Understanding and Using Real Estate Cap Rates

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Junction Properties, LLC

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Learning Objectives:

1. **Factors determining** a particular real estate capitalization rate.

2. **Return on investment decisions** over a time horizon indicated by cap rates.

3. **Finance-ability of a real estate development project** by comparing its “development cap” to the current market cap rate.

4. **Investment and development opportunities** based on existing and projections of future cap rates.
• Developer specializing mixed use development in California
• Consultant on redevelopment, capital finance and economic development
• Instructor for ULI Real Estate School on development process, public-private partnerships and sustainable development
• Former city manager of Fairfield and interim manager in Mammoth Lakes, Hercules and Pinole, CA
• Author of “Finance for Real Estate Development” published April 2011. Winner of 2012 Silver Award, NAREE
• Served on 18 ULI advisory panels, chairing panels in Salem OR, Boise, ID, Dallas, TX, Buffalo, NY, Pasco County, FL, San Bernardino, CA
• Masters in Public Policy, UC Berkeley; platoon sergeant, US Army
Finance for Real Estate Development
published by ULI
April 2011
Winner NAREE Silver Award 2012

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Real Estate Cap Rates
Under construction—Two Uptown Oakland Projects

471 26th Street (97 residential apartments)

570 21st Street (78 residential apartments)

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Real Estate Cap Rates
Where do real estate cap rates come from?
Real Estate is Capital Intensive

Cost of Capital
10% to 35%

Land
5% to 15%

Construction and Fees
60% to 80%

Equity
30% to 40%

Debt
60% to 70%

Example
• Apartment project takes 30 months to complete
• 60% leverage—debt at 5%, equity at 20%
• Cost of capital = 30% of other projects costs

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Real Estate Cap Rates
Project return is expressed many different ways

- Pre-tax Internal Rate of Return (IRR)
  - Leveraged
  - Unleveraged
- Net Present Value
  - Present Value of cash flow (if equal to investment=IRR)
- Net operating income/Total cash cost (the “Development Cap”)
- Cash-on-cash (Value vs Cost or Return on Cost)

Understand the arithmetic for the labels
Internal Rate of Return measures income of a project over the investment period.

Spreadsheets make it easy:

<table>
<thead>
<tr>
<th>Initial Investment</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>-$100.00</td>
<td>$6.00</td>
<td>$7.00</td>
<td>$8.00</td>
<td>$110.00</td>
</tr>
</tbody>
</table>

7.63% Internal Rate of Return

The discount rate at which the present value of the stream of income equals the amount of the investment.

FOR IRR TO BE ACCURATE, THE PROJECTIONS MUST BE ACCURATE.
Basic Financing Structure Involving Debt and Equity

- **DEBT SOURCE:** Lenders
- **EQUITY SOURCE:** Owners and Investors
- **PUBLIC SECTOR AGENCIES**
- **DEVELOPER**
- **OPERATOR**

**THE REAL ESTATE**
Political / Physical / Economic Opportunities & Constraints

- **CONSTRUCTION AND PERMANENT DEBT FINANCING**
- **PRE-DEVELOPMENT AND PERMANENT EQUITY FINANCING**
- **DEBT SERVICE**
- **RETURN**
- **VISION, SKILLS**
- **REQUIRED CO-INVESTMENT**
- **PUBLIC PARTICIPATION**
- **TAXES AND FEES**
- **SALE, LEASE, OR OCCUPANCY$**
- **COMMODITY AND/OR VALUE**
- **THE MARKET**
- **USERS**
- **Urban Land Institute**

Real Estate Cap Rates
Capital funding categories

**Equity**
- Return from project performance
- Paid in tiers (the waterfall)
- Much higher return than debt
- Funds before debt

**Mezzanine or performing debt**
- The value-add play
- Return from interest rate and from performance

**Debt**
- Pays an interest rate
- Costs less than equity
- Secured by a lien on the property
- Amount based on LTV, LTC or DCR
- Lender can foreclose if not paid
- Construction and permanent loans

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Real Estate Cap Rates
Current capital conditions mean less leverage; i.e., a lower percentage of debt

- **Higher equity:** 30% or more
- "Gap" financing for “value-add” conversions harder to obtain
- **Lower debt:** 70% or less—recourse provisions at lower debt
  - Overall project returns must be higher to attract capital
  - Equity sources have more control
Capital dimensions affect real estate pricing and viability

Availability
- Investor preferences
- Lender liquidity

Leverage
- Higher debt/lower total return requirements
- Higher debt increases foreclosure risk (some investors avoid this risk)

Cost
- Benchmark debt costs
- Investor yield requirements
What about cap rates?
Start with capital is mobile

- Other investments choices
- Regions/sub-regions
- Property types/Sectors

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Real Estate Cap Rates
Preferences of US Investors for asset categories

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Real Estate Cap Rates
Investment in real estate became more mainstream in 1990’s

- “Stabilized” NOI frequently perceived as more predictable than future earnings of a company.
- Cap rates in 1990’s were 8% and up.
- Real estate market changed beginning in late 1980’s.
  - 1986 Tax Reform lowered tax shelter benefits
  - Savings and Loan crisis of late 80s spawned RTC which initiated CMBS in mid-90’s.
  - Real estate became an accepted “asset allocation” category for portfolios in 1990’s –real income, higher liquidity
- In 2000’s cap rates dropped in some markets for some sectors below 5%.
Real Estate has outperformed stocks in several sectors and over time

![Historical Compound Annual Total Returns of REITs and Leading U.S. Benchmarks (%)]

- Listed U.S. REITs
- Large-Cap U.S. Stocks (S&P 500)
- Small-Cap U.S. Stocks (Russell 2000)
- U.S. Bonds (BC US Aggregate)
- U.S. Inflation (CPI)

<table>
<thead>
<tr>
<th></th>
<th>1-Year</th>
<th>3-Year</th>
<th>5-Year</th>
<th>10-Year</th>
<th>15-Year</th>
<th>20-Year</th>
<th>25-Year</th>
<th>30-Year</th>
<th>35-Year</th>
<th>40-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed U.S. REITs</td>
<td><strong>27.15</strong></td>
<td>16.39</td>
<td><strong>16.63</strong></td>
<td>7.50</td>
<td><strong>12.29</strong></td>
<td>11.13</td>
<td><strong>10.60</strong></td>
<td>9.52</td>
<td>11.14</td>
<td><strong>12.83</strong></td>
</tr>
<tr>
<td>U.S. Bonds (BC US Aggregate)</td>
<td>5.97</td>
<td>2.66</td>
<td>4.45</td>
<td>4.71</td>
<td>5.70</td>
<td>6.20</td>
<td>6.49</td>
<td>7.44</td>
<td>8.16</td>
<td>NA</td>
</tr>
<tr>
<td>U.S. Inflation (CPI)</td>
<td>0.76</td>
<td>1.33</td>
<td>1.69</td>
<td>2.12</td>
<td>2.25</td>
<td>2.28</td>
<td>2.52</td>
<td>2.71</td>
<td>3.25</td>
<td>3.85</td>
</tr>
</tbody>
</table>

Note: Annual data as of the end of 2014
Source: NAREIT® analysis

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Real Estate Cap Rates
Real Estate Transactions recovered. (are they declining?)

Source: CBRE Global Real Estate 2017
Valuing a real estate project

**For Sale Project**
(primarily residential)
Net Sales

**Income projects**
(retail, office, apartments, etc.)
Net Operating Income divided by a “cap rate”
Economics of *Income* Property Development and Ownership

**DEVELOPMENT COSTS**
- Developers Fee
- Legal
- A&E
- Land/Infrastructure
- Construct Interest

**FINANCING**
- Equity
- Private Debt
- Gap

**OPERATIONS**
- GROSS INCOME = Rent + Other Income - Vacancy
- OPERATING EXPENSES = (Maintenance, Management, Taxes, Insurance) + Utilities + Replacement Reserves
- NET OPERATING INCOME (NOI) = GROSS INCOME - OPERATING EXPENSES
- DEBT SERVICE
- OPERATING CASH FLOW (OPCF) = NET OPERATING INCOME - DEBT SERVICE

Private debt based on Debt Service Coverage Ratio OR Loan-to-Value OR Loan-to-Cost Ratio

**Net Operating Income (NOI)**

Economics of Income Property Development and Ownership

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-20
Value of an “income” project.

e.g. apartments, offices, retail stores, industrial buildings, hotels, business parks…; i.e. real estate with a Net Operating Income.

\[
\text{Project Value} = \frac{\text{NOI}}{\text{Capitalization Rate}}
\]

\[
\text{Capitalization Rate} = \frac{\text{NOI}}{\text{Project Value}}
\]

Is the cap rate a dependent or independent variable?
A cap rate is an “all-in” value metric which reflects many dimensions that determine project value

- Financing costs
- Investor return requirements
- Market strength of rents and occupancy
- Sector differences

High cap rate: low value
Low cap rate: high value
The cap rate reflects project performance dimensions

- Interest rates on debt high → Operating cash flow lower → Higher cap rate
- Rents declining or vacancies increasing → Operating cash flow riskier → Higher cap rate
- Alternative investments volatile or declining → Real estate a more attractive asset category → Lower cap rate
The cap rate indicates how the market values a stream of income (NOI)

Or, the same NOI with a different

• property condition
• sector
• Regional and local market
• capital market conditions

has a different value, and that difference is reflected by the “all in” market indicator called a “cap rate”.

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Real Estate Cap Rates
### What is the project value?

<table>
<thead>
<tr>
<th>NOI</th>
<th>Cap Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,000,000</td>
<td>5%</td>
</tr>
<tr>
<td>$3,000,000</td>
<td>6%</td>
</tr>
<tr>
<td>$2,000,000</td>
<td>4%</td>
</tr>
<tr>
<td>$2,000,000</td>
<td>5%</td>
</tr>
</tbody>
</table>

How is the difference in value reflected in the percentage increase between the low and high cap rate?

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*Real Estate Cap Rates*
Cap rate is the inverse of the P/E ratio used in the stock market

<table>
<thead>
<tr>
<th>Cap rate</th>
<th>P/E Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2%</td>
<td>50</td>
</tr>
<tr>
<td>3%</td>
<td>33</td>
</tr>
<tr>
<td>4%</td>
<td>25</td>
</tr>
<tr>
<td>5%</td>
<td>20</td>
</tr>
<tr>
<td>6%</td>
<td>16.7</td>
</tr>
</tbody>
</table>

And, is the same type of market indicator—i.e. an *indicator of investor preferences*.
S&P 500 PE ratio is up from its historical average of 15.67

Source: multpl web site
### Other stock P/E ratios

<table>
<thead>
<tr>
<th>Company</th>
<th>P/E Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Electric</td>
<td>15.87</td>
</tr>
<tr>
<td>Microsoft</td>
<td>22.42</td>
</tr>
<tr>
<td>Starbucks</td>
<td>26.70</td>
</tr>
<tr>
<td>Amazon</td>
<td>273.99</td>
</tr>
</tbody>
</table>

What does a high P/E (or low cap rate) signal about investor expectations on income?

*Source: NASDAQ web site*
Tesla

$61 billion market value
$7 billion annual sales

P/E Ratio: current (47.05)
Projected 2019  79.59
Cap rate of 1.26%

General Motors

$57.4 billion market value
$166 billion annual sales

P/E Ratio:  6.39
Cap rate of 15.65%

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Real Estate Cap Rates
Different investors seek different property types with differing risk profiles

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>7%-9%</td>
<td>Income</td>
<td>Class A and premium multitenant</td>
<td>Primary markets</td>
<td>LOW</td>
<td>Low: &lt;30%</td>
</tr>
<tr>
<td>Core-Plus</td>
<td>9%-12%</td>
<td>Income and some value creation</td>
<td>Core-type assets with vacancies or repositioning potential</td>
<td>Primary or secondary locations</td>
<td>MODERATE</td>
<td>Moderate: &lt;55%</td>
</tr>
<tr>
<td>Value Add</td>
<td>12%-16%</td>
<td>Value creation with some income</td>
<td>Class A and B with high vacancies, rents below market, obsolete properties with repositioning potential</td>
<td>Recovering primary or secondary and tertiary markets</td>
<td>MODERATE TO HIGH</td>
<td>High: Up to 70%</td>
</tr>
<tr>
<td>Opportunistic</td>
<td>&gt;16%</td>
<td>Value creation</td>
<td>Development, conversion, repositioning of obsolete, redevelopment</td>
<td>New development or secondary and tertiary markets</td>
<td>HIGH</td>
<td>High: Over 70%</td>
</tr>
<tr>
<td>Mezzanine/Debt</td>
<td>9%-12%</td>
<td>Value creation</td>
<td>Distressed loans, gap financing, value-add plan, repositioning</td>
<td>All markets</td>
<td>MODERATE</td>
<td>High: Over 70%</td>
</tr>
</tbody>
</table>

Source: Steven Ott, University of North Carolina, Charlotte

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Real Estate Cap Rates
Cap rates differ by sector, city and over time

Class A Office

Source: CBRE H1 2016 Cap Rate Survey

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Real Estate Cap Rates
Cap rates differ by sector, city and over time.

Multi-family

Source: CBRE H1 2016 Cap Rate Survey

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Real Estate Cap Rates
Cap rates differ by sector, city and over time.

Retail:
5.1%
5.5%
5.7%
6.3%

Source: CBRE H1 2016 Cap Rate Survey
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Real Estate Cap Rates
REGIONAL MARKETS: Differentiation based on vitality and anticipation of return.

“Successful places have "urban metabolism", based on quality of life, innovative capacity and a diverse economy. Avoid an economy centered largely on real estate and construction; these are places where much of the cities’ development comes from development itself. Whole cities and metro regions became giant Ponzi schemes."

Richard Florida, "How the Crash will Reshape America", Atlantic Monthly, March 1, 2009
Bay Area: wide variation in cap rates

Source: Paragon Realty, SF Bay Area Apartment Report Sept 2016
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Real Estate Cap Rates
Web sites where you can track cap rates by region, sector and investor type

- CBRE https://www.cbre.com/research-and-reports
- Real Estate Research Council www.rerc.com
- Real Capital Analytics http://global.rcanalytics.com/
- National Council of Real Estate Investment Fiduciaries (NCREIF) http://www.ncreif.com
- Reis: http://www.reis.com/index.cfm
Higher capital liquidity lowers cap rates

Cap rates vs CMBS Issuance

Source: CBRE

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Real Estate Cap Rates
Lending has increased

LENDING MOMENTUM REVIVES IN JUNE, VOLUME REMAINS AHEAD OF LAST YEAR'S PACE

Source: CBRE

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Real Estate Cap Rates
CMBS market has recovered

Source: CBRE
Lower interest rates = Lower cap rates (depending on investor perceptions)

Cap rates vs 10 year-Treasury

Why has the spread been increasing?

Source: CBRE
Cap rates have come down with interest rates, but spread over 10-year treasury is at an all time high.

Why is the spread so high?
The Fed, a Decade After the Crisis, Is About to Embark on the Great Unwinding

After a historic buildup of its bond portfolio to support the U.S. economy, the central bank plans to shrink its holdings, entering uncharted territory.

The Fed launched its bond buying in late 2008, at the depth of the financial crisis, to shore up money-market funds, companies and banks.

In June, the Fed said when it started to shrink its balance sheet it would do so by allowing a small initial amount of bonds—$4 billion of mortgages and $6 billion in Treasuries per month—to run off the portfolio without reinvestment. Every quarter, it will let a slightly larger amount do so, up to a maximum of $20 billion in mortgages and $30 billion in Treasuries per month.

Wall Street Journal, Sept 18, 2017

$4.5 trillion to mature or sell
Using cap rates in to analyze return on investment

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Real Estate Cap Rates
# Going in and terminal cap rates

<table>
<thead>
<tr>
<th></th>
<th>Office</th>
<th>Industrial</th>
<th>Retail</th>
<th>Apartment</th>
<th>Hotel</th>
<th>Average All Types</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CBD</td>
<td>Suburban</td>
<td>Warehouse</td>
<td>R&amp;D</td>
<td>Flex</td>
<td>Regional Mall</td>
</tr>
<tr>
<td><strong>Pre-tax Yield (IRR) (%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td>6.0 - 10.0</td>
<td>7.0 - 12.0</td>
<td>6.0 - 11.0</td>
<td>7.5 - 12.0</td>
<td>7.5 - 12.0</td>
<td>6.5 - 10.0</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>8.1</td>
<td>9.2</td>
<td>8.5</td>
<td>9.2</td>
<td>9.6</td>
<td>8.1</td>
</tr>
<tr>
<td><strong>Weighted Average</strong></td>
<td>8.7</td>
<td>8.8</td>
<td>8.6</td>
<td>8.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BPS Change</strong></td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>-10</td>
</tr>
</tbody>
</table>

|                      |       |            |         |           |       |                  |              |             |          |       |       |
| **Going-in Cap Rate (%)** |        |            |         |           |       |                  |              |             |          |       |       |
| **Range**            | 5.0 - 8.0 | 6.0 - 9.0 | 6.0 - 8.0 | 6.0 - 8.5 | 6.0 - 10.0 | 6.0 - 8.0 | 6.0 - 9.0 | 6.0 - 9.0 | 4.0 - 7.3 | 6.0 - 10.0 | 4.0 - 10.0 |
| **Average**          | 6.2 | 7.4 | 6.6 | 7.6 | 8.0 | 6.3 | 7.4 | 7.1 | 5.7 | 8.2 | 7.1 |
| **Weighted Average** | 6.8 | 6.9 | 6.7 |       |       |              |              |             |          |       |       |
| **BPS Change**       | -10 | -30 | -10 | -10 | 0 | -30 | 10 | 10 | 0 | 30 | 0 |

|                      |       |            |         |           |       |                  |              |             |          |       |       |
| **Terminal Cap Rate (%)** |        |            |         |           |       |                  |              |             |          |       |       |
| **Range**            | 5.5 - 8.5 | 6.5 - 10.0 | 6.0 - 8.5 | 7.0 - 9.0 | 7.0 - 10.0 | 6.5 - 8.0 | 7.0 - 10.0 | 7.0 - 9.0 | 5.0 - 7.3 | 8.0 - 11.0 | 5.0 - 11.0 |
| **Average**          | 6.9 | 8.0 | 7.4 | 8.1 | 8.5 | 7.0 | 7.9 | 7.7 | 6.4 | 8.8 | 7.7 |
| **Weighted Average** | 7.5 | 7.5 | 7.3 |       |       |              |              |             |          |       |       |
| **BPS Change**       | -20 | -10 | -10 | -10 | 10 | -30 | 0 | 10 | -10 | 30 | 0 |

*Source: RERC*
Going in is known Terminal is an estimate

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Going in/Terminal Cap Rates</td>
<td>6.0%</td>
<td></td>
<td></td>
<td></td>
<td>6.5%</td>
</tr>
<tr>
<td>Annual NOI</td>
<td>$2,000,000</td>
<td>$2,100,000</td>
<td>$2,205,000</td>
<td>$2,315,250</td>
<td>$2,431,013</td>
</tr>
<tr>
<td>Acquisition/Sale</td>
<td>($33,333,333)</td>
<td></td>
<td></td>
<td></td>
<td>$37,400,192</td>
</tr>
<tr>
<td>Investment/Return</td>
<td>($10,000,000)</td>
<td></td>
<td></td>
<td></td>
<td>$11,566,859</td>
</tr>
<tr>
<td>Debt at 70%</td>
<td>$23,333,333</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt service at 5%</td>
<td>($1,517,867)</td>
<td>($1,517,867)</td>
<td>($1,517,867)</td>
<td>($1,517,867)</td>
<td>($1,517,867)</td>
</tr>
<tr>
<td>Operating cash flow</td>
<td>$482,133</td>
<td>$582,133</td>
<td>$687,133</td>
<td>$797,383</td>
<td>$913,146</td>
</tr>
<tr>
<td>Total cash flow to investor</td>
<td>($9,517,867)</td>
<td>($582,133)</td>
<td>$687,133</td>
<td>$797,383</td>
<td>$12,480,005</td>
</tr>
<tr>
<td>Leveraged IRR</td>
<td>12%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Real Estate Cap Rates
The changed assumptions change the IRR

<table>
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<th>4</th>
<th>5</th>
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</thead>
<tbody>
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<td>6.0%</td>
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<td>$2,431,013</td>
</tr>
<tr>
<td>Acquisition/Sale</td>
<td>($33,333,333)</td>
<td></td>
<td></td>
<td></td>
<td>($40,516,875)</td>
</tr>
<tr>
<td>Investment/Return</td>
<td>($10,000,000)</td>
<td></td>
<td></td>
<td></td>
<td>($14,683,542)</td>
</tr>
<tr>
<td>Debt at 70%</td>
<td>$23,333,333</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Debt service at 5%</td>
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<td>$582,133</td>
<td>$687,133</td>
<td>$797,383</td>
<td>$15,596,687</td>
</tr>
<tr>
<td>Leveraged IRR</td>
<td>18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What the terminal estimate reflects

- Property aging and depreciation
- Market assessment
- Risk discounting
Evaluating development project viability using the “development cap”
The “Development Cap” is the projected NOI divided by projected costs

\[
\frac{\text{Projected NOI}}{\text{Projected development costs}} = \frac{\$3,500,000}{\$50,000,000} = 7\%
\]

You can quickly estimate the “return on costs” for the project by comparing the “development cap” to the estimated market cap for the project.
Example

• Multi-family projects are selling at a market cap of 5%.

• You have estimated NOI and development costs on a multi-family project with a development cap of 7%.

• How much more can you, in theory, sell the completed project for than it cost you to develop?
The return on cost is one way to measure whether a project is viable. First, what is the blended cost of capital?

Example

**Cost of equity:** 20% per year (30% of costs) = 6%

**Cost of debt:** 5% per year (70% of costs) = 3.5%

**TOTAL ANNUAL COST OF CAPITAL** = 9.5%

If a project takes 2 years to construct, the cost of capital is: 9.5% per year or a total of about 20%.
The minimum required cash-on-cash return is the “hurdle rate” based on blended cost of capital and duration of development period

1-year: about 10%
2-years: about 20%
3-years: about 30%
Compare the “Development Cap” to the “Market Cap”: a shortcut to evaluate project viability

- Detailed cash flow on each land acquisition opportunity is impractical and inaccurate
- Use a cash-on-cash hurdle rate reflecting the financing and “product absorption” characteristics.
- Once a property is tied up, and more information is available, do a more detailed IRR analysis.

BUT, in the early stages of a project, do not substitute precision for accuracy. A simple “return on cost estimate” is quick and accurate screening tool.
Comparing development cap to market cap

<table>
<thead>
<tr>
<th>NOI</th>
<th>Cap Rate</th>
<th>Percentage Increase in Value?</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,000,000</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>$3,000,000</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>$2,000,000</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>$2,000,000</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>

How is the cash-on-cash return reflected in the percentage increase between the low and high cap rate?
Using cap rates to evaluate investment and development decisions
Where would you invest?
Where would you develop?

Source: Paragon Realty, SF Bay Area Apartment Report March 2014
Urban Land Institute
Real Estate Cap Rates
Remember the arithmetic

<table>
<thead>
<tr>
<th>NOI</th>
<th>Acquisition Cap</th>
<th>Acquisition price</th>
<th>Selling cap</th>
<th>Selling price</th>
<th>% Return on Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,000,000</td>
<td>6.0%</td>
<td>$50,000,000</td>
<td>5.0%</td>
<td>$60,000,000</td>
<td>20.0%</td>
</tr>
<tr>
<td>$3,000,000</td>
<td>5.0%</td>
<td>$60,000,000</td>
<td>6.0%</td>
<td>$50,000,000</td>
<td>-16.7%</td>
</tr>
<tr>
<td>$4,000,000</td>
<td>8.0%</td>
<td>$50,000,000</td>
<td>5.0%</td>
<td>$80,000,000</td>
<td>60.0%</td>
</tr>
<tr>
<td>$4,000,000</td>
<td>5.0%</td>
<td>$80,000,000</td>
<td>8.0%</td>
<td>$50,000,000</td>
<td>-37.5%</td>
</tr>
</tbody>
</table>

How does this relationship affect the decision to purchase investment property?

How does this relationship affect the decision to develop in a particular market?
Buy high, sell low

High cap rate:
• High upside from improvements in market conditions, capital costs and property conditions.

Low cap rate:
• Property more expensive.
• Lower upside from improvements in market conditions.
• Higher downside from deterioration in capital markets.
Development in high cap rate markets

Replacement costs may be higher than value of existing.

BUT:

High upside from improvements in market conditions, capital costs and property conditions.
Development in low cap rate markets

Low cap rates may reflect
• Scarcity of supply
• Expected growth in rents
i.e. Less risk and better long term returns.

BUT: Watch out for:
• Escalating construction costs
• Potential changes in capital costs
Evaluate what cap rates are telling you about existing and future property values

Understand why cap rates are where they are in particular market.

Understand market factors which will affect change.
Differentiation based on anticipation of return.

“In a compressed cap rate environment with low interest rates, I like markets that can generate attractive cash-on-cash returns. That is very difficult in gateway markets, but more possible in markets like Dallas and Austin.”

Source: Emerging Trends 2017

Urban Land Institute
Real Estate Cap Rates
Summary

The cap rate is an “all in” dependent variable reflecting the multiple determinants of project value.

The cap rate is projected as a future independent variable to estimate total investment return over a holding period.
Summary (continued)

Comparing the “development cap” to the market cap estimates the return on costs for a development project.

Evaluating cap rates and their potential for stability or change can inform both investment and development decisions.
Questions or comments?