

**THE UNIVERSITY OF WISCONSIN**  
**Department of Real Estate and Urban Land Economics**  
**Fall session - 2014**  
**RE740: Real Estate Capital Markets**

**Instructor**

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**Course objectives**

My goal in this course is to teach you how to analyze publicly traded real estate securities and the derivatives on those securities. Following a brief review of the relevant fundamentals of finance and real estate investment analysis, we will thoroughly discuss how public real estate investment products – REITs and MBSs, in particular – are structured and how investors price them. By the end of the class, you should be able to apply with confidence for jobs in the security analysis industry and hit the ground running if you take a job in that field.

**Resources**

The main sources of material for this course are my notes and power point presentations, which I will make available on my webpage. While no textbook is required, you may find it useful to have access to standard texts in the following areas:

1. An undergraduate-level real estate finance text (e.g. “Commercial Real Estate Analysis and Investments,” D.M. Geltner, N.G. Miller, J. Clayton, P. Eichholtz, Cengage Learning, 2007.)
2. A valuation reference (“Valuation”, Koller, Goedhart, Wessels, McKinsey)
3. An undergraduate-level capital markets text (e.g. “Capital Markets: Institutions and Instruments,” Frank J. Fabozzi Frank J. Fabozzi and Franco Modigliani, Prentice Hall)

4. A undergraduate to master's level text in financial economics (e.g. "Introduction to the Economics and Mathematics of Financial Markets," Cvitanic, J. and F. Zapatero, MIT Press, 2004)
5. A fixed-income pricing reference (e.g. "The handbook of fixed income securities," Frank J. Fabozzi and Steven V. Mann editors, McGraw-Hill, 2005)
6. Anything you need to become very good with Excel very quickly
7. Anything you need to put Bloomberg to work for your presentation

## Grading

Homework (20%), midterm (25%), comprehensive final (30%), presentations (25%). I will announce a date for the midterm examination as soon as possible. Homework assignments and presentations are team projects. You need to form a group of 2 or 3 students where at least two different schools are represented. You will have to make two 20-minute presentations. I detail my specific expectations below. The first presentation must be made prior to the midway point of the semester, the second presentation before the last day of class. Problems sets will be handed out more or less on a bi-weekly basis. Homework problems are difficult, and they involve computer tasks in most cases. Assignments are due at the start of lecture on the due date, no exception.

## List of topics

1. Preliminaries
  - (a) Real estate assets
  - (b) Asset pricing
  - (c) Capital structure
  - (d) Review of real estate investment analysis
  - (e) Mortgages
2. Public REITs
  - (a) Basics
  - (b) Metrics
  - (c) Multiple approach

- (d) NAV
  - (e) DCF
  - (f) Analysis
3. Fundamentals of fixed income pricing
- (a) The spot yield curve
  - (b) Interest rate models
  - (c) Prepayment and Default
  - (d) Yield spread analysis
  - (e) Pricing derivatives
4. Mortgage-backed securities
- (a) Basics
  - (b) Cash-flows
  - (c) Pricing (option-adjusted spreads)
  - (d) Analysis

### **Group presentations**

Your first presentation will be a demonstration of what Bloomberg tools are available in one of the following 2 areas: 1) REIT valuation, 2) MBS analysis. The goal is to have one group train the rest of the class on how to use Bloomberg to quickly gather basic information in the 2 areas above. I will check out the Bloomberg-equipped Laptop for you once you tell me what dates you have chose, presentations will be made in class. Your presentation should go from the broad (sector level) to the narrow (firm or security level.) Other groups will ask you questions for 10 to 15 minutes after your presentation. Your will be graded on the quality of your presentation and on your participation in the Q&A part of other groups' presentations.

Your second presentation will be a REIT valuation pitch. You will pick a REIT in your first homework and follow it the entire semester. In your presentation, you should (at least) describe your REIT's fundamental value-driving features and standard valuation metrics (multiples, NAV premium/discount, DCF). The audience will play the role of investors considering the company you analyzed and grill you accordingly.