An Overview of Joint Ventures & Incentive Fees

Joseph L. Pagliari, Jr.
Clinical Professor of Real Estate
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The Law of One Price

- Two assets with the same pattern of cash flows ought to have the same price.

In practice:
- We spend a lot of time thinking about $E(k)$.
- We don't spend a lot of time thinking about $\sigma_{E(k)}$.

This is a mistake!
A core property can be levered up to have the same the risk/return characteristics as non-core property. The non-core will be attractive if priced at or above the core-with-leverage alternative.
Joint Ventures: Some Observations & Thoughts:

• Like leverage, JVs are neither good nor bad.
• Like leverage, JVs reshape the investor’s return distribution
• Unlike leverage, the JV concern is how to:
  • Protect the investor’s downside
  • Motivate the operating partner to act optimally
• JVs always impose additional costs:
  • Monitoring and supervision,
  • Additional legal complexities,
  • Issues of control,
  • Risk of a “bad” partner, and
  • Operator’s “promoted” interest.
• The benefits of JVs include:
  • Access to “off-market” deals,
  • Access to asset- and/or market-specific expertise, and
  • Potential for excess risk-adjusted returns.
Joint Ventures:
Numerical Example

- Property-Level Return Distribution:
  - Average Return: 12.5%
  - Volatility: 15.0%

- Joint Venture Structure:
  - Ongoing fees: 0.5%
  - Investor’s Preference: 12.0%
  - Residual Split:
    - Investor: 50%
    - Operating Partner: 50%

- Notes:
  - Monitoring/supervision costs always reduce returns.
  - Investor’s preference typically set at or near deal’s likely return.
  - The operating partner’s “promoted” interest creates an option-like return for operator.
  - The value of the option reduces the investor’s upside.
Joint Ventures:
Property Returns & Operator’s Promote

Illustration of Venture-Level Returns and Operating Partner's Participation

Note: assumes the operating partner’s capital, if any, is *pari passu* with money partner’s capital.
Joint Ventures: Returns Before and After JV Participation

Illustration of Venture-Level Returns before and after the Venture Partner’s Participation

- Likely Returns before JV Participation
- Likely Returns after JV Participation

Estimated Frequency

Likely Returns

-40% -30% -20% -10% 0% 10% 20% 30% 40% 50% 60% 70%
Joint Ventures:
Numerical Example (continued)

- Joint Venture Deal after Operating Partner:
  - Likely Returns:
    - JV Deal before Operating Partner: \(12.5\%\)
    - Ongoing (Monitoring) Fees: \(0.5\%\)
    - Operating Partner’s Participation: \(3.0\%\)
    - Investor’s Net Return: \(9.0\%\)
  - Volatility (Standard Deviation):
    - JV Deal before Operating Partner: \(15.0\%\)
    - Operating Partner’s Participation: \(3.5\%\)
    - Investor’s Net Return: \(11.5\%\)

- Notes:
  - The operating partner’s “promoted” interest reduces the investor’s net return by 300 bps:
    - Even though the value of the promote equals zero at the most likely return,
    - This is attributable to operating partner’s asymmetric participation in returns.
  - The reduction in the investor’s standard deviation is a statistical illusion:
    - The investor still receives 100% of the economic downside.
Joint Ventures: Numerical Example (continued)

- A simple way to think of the average promote:

  ![Table]

<table>
<thead>
<tr>
<th>Probability</th>
<th>Gross Returns</th>
<th>Promote</th>
<th>Net Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>24.0%</td>
<td>6.0%</td>
<td>18.0%</td>
</tr>
<tr>
<td>50%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Average</td>
<td><strong>12.0%</strong></td>
<td><strong>3.0%</strong></td>
<td><strong>9.0%</strong></td>
</tr>
</tbody>
</table>

- Note: The appropriate way to calculate the expected promote:

  \[ E(\pi) = \int_{\psi}^{\infty} \kappa(x - \psi) f(x) \, dx \]

  where: \( \pi \) = the “promote”, \( \kappa \) = operating partner’s participation in the excess profits,
  \( \psi \) = investor’s preference, and \( f(x) \) = the distribution of venture-level returns, \( x \).

- Because of the operating partner’s asymmetric participation:
  - The average expectation does not equal the expectation of the average:

  \[ E(\pi) = \int_{\psi}^{\infty} \kappa(x - \psi) f(x) \, dx \neq \kappa(\bar{x} - \psi) \]
Joint Ventures: Value of Operator’s Promote Increases with Volatility

- With greater property volatility, the operating partner’s has a greater probability of achieving a larger promoted interest.

Illustration of Increasing Expected Value of the Promote as Venture Volatility Increases
Joint Ventures: Value of Operator’s Promote Increases with Volatility (continued)

- Investor’s net return declines with greater venture-level volatility.
- Of course, investor can alter “pref” &/or promote, given $E(\text{volatility})$.

Illustration of Joint Venturer's Increasing Expected Participation as Project Volatility Increases

- Costs & promotes generally increase with volatility (and leverage)
- Widening spread between gross & net returns

Illustration of the Law of One Price
Based upon Required Gross v. Net Returns

<table>
<thead>
<tr>
<th>Expected Return ($k_e$)</th>
<th>Volatility of Expected Return ($\sigma_e$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>4%</td>
<td>10%</td>
</tr>
<tr>
<td>6%</td>
<td>15%</td>
</tr>
<tr>
<td>8%</td>
<td>20%</td>
</tr>
<tr>
<td>10%</td>
<td>25%</td>
</tr>
<tr>
<td>12%</td>
<td>30%</td>
</tr>
<tr>
<td>14%</td>
<td>35%</td>
</tr>
</tbody>
</table>

- Required Gross Returns
- Required Net Return
- Fees & Costs
- JV Promotes
Joint Ventures: Additional Notes

• The nature of JV deals (with their additional monitoring costs, specialized expertise, etc.) typically lead to higher-risk/higher-return deals.

• These higher-risk deals increase the expected value of the promoted interest.

• The nature of these JV deals also leads to typically shorter holding periods.

• The higher “velocity” of capital (i.e., the shorter holding periods) engenders higher transaction costs for the JV deals (as compared to core) over the same holding period.

• To dramatize this point, assume there will need to be five JV deals over a ten-year period (i.e., the JV deal rolls over every 2 years) as compared to one core deal over the same period.

• These costs must also be factored into the comparison.
Joint Ventures: Additional Notes (continued)

• For an investor to increase its share of JV deals with operating partners, two risk/costs must be acknowledged:
  
  – Poaching by Trimming Participation – First-tier operating partners are likely to stay with their existing capital sources, unless the new investor “cuts” a substantially better deal, and/or

  – Betting on Emerging Partners – Second-tier operating partners (i.e., they are less experienced/proven) are solicited instead of first-tier partners (these second-tier partners tend to represent more volatile outcomes).
Joint Ventures:
Betting on Emerging Partners (continued)

- Some partners will out-perform and others will under-perform their peers
- Underperformance generally worsens with riskier strategies:

Illustration of Partner Risk
as a Function of Investment Strategy

![Graph showing the relationship between volatility of expected return and expected return, with lines for upper quartile, average partner, and lower quartile performance.]
Joint Ventures: Motivational Issues

• If the operating partner has earned (but not realized) its promoted interest, they tend to make “safe” bets in the future (i.e., they become risk-averse), because of the fragile/volatile nature of the promoted interest:
  • For example, execute a lower-rate lease with a strong credit tenant.

• If the operating partner has not earned its promoted interest, they tend to make risky bets (i.e., they become risk-seeking), because the downside is completely underwritten by the investor:
  • For example, execute a higher-rate lease with a weak credit tenant.

• Practical implication - the importance of how the preferences and waterfalls are structured:
  • If preference is too low, the incentive is too generous.
  • If preference is too high, the operator either:
    • Takes on very risky behavior, or
    • Places its efforts on other projects (with better likely outcomes).
Joint Ventures: Motivational Issues – “In-the-Money” Promote

- If the operating partner has earned (but not realized) its promoted interest, they tend to make “safe” bets in the future (*i.e.*, they become risk-averse).

Illustration of Operating Partner's Conservative Proclivities when the Promoted Interest is "in the Money"
Joint Ventures: Motivational Issues – “Out-of-the-Money” Promote

- If the operating partner has not earned its promoted interest, they tend to make risky bets (i.e., they become risk-seeking).

Illustration of Operating Partner's Aggressive Proclivities when the Promoted Interest is "out of the Money"
Motivational Issues – Safe v. Risky Tenant

Just one example of how the operator’s motivations may influence the selection of a “safe” v. “risky” tenant (e.g., with regard to credit quality).

<table>
<thead>
<tr>
<th>Tenant Credit Type</th>
<th>Lease Rate/sq. ft.</th>
<th>Capitalization Rate</th>
<th>Building Value/sq. ft.</th>
<th>Lease Rate/sq. ft.</th>
<th>Capitalization Rate</th>
<th>Building Value/sq. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td>$12.00</td>
<td>6.0%</td>
<td>$200.00</td>
<td>$12.00</td>
<td>6.0%</td>
<td>$200.00</td>
</tr>
<tr>
<td>Weak</td>
<td>$14.00</td>
<td>7.0%</td>
<td>$200.00</td>
<td>$14.00</td>
<td>6.0%</td>
<td>$233.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$14.00</td>
<td>8.4%</td>
<td>$166.67</td>
</tr>
</tbody>
</table>

50%
Joint Ventures:
Motivational Issues – “Out-of-the-Money” Promote

• Because of the recent dislocations in the capital markets (e.g., Bears Stearns, Lehman Brothers, etc.), there may be additional financial pressures placed on operating partners.

• This pressure may be:
  – direct (e.g., unfunded Lehman commitments) or
  – indirect (e.g., general malaise in capital and space markets)

• With increasing pressure, be on guard for:
  – Commingling of funds between unaffiliated projects
  – “Forced” sales
  – Reduced resources applied to your project(s)
  – Short cuts on construction/maintenance
So, Do Institutional Investors “Get It”?

- Let’s look at the performance by private fund type:

**Reported Performance by Fund Type**
**for the 16-Year Period Ended 2011**

- **NPI**
- **Core**
- **Value-Added**
- **Opportunistic**

**Average Annual Returns**
- 18%
- 16%
- 14%
- 12%
- 10%
- 8%
- 6%
- 4%
- 2%
- 0%

**Volatility**
- 0%
- 5%
- 10%
- 15%
- 20%
- 25%

**Gross Returns**
**Net Returns**

Source: NCREIF/Townsend and Author’s Calculations
So, Do Institutional Investors “Get It” (continued)?

- Apply the law of one price by levering up core:

![Graph showing reported and adjusted performance by fund type for the 16-year period ended December, 2011, with levered core creating the law-of-one-price continuum.](image)
So, Do Institutional Investors “Get It” (continued)?

- Recall: The volatility of net returns understates the investor’s true risk exposure.

Exhibit 75: Reported & Volatility-Adjusted Performance by Fund Type for the 16-Year Period Ended December, 2011 with Levered Core Creating the Law-of-One-Price Continuum.
Addendum:
A Note on How the Promote Should Be Set
**Tradeoff: Preference v. Promote**

- Assuming venture-level performance is unchanged, what’s the tradeoff between the preferred return & promote?

<table>
<thead>
<tr>
<th>JV Deal before Operating Partner:</th>
<th>Sensitivity of Preference &amp; Promote Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base Case</strong></td>
<td></td>
</tr>
<tr>
<td>Average Return ($\mu_V$)</td>
<td>12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0% 12.0%</td>
</tr>
<tr>
<td>Standard Deviation ($\sigma_V$)</td>
<td>15.0% 15.0% 15.0% 15.0% 15.0% 15.0% 15.0% 15.0% 15.0% 15.0% 15.0% 15.0% 15.0%</td>
</tr>
<tr>
<td>Investor's Preference ($\psi$)</td>
<td>12.0% 11.0% 10.0% 9.0% 8.0% 7.0% 6.0% 5.0% 4.0% 3.0% 2.0% 1.0% 0.0%</td>
</tr>
<tr>
<td>Residual Splits:</td>
<td></td>
</tr>
<tr>
<td>Investor</td>
<td>50.0% 54.0% 57.5% 60.7% 63.5% 66.1% 68.4% 70.5% 72.4% 74.1% 75.7% 77.1% 78.4%</td>
</tr>
<tr>
<td>Operator (Promote = $\kappa$)</td>
<td>50.0% 46.0% 42.5% 39.3% 36.5% 33.9% 31.6% 29.5% 27.6% 25.9% 24.3% 22.9% 21.6%</td>
</tr>
</tbody>
</table>

| JV Deal after Operating Partner: |                                               |
| Likely Returns:                 |                                               |
| JV Deal before Operating Partner: |                                               |
| Operating Partner's Participation | 3.0% 3.0% 3.0% 3.0% 3.0% 3.0% 3.0% 3.0% 3.0% 3.0% 3.0% 3.0% 3.0% |
| Investor's Net Return            | 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% 9.0% |

| Volatility (Standard Deviation): |                                               |
| JV Deal before Operating Partner: |                                               |
| Operating Partner's Participation | 3.1% 2.9% 2.8% 2.6% 2.4% 2.3% 2.2% 2.1% 2.0% 1.9% 1.8% 1.8% 1.7% |
| Investor's Net Return            | 11.9% 12.1% 12.2% 12.4% 12.6% 12.7% 12.8% 12.9% 13.0% 13.1% 13.2% 13.2% 13.3% |
• For an equivalent operating partner’s expected promote, here’s the tradeoff between the preferred return and the promote.
The previous two slides suggest that the operating partner can earn the same expected promote – with less risk – by reducing its promote in return for the investor reducing its preferred return.

In the extreme (and given our assumptions), the operating partner ought to be willing to reduce its promote to 20% provided the investor eliminates its preferred return:

– Looks a lot like the private equity model

Endogeneity problem: Operating partner’s effort level is related to the probability of realizing the promote.

This endogeneity problem argues – all else being equal – for a lower preference and a lower promote; so that the operating partner expends more effort and, hence, the venture earns a larger (risk-adjusted) return.

In addition to effort, the venture-level performance is influenced by the property type and the skill of the operating partner.
Effort = \( f(\text{Expected Promote} > 0) \)

- But, the operating partner’s effort should be a function of the probability that the expected promote will be greater than zero (or realized).
Venture Performance $= f(\text{Effort})$

- In turn, the venture’s performance is a function of the operating partner’s effort.

Illustration of Forecasted Core Real Estate Returns with Leverage

- Market Opportunity Set (Core with Leverage)
- Maximum Effort
- Venture-Specific Performance
- Minimum Effort