Investment Analysis

- **Equity Investment**
  - All assets need to be financed in some way. A balance sheet tells us how. Equity is the ownership portion. The mortgage is the debt portion.

- **Motivations for CRE Investing**
  - Annual Net Income from Operations
  - Price Appreciation
  - Diversification
  - Tax Benefits

Market Characteristics

- **Real Estate Cycle**
  - Large Market
  - Many types of properties
  - Competitive
  - Fragmented Ownership
  - Overdevelopment Potential – no one knows exactly how much to develop at any point in time.
  - The cycle may differ for different property types.
  - It’s hard to know where you are in the cycle

Investment Strategies

- **Property Sector Investing** – choose a specific property type and stick to that
- **Contrarian Investing** – go against the flow (Invest in the properties others are avoiding)
- **Marketing Timing** – for those who can forecast the cycle
- **Growth Investing** –
- **Value Investing** –
- **Core Property Investing** – Invest in existing, seasoned, highly leased properties

Investment Styles

- **Size-Based Strategy**
- **Tenant-Based Strategy**
- **Arbitrage Investing**
- **Turnaround Investing**
- **Opportunistic Investing**
- **Blue Chip Investing**
- **Development**
Investment Analysis

- Internal Rate of Return (IRR)
  - The discount rate forces the net present value to equal zero.
  - If IRR > r; Accept Project
  - If IRR < r; Reject Project
  - Where r is a required return or hurdle rate

Net Present Value (NPV)
- Discounted value of the future expected cash flows net of any outlays
- The discount rate is the capital cost for the investor.
- If NPV>0, accept project
- If NPV<0, reject project
- NPV is the increase in wealth to the equity investor

Debt Financing
- Equity Individ = NOI - ADS
- NOI = Net Operating Income
- ADS = Annual Debt Service; the annual payment on debt
  - This is both principal and interest
- It is calculated as 12 times the monthly payment
- The equity dividend is also referred to as the before-tax cash flow from operations (BTCF0).
- When no debt is used, the BTCF0 or Equity Dividend is the NOI

Example 11-1:
- $1,000,000 Property
- 95% allocated to building and 5% to land
- 70% LTV; 7% Interest Rate, 30 Years
- $700,000 debt; $300,000 equity
- Monthly Payment = $4657.11
- ADS = 12 x $4657.11 = $55,885
- NOI = $85,000

Before-Tax Cash Flow
- Equity Dividend = NOI-ADS
- $85,000 - $55,885 = $29,115
- This is also the BTCF0 for this year.
- Equity Dividend Rate = ECDIV/Equity
- $29,115/$300,000 = 9.71%
- Debt Coverage Ratio =
- $85,000/$55,885 = 1.521
- These ratios all pertain to the first year of operations
Before-Tax Cash Flow

- Example 11-1 continued….
- Before-Tax Cash Flow from the Property Sale (BTCF<sub>t</sub>):
  - BTCF<sub>t</sub> = Sales Price – Mortgage Balance
  - In Example 11-1, if the property were sold in Year 4 for $1,100,000 then
  - BTCF<sub>t</sub> = $1,100,000 - $668,322 = $421,678
  - The mortgage loan balance ($668,322) is computed as previously. See Chapter 4.

After-Tax Cash Flows

- Calculating the after-tax cash flow from operations
  - **Step 1**: Compute taxable income
    - **Net Operating Income**
      - Depreciation
      - Interest
    - Taxable Income

After Tax Cash Flows

- From Slide 11-10, Depreciation is based on a building value of $950,000 over 27.5 years
  - Depreciation = $950,000/27.5 = $34,545
  - Interest = $48,775 using the “amort” function on the financial calculator.

After Tax Cash Flows

- From Example 11-1, year 1 taxable income would be:
  - NOI = $85,000
  - Depreciation - $34,545
  - Interest - $48,775
  - Taxable Income $ 1,680

After Tax Cash Flows

- **Step 2**: Compute Taxes
  - Taxes (at 28%) = .28 x $1,680 = $470
- **Step 3**: Compute after-tax cash flow from operations for year 1
  - ATCF<sub>t</sub> = BTCF<sub>t</sub> – Taxes
  - = $29,115 - $470
  - = $28,645

After Tax Cash Flows

- Taxes on the property sale
  - Gain from property value increase
  - Taxed at capital gains rate for the investor
  - Gain from prior depreciation
  - Taxed at 25%
After Tax Cash Flows

- From Example 11-1, Slide 11-12
- Before tax cash flow from the property sale = $421,678
- **Step 1:** Compute tax on property value increase:
  
  \[ \text{Value Increase} = \$1,100,000 - \$1,000,000 = \$100,000 \]
  
  Taxed at 15% capital gains rate = $15,000

- **Step 2:** Compute tax on prior depreciation:
  
  \[ \text{Depreciation} = 4 \text{Years} \times \$34,545 = \$138,180 \]
  
  Taxed at 25% = $34,545

- **Step 3:** Compute total taxes from sale:
  
  $34,545 + $15,000 = $49,545

- **Step 4:** Compute after-tax cash flow from the property sale
  
  \[ \text{ATCF}_f = \text{BTCF}_f - \text{Taxes} \]
  
  \[ \text{ATCF}_f = \$431,678 - \$49,545 = \$382,133 \]

**Analysis**

- Compute After-Tax Internal Rate of Return
- Compute After-Tax Net Present Value