Revisiting Return Profiles of Real Estate Investment Vehicles

Assessing alternative real investment vehicles over time.

PETER LINNEMAN
DEBORAH C. MOY

IN "UNDERSTANDING THE Return Profiles of Real Estate Investment Vehicles" (*WRER* Fall 2003), we presented simulated investment returns for alternative real estate investment vehicles such as Unlevered Core (NCREIF), Core Plus, REITs (NAREIT), and Value-add funds. We assumed that $100 million was invested in each of these four vehicles for a seven-year investment horizon. For each vehicle, cash flows were estimated based on assumptions about leverage, growth rates, cap rates, management fees, and cash flow payout

ratios. We found that because Value-add funds take greater up-front risks, with the expectation of greater profits late in the investment horizon, their returns are generally negative in the early years. Hence, when equivalent investments in the Value-add fund are benchmarked relative to either the NCREIF or NAREIT indices, Value-add funds will appear to under-perform in their early years, even if they exceed their business plan. The need to reserve judgment on these funds until later in their investment horizon often frustrates employees of limited partner investors, as many receive bonuses based upon annual fund performance. This delayed "day of reckoning" also allows weak Value-add managers to raise additional funds, as it is difficult to determine if the current weak performance is temporary or permanent. In short, it is inappropriate to benchmark Value-add fund performance against the other funds prior to stabilization.

Under four alternative market conditions, we determined that the Value-add vehicle tends to outperform the other vehicles. The true risk of the Value-add fund is not the prospect of "disastrous" market conditions, but the inability of the manager to "add value."

Our 2003 paper had several limitations, which we will address here. Specifically, we make four major adjustments to our analysis in an effort to more accurately compare the four investment vehicles. These adjustments include using the Value-add vehicle net cash flows to determine the investments in the other vehicles, staggering investments over three years rather than assuming all capital is invested up-front, adjusting the management fee calculations, and calculating after-promote limited partner IRRs for the Core Plus and Value-add funds.

PROS AND CONS

It is important to note the qualitative pros and cons of each vehicle (Table I). For example, REITs are the most liquid, while the other three vehicles are generally considered fairly illiquid given the complex and time-consuming process of buying and selling real estate. However, this illiquidity is often mitigated, particularly by Value-add funds, through refinancing, which is a much simpler transaction, and tax-advantaged, than an outright property sale.

Investment transparency is a matter of knowing how much capital investors will put to work, versus the investment commitment. For example, for REITs, if an investor wants to invest $100 million, then $100 million of securities (less fees) can be purchased. However, with Core, Core Plus, and Value-add funds, an investor can agree to commit $100 mil-

Table I: A broader comparison

Pros and Cons				
	Core	**Core Plus**	**REIT**	**Value-add**
Return Potential	Low	Medium	Medium	High
Liquidity	Low	Low	High	Low
Leverage	Low	Medium	Medium	High
$ Cost-Averaging	No	No	Yes	No
Investment Transparency	Medium	Medium	High	Low
Reporting Control	Sponsor	Sponsor	SEC	Sponsor
Operating Control	Medium	Medium	Low	Low
Diversification	Low	Medium	High	Medium
Alignment of Interests	Low	High	Medium	High

lion, but the amount actually invested or put to work depends on the availability of desirable investments (and the ability to win control of those investments). We categorize the Core and Core Plus funds as having medium investment transparency and low transparency for the Value-add fund, because opportunistic investment properties are often more difficult to find.

With regard to reporting, REITs adhere to rigorous SEC guidelines. However, that is not to say that the other vehicles have lesser requirements, as reporting is dictated by each investor and sponsor. Separate account fund reporting can be just as demanding as SEC reporting criteria. Multiple investors in commingled funds can also dictate reporting requirements, although collaborative and consistent investor reporting is difficult. A major limitation of Value-add fund reporting is the lack of meaningful benchmarking.

By definition, the greatest investor operating control is associated with Core funds. Core assets are the most stable, and easiest to "understand" from a cash flow perspective. Core Plus and REIT funds bring a slightly higher degree of risk with moderate operating control, depending on each asset. At the other end of the spectrum, the Value-add fund brings low operating control, especially when assets have not yet been stabilized. By the same token, Core funds have less diversification because of their focus on stabilized, core assets. Diversification of the other vehicles varies, because while those vehicles have greater flexibility in which property types to invest, diversification may or may not be a primary goal. Lastly, the interests of the investor and the manager are most closely aligned under the Core Plus and the Value-add funds, because of the sponsor promote structure. If the properties perform well, then both the manager and the investor benefit.

THE SET-UP

The base case market scenario assumptions for each investment vehicle simulation are summarized in Table II. In our earlier analysis, the investor commits $100 million of equity in each of the four real estate vehicles, which have different investment strategies, capital structures, cash flow payout ratios, management fees, and promote structures. The simulated NAREIT and Core Plus investment vehicle own the same quality properties as the unlevered Core scenario, but are levered 50 percent and 65 percent, respectively. In addition, the REIT portfolio grows over time, as the REITs retain 30 percent of their cash flow to purchase additional stabilized, core properties (that is, a 70 percent cash flow payout ratio), which are also 50 percent levered. Once stabilized, the Core Plus properties are refinanced with 70 percent debt, and net proceeds are distributed to investors.

As mentioned earlier, we make four major adjustments to our original analysis.

Table II: Base case investment vehicle simulation assumptions

	Base Case			
	Core	**Core Plus**	**REIT**	**Value-add**
Purchase Price - Year 0	$28,748,910	$82,139,743	$57,497,820	$95,829,700
Purchase Price - Year 1	$34,512,500	$98,607,143	$69,025,000	$115,041,666
Purchase Price - Year 2	$36,738,590	$104,967,399	$73,477,179	$122,461,966
Reserve for Negative CF	$0	$0	$0	$16,234,039
LTV	0.0%	65.0%	50.0%	70.0%
Equity Committed	$100,000,000	$100,000,000	$100,000,000	$102,480,769
Equity Invested	$100,000,000	$100,000,000	$100,000,000	$100,000,000
Interest Rate	n/a	6.0%	6.0%	6.3%
Going-in Cap Rate (Stabilized)	8.0%	8.0%	8.0%	n/a
Residual Cap Rate	8.0%	8.0%	8.0%	8.0%
Yr 0 Inv Residual in Yr 5	$31,741,120	$90,688,914	$69,005,082	$129,135,749
Yr 1 Inv Residual in Yr 6	$38,866,680	$111,047,658	$84,653,780	$129,135,749
Yr 2 Inv Residual in Yr 7	$42,201,091	$120,574,547	$94,686,642	$129,135,749
Cash Flow Payout Rate	100%	100%	70%	100%
Management Fee*	0.5%	1.5%	0.5%	1.5%
Carried Interest (Promote)	n/a	10%	n/a	20%
NOI Growth Rate	2.0%	2.0%	2.0%	2.0%
Pre-Promote IRR	10.5%	16.3%	13.0%	20.0%
Equity Multiple (over 7 years)	1.6x	1.94x	1.79x	2.17x
Years to Double Equity	8.7	7.2	7.8	6.5

* Management fee on committed capital for Core Plus and Value-add; on invested capital for Core and REITs.

First, we attempt to more realistically imitate the cash flows by staggering the capital outflows over three years, rather than assuming all committed capital is immediately invested. Specifically, each vehicle is assumed to have three staggered investment phases of five years each. Acquisitions occur in years zero, one, and two, which are sold in years five, six, and seven, respectively. Note that the Value-add fund experiences negative operating cash flow during the first two years of each stage of investment, before the properties are stabilized as core quality assets in the third year. That is, the properties purchased up-front experience negative operating cash flow in years one and two, and stabilize after development/redevelopment in year three. The properties purchased in year two (end of year one), experience negative cash flow in years two and three, stabilizing in year four, and the third stage investments experience negative cash flow in years three and four, stabilizing in year five. Specifically, we set the first-, second-, and third-year NOIs of each investment phase of the Value-add fund to $0, $2 million, and $9.7 million respectively.

In the base case for the Value-add fund, these NOI values are set so that combining all three investment phases generates a 20 percent gross IRR over the seven-year investment horizon (before general partner promote). Given our assumed operating cash flow, debt, and interest rate, in the base case, the three-year staggered investments of the Value-add fund generate an aggregate cash flow of -$16.2 million, which is set aside from the equity commitment as a reserve. As a result, only $86.2 million of the equity commitment is used for acquisitions. This amount is invested evenly over three years, or about $28.7 million per year.

Given this revised structure, our second critical adjustment is to use the Value-add vehicle as the starting point for the amount invested in each of the other fund vehicles each year. Because Value-add investments are unstabilized in the early years, the investor must tap into the committed capital to cover any operating cash shortfalls. These shortfalls ($5.8 million in year one, and about $8 million in year two), plus the actual capital placed by the Value-add fund ($28.7 million in each of the first three years), determine the capital placed by the other vehicles. This modification is necessary because under our original assumptions, the Value-add vehicle investor was not able to put the full $100 million to work, as he receives cash back via refinancing, prior to investing the entire $100 million. Because of this nuance, we were essentially comparing $100 million invested in the Core, Core Plus, and REIT funds to a lesser investment in the Value-add fund. Thus, in order to ensure that all vehicles actually invest the same amount ($100 million) we

increased the amount of "committed" capital to the Value-add fund to allow for operating cash shortfalls and the early return of capital via refinancing.

We also adjust the management fee calculations for each vehicle, so that the Core and REIT fund fees are based on "placed" capital, and Core Plus and Value-add fund fees are based on "committed" capital. Although the actual cash investments are staggered for the Core Plus and the Value-add vehicles, the management fees for both are based upon the commitment of $100 million, not merely the amount that has been placed. As a result, in the early years, the effective management fee for these vehicles is significantly higher than 1.5 percent per year. In fact, because about $28.7 million (including operating cash shortfall of the Value-add fund) is placed in the first year, the effective management fees of the Core Plus and Value-add funds start out at about 5.25 percent of invested capital. Then as capital is returned to the investor through re-financing (for the Value-add fund) or liquidation, the management fee is adjusted accordingly, often bringing the effective management fee lower than 1.5 percent toward the end of the investment horizon.

Lastly, we further examine investor returns of the Core Plus and the Value-add funds, by netting out the sponsor promote features and fees, under alternative market scenarios.

MARKET SCENARIO COMPARISONS

Given the base case assumptions, the equity IRRs of the Core, Core Plus, and REIT vehicles over the seven-year investment horizon are 10.5 percent, 16.3 percent, and 13 percent, respectively. As indicated earlier, the Value-add vehicle is set up to generate a 20 percent IRR. Comparing the Core, Core Plus, and Value-add vehicles on an unleveraged basis, we observe that Core (10.5 percent equity IRR) outperforms Core Plus (8.7 percent equity IRR), simply because of the slightly higher management fee of the Core Plus vehicle. With an 8.9 percent unlevered IRR, the REIT fund performs slightly better than the unlevered Core Plus portfolio, but also worse than the unlevered Core vehicle. In contrast, without leverage, due to fees, the Value-add fund IRR drops to 7.8 percent.

As in the earlier paper, we model Base, Strong, Weak, and Disaster real estate market scenarios. These scenarios reflect different annual NOI growth rates and residual cap rates, as summarized in Table III. In the Strong market scenario, NOI is assumed to grow by 3 percent (versus 2 percent in the Base case) annually, and the investor enjoys significant appreciation through a 7 percent (versus 8 percent) residual cap rate. In contrast, the Weak market scenario assumes that the annual NOI growth rate falls 100

Table III: Scenario assumption modifications

MarketScenario Assumptions		
	NOI Growth Rate	Residual Cap Rate
Strong	3%	7%
Base	2%	8%
Weak	1%	9%
Disaster	-2%	9%

basis points short of the base case, while the residual cap is 100 basis points higher. In the Disaster scenario, real estate market conditions soften dramatically, resulting in annual NOI growth of negative 2 percent, combined with a 9 percent residual cap rate. Each of these four real estate scenarios occur over a seven-year investment period.

Although we have "standardized" the initial capital outlays across investment vehicles, it is still difficult to compare the four sets of cash flows from year to year, without ignoring the additional complexity of the Value-add fund of purchasing, refinancing, and selling different properties at overlapping times of the hold period. For example, in year five of the Value-add vehicle, properties purchased at the beginning of year one are sold, but properties purchased at the beginning of year three are refinanced. Thus, benchmarking the Value-add portfolio against the Core or the REIT portfolio at that time is not a fair comparison. However, we are able to consistently examine three metrics: the IRR, the equity multiple over the hold period, and the time path of the cash flows (including how long it takes to get investor capital back).

First, we examine the seven-year pre-promote equity IRRs under each of the four market scenarios, which are summarized in Table IV. In all cases, the Value-add fund yields the highest IRR, while the Core strategy (NCREIF) yields the lowest in all but the Disaster scenario. That is, unless one expects substantial value declines, the unlevered Core strategy is always dominated. Only if we change the residual cap to 10 percent (worse than the Disaster scenario), combined with a -2 percent annual NOI growth rate, the value of the Core unlevered portfolio declines by 30 percent, and generates the highest IRR (1.9 percent) of the four vehicles, roughly equal to the Value-add fund (1.7 percent IRR).

In the Disaster scenario (a 9 percent residual cap rate and -2 percent annual NOI growth), the Core Plus vehicle falls victim to its higher debt service and higher management fees, resulting in the lowest IRR of the four alternatives. In contrast, even though the Value-add fund uses more leverage than the Core Plus alternative, its performance is buffered by its value-add execution (assuming they successfully stabilize the portfolio). In fact, the "real" disaster situation for the Value-add fund is failure to achieve stabilization. That is, if a Value-add fund fails to add value, the returns are very disappointing

Table IV: Real estate scenario comparison for pre-promote equity IRRs

Pre-Promote Equity IRR (7-Year Horizon)				
Case	**Core**	**Core Plus**	**REIT**	**Value-add**
Strong	14.1%	24.3%	17.7%	29.0%
Base	10.5%	16.3%	13.0%	20.0%
Weak	7.2%	7.7%	8.5%	12.2%
Disaster	3.5%	-5.3%	0.5%	7.1%
Range in bps	1063	2964	1723	2189

Indicates best return in each case.
Indicates worst return in each case.

except perhaps in the Strong market case, where a buoyant market may mask the lack of effective execution.

Second, we examine equity multiples by comparing the total cash outflows (regardless of timing) to the total cash inflows over the seven-year investment period (Table V). Under all scenarios, the Value-add fund performs the best, and therefore requires the shortest amount of time to double one's equity. On the other end of the spectrum, the Core vehicle is the worst performer under all market scenarios, except the Disaster case. When Disaster strikes, the Core Plus vehicle is the weakest.

Third, absent a direct benchmark across vehicles, we examine the time path of the cash flows of each vehicle to determine how long it takes to get one's capital back. Under the Base, Weak, and Disastrous market conditions of the Core vehicle, the equity investor does not receive his full investment back until year seven when the portfolio is liquidated. However, under Strong market conditions, the Core portfolio generates sufficient cash flow to fully return equity

Table V: Real estate scenario comparison for pre-promote equity multiples

	Pre-Promote Equity Multiple (7-Year Horizon) & Years to Double			
Case	**Core**	**Core Plus**	**REIT**	**Value-add**
Strong	1.88x 7.5	2.67x 5.2	2.2x 6.4	2.81 5.0
Base	1.6x 8.7	1.94x 7.2	1.79x 7.8	2.17x 6.5
Weak	1.39x 10.1	1.37x 10.2	1.47x 9.5	1.67x 8.4
Disaster	1.17x 11.9	.81x 17.3	1.02x 13.7	1.36x 10.3

Indicates best return in each case.
Indicates worst return in each case.

capital at the end of year six. With the Core Plus vehicle, investors get their money back in six years, assuming Base or Strong market conditions, and seven years under Weak market conditions. However, Core Plus investors suffer a loss under Disastrous conditions. REIT investors will be in the black after six years of Base case or Strong conditions, but not until a liquidity event in year seven with Weak or Disastrous conditions. The Value-add investor's capital is fully returned in year five under Base and Strong market conditions, and year six under the Weak and Disaster scenarios. This is despite negative cash flows in the first three years of the investment period.

THE IMPACT OF SPONSOR PROMOTES

Core Plus and Value-add fund structures provide the general partner sponsor a promote (profit share) in exchange for portfolio management, asset selection, the oversight of major capital improvements, lease-up decisions, orchestrating turn-around strategies, and refinancing decisions. How do these general partner promotes alter the returns realized by limited partner investors? To evaluate this question, we analyzed a typical promote structure for a Value-add fund, using the following fund cash flow distribution waterfall:

1) A 10 percent cumulative preferred return to investors
2) The return of investor capital
3) 50 percent of remaining cash flows go to the general partner's "catch-up," until the general partner has received 20 percent of all profit distributions (not including the return on their invested capital)
4) Thereafter, profits are split, with 80 percent going to investors and 20 percent going to the fund's general partner.

For the Core Plus vehicle, the promote structure reflects the following cash flow distribution waterfall:

1) A 9 percent cumulative preferred return to investors
2) The return of investor capital
3) 50 percent of remaining cash flows go to the general partner's "catch-up," until the general partner has received 10 percent of all profit distributions (not including the return on their invested capital)
4) Thereafter, profits are split, with 90 percent going to investors and 10 percent going to the fund's general partner.

The final two profit distributions are the general partner's promote, an incentive-based compensation to the sponsor for exceeding the (cumulative) preferred return. The promote structure allows a 50 percent catch-up of cash flows to the gen-

Table VI: Limited partner IRR comparison, pre- & post-promote

Limited Partner IRR Pre- & Post-Promote						
	Core	REIT	Core Plus		Value-add	
			Pre-	Post-	Pre-	Post-
Strong	14.1%	17.7%	24.3%	21.5%	29.0%	21.8%
Base	10.5%	13.0%	16.3%	14.3%	20.0%	15.2%
Weak	7.2%	8.5%	7.7%	7.6%	12.2%	9.5%
Disaster	3.5%	0.5%	-5.3%	-5.3%	7.1%	6.1%

eral partner until they have received their full profit share. Beyond this "catch-up," additional cash flows are split between the limited and general partners either 80/20 (Value-add) or 90/10 (Core plus). While neither the investment's equity cash flows nor IRR are affected by the promote structure, the split of profits between investors and the general partner varies depending upon investment performance.

In the Base market scenario, the Value-add limited partner's post-promote equity IRR is 15.2 percent. Even after paying the promote to the general partner, the Value-add fund still generates the highest IRR, when compared to the promoted Core Plus vehicle, and the original Core and REIT Base cases. In addition, because of the refinancing upon stabilization, Value-add investors benefit from an earlier extraction of cash flows. For the Core Plus investment, in the Base scenario, the equity IRR for limited partners is 14.3 percent, net of the general partner promote, which is still also higher than the 13 percent return for the REITs. The most conservative investment approach, unlevered Core, is by far the weakest performer for the Base case, with an IRR of 10.5 percent.

In the Strong real estate market scenario, where the residual cap rate is 100 basis points lower, and the annual NOI growth rate is 100 basis points higher each year, the Value-add fund generates a total IRR of 29.0 percent. Net of the general partner promote, the investor's IRR drops to 21.8 percent. For the Core Plus vehicle, the equity IRR is 24.3 percent, and 21.5 percent pre- and post-promote to the limited partner investor, respectively. That is, the Core Plus post-promote sponsor return in the Strong scenario is 150 basis points higher than the Value-add fund pre-promote Base market scenario return of 20 percent. In addition, the Core Plus investor still fares better after the promote than the REIT investor (who receives a 17.7 percent IRR), as well as the unlevered Core investor (who only achieves a 14.1 percent IRR) in a Strong market. In fact, with the Core (NCREIF) investment vehicle, we observe that a Strong market scenario provides unlevered investor returns less than that achieved by Core Plus

investors in the Base scenario. This vividly demonstrates the severe upside limitation of the unlevered Core strategy.

Turning to the Weak real estate market scenario, returns for Core Plus are insufficient for the general partner to earn their promote until year seven. That is, performance does not exceed the preferred return hurdle until liquidation, leaving the limited partner investor with an IRR of 7.6 percent (versus 7.7 percent before the promote). In this scenario, the Value-add fund modestly exceeds the preferred return hurdle in year six, a year earlier than the Core Plus investor. As a result, the general partner earns a larger share of the profits than the Core Plus general partner under the same conditions, causing the limited partner's IRR to drop to 9.5 percent (versus a pre-promote investment equity IRR of 12.2 percent). Under the Weak market scenario, REITs generate an investor IRR of 8.5 percent, while the unlevered Core once again performs the worst at 7.2 percent. That is, even if markets are weak (higher residual cap rate of 100 basis points, and NOI growth is 100 basis points lower each year), the Value-add fund performs notably better than the alternatives, while the unlevered Core strategy substantially underperforms.

If a real estate market Disaster strikes (9 percent residual cap rate, -2 percent annual NOI growth rate), implying a portfolio value increase of about 10 percent from the Value-add fund purchase price, the promote structure does not kick in for the Value-add fund until year seven. The Value-add pre- and post-promote IRRs are 7.1 percent and 6.1 percent, respectively. For the Core Plus fund, returns are insufficient to yield profit participation for the general partner in the Disaster scenario. As a result, post-promote returns for investors are identical to pre-promote returns (-5.3 percent). In short, the Core Plus vehicle is penalized for its relatively high leverage. Note that the original $100 million Core portfolio drops in value to about $78 million after seven years in the Disaster scenario. Because of its conservative capital structure, the unlevered Core strategy generates the second highest IRR of 3.5 percent, with the Value-add fund providing a 6.1 percent post-promote IRR, as even though the Value-add fund utilizes the highest leverage ratio, its low acquisition price buffers the IRR. The strength of moderately leveraged real estate is demonstrated by the fact that the REIT strategy still ekes out a 0.5 percent IRR under this Disaster scenario.

The four simulated market scenarios (Base, Strong, Weak, and Disaster) cover a broad, yet reasonable, range of market conditions. If the Value-add fund is able to execute its stabilization strategy, it provides the best risk/return trade-off, while the unlevered Core is the worst. REITs provide

the most liquid investment of the four investment vehicles, while Core Plus generally performs slightly better than REITs on the upside, but provide less liquidity. Even post-promote, the limited partner investor in a Value-add fund fares substantially better than other vehicles (assuming stabilization is successfully achieved) in the Base scenario or better real estate markets, and worst with the unlevered Core strategy.

SENSITIVITY ANALYSES

When structuring the partnership agreement, how critical is the preferred return hurdle for limited partners? As seen in Table VIIa, a preferred return range of 7 percent to 10.5 percent for the Core Plus fund and 8 percent to 11.5 percent for the Value-add fund generates an equity IRR for the limited partner, ranging from 14.2 percent to 14.6 percent in the Core Plus vehicle, and 15.2 percent to 15.3 percent with the Value-add fund. In the Strong case (Table VIIb), the same preferred return range corresponds to no change in the Core Plus vehicle, and a swing of only 10 basis points in the IRR for the Value-add fund limited partners. In the Weak case (Table VIIc), the IRR swing resulting from a change in the preferred return hurdle varies by 60 and 30 basis points between the lowest and highest assumed preferred hurdle, for the Core Plus and Value-add funds, respectively. In the Disaster case (Table VIId), since the preferred return hurdle is never achieved for the Core Plus vehicle, it is irrelevant over the range we examine. That is, market conditions do not allow for a strong enough performance to even reach a 7 percent return hurdle. In the Value-add vehicle, the Disaster case IRR varies by 100 basis points for the given range of preferred return hurdles.

These simulations demonstrate that the limited partner's equity IRR is driven far more by real estate market conditions,

Table VIIa: Base case preferred return sensitivity

Core Plus Base Case		Value-add Base Case	
Pref. Ret.	**IRR**	**Pref. Ret.**	**IRR**
7.0%	14.2%	8.0%	15.2%
7.5%	14.2%	8.5%	15.2%
8.0%	14.2%	9.0%	15.2%
8.5%	14.3%	9.0%	15.2%
9.0%	14.3%	10.0%	15.2%
9.5%	14.4%	10.5%	15.3%
10.0%	14.5%	11.0%	15.3%
10.5%	14.6%	11.5%	15.3%

Table VIIb: Strong case preferred return sensitivity

Core Plus Strong Case		Value-add Strong Case	
Pref. Ret.	**IRR**	**Pref. Ret.**	**IRR**
7.0%	21.5%	8.0%	21.8%
7.5%	21.5%	8.5%	21.8%
8.0%	21.5%	9.0%	21.8%
8.5%	21.5%	9.5%	21.8%
9.0%	21.5%	10.0%	21.8%
9.5%	21.5%	10.5%	21.8%
10.0%	21.5%	11.0%	21.8%
10.5%	21.5%	11.5%	21.9%

Table VIIc: Weak case preferred return sensitivity

Core Plus Weak Case		Value-add Weak Case	
Pref. Ret.	**IRR**	**Pref. Ret.**	**IRR**
7.0%	7.1%	8.0%	9.5%
7.5%	7.2%	8.5%	9.6%
8.0%	7.3%	9.0%	9.6%
8.5%	7.5%	9.5%	9.7%
9.0%	7.6%	10.0%	9.7%
9.5%	7.7%	10.5%	9.8%
10.0%	7.7%	11.0%	9.8%
10.5%	7.7%	11.5%	9.8%

Table VIId: Disaster case preferred return sensitivity

Core Plus Disaster Case		Value-add Disaster Case	
Pref. Ret.	**IRR**	**Pref. Ret.**	**IRR**
7.0%	-5.2%	8.0%	6.1%
7.5%	-5.2%	8.5%	6.3%
8.0%	-5.3%	9.0%	6.5%
8.5%	-5.3%	9.5%	6.6%
9.0%	-5.3%	10.0%	6.8%
9.5%	-5.3%	10.5%	7.0%
10.0%	-5.3%	11.0%	7.1%
10.5%	-5.3%	11.5%	7.1%

rather than the preferred return hurdle. In short, negotiating 100 basis points higher or lower on a preferred return is not nearly as critical as some investors seem to believe, as its differential impact on the IRR comes into play only within a very narrow performance range. If a Value-add sponsor insists on a low hurdle, it may be a sign of low confidence in their performance prospects.

We also explore how changes in the general partner "catch-up" impact the limited partner's return. Recall that we assume in step three of the cash flow distribution waterfall that "50 percent of remaining cash flows (after preferred returns and return of capital) go toward the general partner's 'catch-up' until the general partner has received 20 percent (10 percent for Core Plus) of all profit distributions." What if these allocations are changed to 25 percent (or 75 percent), rather than 50 percent? How are the equity IRRs of the limited partner investing in each vehicle impacted under varying real estate market conditions?

Table VIII illustrates a range of catch-up allocations and the resulting limited partner IRRs for the Core Plus and Value-add vehicles under the Base case market conditions. On the one extreme, when 0 percent of the excess profits (after preferred return and return of capital) are allocated toward the catch-up, then the limited partner maximizes his IRR. As the catch-up allocation increases, the LP's IRR decreases. However, from the perspective of the limited partner, if enough cash flow is generated to allow the general partner to reach his maximum promote, then the limited partner's "downside" IRR is capped. In the Base case, the general partner of the Core Plus vehicle achieves his maximum 20 percent promote when 75 percent of the excess profits are allocated toward the catch-up. Even at a higher allocation percentage to the general partner, the limited partner is no worse off under the same market conditions, because the general partner allocations will have already "caught up" to the designated promote share. Similarly for the Base case Value-add fund, the general partner achieves his maximum promoted share at a 50 percent allocation. Thus, given the portfolio's performance in the Base case market conditions, the limited partner's IRR will be no less than 14.2 percent and 15.2 percent under the Core Plus and Value-add fund vehicles, respectively.

The allocation percentage that goes toward a general partner's catch-up is a way to smooth limited partner cash flows. At the extreme, if 100 percent of all excess cash flows are allocated to the general partner catch-up, then the limited partner does not receive a profit share for an extended period.

Table VIII: LP return sensitivity to percentage allocated to the general partner catch-up

Base Case: LP 7-Year Equity IRR		
	Core Plus	Value-add
Catch-Up Alloc.		
0.0%	16.3%	20.0%
5.0%	15.3%	17.7%
10.0%	14.9%	17.3%
15.0%	14.6%	16.9%
20.0%	14.5%	16.5%
25.0%	14.5%	16.1%
50.0%	14.3%	15.2%
75.0%	14.2%	15.2%
100.0%	14.2%	15.2%

This discontinuity is the most damaging situation for limited partner investors. If, on the other hand, the general partner's catch-up allocation was 25 percent or 50 percent of excess cash flows, then that would be an appreciably better position for the limited partner. However, the difference between a 25 percent and a 50 percent catch-up allocation is not as critical as avoiding the 100 percent allocation.

The Base, Strong, Weak, and Disaster scenarios are driven by real estate market conditions, specifically in annual NOI growth rates and residual cap rates. As noted, these variables have a significant impact on vehicle performance and investor returns. Figures IXa and IXb illustrate Core Plus sensitivity tables for even more extreme market conditions. Specifically, the residual cap rate varies between 6.5 percent and 10 percent while the NOI growth rate varies between negative 3 percent and positive 4 percent (for all seven years). The resulting limited partner equity IRRs are color coded for each of the Base, Strong, Weak, and Disaster scenarios, but incremental IRRs are also shown in the matrix for combinations within those ranges.

Comparing Figures IXa and IXb, it is apparent that equity IRRs for the Disaster cases of the Core Plus vehicle are identical for pre- and post-promote. This is because performance under such onerous market

Table IXa: Core plus IRR sensitivity before promote

Core Plus Equity IRR Pre-Promote									
		Residual Cap Rates							
		6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	9.50%	10.00%
Annual NOI Growth Rate	-3.0%	9.1%	5.4%	1.5%	-2.4%	-6.7%	-11.4%		
	-2.5%	10.9%	7.3%	3.7%	-0.1%	-4.0%	-8.1%	-12.8%	
	-2.0%	12.6%	9.1%	5.7%	2.1%	-1.5%	-5.3%	-9.4%	-14.1%
	-1.5%	14.3%	10.9%	7.6%	4.2%	0.8%	-2.7%	-6.4%	-10.5%
	-1.0%	15.9%	12.6%	9.4%	6.2%	3.0%	-0.3%	-3.8%	-7.4%
	-0.5%	17.4%	14.2%	11.1%	8.0%	5.0%	1.9%	-1.3%	-4.7%
	0.0%	18.9%	15.8%	12.8%	9.8%	6.9%	3.9%	0.9%	-2.2%
	0.5%	20.3%	17.3%	14.4%	11.5%	8.7%	5.9%	3.0%	0.2%
	1.0%	21.7%	18.8%	16.0%	13.2%	10.4%	7.7%	5.0%	2.3%
	1.5%	23.1%	20.2%	17.5%	14.8%	12.1%	9.5%	6.9%	4.3%
	2.0%	24.5%	21.6%	18.9%	16.3%	13.7%	11.2%	8.7%	6.2%
	2.5%	25.8%	23.0%	20.3%	17.8%	15.3%	12.8%	10.4%	8.1%
	3.0%	27.1%	24.3%	21.7%	19.2%	16.8%	14.4%	12.1%	9.8%
	3.5%	28.4%	25.7%	23.1%	20.6%	18.2%	15.9%	13.7%	11.5%
	4.0%	29.6%	27.0%	24.4%	22.0%	19.7%	17.4%	15.2%	13.1%

Strong Base Weak Disaster

Table IXb: Core plus IRR sensitivity after promote with 50 percent catch-up allocation

Core Plus Limited Partner Equity IRR Net of Promote									
		Residual Cap Rates							
		6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	9.50%	10.00%
Annual NOI Growth Rate	-3.0%	8.3%	5.4%	1.5%	-2.4%	-6.7%	-11.4%		
	-2.5%	9.8%	7.2%	3.7%	-0.1%	-4.0%	-8.1%	-12.8%	
	-2.0%	11.3%	8.3%	5.7%	2.1%	-1.5%	-5.3%	-9.4%	-14.1%
	-1.5%	12.8%	9.8%	7.4%	4.2%	0.8%	-2.7%	-6.4%	-10.5%
	-1.0%	13.9%	11.3%	8.5%	6.2%	3.0%	-0.3%	-3.8%	-7.4%
	-0.5%	15.1%	12.7%	10.0%	7.6%	5.0%	1.9%	-1.3%	-4.7%
	0.0%	16.5%	13.9%	11.5%	8.9%	6.9%	3.9%	0.9%	-2.2%
	0.5%	17.8%	15.1%	12.9%	10.4%	8.0%	5.9%	3.0%	0.2%
	1.0%	19.1%	16.4%	14.1%	11.8%	9.4%	7.6%	5.0%	2.3%
	1.5%	20.4%	17.7%	15.2%	13.2%	10.9%	8.7%	6.9%	4.3%
	2.0%	21.6%	19.0%	16.5%	14.3%	12.3%	10.1%	8.1%	6.2%
	2.5%	22.8%	20.3%	17.8%	15.5%	13.7%	11.5%	9.5%	7.8%
	3.0%	24.1%	21.5%	19.1%	16.8%	14.7%	12.9%	10.9%	8.9%
	3.5%	25.2%	22.7%	20.4%	18.1%	15.9%	14.2%	12.3%	10.3%
	4.0%	26.4%	23.9%	21.6%	19.3%	17.2%	15.2%	13.6%	11.7%

Strong Base Weak Disaster

Gray shaded section indicates no post-promote impact on the IRR

conditions does not merit any profit participation to the general partner. However, the limited partner's Strong case equity IRR of the Core Plus strategy declines by 280 basis points between the pre- and post-promote payment. Similarly, the Core Plus Weak and Base case limited partner IRRs drop by 10 and 200 basis points, respectively.

Figures Xa and Xb illustrate the same analysis for the Value-add fund, with equity IRR sensitivity tables driven by changes to the residual cap rate and the annual NOI growth rate assumptions, before and after the promote payment, respectively. Once again, we examine market condition combinations, where residual cap rates range from 6.5 percent to 10 percent, and annual NOI growth rates range from negative 3 percent to positive 4 percent. Even in the Disaster case, cash flows are sufficient to achieve a general partner promote distribution, decreasing the limited partner distribution by 100 basis points. The more the performance of the Value-add fund improves, the greater the spread between pre- and post-promote IRRs. Specifically, the Weak case pre-promote IRR to the limited partner is 12.2 percent, but declines by 270 basis points to 9.5 percent upon payment of the general partner's promote. The Base Case for the Value-add fund exhibits a 480 basis point decline, with a 20 percent initial IRR and a 15.2

Table Xa: Core plus IRR sensitivity before promote

Value-add Fund Equity IRR Pre-Promote								
	Residual Cap Rates							
Annual NOI Growth Rate	6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	9.50%	10.00%
-3.0%	23.9%	19.5%	15.4%	11.8%	8.4%	5.3%	2.5%	-0.1%
-2.5%	24.7%	20.3%	16.3%	12.7%	9.3%	6.2%	3.4%	0.8%
-2.0%	25.6%	21.2%	17.2%	13.5%	10.2%	7.1%	4.3%	1.7%
-1.5%	26.4%	22.0%	18.0%	14.4%	11.0%	8.0%	5.2%	2.6%
-1.0%	27.2%	22.8%	18.8%	15.2%	11.9%	8.8%	6.0%	3.4%
-0.5%	28.0%	23.6%	19.7%	16.0%	12.7%	9.7%	6.9%	4.3%
0.0%	28.8%	24.4%	20.5%	16.9%	13.6%	10.5%	7.7%	5.1%
0.5%	29.6%	25.2%	21.3%	17.7%	14.4%	11.3%	8.5%	6.0%
1.0%	30.3%	26.0%	22.1%	18.5%	15.2%	12.2%	9.4%	6.8%
1.5%	31.1%	26.8%	22.8%	19.3%	16.0%	12.9%	10.2%	7.6%
2.0%	31.8%	27.5%	23.6%	20.0%	16.7%	13.7%	11.0%	8.4%
2.5%	32.6%	28.3%	24.4%	20.8%	17.5%	14.5%	11.7%	9.2%
3.0%	33.3%	29.0%	25.1%	21.5%	18.3%	15.3%	12.5%	9.9%
3.5%	34.0%	29.7%	25.8%	22.3%	19.0%	16.0%	13.3%	10.7%
4.0%	34.7%	30.5%	26.6%	23.0%	19.8%	16.8%	14.0%	11.4%

Strong Base Weak Disaster

* Annual growth rate applies after stabilization

Table Xb: Value-add fund IRR sensitivity after promote with 50 percent catch-up allocation

Value-add Fund Limited Partner Equity IRR Net of Promote								
	Residual Cap Rates							
Annual NOI Growth Rate	6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	9.50%	10.00%
-3.0%	17.6%	14.8%	11.8%	9.5%	7.1%	5.3%	2.5%	-0.1%
-2.5%	18.3%	15.3%	12.3%	10.2%	7.5%	5.7%	3.4%	0.8%
-2.0%	18.9%	15.9%	12.9%	10.7%	8.2%	6.1%	4.3%	1.7%
-1.5%	19.6%	16.4%	13.6%	11.2%	8.8%	6.5%	4.9%	2.6%
-1.0%	20.3%	17.0%	14.2%	11.7%	9.5%	7.1%	5.3%	3.4%
-0.5%	21.0%	17.5%	14.9%	12.2%	10.0%	7.7%	5.7%	4.3%
0.0%	21.6%	18.0%	15.6%	12.7%	10.5%	8.3%	6.1%	4.8%
0.5%	22.3%	18.7%	16.2%	13.3%	11.0%	8.9%	6.7%	5.1%
1.0%	22.9%	19.3%	16.8%	13.9%	11.4%	9.5%	7.3%	5.5%
1.5%	23.6%	20.0%	17.3%	14.6%	11.9%	9.9%	7.9%	6.0%
2.0%	24.2%	20.6%	17.8%	15.2%	12.5%	10.4%	8.5%	6.5%
2.5%	24.9%	21.2%	18.3%	15.8%	13.1%	10.9%	9.1%	7.1%
3.0%	25.5%	21.8%	18.8%	16.4%	13.7%	11.3%	9.5%	7.7%
3.5%	26.1%	22.5%	19.2%	17.1%	14.3%	11.9%	10.0%	8.2%
4.0%	26.7%	23.1%	19.8%	17.7%	14.9%	12.5%	10.4%	8.8%

Strong Base Weak Disaster

* Annual growth rate applies after stabilization

Gray shaded section indicates no post-promote impact on the IRR

percent IRR net of promote. Following the same pattern, the Strong case equity IRR decreases by 720 basis points between the pre- and post-promote cash flow to the limited partner.

CONCLUSION

The unlevered Core vehicle only merits investment if you expect—or fear—an absolute disaster in the market, and it severely limits the upside potential. Comparing Core Plus and REITs, the two generally perform closely to each other, with Core Plus slightly stronger on the upside but less liquid, and worse on the downside than REITs. The Value-add fund generally presents the best risk-reward balance, *if* successful stabilization is achieved.

When evaluating real estate investment vehicles, it is clear that you have to run the numbers in an internally consistent manner in order to understand return profiles and risks. Because investment strategies vary so widely, including types of investment, leverage ratios, geographic risk tolerance, and countless other dimensions, an investor cannot simply rely on an "expected" base case pro forma return to evaluate the vehicle. In addition, actual execution of each strategy is critical. Anybody can say they will pursue an opportunist investment approach, but only the best investment managers can consistently generate the targeted returns. This brings us back to square one: how should we compare return performance of these alternative vehicles? We have shown that interim performance is useful for only the most conservative strategies, while more opportunistic strategies are unfortunately much more difficult to evaluate until their investments are fully liquidated. Therefore, a strong tolerance for short-term weak performance, combined with patience, is the key to pursuing more aggressive investment strategies. A key is assessing and tracking the ability to execute among Value-add funds.