

SEMINAR IN REAL ESTATE FINANCE (RE 388)

SPRING 2009

ProfessorJay HartzellOfficeGSB 5.165

Office Hours Wed., 10:00 am – noon, or by appointment

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Course Objectives

This course's primary objective is to examine real estate capital markets, both debt and equity.

The first half of the course is devoted to real estate debt markets. The primary focus is on the structure and cash flow characteristics of real estate debt instruments. The course begins with a study of the primary residential mortgage market and the mathematics and finance of residential mortgage cash flows and pricing. The course then moves into the secondary market for mortgage funds with a study of simple pass-through residential mortgage pass-through securities. The problem of prepayment and the complications that prepayment introduces to the valuation of mortgage backed securities is analyzed. The prepayment problem in simple residential mortgage pass-through securities led to the creation of Collateralized Mortgage Obligations (CMOs). Following our study of the prepayment problem we go directly to a study of the creation, structure, and pricing of CMOs, including a discussion of mortgage strip securities (IOs and POs) and specialized CMO tranches (PACs and Zs). Students will analyze an actual \$250 million Fannie Mae CMO (REMIC) issued in August 2002 as a case assignment. After working through the residential mortgage instruments we will go directly into our study of Commercial Mortgage Backed Securities (CMBS), CMBS are very similar in spirit and structure to MBS, but significant differences in both prepayment and default characteristics make CMBS an interesting twist on the original MBS model.

The second half of the course begins with a discussion of the application of real options to real estate. The remainder of the second half of the semester is dedicated to the study of real estate equity markets, both public and private. We will study how real estate fits within a diversified investor's portfolio, and the various alternatives an institutional investor has to invest in commercial real estate. We will spend several meetings discussing Real Estate Investment Trusts (REITs), including their structure, corporate governance, and valuation. We will also analyze alternative ways to invest in private equity in the real estate sector, such as commingled real estate funds and limited partnerships.

Leadership and this Course

The Texas MBA program is designed to develop influential business leaders. The MBA Program has identified four fundamental and broad pillars of leadership: knowledge and understanding, communication and collaboration, responsibility and integrity, and a worldview of business and society.

In this course, you will enhance your knowledge and understanding of real estate, securitization,

and fixed income markets. Through class discussion, informal study groups, and formal group projects (written and oral) you will enhance your communication and collaboration skills. You will learn how incentives in these markets may induce some participants to act irresponsibly or without integrity. Finally, many of the issues discussed transcend U.S. boundaries, providing a global perspective on financial markets.

Materials

Required (These will eventually be available at the Co-op, but you should also check Amazon and/or other sources):

Liar's Poker, by Michael Lewis (1989 Penguin Books).

<u>Mortgage-Backed Securities</u>, Frank J. Fabozzi, Anand K. Bhattacharya, and William S. Berliner, 2007, Wiley.

Case CoursePack, details to follow.

Recommended:

Real Estate Investment Trusts, by Chan, Erickson, and Wang, 2002, Oxford.

Course Requirements and Grading

Grades will be based on the student's performance on one quiz (on Liar's Poker), two tests (the midterm and the final), and cases. The weights on each component of the overall course grade are as follows:

Class Participation	Ongoing	5%
Liar's Poker quiz	Tues., Feb 3	5%
CMO Case	Mar. 3	15%
NAV Assignment, Other		
Cases (Groups)	Various	15%
First half test	Thur., Mar 5	30%
Second half test	Thur., May 7	30%

Make-up and extra-credit assignments are generally not possible. Your grade will be determined solely by the components listed above. If you fail to turn in the case assignment or the problem set when they are due you will not be able to make up the assignment or the points. Don't miss the quiz or the tests.

The NAV assignment and cases in the second half of the class will be done in groups of two or three students (no exceptions). Each group must work independently. Students are left to form their own groups, but please see me if help is needed. The CMO Case is to be done individually.

Though attendance will not be taken, you are responsible for everything covered or assigned in class. The lectures may depart significantly from the material assigned and it is important that you review the assigned readings prior to the class session.

McCombs Classroom Professionalism Policy

The highest professional standards are expected of all members of the McCombs community. The collective class reputation and the value of the Texas MBA experience hinges on this.

Faculty are expected to be professional and prepared to deliver value for each and every class session. Students are expected to be professional in all respects.

The Texas MBA classroom experience is enhanced when:

- Students arrive on time. On time arrival ensures that classes are able to start and finish at the scheduled time. On time arrival shows respect for both fellow students and faculty and it enhances learning by reducing avoidable distractions.
- Students display their name cards. This permits fellow students and faculty to learn names, enhancing opportunities for community building and evaluation of in-class contributions.
- Students minimize unscheduled personal breaks. The learning environment improves when disruptions are limited.
- Students are fully prepared for each class. Much of the learning in the Texas MBA program takes place during classroom discussions. When students are not prepared they cannot contribute to the overall learning process. This affects not only the individual, but their peers who count on them, as well.
- Students attend the class section to which they are registered. Learning is enhanced when class sizes are optimized. Limits are set to ensure a quality experience. When section hopping takes place some classes become too large and it becomes difficult to contribute. When they are too small, the breadth of experience and opinion suffers.
- Students respect the views and opinions of their colleagues. Disagreement and debate are encouraged. Intolerance for the views of others is unacceptable.
- Laptops are closed and put away. When students are surfing the web, responding to email, instant messaging each other, and otherwise not devoting their full attention to the topic at hand they are doing themselves and their peers a major disservice. Those around them face additional distraction. Fellow students cannot benefit from the insights of the students who are not engaged. Faculty office hours are spent going over class material with students who chose not to pay attention, rather than truly adding value by helping students who want a better understanding of the material or want to explore the issues in more depth. Students with real needs may not be able to obtain adequate help if faculty time is spent repeating what was said in class. There are often cases where learning is enhanced by the use of laptops in class. Faculty will let you know when it is appropriate to use them. In such cases, professional behavior is exhibited when misuse does not take place.
- Phones and wireless devices are turned off. We've all heard the annoying ringing in the middle of a meeting. Not only is it not professional, it cuts off the flow of discussion when the search for the offender begins. When a true need to communicate with someone outside of class exists (e.g., for some medical need) please inform the professor prior to class.

Remember, you are competing for the best faculty McCombs has to offer. Your professionalism and activity in class contributes to your success in attracting the best faculty to this program.

Academic Dishonesty

I have no tolerance for acts of academic dishonesty. Such acts damage the reputation of the school and the degree and demean the honest efforts of the majority of students. The minimum penalty for an act of academic dishonesty will be a zero for that assignment or exam.

The responsibilities for both students and faculty with regard to the Honor System are described on http://mba.mccombs.utexas.edu/students/academics/honor/index.asp and on the final pages of this syllabus. As the instructor for this course, I agree to observe all the faculty responsibilities described therein. During Orientation, you signed the Honor Code Pledge. In doing so, you agreed to observe all of the student responsibilities of the Honor Code. If the application of the Honor System to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification.

As specific guidance for this course, you should consider the *writing* of all examinations to be an individual effort. Group *preparation* for examinations is acceptable and encouraged. Homework assignments are to be turned in individually but I encourage you to work together in answering the questions. You should, however, develop your own answer and not cut and paste the work of

others.

Students with Disabilities

Upon request, the University of Texas at Austin provides appropriate academic accommodations for qualified students with disabilities. Services for Students with Disabilities (SSD) is housed in the Office of the Dean of Students, located on the fourth floor of the Student Services Building. Information on how to register, downloadable forms, including guidelines for documentation, accommodation request letters, and releases of information are available online at http://deanofstudents.utexas.edu/ssd/index.php. Please do not hesitate to contact SSD at (512) 471-6259, VP: (512) 232-2937 or via e-mail if you have any questions.

Schedule (Tentative and Subject to Change)

MEETING	DAY	DATE	TOPIC	READING
1	Tues	Jan 20	Syllabus, course overview;	
2	Thur	Jan 22	Subprime discussion The Primary Residential Mortgage Market and Products	FBB 1, 2
3	Tues	Jan 27	Mortgage Math and Analytics Payments, Amortization, OSB	
4	Thur	Jan 29	Mortgage Backed Securities (MBS) – Creation and players MBS Cash Flow and Cash Flow spreadsheet	
5	Tues	Feb 3	(Liar's Poker quiz at beginning of class) Prepayment Modeling	FBB 3, 4
6	Thur	Feb 5	Prepayment Modeling	
7	Tues	Feb 10	CMOs IO's, PO's, and Sequentials Assign and discuss CMO case: FNMA REMIC Trust 2002- 46	FBB 5, 6, 7
8	Thur	Feb 12	CMOs – Z's and PAC's	
9	Tues	Feb 17	Private Label MBS	FBB 8, 9
10	Thur	Feb 19	Commercial Mortgage Backed Securities (CMBS) CMBS Intro, Structure, and Property Types	
11	Tues	Feb 24	CMBS - Call Protection, Default and Credit Performance	
12	Thur	Feb 26	Alternative Asset Career Panel in lieu of regular class	
13	Tues	Mar 3	Valuation and Analysis of MBS – Spreads (Zero-vol and OAS), Yield Measures, and Interest Rate Sensitivity (MBS Duration) CMO Case Due	
14	Thur	Mar 5	Midterm	FBB 10, 11, 12
			Global Trips, Spring Break	
15	Tues	Mar 24	Real Options in Real Estate	
16	Thur	Mar 26	Real Options in Real Estate, Citic Tower Case	
17	Tues	Mar 31	Simulations in Modeling Real Estate	
18	Thur	Apr 2	Real Estate in an Institutional Investor's Porfolio	
19	Tues	Apr 7	Real Estate and Diversification	
20	Thur	Apr 9	AMB Case	
21	Tues	Apr 14	REITs (1)	CEW 1-3
22	Thur	Apr 16	REITs (2)	

23	Tues	Apr 21	REITs: Valuation and NAV Calculation	
24	Thur	Apr 23	REITs: Governance	CEW 4, 6, 7
25	Tues	Apr 28	REIT NAV assignment discussion	
26	Thur	Apr 30	Commingled funds and RELPs	
27	Tues	May 5	Commingled funds and RELPs	
28	Thur	May 7	Second Exam	

Honor Code Purpose

Academic honor, trust and integrity are fundamental to The University of Texas at Austin McCombs School of Business community. They contribute directly to the quality of your education and reach far beyond the campus to your overall standing within the business community. The University of Texas at Austin McCombs School of Business Honor System promotes academic honor, trust and integrity throughout the Graduate School of Business. The Honor System relies upon The University of Texas Student Standards of Conduct (Chapter 11 of the Institutional Rules on Student Service and Activities) for enforcement, but promotes ideals that are higher than merely enforceable standards. Every student is responsible for understanding and abiding by the provisions of the Honor System and the University of Texas Student Standards of Conduct. The University expects all students to obey the law, show respect for other members of the university community, perform contractual obligations, maintain absolute integrity and the highest standard of individual honor in scholastic work, and observe the highest standards of conduct. Ignorance of the Honor System or The University of Texas Student Standards of Conduct is not an acceptable excuse for violations under any circumstances.

The effectiveness of the Honor System results solely from the wholehearted and uncompromising support of each member of the Graduate School of Business community. Each member must abide by the Honor System and must be intolerant of any violations. The system is only as effective as you make it.

Faculty Involvement in the Honor System

The University of Texas at Austin McCombs School of Business Faculty's commitment to the Honor System is critical to its success. It is imperative that faculty make their expectations clear to all students. They must also respond to accusations of cheating or other misconduct by students in a timely, discrete and fair manner. We urge faculty members to promote awareness of the importance of integrity through in-class discussions and assignments throughout the semester.

Expectations Under the Honor System

Standards

If a student is uncertain about the standards of conduct in a particular setting, he or she should ask the relevant faculty member for clarification to ensure his or her conduct falls within the expected scope of honor, trust and integrity as promoted by the Honor System. This applies to all tests, papers and group and individual work. Questions about appropriate behavior during the job search should be addressed to a professional member of the Career Services Office. Below are some of the specific examples of violations of the Honor System.

Lying

Lying is any deliberate attempt to deceive another by stating an untruth, or by any direct form of communication to include the telling of a partial truth. Lying includes the use or omission of any information with the intent to deceive or mislead. Examples of lying include, but are not limited to, providing a false excuse for why a test was missed or presenting false information to a recruiter.

Stealing

Stealing is wrongfully taking, obtaining, withholding, defacing or destroying any person's money, personal property, article or service, under any circumstances. Examples of stealing include, but are not limited to, removing course material from the library or hiding it from others, removing material from another person's mail folder, securing for one's self unattended items such as calculators, books, book bags or other personal property. Another form of stealing is the duplication of copyrighted material beyond the reasonable bounds of "fair use." Defacing (e.g., "marking up" or highlighting) library books is also considered stealing, because, through a willful act, the value of another's property is decreased. (See the appendix for a detailed explanation of "fair use.")

Cheating

Cheating is wrongfully and unfairly acting out of self-interest for personal gain by seeking or accepting an unauthorized advantage over one's peers. Examples include, but are not limited to, obtaining questions or answers to tests or quizzes, and getting assistance on case write-ups or other projects beyond what is authorized by the assigning instructor. It is also cheating to accept the benefit(s) of another person's theft(s) even if not actively sought. For instance, if one continues to be attentive to an overhead conversation about a test or case write-up even if initial exposure to such information was accidental and beyond the control of the student in question, one is also cheating. If a student overhears a conversation or any information that any faculty member might reasonably wish to withhold from the student, the student should inform the faculty member(s) of the information and circumstance under which it was overheard.

Actions Required for Responding to Suspected and Known Violations

As stated, everyone must abide by the Honor System and be intolerant of violations. If you suspect a violation has occurred, you should first speak to the suspected violator in an attempt to determine if an infraction has taken place. If, after doing so, you still believe that a violation has occurred, you must tell the suspected violator that he or she must report himself or herself to the course professor or Associate Dean of the Graduate School of Business. If the individual fails to report himself or herself within 48 hours, it then becomes your obligation to report the infraction to the course professor or the Associate Dean of the Graduate School of Business. Remember that although you are not required by regulation to take any action, our Honor System is only as effective as you make it. If you remain silent when you suspect or know of a violation, you are approving of such dishonorable conduct as the community standard. You are thereby precipitating a repetition of such violations.

The Honor Pledge

The University of Texas at Austin McCombs School of Business requires each enrolled student to adopt the Honor System. The Honor Pledge best describes the conduct promoted by the Honor System. It is as follows:

"I affirm that I belong to the honorable community of The University of Texas at Austin Graduate School of Business. I will not lie, cheat or steal, nor will I tolerate those who do."

"I pledge my full support to the Honor System. I agree to be bound at all times by the Honor System and understand that any violation may result in my dismissal from the Graduate School of Business."