Real Estate Finance – MGMT 659  
Fall 2010

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Lectures: TTh 12:30-2:00 at McNair Hall 214

1. Course Description

This course has two major objectives: First, this course provides an overview of topics related to real estate finance. Specifically, this course provides a detailed description of the Discounted Cash Flow (DCF) model applied to real estate. The DCF model is the main financial decision tool used in the real estate industry and we use it extensively in this course. In addition, this course also describes the connection between financial markets and real estate. A large part of this course is devoted to the study of public traded securities that have their cash flows tied to real property cash flows, such as commercial mortgage-backed securities and REITs. Second, this course is the first elective related to real estate in a series available to Rice MBA students, and hence it briefly overviews basic concepts commonly used in the Real Estate Industry.

You need to have a good grasp of many different topics to become a successful real estate investor. First, you need to know how your investment properties work: Why do people drive to my retail center? What is the signage in my center? What is the income of the renters in my apartment building? Second, you will have to develop a very good sense of the local economy: What are the main sources of employment in the area where I invest? How sensitive is the income of my properties to the local unemployment rate? Third, you will need to understand how events in the capital markets may affect your investment: What happens to the value of my properties when interest rates come down? Or up? What if inflation goes up? What are the sources of capital available for the possible buyers of my real estate assets? Finally, you need to be able to put all these different aspects of your analysis on a single investment decision model (the DCF model) that allows you to properly evaluate the relative importance of all aspects of your
investment. In this course, we do not have time to properly address all these topics in detail, however this course aims to make you aware that successful real estate investors take into consideration many different issues when investing. Moreover, this course also aims to teach you the mechanics of applying the DCF model, which is the tool that summarizes the assumptions of real estate investments.

This course aims to be useful to students interested in pursuing a career in real estate investment who have no experience in real estate. Students interested in the connection between real estate and capital markets may also appreciate this course. After all, the Mortgage-Backed Securities (MBS) market is the largest fixed income market in the world! Students with a prior career in real estate may already be aware of many of the concepts described in this course. As a result, some of the lectures may be very basic for these students. However, these students may especially appreciate the opportunity to network with the experienced guest speakers and it is unlikely that these students have had previous exposure to the entire material of this course.

2. Course Objectives

After completing this course you should:

- Understand the roles of space and capital markets in real estate valuation
- Be able to calculate the cash flows of different types of mortgages
- Be able to apply the DCF model to real estate assets
- Understand the effect of leverage and taxes on real estate investments
- Understand the mechanics of the securitization process and of CMBS
- Understand the basic characteristics of REITs

3. Prerequisites

The prerequisite is MGMT 543 (core finance).

4. Guest Speakers

This course will have a series of guest speakers. Their names and affiliation are in the course calendar below.

5. ARGUS, the Counselors of Real Estate (CRE) and the Real Estate Club

ARGUS Software’s products have become the industry standard. More than 8,000 of the industry's leading owners, managers, financial institutions, brokerages and REITs use ARGUS Software solutions throughout their critical business processes. These processes include property management, asset valuation, portfolio management, budgeting, forecasting, reporting and lease management. As a result of this, you may have strong competitive advantage in the job market if you demonstrate that you know ARGUS.
In this course we use the same procedures as ARGUS in its applications of the DCF model. Even though, the DCF model is a standard in the real estate business, there are many different assumptions that go in the DCF model, and different practitioners use different assumptions. As a result, there is no standard in the real estate industry of how to apply the DCF model. For instance, some practitioners use the projected cash flows of the 10th year to calculate the sale price of the property in the 10th year, while other practitioners use the cash flows of the 11th year of the proforma to estimate the sale price of the property in the 10th year. In this course, we follow ARGUS default and we use the cash flows of the 11th year of the proforma.

ARGUS Software has created a certification program that allows you to demonstrate ARGUS proficiency if you pass an exam. A large part of this course is related to the material in the ARGUS certification exam. ARGUS sessions are offered as a supplemental material for this course. These ARGUS sessions are organized by the Real Estate Club. If you are interested in learning about these sessions, please contact Mr. Jaime Hernandez (Jaime.H.Hernandez@rice.edu) from the Real Estate Club. Because ARGUS is a supplemental material to this course, there will be no questions about ARGUS in the exam or in the problem sets.

The Counselors of Real Estate (CRE) is the membership organization established exclusively for real estate advisors who provide intelligent, unbiased, and trusted advice for a client or employer. Founded in 1953, the organization serves 1,100 members worldwide, all who hold the "CRE" designation. The purpose of the organization is to serve as an information resource and to provide its members with opportunities for professional development, knowledge sharing, and networking, all grounded in a culture of camaraderie.

The CRE has generalists as well as many diverse specialists. Some members work by product type (office, retail, apartment, industrial etc.) and others by service type (appraisal/valuation, investment sales, advisory services, arbitration/mediation, brokerage etc.). If you want to get a sample of the CRE members’ specialties, go to www.cre.org. While there, you can go to the ‘Chapter’ section and see short bios on each member of the local Houston/Gulf Chapter.

The Houston/Gulf chapter of the CRE and the Real Estate Club are establishing a mentoring program in which a student will be paired with a CRE member. This mentoring program is a great opportunity for the students to meet with experienced and influential real estate professionals. If you are interested in participating in this program please send an e-mail to Mr. Jaime Hernandez (Jaime.H.Hernandez@rice.edu) from the Real Estate Club.

6. Requirements and Grading

The course requirements consist of problem sets, peer-evaluation, class participation, and a take-home exam.
6.1 Problem Sets

Problem sets contain exam-type questions and computer exercises meant to help you practice on your own. I require that you work in a group of students, with a minimum of 2 students and a maximum of 4 students per group. Only one copy of the (joint) homework should be turned in. Please try not to change groups during the semester. If you must change group, write a very clear and visible note on the cover of the first problem set after the change. **The problem sets will account for 40% of your grade.**

Answers to problem sets should be returned on their due date. If you return your answer late, the problem set grade will be penalized by max [100%; 5% x (number of days late)].

I will ask you to evaluate the performance of the members of your study group in the last day of instruction. **This peer-evaluation will account for 10% of your course grade.**

6.2 Class Participation

Class attendance is not mandatory. However, I expect you to be present at all classes. I expect you to arrive on time for the class but if you arrive late, please do so in way that does not disturb the class.

I encourage you to participate in the class. Don’t be shy about asking questions to clarify what we are discussing. Every lecture and the course as a whole build on what we learned previously, so being lost gets very costly very quickly.

**Class participation will be 10% of your grade.** Please display your name plates during the classes.

6.3 Exam

The exam questions will be very similar to the problem set questions. The exam is a take-home exam. The exam is strictly individual. I accept only hard copy versions of the exam (no electronic form). I will give you the exam on the last day of class. You should return the exam to me in my office. If you cannot find me, you may leave your answers below the door of my office. **The exam will account for 40% of the course grade.**

6.4 Course Grade

Your course grade is:

\[
(0.4 \times \text{exam grade} + 0.4 \times \text{problem sets grade} + 0.1 \times \text{class participation} + 0.1 \times \text{peer-evaluation})
\]

7. Rice Honor Code
The Rice Honor System (http://www.ruf.rice.edu/~honor) applies to all work in the class. For each item submitted for grading, please print and sign the entire honor code as follows (for team assignments, each member of the team should sign):

“On my honor, I have neither given nor received any unauthorized aid on this (examination, quiz or paper),”

[Your signature (s) – all team members should sign in team assignments]

8. Questions and Office Hours

Send me an e-mail if you have any questions. If you think that you will need extended help, please e-mail me to make an appointment.

9. Comments and feedback

I welcome your feedback on every aspect of the course. If you would prefer to be anonymous drop a note addressed to me in the drop box close to your mailbox in McNair Hall.

10. Academic Accommodations

To request academic accommodations due to disability, please contact Rice Disabilities Support Services in the Allen Center at 713-348-5841. Please, also contact me to discuss the accommodations you might need in this class. Additional information is available at http://www.dss.rice.edu

11. Laptop and cell phone classroom policy

It is the policy of the Jones School for students to place their laptop computer in the closed position while class is in session.

It is the policy of the Jones School for students to turn their cell phones off during class. If you cannot turn your cell phone off then put your cell phone in “vibrate” position and leave the classroom quietly if you receive a call.

13. Course Material

The class notes and the problem sets will be at the course web page. The required textbook used in this course is Commercial Real Estate Analysis & Investments, by David Geltner, Norman Miller, Jim Clayton and Piet Eichholtz. 2nd edition, Thomson South-Western editors. There will be a copy of this book on reserve at the BIC and at the Fondren Library.
You may access the course web page at https://owlspace-ccm.rice.edu/portal. The course web page will have a copy of the slides used in the lectures. Also, problem sets and announcements will be in Owlspace.

14. Course Outline and Readings

Please note that this outline may change during the semester.
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reading for the week</th>
<th>Problem sets/exams due</th>
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<tbody>
<tr>
<td>1 T</td>
<td>8/24/2010</td>
<td>Syllabus, space and asset markets, cap rates</td>
<td>1, 2 (up to 2.2), 6 (skip 6.2)</td>
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<tr>
<td>Th</td>
<td>8/26/2010</td>
<td>space market, property types</td>
<td></td>
<td></td>
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<tr>
<td>2 T</td>
<td>8/31/2010</td>
<td>Real Estate as an Asset Class</td>
<td>7 and 9</td>
<td>PS1</td>
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<tr>
<td>Th</td>
<td>9/2/2010</td>
<td>Del Kendall (MD, RERC)</td>
<td></td>
<td></td>
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<tr>
<td>3 T</td>
<td>9/7/2010</td>
<td>PV math</td>
<td>8 and 10</td>
<td>PS2</td>
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<tr>
<td>Th</td>
<td>9/9/2010</td>
<td>PV math and DCF real estate valuation</td>
<td></td>
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<tr>
<td>4 T</td>
<td>9/14/2010</td>
<td>Charles Hazen (CEO Hines REIT)</td>
<td></td>
<td>PS3</td>
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<tr>
<td>Th</td>
<td>9/16/2010</td>
<td>Leases</td>
<td>30.1, 30.2</td>
<td></td>
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<tr>
<td>5 T</td>
<td>9/21/2010</td>
<td>Leases, proforma</td>
<td>11</td>
<td>PS4</td>
</tr>
<tr>
<td>Th</td>
<td>9/23/2010</td>
<td>Proforma, discount rates</td>
<td></td>
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<tr>
<td>6 T</td>
<td>9/28/2010</td>
<td>Due Diligence, Investment vs. Market Value</td>
<td>12 (skip 12.3)</td>
<td>PS5</td>
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<tr>
<td>Th</td>
<td>9/30/2010</td>
<td>Leverage and Taxes</td>
<td>13 and 14 (up to 14.3.2)</td>
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**Term II**

<table>
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<tr>
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<th>Topic</th>
<th>Reading for the week</th>
<th>Problem sets/exams due</th>
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<tbody>
<tr>
<td>1 T</td>
<td>10/26/2010</td>
<td>Leverage and Taxes</td>
<td>15</td>
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<td>Th</td>
<td>10/28/2010</td>
<td>Capital Structure</td>
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<tr>
<td>2 T</td>
<td>11/2/2010</td>
<td>Edmund Donaldson (CIO, Hines REIT) and/or</td>
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<td>PS6</td>
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<tr>
<td>3 T</td>
<td>11/9/2010</td>
<td>Burdette Huffman (Director, Weingarten)</td>
<td>16, 17 and 18</td>
<td>PS7</td>
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<td>Th</td>
<td>11/11/2010</td>
<td>Mortgages legal, CM underwriting</td>
<td>19 and 20</td>
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<tr>
<td>4 T</td>
<td>11/16/2010</td>
<td>The Crisis</td>
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<td>PS8</td>
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<tr>
<td>Th</td>
<td>11/18/2010</td>
<td>Jim Higgins (CEO, Sorin Capital)</td>
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<tr>
<td>5 T</td>
<td>11/23/2010</td>
<td>REITs</td>
<td>23</td>
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<tr>
<td>Th</td>
<td>11/25/2010</td>
<td>Thanksgiving</td>
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<tr>
<td>6 T</td>
<td>11/30/2010</td>
<td>Jim Mastandrea (CEO, Whitestone REIT)</td>
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<tr>
<td>Th</td>
<td>12/2/2010</td>
<td>Ric Campo (CEO, Camden Property Trust)</td>
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<tr>
<td>T</td>
<td>12/7/2010</td>
<td>Wrap up</td>
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<td>Receiving Take Home Exam</td>
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