
<td>$100.00X</td>
<td>$6.000X</td>
<td>$106.00X</td>
</tr>
<tr>
<td>12</td>
<td>$110X Distribution</td>
<td>$2.00X\textsuperscript{47}</td>
<td>$0\textsuperscript{48}</td>
<td>$2.00X</td>
</tr>
<tr>
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<td>$0</td>
<td>$2.00X</td>
<td>$0.120X</td>
<td>$2.12X</td>
</tr>
<tr>
<td>24</td>
<td>$10X Contribution</td>
<td>$12.24X</td>
<td>$0</td>
<td>$12.24X</td>
</tr>
<tr>
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<td>$0</td>
<td>$12.24X</td>
<td>$0.734X</td>
<td>$12.97X</td>
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</tbody>
</table>

\textsuperscript{47} After 12 months, immediately before the $110X distribution to Investor, the balance of the accrued return subaccount, which is then $12X, is added to the contribution subaccount, so that the contribution subaccount balance is $112X and the accrued return subaccount balance is $0. The $110X distribution is applied to the $112X contribution subaccount balance, leaving a net balance of $2X.

\textsuperscript{48} Id.

Thus, at the end of 30 months the Investor preferred return (with return of capital) account balance would be $12.97X, meaning that a distribution to Investor at that time in the amount of $12.97X would result in Investor receiving a 12% annual preferred return and recouping its capital. Like Example 6, the distributions in Example 7 never exceed the then hurdle balance. But had the $110X distribution been more than $112X, then only $112X of the distribution would have been taken into account. The difference between the final $12.95 hurdle balance in Example 6 and the $12.97 hurdle balance in Example 7 is attributable solely to the use of the theoretical method in one and the practical method in the other.

If recycling of profits were permitted, then the bold underscored language in the rules above could be changed to read as follows: \textit{(it being understood that the reduction may result in a negative balance, in which event the accrued return subaccount shall be reduced continuously by a 12\% annual return on the amount of any negative balance in the capital subaccount).} The quoted language in the preceding sentence is intended to replicate the way the typical IRR calculation allows for recycling of profits. However, in the author's experience when recycling of profits is permitted under the preferred return approach, negative balances typically do not accrue a return as they do when recycling of profits is permitted under the IRR approach.\textsuperscript{49}

As noted earlier, if the theoretical method has been adopted, then all return is immediately added to capital, so separate subaccounts are not necessary. In that event, contributions could be added as positive amounts and distributions could be added as negative amounts (and if recycling were not allowed, such negative distribution amounts would be disregarded to the extent they would otherwise cause the balance to go below zero).

Comparing Account Balances

Earlier in this Article, it was noted that the two alternative (IRR and preferred return) approaches produce the same results when there is no recycling of profits (or more generally when Surplus Distributions do not occur or are ignored) and the theoretical method is adopted. The hypothetical accounts that have been created for the IRR and preferred return approaches may provide an intuitive explanation of this equivalence.

\textbf{Apparent Differences}. These hypothetical accounts, which are explained and illustrated above, may seem very different: the IRR sub-accounts keep running gross subtotals, while the preferred return sub-accounts keep running net subtotals (after deduction for distributions):

- in the IRR account, the return accrues on the gross amount of contributions and on the gross amount of distributions (and, in each case, the accrued return thereon); while
- in the preferred return account, the return accrues on the net amount of contributions (and accrued and unpaid return that has compounded).

Yet these accounts are more alike than they appear at first blush. Both account balances are effectively increased by contributions and reduced by distributions and both accounts accrue a return on unrecovered contributions and (to the extent there has been compound-
ing, which is assumed to be continuous for the IRR) the unpaid return. Assuming the theoretical method has been adopted in both cases, the differences are simply that the IRR account has the following additional features not present in the preferred return account:

- the IRR account is increased by a return on the recouped contributions (and on the paid return); and
- the IRR account is reduced by a return on distributions.

**Different Ways to Reach Same Result?** But if there are no Surplus Distributions (i.e., no distribution exceeds the then account balance) and the theoretical method is adopted in both cases, then these two unique features of the IRR account offset one another. The recoupment of contributions and payment of return, on the one hand, and the distributions used to recoup/pay them, on the other hand, occur at the same time in matching amounts and accrue matching returns and therefore simply cancel one another out when the distribution subaccount is subtracted from the contribution subaccount. See Appendix E for examples.

**Different Results.** The above comparison assumes that the theoretical method has been adopted for both hurdle approaches. As previously noted, this assumption is consistent with the typical IRR formulation but is often inconsistent with the preferred return approach. Assuming the practical method has been adopted instead for the preferred return approach, then further assuming return calculations were done daily, the accounts for the IRR and the preferred return approaches would be using different daily rates (approximately 0.0310538% and 0.0328767%, respectively) for return accruals. This disparity is illustrated by a comparison of Examples 6 and 7. Moreover, although the IRR approach commonly allows a negative balance, the preferred return approach may not; and even when the preferred return approach allows for a negative balance, that negative balance may not accrue a return as it would with the IRR approach.

**Quantifying the Difference**

To repeat, it is the author’s impression that there are often two key points of departure between the IRR and preferred return approaches:

- recycling of profits is typically permitted under the IRR approach but may not be permitted under the preferred return approach; and
- the theoretical method is generally adopted in the context of an IRR hurdle, but the practical method is relatively common in the context of the preferred return hurdle.

Often these differences will not matter, but when they do, the consequences can be material.

**Theoretical vs. Practical Method: Partial Compounding Periods.** As a general matter, when calculating the return for a partial compounding period, the theoretical method results in a smaller amount than the practical method.

**Example 8.** Under our Hypothetical Facts, assume the following additional facts: on the first day of Year 1, Investor contributes $10 million and makes no other contributions; and during the first 5 years, the only distributions equal exactly $100,000 per month at the beginning of each month, starting with the second month.

- **IRR (with theoretical method).** Using an IRR and the theoretical method, all equivalent rates are substantively the same, so the parties can use the equivalent nominal annual rate that compounds monthly, which is approximately 11.38655% (and a monthly rate of approximately 0.948879%). The accrued return each month would be approximately $94,887.90. The monthly $100,000 distribution to Investor is therefore $5,112.10 more than what is needed to pay the accrued return. This incremental excess effectively reduces capital and, as a result, the monthly hurdle balance (immediately after the monthly distribution) gets smaller and smaller over time. At the end of 5 years (immediately after the final monthly distribution of $100,000), the hurdle balance would be $9,589,290.

- **Preferred Return (with practical method).** Using a preferred return (and return of capital) hurdle and the practical method, the return would accrue on a straight-line (simple) basis during the year, so the accrued return each month would be $100,000. This amount would be paid to Investor and applied to pay the current monthly return. There would be no reduction of capital. At the end of 5 years, the hurdle (immediately after the final monthly distribution of $100,000) would be $10 million.

The disparity in the hurdle balance in this example exceeds $400,000 (more than 4% of the total $10 million equity investment). If the rate were 20% per annum and the monthly payments were $166,667, then after five years the difference would exceed $1.3 million (more than 13%), and after 10 years, the difference would exceed $4.5 million (more than 45%).

**Recycling Profits: Surplus Distributions.** Typically, the IRR approach takes into account Surplus Distributions (in which event the hurdle balance may become negative), while the preferred return approach often excludes Surplus Distributions (in which event the hurdle balance may never be negative). Consequently, the hurdle balance under the IRR approach may be less than the hurdle balance under the preferred return approach. Generally, the difference is not only the amount of the Surplus Distributions; it may also include the return that accrues on the Surplus Distributions (prior to the time, if any, they are offset by contributions subsequently taken into account). This difference will be relevant only if there are contributions that subsequently increase the account. But then it can make a difference: the next contribution taken into account will result in a positive preferred return (with return of capital) hurdle in the full amount of the contribution; but the IRR hurdle balance will be positive only to the extent, if any, the contribution exceeds the negative balance immediately prior to taking the contribution into account. As suggested previously, this difference may be mitigated with reserves and clawbacks (if drafted properly). But if it is not addressed, it can be material. The disparity in the hurdle balance immediately after the subsequent contribution in Example 3 ($10X) was more than 9% of the total equity investment ($110X) and, as shown in Appendix B, it is easy to construct examples where the disparity is much greater.

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[50] See the discussion of KEY UNDERLYING CONCEPTS in the body of this Article.
Simplicity of Preferred Return vs. Utility of IRR

The preferred return approach may seem less confusing than the IRR. The preferred return approach may also make it easier to eliminate recycling of profits: some partners are reluctant to tinker with the IRR calculation, but recycling is often (and is easily) eliminated in the preferred return calculation. The preferred return may also make it easier to adopt the practical method, which in many circumstances may lead to more whole dollars for Investor. More generally, the preferred return approach may seem more intuitive given the closer connection with the common notion of a bank account. So why not use a preferred return approach all the time?

Indeed, there is much to be said for the familiarity of the concepts involved in the preferred return approach. But many partners, and real estate professionals generally, are accustomed to working with IRRs and may use the IRR in other facets of their business (including their own internal reporting and compensation). And the notion that simple interest is simple is not shared by all; some have observed that it can make the calculations more difficult. Moreover, the promote structures in many real estate partnerships today involve multiple promote hurdles, which may make it more cumbersome (or confusing) to utilize the preferred return approach. Applying a preferred return approach to multiple hurdles may be non-intuitive: some of the distributions that return capital under the first hurdle may need to be recast as distributions that pay the higher return for the second hurdle. In the context of multiple hurdles (and for some, even a single hurdle), many professionals may view the IRR approach as the more streamlined and consistent approach to use.

Conclusion

To recapitulate, how does the preferred return approach compare to the IRR approach when establishing a promote hurdle? The differences are technical, but they relate to two relatively straightforward concepts, negative hurdle balances and simple interest:

- In the parlance of the accounts discussed in this Article, the IRR approach is more likely than the preferred return approach to allow negative balances (and usually does); and even if the preferred return approach allows for negative balances, such balances may not accrue a return (at the hurdle rate), as they typically do under the IRR approach. Allowing negative hurdle balances can result in a smaller hurdle balance.
- The IRR approach usually adopts the theoretical method so that the return accrues at an equivalent continuously compounded rate within each of the stated compounding periods. But the preferred return approach often uses the practical method instead so that the return accrues proportionately within each of the stated compounding periods. Use of the practical method could mean a hurdle balance that is larger under the preferred return approach than under the IRR approach. However, if negative balances are allowed under the preferred return approach, then it is also possible for the practical method to generate a smaller balance than the theoretical method. These differences are sometimes irrelevant (e.g., because all cash flows and hurdle calculations occur at or sufficiently near the beginning of a compounding period and interim distributions are not sufficiently large to create a negative hurdle balance). But when they are relevant, they can decrease the IRR hurdle balance or increase the preferred return (with return of capital) hurdle balance (when compared to the other). Example 3 illustrates how just the recognition of a negative hurdle balance could produce a decrease of 100% in the amount Investor must receive before Operator starts to receive its promote, where the amount of the decrease is more than 9% of the entire equity investment. Example 5 shows how some clawbacks, which may be relied upon to address negative hurdle balances, may fail to do so. Example 8 identifies scenarios where, after five years, the mere use of continuous compounding instead of a straight-line accrual (within each compounding period) could produce a decrease in the hurdle balance of more than 4% or 13% of the entire equity investment. Thus, these differences—triggered by nothing more than what may be perceived as some “minor” changes in calculation techniques—can dramatically affect the amount and timing of Operator’s compensation and Investor’s whole dollar return.

The partners should understand from the outset how the promote hurdles work. No single approach must be followed in all deals. It is a business negotiation. If the partnership agreement is drafted to reflect whatever the partners intend and agree, there may be savings in both time and money when it comes time to make these calculations.

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52 However, Investor may be more concerned with whether and how the true-up adjustments work.
53 If negative balances are allowed and they accrue a return (as they typically do with the IRR approach), then the preferred return approach may result in a smaller balance than the IRR approach assuming the preferred return approach adopts the practical method. To see this, assume for simplicity that the relevant annual rate is 21% compounded annually, Investor’s first cash flow is a distribution of $100X, and Investor’s second cash flow is a $110.5X contribution six months later. Given such facts: the balance under each approach immediately after the distribution would be negative $100X; and at the end of six months, before the contribution, the IRR approach balance would be negative $110, which is greater than the preferred return approach balance of negative $110.5. Immediately after the contribution, the balances would be $0.5X and $0 respectively, and the larger IRR balance would continue to grow at 21% per annum until the next cash flow.
54 The timing for this decrease is unspecified in Example 3, but it would be two years if the cash flows were annual.
55 A partner may not always want to clarify the terms of the deal. Sometimes a partner may have little bargaining power and may be concerned that the counterparty will always resolve ambiguities against it. Also, some partners will not want to spend the time and money to work out the details. Of course, keeping ambiguities defers the issue until later, at which time they still may not be resolved in the desired manner and may be more costly to resolve.
Appendices

Appendix A - Distributions to Satisfy Preferred Return Hurdle: Order of Application
Appendix B - Additional Recycling Example
Appendix C - Preferred Return Formulations: Does Language Allow Recycling of Profits?
Appendix D - Certain Double-Counting Examples (Supplementing Appendix C)
Appendix E - Examples of Matching Results Under IRR and Preferred Return Approaches

APPENDIX A

DISTRIBUTIONS TO SATISFY PREFERRED RETURN HURDLE: ORDER OF APPLICATION

This Appendix addresses the following subjects (assuming the parties have adopted the practical method):

- The order in which distributions should be applied (1) to pay the preferred return, on the one hand, and (2) to return capital, on the other hand; and
- The order in which distributions should be applied (1) to the preferred return accrued during prior compounding periods that remains unpaid, on the one hand, and (2) to the preferred return accrued during the current compounding period that remains unpaid, on the other hand.

Under the theoretical method, the return is immediately added to capital, capital and return are fungible, and the order of application between the two doesn’t matter. Consequently, it is assumed in this Appendix that the practical method has been adopted. The conclusion is both straightforward and simple: if given the choice, Investor would generally prefer to apply distributions first to amounts that are not accruing a return at the time and then to the amounts accruing the smallest return at the time.

What Should Be Paid First, Preferred Return or Capital?

In the author’s experience, when using a hurdle based on a preferred return and return of capital, the preferred return is usually paid before the capital is returned. But not always. In private equity funds, it has been said that “[t]he first priority is usually ‘invested capital’... . . . In most cases, the second priority is a ‘preferred’ or ‘hurdle’ return on that capital.”

If capital is returned before the preferred return is paid, then Investor may not get the full anticipated benefit of its return on that capital.

Debt Analogy – Generally. In this respect, Investor’s interests are similar to those of a creditor holding an interest-bearing debt, and such a creditor generally does not want to reduce its principal balance until all accrued interest has been paid. Creditors typically require that debt payments are applied to interest before principal. Why? A principal payment may mean less total interest and therefore less payment in the aggregate. An interest payment, on the other hand, may not reduce the total interest payments at all (or as much, if there is compounding). Even if there is no express requirement to pay interest first, “[a] voluntary payment will, absent an agreement to the contrary, be applied to the interest rather than to the principal of a debt.” This principle was established by the United States Supreme Court in the 1800s.

Debt Analogy – Simple Interest. When the principal is the only portion of the debt that bears interest (i.e., when interest is “simple” or, in other words, not “compounded”), the reason for this rule is obvious: interest payments do not reduce future interest, but principal payments do. Requiring payment of interest before principal “encourages full payment, for the debtor can stop the running of interest only by paying [principal]; the rule thus ensures that the creditor is fully compensated for the loss of use of the principal.”

Example A-1. Consider a one-year $10 million loan with 12% annual simple interest that is payable in its entirety by a single payment upon maturity. After 10 months, the accrued interest would total $1 million. Assume that the borrower is allowed to pay $1,000,000 at that point in time and does so. Assume further that the borrower makes no further payments until maturity.

- if the $1 million payment were applied to interest, then $10 million of outstanding principal would remain; therefore, the interest for the last two months would be $200,000; and
- if the $1 million payment were applied to principal, then there would be only $9 million of outstanding principal and therefore the interest for the last two months would be only $180,000 (and the lender would lose $20,000).

Below is a more generalized chart (where the single payment equal to the accrued interest may occur at the end of any month during the year) showing the effect of reducing principal before paying interest for a $10 million loan with a 12% annual simple interest rate:

56 ANDREW W. NEEDHAM & ANITA BETH ADAMS, BNA PORTFOLIO 735-2ND PRIVATE EQUITY FUNDS (Tax Management, Inc.), § III.B. See also JAMES M. SCHELL, PAMELA LAWRENCE ENDREY & KRISTINE M. KOREN, PRIVATE EQUITY FUNDS: BUSINESS STRUCTURE AND OPERATIONS, app. D(1), § 6.2(b) at D-64 (2012); VCEXPERTS, THE ENCYCLOPEDIA OF PRIVATE EQUITY AND VENTURE CAPITAL, BOOK 40: LEGAL FORMS § 10.2.4, LPA: Front End Loaded - Allocations and Distributions Deal-by-Deal (Long Form), § 6.2(b) (2013).

57 SAMUEL WILISTON, 28 WILISTON ON CONTRACTS § 72.20 (4th ed. 2010); see also id. at n. 12.
59 WILISTON, supra note 57; see also id. at n. 14.
60 Assuming, for this purpose, that the loan documents provide for the calculation of interest using 30-day months and 360-day years.
61 Under the laws of many, if not most, states, a loan may not be prepaid in the absence of an express right of prepayment. See discussion and cases cited in GRANT S. NELSON & DALE A. WHITMAN, REAL ESTATE FINANCE LAW § 6.1, at 482–87 (5th ed. 2007). Thus, in such states, unless otherwise agreed, the lender in this example would be entitled to receive at maturity $1.2 million of interest in addition to the repayment of the $10 million of principal.
Given such a simple interest rate loan, it does not make much sense to prepay interest and give up what is, in effect, an interest-free loan (as to the accrued interest). However, if one can prepay principal, there may be an advantage, assuming the cost of the capital used to make the prepayment is less than the 12% simple annual interest rate.

Debt Analogy – Compound Interest. What happens when interest is not simple (i.e., when accrued interest also bears interest or, in other words, “compounds”)? Such an arrangement will generally not be implied; instead the parties must generally agree to compound interest first (because the current interest is the interest accruing during any compounding period, it is in effect, reinvested at the end of the compounding period, so that it too may earn interest (at the same rate) in subsequent compounding periods. Thus, one way to compound interest is to add the interest accrued during a compounding period to principal at the end of that compounding period. It may help for purposes of this discussion to identify these amounts that could be added to principal as “capitalized” or “deferred” interest.

Note that, with respect to this modified outstanding balance (i.e., the outstanding balance of principal taking into account additions of deferred interest), the interest (“current interest”) accruing during any compounding period is simple interest (because, by assumption, the practical method has been adopted). Consequently, one can argue that the same analysis discussed above with respect to simple interest should apply during each compounding period. Indeed, if there is annual compounding and the practical method is adopted, then the same analysis would apply for the first year of the loan (because there is no compounding until the end of the year). Moreover, even for a subsequent year one can back into the same fact scenario as in Example A-1:

Example A-2. Consider a two-year loan with a 12% interest rate, compounded annually, with all interest and principal payable upon maturity, and a loan amount which, together with the first year’s interest, adds up to $10,000,000 after one year (a loan amount of $8,928,571.43 would yield this result). If the first year’s interest were added to principal, then during the second compounding period (i.e., the second year), this loan would look the same as the one-year loan in Example A-1. And the lender would have the same $20,000 loss if, at the end of the first 10 months of this (second year) compounding period, the payment of $1 million were applied to the $10 million principal balance (rather than to the interest accruing during the second year).

Debt Analogy – General Rule for Order of Application of Debt Payments. If there is no compounding or if compounding is effectuated by adding deferred interest to principal at the end of each compounding period, then the application desired by the creditor is the same:

<table>
<thead>
<tr>
<th>Month of Payment</th>
<th>Accrued Interest at End of Month</th>
<th>Months of Year Remaining</th>
<th>Interest for Rest of Year if Payment is Applied to Interest</th>
<th>Hurdle at End of Year if Payment is Applied to Interest</th>
<th>Principal Balance if Payment is Applied to Principal</th>
<th>Interest for Rest of Year if Payment is Applied to Principal</th>
<th>Hurdle at End of Year if Payment is Applied to Principal</th>
<th>Loss of Interest if Payment is Applied to Principal</th>
</tr>
</thead>
<tbody>
<tr>
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<td>$10,000,000</td>
<td>$0</td>
</tr>
</tbody>
</table>

Assuming a 12% annual simple interest rate and no loan disbursements or payments other than a $10 million disbursement at the beginning of year and a single payment at the end of the relevant month equal to the then accrued and unpaid interest.

<table>
<thead>
<tr>
<th>General Rule For Application Of Debt Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Typical Wording)</td>
</tr>
<tr>
<td>Debt payments should be applied to interest before principal.</td>
</tr>
</tbody>
</table>

But if there is compounding and deferred interest is not added to principal but is accounted for separately (and it is certainly possible to do so and reach the same economic result), then the above rule may not fully protect the creditor. Why? If the debt payments were applied to deferred interest, they would reduce the creditor’s total interest payments just as they would if the debt payments were applied to principal. The interest accrual would be diminished equally in either case. Thus, the creditor will want the debtor to pay the current interest first (because the current interest is the only portion of the outstanding balance of principal and interest that is not then accruing interest):

<table>
<thead>
<tr>
<th>Creditor’s Preferred Rule For Application Of Debt Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(More Precise Wording)</td>
</tr>
<tr>
<td>Debt payments should be applied to current interest before deferred interest or principal.</td>
</tr>
</tbody>
</table>
Compound interest is common in commercial real estate loans. But in the commercial loan context, more often than not, accrued interest is required to be paid at the end of each compounding period, and the compounding and payment periods tend to be the same monthly periods. Consequently, the order of application may not be as much of an issue for commercial real estate lenders.

**What Should Be Paid First, Current or Deferred Return?**

*Equity Investments – Preferred Returns.* Like a creditor accruing interest on the amount owed to it, Investor is accruing a preferred return on its capital. For the same reasons discussed above, Investor generally wants its distributions applied first to amounts due Investor that are not earning a return. Therefore, as a general rule, Investor wants its preferred return paid before its capital is returned. But, for the same reasons described above, this statement may be too simplistic: it overlooks the fact that if the practical method is adopted, then during any given compounding period, only the current preferred return is not earning a return. Thus, Investor may prefer to adhere to the following rule:

<table>
<thead>
<tr>
<th>Investor’s Preferred General Rule For Application Of Distributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributions should be applied to current preferred return before deferred preferred return or capital.</td>
</tr>
</tbody>
</table>

More generally, Investor usually wants distributions applied first to amounts that are not accruing a return and then to amounts that are accruing the smallest return at the time.

But there may be exceptions to this rule. If, for example, Investor were paying fees based on its outstanding capital, then the savings in fees should be compared with the loss of return that would result from a return of capital, to determine whether it is advantageous to return capital sooner. Also, some practitioners might be concerned that, by paying the preferred return first, the IRS could argue that the preferred return is “determined without regard to the income of the partnership” and therefore could be characterized as a “guaranteed payment” taxable as ordinary income. However, if all the partnership had no income and consequently there were insufficient distributions to pay the preferred return and recoup all capital, then payment of the preferred return would, in effect, reduce the amount of capital that will be recouped. This tax risk may be of greatest concern in deals where another partner’s capital is subordinate to the capital earning a preferred return, as is the case in many preferred equity deals, so that a partner would be putting its capital at risk to pay another partner’s preferred return.

**Continuous Compounding:** If the preferred return were compounded continuously, both capital and preferred return would earn a return simultaneously, and the order in which distributions would be applied might not matter (all else being equal). Continuous compounding is inherent in the theoretical method, and it is possible to adopt the theoretical method for a preferred return calculation. However, in the author’s experience, the practical method is usually adopted for preferred return calculations, so the order of application may be important.

**APPENDIX B**

**ADDITIONAL RECYCLING EXAMPLE**

This Appendix will set forth a more extreme example illustrating the recycling of profits when there are Surplus Distributions. It will also highlight the fact that in those instances when a preferred return (with return of capital) hurdle is formulated to allow recycling of profits, it will effectively allow for a negative balance, but as noted at the end of Appendix C it may not provide that the negative balance earns a return as it typically does with an IRR hurdle. As noted at the end of Appendix C, it is possible to draft a preferred return (with return of capital) hurdle to replicate the results of an IRR (including the return on a negative balance), but this requires more wording. For purposes of this Appendix, it is assumed that if a negative balance is allowed under the preferred return (with return of capital) hurdle, it does not provide for a return on the negative balance.

**Example B-1.** Assume under our Hypothetical Facts the following: the annual rate is 20% (instead of 12%), compounded annually; there is a contribution of $100X at the beginning of Year 1, a distribution of $320X at the beginning of Year 2, and a contribution of $120X at the beginning of Year 3; and there are no other contributions or distributions.

**If Recycling is Not Allowed under Both Approaches.** If recycling of profits is not allowed (i.e., the account, in effect, is not allowed to go negative), then under the facts of Example B-1, there would be a $0 balance immediately after the $320X distribution ($220X of which would go to Investor—$120X to achieve the hurdle and $100X as its share of the remainder). The subsequent $120X contribution would result in a $120X balance. The result is the same with the IRR and preferred return approaches (assuming recycling of profits is not allowed).

<table>
<thead>
<tr>
<th>Recycling Not Allowed – Example B-1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning of Year</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

**If Recycling is Allowed under Both Approaches.** However, if recycling of profits is allowed (i.e., the account is, in effect, allowed to go negative) under the facts of Example B-1, then:

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66 See BREALEY MYERS & ALLEN, supra note 8, § 2-4, at 36.
67 See prior paragraph.
Under the preferred return approach, there would be a $100X negative balance immediately after the $320X distribution (because Investor received $100X of Surplus Distributions) and the balance would (by assumption) remain at negative $100X (i.e., the negative balance of the account would not grow) until the second contribution, at which time the balance would increase by $120X to $20X.

Under the IRR approach, there would also be a $100X negative balance immediately after the $320X distribution, but the negative balance of the account would grow at 20% per annum so that after a year the balance would be a negative $120X. The second contribution would result in a $0 balance.

### Summary

The second anniversary balance alternatives (immediately after the second contribution) under the facts of Example B-1 may be summarized as follows:

<table>
<thead>
<tr>
<th>Hurdle Type</th>
<th>2nd Anniversary Hurdle Balance</th>
<th>Difference</th>
<th>% of Total Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRR w/o recycling</td>
<td>PR w/o recycling</td>
<td>$20X</td>
<td>$20X</td>
</tr>
<tr>
<td>IRR w/ recycling</td>
<td>PR w/ recycling</td>
<td>$120X</td>
<td>$120X</td>
</tr>
<tr>
<td>PR w/ recycling</td>
<td>IRR w/ recycling</td>
<td>$20X</td>
<td>$120X</td>
</tr>
<tr>
<td>PR w/o recycling</td>
<td>IRR w/o recycling</td>
<td>$0</td>
<td>$120X</td>
</tr>
</tbody>
</table>

To appreciate the impact of the hurdle balance variations in Example B-1, take the same example and add an additional fact.

**Example B-2.** Assume the same facts as in Example B-1, except that there is a distribution of $144X at the beginning of Year 4.

If Recycling is Not Allowed under Both Approaches. If recycling of profits is not allowed under the facts of Example B-2, then the final $144X distribution would be made 100% to Investor. The result is the same under the preferred return and IRR approaches (assuming recycling of profits is not allowed).

### If Recycling is Allowed under Both Approaches.

If recycling of profits is allowed (i.e., the account is, in effect, allowed to go negative) under the facts of Example B-2, then:

- Under the preferred return approach, the final $144X distribution would be made first $24X to Investor and the remaining $120X would be split 50/50, so that Investor receives an additional $60X for a total of $84X.

- Under the IRR approach, the final $144X distribution would be split 50/50, so that Investor receives $72X.

### Summary

Thus, the second anniversary balance alternatives (immediately after the final distribution) under the facts of Example B-2 would be as follows:

| Hurdle Type | Recycled | PR w/o recycling | PR w/ recycling | PR w/ recycling | PR w/o recycling | PR w/ recycling | PR w/o recycling | PR w/ recycling |
|-------------|----------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| IRR w/ recy- cling | $0 | $100X | $120X | $20X | $0 | $20X | $120X | $0 | $20X |
| IRR w/o recy- cling | $0 | $100X | $100X | $120X | $0 | $20X | $100X | $0 | $20X |
| PR w/ recy- cling | $20X | $120X | $100X | $120X | $0 | $20X | $100X | $0 | $20X |
| PR w/o recy- cling | $0 | $120X | $0 | $120X | $0 | $20X | $0 | $120X | $0 | $20X |

## Example B-1 Variations

<table>
<thead>
<tr>
<th>Recycling Allowed – Example B-1</th>
<th>Investor Account Balance Immediately Before</th>
<th>Cont. by Investor (Dist. to Investor)</th>
<th>Investor Account Balance Immediately After</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning of Year</strong></td>
<td><strong>IRR PR</strong></td>
<td><strong>IRR PR</strong></td>
<td><strong>IRR PR</strong></td>
</tr>
<tr>
<td>1</td>
<td>$0 $0 $100X $100X $100X $100X $100X $100X $100X</td>
<td>$120X $120X $20X $0 $20X</td>
<td>$120X $120X $20X $0 $20X</td>
</tr>
<tr>
<td>2</td>
<td>$120X $120X $120X $120X ($220X) ($220X) ($220X) ($220X) ($220X)</td>
<td>$20X $20X $0 $0 $0</td>
<td>$20X $20X $0 $0 $0</td>
</tr>
<tr>
<td>3</td>
<td>($120X) ($120X) ($120X) ($120X) ($120X) ($120X) ($120X) ($120X) ($120X)</td>
<td>$120X $120X $20X $0 $0</td>
<td>$120X $120X $20X $0 $0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recycling Not Allowed – Example B-2</th>
<th>Investor Account Balance Immediately Before</th>
<th>Cont. by Investor (Dist. to Investor)</th>
<th>Investor Account Balance Immediately After</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning of Year</strong></td>
<td><strong>IRR PR</strong></td>
<td><strong>IRR PR</strong></td>
<td><strong>IRR PR</strong></td>
</tr>
<tr>
<td>1</td>
<td>$0 $0 $100X</td>
<td>$100X</td>
<td>$100X</td>
</tr>
<tr>
<td>2</td>
<td>$110X ($210X)</td>
<td>$120X</td>
<td>$120X</td>
</tr>
<tr>
<td>3</td>
<td>$0 $120X $120X</td>
<td>$100X</td>
<td>$100X</td>
</tr>
<tr>
<td>4</td>
<td>$144X ($144X)</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>
More importantly, as shown below, the whole dollars Investor receives range from $72X with the IRR approach and recycling to twice that much (i.e., $144X) if there is no recycling:

<table>
<thead>
<tr>
<th>Recycling Permitted – IRR Approach – Example B-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cash Flow</td>
</tr>
<tr>
<td>$100X Contribution</td>
</tr>
<tr>
<td>$320X Distribution</td>
</tr>
<tr>
<td>$120X Subsequent Contribution</td>
</tr>
<tr>
<td>$144X Final Distribution</td>
</tr>
<tr>
<td>$244X Profits (i.e., Ds – Cs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recycling Permitted – PR Approach – Example B-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cash Flow</td>
</tr>
<tr>
<td>$100X Contribution</td>
</tr>
<tr>
<td>$320X Distribution</td>
</tr>
<tr>
<td>$120X Subsequent Contribution</td>
</tr>
<tr>
<td>$144X Final Distribution</td>
</tr>
<tr>
<td>$244X Profits (i.e., Ds – Cs)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recycling Not Permitted – IRR or PR Approach – Example B-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cash Flow</td>
</tr>
<tr>
<td>$100X Contribution</td>
</tr>
<tr>
<td>$320X Distribution</td>
</tr>
<tr>
<td>$120X Subsequent Contribution</td>
</tr>
<tr>
<td>$144X Final Sale Distribution</td>
</tr>
<tr>
<td>$244X Profits (i.e., Ds – Cs)</td>
</tr>
</tbody>
</table>

**APPENDIX C**

**PREFERRED RETURN FORMULATIONS: DOES LANGUAGE ALLOW RECYCLING OF PROFITS?**

This Appendix will discuss the following preferred return formulation (which also appears in the body of this Article), the possible interpretations if the underscored, bold language is deleted, and an alternative formulation that makes it easier to determine whether the partners intend to allow recycling of profits.

“Section X Distributions. Distributions shall be made as follows:

**A. First Level.** First, 100% to Investor until it has received under this subsection A an amount equal to a 12% annual return, compounded annually, on all of Investor’s outstanding capital contributions (i.e., the portion of Investor’s capital contributions that has not been received under subsection B below);

**B. Second Level.** The balance, if any, 100% to Investor until it has received under this subsection B all of its capital contributions; and

**C. Third Level.** The balance, if any, 50% to Investor and 50% to Operator.”

**Eliminating Underscored Language**

What happens if the underscored, bold language is eliminated? This formulation is not uncommon in the author’s experience. But it is not clear under the First and Second Levels what distributions are to be taken into account. By eliminating the underscored, bold language, does it mean that distributions under the entire Section should be taken into account under each of the first two levels? As will be seen below, such an interpretation could, under certain circumstances, lead to an absurd result, so the original underscored, bold language might be read into the document even though it is not expressly stated.

**Referring to Entire Section**

What happens if each underscored, bold reference to an individual subsection is replaced with a reference to the entire section?

“Section X Distributions. Distributions shall be made as follows:

**A. First Level.** First, 100% to Investor until it has received under this Section X an amount equal to a 12% annual return, compounded annually, on all of Investor’s capital contributions (i.e., the portion of Investor’s capital contributions that has not been received under this Section X);

**B. Second Level.** The balance, if any, 100% to Investor until it has received under this Section X all of its capital contributions; and

**C. Third Level.** The balance, if any, 50% to Investor and 50% to Operator.”

A literal reading of this language may require that the same distributions (whether made under subsection A, B or C) be credited against the preferred return under subsection A and also the return of capital under subsection B. By counting the same dollars twice—first under the first level of distributions and second under the second level of distributions—one presumably reaches a result that was not intended: if the same dollars are applied to pay preferred return and to recoup capital, then there may not be a full preferred return or a full return of capital, even though there are sufficient distributions to achieve that result.\(^{68}\)

**Double-Counting**

Such double-counting problems exist in most of the permutations of possible subsections to be taken into account.

\(^{68}\) See infra app. D for examples.

\(^{69}\) If the same distributions are credited against both the return (first level) and capital (second level), then Investor may not get both, which is clearly not intended. So what does that leave? What is left is no duplication at all or having 50/50 distributions also credited against return or capital. One can ar-
account at each of the first two distribution levels. Indeed, if any subsection is taken into account in both the first two distribution levels, there may be similar duplication, which should rule out these alternatives as logical interpretations. The permutations are identified below:

<table>
<thead>
<tr>
<th>Subsection(s) Taken into Account</th>
<th>Common Subsection(s)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Level</td>
<td>2nd Level</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>A</td>
<td>AB</td>
</tr>
<tr>
<td>A</td>
<td>BC</td>
</tr>
<tr>
<td>A</td>
<td>ABC</td>
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<tr>
<td>AB</td>
<td>B</td>
</tr>
<tr>
<td>AB</td>
<td>AB</td>
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<tr>
<td>AB</td>
<td>BC</td>
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<td>AB</td>
<td>ABC</td>
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<td>AC</td>
<td>B</td>
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<td>ABC</td>
<td>BC</td>
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<tr>
<td>ABC</td>
<td>ABC</td>
</tr>
</tbody>
</table>

i.e., subsections that are taken into account under both the first and second levels.

It is also possible to avoid double-counting for both the preferred return and the return of capital by assuming that no dollar of distributions will be applied more than once under the first two distribution levels, and then relying on the implicit order that has been assumed in this Article (namely, that all distributions are applied first to outstanding preferred return and then to outstanding capital). This assumption leads to the (perhaps already obvious) conclusion that all distributions under subsection A should be applied only under subsection A (i.e., they should be applied only to outstanding preferred return) and all distributions under subsection B should be applied only under subsection B (i.e., they should be applied only to outstanding capital). But what about the question of whether and how Surplus Distributions (i.e., distributions under subsection C) should be applied to pay preferred return or to recoup capital? In other words, what about the question of whether and how there is recycling of profits? The only three possibilities that do not involve the double-counting of the same subsection under both the first and second levels are the three formulations noted in the chart above (by “None”):

- **Original Formulation – No Recycling**: one possibility is that Surplus Distributions are not applied to either preferred return or capital—this is the original formulation noted in the chart above;
- **Alternative Formulation – Recycling**: another possibility is that Surplus Distributions are applied to recoup capital but not to pay preferred return—this is the alternative formulation noted in the chart above; and
- **Hybrid Formulation – Partial Recycling**: the only other possibility is that Surplus Distributions are applied to pay preferred return but not to recoup capital, which is the hybrid formulation noted above.

The third formulation is a sort of hybrid of the first two that would allow for partial recycling and is sufficiently odd that it will be ignored in this Appendix: Surplus Distributions would be recycled to pay the return on subsequent contributions but not the contributions themselves (so that, if things went well and there were Surplus Distributions, any future contributions would not accrue a return until the forfeited return equaled the amount of the Surplus Distributions).

### Permutations Without Double-Counting

Thus, there are three permutations that do not yield double-counting between the first two levels, and only two of those yield arguably logical results. Of these two, one is the original formulation that effectively prohibits recycling of profits. The other (the “alternative formulation”), which is set forth below, effectively allows recycling:

“Section X Distributions. Distributions shall be made as follows:

“A. First Level. First, 100% to Investor until it has received under this subsection A an amount equal to a 12% annual return, compounded annually, on all of its capital contributions (i.e., the portion of Investor’s capital contributions that has not been received under subsections B and C below).”

“B. Second Level. The balance, if any, 100% to Investor until it has received under this subsection B and subsection C below all of its capital contributions; and

“C. Third Level. The balance, if any, 50% to Investor and 50% to Operator.”

Note that recycling is permitted by allowing Surplus Distributions (i.e., distributions under the Third Level in this distribution waterfall) to be taken into account under the first two distribution levels only in determining the outstanding amount of contributions. It is assumed, however, that the parties do not intend to take into account Surplus Distributions under the first level (to pay preferred return) as well; this is one of the cases eliminated in the above chart (AC, BC).

### Interpreting the Distribution Waterfall

What is the most likely logical interpretation of the distribution waterfall set forth at the beginning of this Appendix when the underscored, bold language is deleted? Neither of the two formulations described above (one of which is the original formulation, which

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72 See supra note 69.
does not allow for recycling of profits, and one of which is the alternative formulation, which does) may jump out at the reader, so the choice may not be clear. But restricting the distributions at each level to take into account only that level might seem like an easier conclusion to reach than allowing Surplus Distributions to be taken into account in the second level and not the first level. If recycling of profits is intended, the parties should be clear, either by using the alternative formulation or by tracking the provisions below.

Collapsing Recoupment and Return

It is easier to discern whether or not the partners intend to allow recycling of profits if the first two distribution levels are collapsed (much like IRR):

“Section X Distributions. Distributions shall be made as follows:

“A. First Level. First, 100% to Investor until it has received under this Section X an amount equal to (1) all of its capital contributions, and (2) a 12% annual return, compounded annually, on the outstanding balance from time to time of its unrecovered capital contributions; and

“B. Second Level. The balance, if any, 50% to Investor and 50% to Operator.

“It is understood that all amounts distributed to Investor under the First Level above shall be applied first to pay the then accrued but unpaid return and then to Investor’s unrecovered capital contributions.”

With this formulation, the underscored, bold language makes it relatively clear that recycling is permitted. If the underscored, bold language were eliminated, then it would still be ambiguous, but perhaps not as confusing as the original formulation without the underscored, bold language.

Final Note Regarding Recycling Imputed Return on Surplus Distributions Return

Keep in mind that under the recycling formulations above, Surplus Distributions are recycled, but there is no imputed return on the Surplus Distributions that are recycled. When Surplus Distributions are recycled in an IRR hurdle, then both the Surplus Distributions and a return on the Surplus Distributions may be recycled. The IRR results may be replicated in a preferred return formulation, but additional language is required to do so.74

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APPENDIX D

CERTAIN DOUBLE-COUNTING EXAMPLES
(Supplementing Appendix C)

This Appendix supplements Appendix C. It sets forth examples to illustrate the double-counting that may occur when distributions under one subsection are taken into account in both the first two distribution levels (i.e., so that the same dollars are reducing not only the accrued preferred return, but also the outstanding capital).

Taking Subsection A into Account in Each of First Two Distribution Levels

The first example addresses the most obvious case, which involves the double-counting of subsection A distributions in both the first and second level of distributions.

Example D-1. Assume the following facts: (1) a $100X contribution is made at the outset; (2) there is a $112X distribution one year after the initial contribution, and (3) there are no other contributions or distributions. Assuming these facts, and assuming that the underscored language in the first distribution waterfall of Example A were included, the distribution would have been made $12X at the First Level, $100X at the Second Level, and $0 at the Third Level. However, if subsection A were taken into account under both the first two distribution levels, then a literal interpretation could require that the distributions be made $12X at the First Level, $88X at the Second Level, and $12X at the Third Level ($6X of which would go to Investor), so that Investor would get $106X instead of the $112X it was presumably expecting.

Taking Subsection B into Account in Each of First Two Distribution Levels

The second example addresses the double-counting of subsection B distributions in both the first and second level of distributions. This is slightly more complicated than Example D-1 because it requires a second distribution to illustrate (i.e., there needs to be a distribution under the first level of distributions after a distribution under the second level of distributions).

Example D-2. Assume the following facts: (1) there is a $100X contribution at the outset, (2) there is a $62X distribution one year after the initial contribution, (3) there is a $56X distribution two years after the initial contribution, and (4) there are no other contributions or distributions. Assuming these facts, and assuming that the underscored language in the first distribution waterfall set forth in Example A were included, Investor would get 100% of the total $118X of distributions:

- the first distribution would be made $12X at the First Level, $50X at the Second Level, and $0 at the Third Level; and
- the second distribution would be made $6X at the First Level, $50X at the Second Level, and $0 at the Third Level.

However, if subsection B were taken into account under both the first two distribution levels, then a literal interpretation could require that the second distribution be made $0 at the First Level, $50X at the Second Level, and $6X at the Third Level ($3X of which would go to Investor), so that Investor would get $115X instead of the $118X it may have been expecting.

74 See the underscored language after Example 6 (in the bank account formulation for the preferred return approach) in the body of this Article.
Taking Subsection C into Account in Each of First Two Distribution Levels

The following example addresses the double-counting of subsection C distributions in both the first and second level of distributions. To illustrate this problem, there must be a distribution under the first two levels of distributions after there is a distribution under subsection C. To make this clear, it will be assumed that there is a second contribution between the first distribution and the second distribution and this second contribution is larger than the portion of the first distribution under subsection C that would be recycled if there were recycling (i.e., it exceeds the negative balance if a negative balance were allowed). In this way, facts are assumed to assure that the next distribution must be distributed under the first two levels of distributions before there are any future distributions under subsection C.

Example D-3. Assume the following facts: (1) there is a $100X contribution at the outset, (2) there is a $132X distribution one year after the initial contribution, (3) there is a $20X contribution two years after the initial contribution, (4) there is a $22.4X distribution three years after the initial contribution, and (5) there are no other contributions or distributions. Given such facts and assuming that the original underscored language in the first distribution waterfall set forth in Appendix C were included:

- the first distribution would be $12X under the First Level, $100X under the Second Level, and $20X under the Third Level (of which Investor would receive $10X); and
- the second distribution would be $2.4X at the First Level and $20X at the Second Level and $0 under the Third Level;

Assuming distributions under subsection C were taken into account under each of the first two levels, then a literal interpretation could require that the first distribution be the same, but the second distribution would be made $0 at the First Level, $20X at the Second Level, and $2.4X at the Third Level, effectively stripping Investor of the return on the new $20X contribution.

**APPENDIX E**

EXAMPLES OF MATCHING RESULTS UNDER IRR AND PREFERRED RETURN APPROACHES

This Appendix provides examples of matching results under the IRR and Preferred Return approaches when both adopt the theoretical method and there are no Surplus Distributions.

Example E-1. Assume under our Hypothetical Facts that there is only one contribution and only one distribution, each in the amount of $100X, and for simplicity assume that the distribution occurs immediately (less than a second) after the contribution. Under a preferred return approach, the distribution would reduce the outstanding balance of contributions to zero so there would be no balance on which to accrue a return and the balance would remain zero thereafter. The IRR approach would reach the same result but in a different way: because the contribution and the distribution were, for all practical purposes, simultaneous, the amount of the contribution and its return would grow but would always equal the amount of the distribution and its return (which would be growing negatively at the same pace), and they would offset one another when the distribution subaccount is subtracted from the contribution subaccount.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0 + 0</td>
<td>$100X - $100X</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0 + 0</td>
<td>$100X x 1.12 - $100X x 1.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n + 1</td>
<td>0</td>
<td>0 + 0</td>
<td>$100X x (1.12)^n - $100X x (1.12)^n</td>
</tr>
</tbody>
</table>

*After cash flows

Example E-2. Assume under our Hypothetical Facts that there is a contribution of $100X at the beginning of the first distribution waterfall set forth in Appendix C were included:

- the first distribution would be $12X under the First Level, $100X under the Second Level, and $20X under the Third Level (of which Investor would receive $10X); and
- the second distribution would be $2.4X at the First Level and $20X at the Second Level and $0 under the Third Level.

Assuming distributions under subsection C were taken into account under the first level of distributions, then a literal interpretation could require that the first distribution be the same, but the second distribution would be made $0 at the First Level, $20X at the Second Level, and $2.4X at the Third Level, effectively stripping Investor of the return on the new $20X contribution.
Year 1, a distribution of $112X at the beginning of Year 2, and no other contributions or distributions. This example is similar to Example E-1; it merely adds some accrued return before the distribution is made. Under a preferred return approach, the distribution would first be applied to the $12X of accrued return and the remaining $100X would recoup the contribution, leaving a zero balance, and the balance would remain zero thereafter. The IRR approach would again reach the same result in a different way: the $100X contribution would grow to $112X at the end of Year 1 (immediately before the distribution is made), and thereafter the $112X contribution subaccount balance would grow at a 12% annual rate and the $112X distribution subaccount balance would also grow at a 12% annual rate, and these amounts would always be equal and would offset one another when the distribution subaccount is subtracted from the contribution subaccount.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$100</td>
<td>$100 + 0</td>
<td>$100 - 0</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0 + 0</td>
<td>$100 x 1.12 - 112</td>
</tr>
<tr>
<td>.</td>
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<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>n-1</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>n</td>
<td>0</td>
<td>0 + 0</td>
<td>$100 x 1.12^n - 112 x 112^-1</td>
</tr>
</tbody>
</table>

*After cash flows

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