

# RE 310 – Principles of Real Estate

## Real Property Rights

### 1) Cash is King!

a) The ultimate goal of any real estate investment is to generate cash flows.

b) Three types of cash flows to consider:

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c) Income taxes and real estate:

- In this class, we will ignore income taxes and focus only on before-tax cash flows.
- As a general rule, however, income taxes generally don't alter real estate investment decisions.
  - Two exceptions:
    - Low income housing tax credits
    - Historic preservation tax credits

2) Common Lease Jargon (see handout in *Downloads* section of the website)

a) Rent

- Base rent
  
- Asking rent
  
- Contract rent
  
- Market rent

b) Rent adjustments

- Indexed leases
  
  
  
  
  
  
  
  
  
  
- Step leases
  
  
  
  
  
  
  
  
  
  
- Percentage leases and overage rent

c) Expense Allocations

- Gross (full-service) lease
  
  
  
  
  
  
  
  
  
  
- Net (hybrid) lease
  - Double-net lease
  
  - Triple-net (absolutely-net) lease
  
  
  
  
  
  
  
  
  
  
- Expense stops
  
  
  
  
  
  
  
  
  
  
- Common area maintenance (CAM) charges

d) Other Common Lease Terms

- Rent Concessions
- Tenant improvements

3) Building Measurement Terms – The terms outlining how office spaced is measured are based on standardized definitions created by the Building Owners and Managers Association (BOMA). More information can be obtained from their web site at <http://www.boma.org>.

b) Gross building area – Also known as gross measured area or gross square feet.

c) Total rentable area – Also known as gross leasable area or rentable square feet.

d) Usable area – Also known as office area or usable square feet.

e) Common areas

f) Load factor – Also known as the add-on factor or the common area factor.

- Efficiency percentage

#### 4) Pro Forma Operating Statement

a) The pro forma is the key tool used in calculating cash flows from operations. The primary goal of this statement is to calculate Net Operating Income (NOI) and Before-tax Cash Flow (BTCF).

- Net Operating Income

#### b) Layout of the pro-forma

Potential Gross Income (PGI)

– Vacancy & Collection Allowance (V&C)

Effective gross income (EGI)

– Operating Expenses (OE)

Net Operating Income (NOI)

– Annual Debt Service (ADS)

Before-tax cash flow (BTCF)

- c) Example: Calculate the NOI for an office building with the following characteristics:
- The building has a total of 15,840 square feet GLA.
    - Of this, 10,800 square feet rent for \$12 psf, while the remaining 5,040 square feet rent for \$10 psf.
    - All leases are gross leases.
  - The vacancy and collection loss allowance is 10% of PGI.
  - Operating expenses include:
 

|                          |          |
|--------------------------|----------|
| – Property taxes         | \$15,900 |
| – Insurance              | 12,000   |
| – Utilities              | 13,900   |
| – Cleaning & maintenance | 23,000   |
| – Management expenses    | 8,100    |
  - The purchase price of the building is \$885,000.
  - Financing is available for 75 percent of the purchase price at 9 percent interest amortized over 30-years with monthly payments.
    - ⇒ Monthly debt service = \$5,341 & Annual debt service = \$64,088

## 5) What is the Building Worth

### a) Cap Rates

- In general, the value of the property ought to be equal to the discounted present value of the NOI forever into the future.

$$V = \frac{NOI_1}{1+r} + \frac{NOI_2}{(1+r)^2} + \frac{NOI_3}{(1+r)^3} + \dots$$
$$= \sum_{t=1}^{\infty} \frac{NOI_t}{(1+r)^t}.$$

To calculate the value of the property, you estimate the expected NOI for each year in the future and discount it back to today. If you plan on selling the property that is no problem, because future purchasers will value it in the same way at that time.

- If we assume that NOI is constant forever into the future, this formula simplifies to

$$V = \frac{NOI}{r}$$

This can be rearranged to write

$$r = \frac{NOI}{V}$$

This shorthand, known as the capitalization (cap) rate, is simply ratio between a property's net operating income (first year) and its value (acquisition price).

b) Using Cap Rates

- Cap rates are typically used to compare different investment alternatives to see if their price is in line with current earnings.

- Cap rates can also be used to estimate the value of a property.

c) Cap Rate Limitations

- The primary value of cap rates is their simplicity.

- Cap rates do not account for a property's

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6) Other Investment Ratios and Multipliers  
a) Cash-on-cash return (equity dividend rate)

- Mortgage constant
  
  
  
  
  
  
  
  
  
  
- Financial leverage
  - An investment has *positive financial leverage* if \_\_\_\_\_.
  
  - When an investment has positive financial leverage, additional debt \_\_\_\_\_ the COCR.
  
  - An investment has *negative financial leverage* if \_\_\_\_\_.
  
  - When an investment has negative financial leverage, additional debt \_\_\_\_\_ the COCR.
  
  - An investment has *neutral financial leverage* if \_\_\_\_\_.
  
  - When an investment has neutral financial leverage, additional debt \_\_\_\_\_ the COCR.

b) Operating expense ratio

- Measures how expensive it is to operate the property.

c) Breakeven ratio

- Frequently called the default ratio.

d) Debt coverage ratio

e) Limitations of ratio analysis

- Ratios are good for measuring against benchmarks, but should not be used as hard and fast rules.
- The main problem is that they ignore changes in the sizes of and in the timing of cash flows.
  - Better method: Discounted cash flow analysis (taught in RE618).

## 7) Thoughts about Small Property Investment

### b) Two key investment rules to remember:

- You make all your money the day you purchase a property.
- The best real estate deals you ever do are the ones you don't.

### c) Do your research:

- Pick a neighborhood and learn it really well
- Build a database of properties in the neighborhood
  - Owner or renter occupied
  - Sale price
  - Physical characteristics
    - Size, bedrooms, bathrooms, condition, etc.
  - Rent charged & how long vacant

d) Estimating the inputs to the pro forma:

- Use your research to estimate rents & vacancy rates
  - Do you want to get the highest rent possible or do you want to keep the unit occupied?
- Operating expenses
  - Property taxes & insurance
  - Property management
    - Include a management fee even if you manage it yourself.
  - Maintenance & repairs depend on condition of the property
    - If you do the work yourself, make sure you pay yourself a wage for your work.
  - Reserves for major repairs
  - Utilities
  - Legal & professional fees