MIT Center for Real Estate
11.S969
Real Estate Investment and Financial Analysis
Spring 2020 Syllabus

Credits: 3
Grading: Pass/Fail
Instructor: Chip Weintraub
E-mail: chip.weintraub@ssinvests.com

Course Description

Real Estate Investment and Financial Analysis will provide a practical overview of institutional real estate investment and financial analysis. We will introduce, discuss, and analyze key metrics for institutional real estate investors at the conceptual and practical levels. Case studies and examples will include office and/or industrial assets. Excel will be used extensively, but advanced experience is not required. This class is appropriate for students with beginner and intermediate level excel and financial analysis experience.

Student Objectives

1. Strengthen understanding of institutional real estate investment.
2. Enhance understanding of metrics and terminology used by real estate investment professionals.
3. Learn or improve Excel-based financial modeling skills, using case study and templates.

Class Structure and Format

• 120-minute classes will use a case study and illustrative examples, accompanied by complimentary excel spreadsheets. Students are not required to build their own spreadsheets but will be provided with additional materials and support if they wish to do so.

• Class discussion will focus on commercial real estate investment from initial evaluation to more detailed analysis.

• Excel spreadsheets will be provided for reference and practice.

• Additional materials and support will be made available for students who want to work on excel modelling skills beyond the scope of the class.

Topic Outline/Schedule

Week 1: Project level cash flow

• Topics, metrics and terminology
  o Defining investment and tax structures: core, core plus, value-add, opportunity, other
  o Operating leverage and operating vs. disposition cash flow as related to risk and pricing
  o Lease reimbursement structures (NNN vs. full service, modified gross leases)
  o Expenses: capital vs. CAM, operating vs. non-operating, reimbursable vs. non-reimbursable

• Spreadsheet: Unlevered Cash Flows (before debt service)
  o Components of Cash Flow: NOI and net cash flow; inflation; rent escalation; disposition and related adjustments
  o Analysis metrics: Going-in cap rate vs. stabilized cap rate; initial vs. stabilized yield on cost; cash on cash yield; Goal seek and data tables
Week 2: Debt (Part 1)

- Topics, metrics and terminology
  - Lenders – Bank, LifeCo, CMBS, Agency, Bridge, other
  - Interest and principal (amortization) payment structures (I/O, fixed amortization, straight-line payment, etc.)
  - Key Metrics: Debt Service Coverage Ratio, Debt Yield, Loan-to-Value / Loan-to-Cost
- Spreadsheet: Basic loan functionality
  - Interest and principal (amortization) payments, flow-through to then-current principal balance, associated formulas
  - Basic graphing functions

Week 3: Debt (Part 2)

- Topics, metrics and terminology
  - Types of loans – stabilized, construction, repositioning / other hybrid types
  - Reserve funding, future funding, cash-flow sweeps & traps
  - Floating vs. fixed rate and rate caps & swaps
- Spreadsheet:
  - Future Funding by line item and percentage contribution
  - Creating rules for order and percentage contributions
  - Modelling future floating rates with the Libor futures curve

Week 4: Equity / Waterfall

- Topics, metrics and terminology
  - Investment structure – sponsor / investor model vs. other investment vehicles (REIT, vertically integrated funds)
  - Basic waterfall structure and functionality
  - Carried interest, promoted interest, IRR and equity multiple hurdles
- Spreadsheet:
  - Waterfall – similarities and differences to debt structure
  - Contributions, distributions, and hurdles