

Advanced Real Estate Investment and Analysis
REAL 240/840
Spring 2008; Huntsman Hall Room F65
Tentative as of November 29, 2007 (speakers subject to change)

Professor Joseph Gyourko
1480 SH-DH
gyourko@wharton.upenn.edu

Office Hours: Monday 12N-1:30pm
and by appointment

This course is designed for majors in Real Estate, both undergraduate and MBA, but also is open to finance-oriented students who wish a deeper analysis of real estate investment analysis issues than is offered in REAL/FNCE 209 or 721. The course presumes knowledge of real estate finance at a level taught in REAL/FNCE 209 and 721, and the prerequisite will be enforced.

The class will contain a mixture of standard lectures, guest speakers, and case discussions. Topics covered will span the real estate equity and debt markets, both public and private. The bulk of the course focuses on commercial or income-producing real estate, but we will spend some time studying the housing markets. Grading will be based on six assignments that will constitute 90% of your final grade. There are four cases and two shorter homework assignments. Cases #1, #2, and #4 each constitute 20% of your grade. Case #3 makes up 14% of your grade. The two homework assignments are each worth 8%. The other 10% will be determined by class participation.

All assignment due dates are listed in the syllabus. Late submissions will not be accepted because all assignments will be discussed in class on the day they are due. In addition, students are expected to come to class prepared to discuss and critique material in lectures and presentations. Hence, the 10% weighting for class participation in grading.

Readings for the course are attached. The readings come from a series of articles provided in a bulk pack. The volume of material is not overly burdensome for a course of this type, but some of the material is difficult. All readings should be done prior to the class for which it is assigned. In general, I have tried to pair academic papers with recent industry reports, with the goal of marrying sound theory and empirical analysis with relevant current events and practices. Class sessions are organized with the same goal in mind. I will deliver a number of lectures outlining what economics and finance tells us about a number of topics. Generally, these will be followed by guest lectures from industry professionals who will focus on a specific application of the principles introduced in the lectures.

January 15th—no class; Martin Luther King Day observed; University holiday

Class #1: January 28

Pricing in Commercial Real Estate Markets

The Public Equity Markets in Real Estate: Advanced REIT Analysis--REIT Structures and Valuation

Readings:

1. Peter Linneman, "The Equitization of Real Estate", *Wharton Real Estate Review*, Fall 2006.
2. Tony M. Edwards, "REITs Modernized", December 1999.
3. Joseph Gyourko & Todd Sinai, "The REIT Vehicle: Its Value Today and in the Future", *Journal of Real Estate Research*, 1999.
4. Todd Sinai & Joseph Gyourko, "The Asset Price Incidence of Capital Gains Taxes: Evidence from the Taxpayer Relief Act of 1997 and Publicly-Traded Real Estate Firms", *Journal of Public Economics*, 2004.
5. Lynne Sagalyn, "Conflicts of Interest in the Structure of REITs", *Real Estate Finance*, 1996.

Problem Set #1 handed out (REIT market analysis); due in class on February 4, 2008.

Class #2: February 4

Problem Set #1 due in class; review and discussion

Advanced REIT Analysis (cont'd.)

Case #1 handed out (Case on Balancing Refinancing and Tenant Turnover Risk; case is due in class on February 18, 2008)

Readings: same as for January 28

Class #3: February 11

Guest Speaker: James Corl, Chief Investment Officer, Cohen and Steers, "The Past and Future of the Equity REIT Market"

The Private Equity Markets in Real Estate: Institutional Investors, Private Equity Firms, and Hedge Funds

Readings:

1. Peter Linneman and Stan Ross, "Real Estate Private Equity Funds", *Wharton*

- Real Estate Review*, Spring 2002.
2. Dale Ann Reiss, Deborah Levinson, and Sanford Present, "Opportunistic Investing and Real Estate Private Equity Funds", *Wharton Real Estate Review*, Spring 2002.
 3. Peter Linneman and Deborah Moy, "Revisiting the Return Profiles of Real Estate Investment Vehicles", *Wharton Real Estate Review*, Fall 2005.
 4. Joanne Douvas, "Adjusting Opportunity Fund Fees", *Wharton Real Estate Review*, Fall 2006.

Class #4: February 18

Case #1 due in class; review and discussion

Private Market Investors in Real Estate: Institutional Investors and Private Equity Firms (cont'd.)

Guest Speaker: Bryan Weingarten, CEO, WP Realty, "Making Private Equity Work: Meshing the Money and Operating Partners"

Case #2 handed out (Vornado Case); due in class on March 3, 2008.

Readings: same as for February 11

Class #5: February 25

Linkages Between the Public and Private Real Estate Markets

Readings:

1. Joseph Gyourko and Donald Keim, "What Does the Stock Market Tell Us About Real Estate Returns?", *Real Estate Economics*, 1992.
2. Roger Ibbotson and Lawrence Siegel, "Real Estate Returns: A Comparison With Other Investments", *Real Estate Economics*, 1984.
3. Joseph Gyourko and Jeremy Siegel, "Long-Term Return Characteristics of Income-Producing Real Estate", *Real Estate Finance*, Spring 1994.
4. Joseph Gyourko, "Real Estate Returns in the Public and Private Markets" A Reexamination Following the Rise of Equity REITs", Zell/Lurie Real Estate Center at Wharton working paper, January 2004.
5. William Gentry, Charles Jones, and Chris Mayer, "Do Stock Prices Really Reflect Fundamental Values" NBER Working Paper 10850, October 2004.

Class #6: March 3

Case #2 due in class; review and discussion

Finish up public-private linkages

Readings: same as for February 25, 2008

March 10—no class due to Spring Break

Class #7: March 17

Real Estate in a Portfolio

Readings:

1. Chapters 7 & 8 in Brealey & Myers, *Principles of Corporate Finance*
2. Chapter 6 in Copeland & Weston, *Financial Theory and Corporate Policy*

Case #3 (Case on Portfolio Analytics—adding real estate to a diversified stock and bond portfolio); due in class on March 24, 2008

Real Estate Debt Markets: Mortgages, CMBS, and Structuring

Readings:

1. David Jacob, et. al., “Price, Duration, and Convexity of MBS”, Ch. 4 in *MBS—New Strategies, Applications, and Research*, 1996.
2. J.P. Morgan, “Understanding Commercial Real Estate CDOs”, October 13, 2006.
3. Tad Philipp, Paolo Obias, and Pamela Dent, “US CMBS and CRE CDO 3Q 2006 Review: The Double-A Environment—Ambivalence and Anxiety”, Moody’s Investors Service, October 31, 2006.
4. Martin Dierker, Daniel Quan, and Walter Torous, “Pricing the Defeasance Option in Securitized Commercial Mortgages”, July 2004.
5. Others TBA.

Class #8: March 24

Case #3 due in class; review and discussion

Real Estate Debt Markets (cont’d.)—need something on residential

Guest Speaker: Spencer Haber, CEO, H2 Capital Partners, LLC, “Structured Debt Deals After the Credit Crunch”

Readings: same as for March 17, 2008

Problem Set #2 handed out; due in class on March 31, 2008

Class #9: March 31

Problem Set #2 due in class; review and discussion

Real Estate Debt Markets (cont'd.)—need something on residential

Readings: same as for March 17, 2008

Class #10: April 7

Understanding Pricing and Risk in the Housing Markets

Readings:

1. Karl Case and Robert Shiller, “Is There a Bubble in the Housing Market?”, *Brookings Papers on Economic Activity*, 2003 (2): 299-362.
2. Edward Glaeser, Joseph Gyourko, and Raven Saks, “Why Is Manhattan So Expensive? Regulation and the Rise in House Prices”, *Journal of Law and Economics*, 2005(2): 331-370.
3. Todd Sinai and Nicholas Souleles, “Owner-Occupied Housing as a Hedge Against Rent Risk”, *Quarterly Journal of Economics*, 2005(2): 763-789.
4. Joseph Gyourko, Chris Mayer, and Todd Sinai, “Superstar Cities”, Zell/Lurie Real Estate Center Working Paper, NBER Working Paper 12355, July 2006.
5. Other TBA.

Class #11: April 14

Understanding Pricing and Risk in the Owner-Occupied Housing Sector (cont'd.)

Readings: same as for April 7

Class #12: April 21

Case #4 handed out (EOP case); due in class on April 28, 2008

No new material

Class #13: April 28

Case #4 due in class; review and discussion