

*Mortgages, Mortgage-backed Securities and Real Estate Capital Markets*

FBE 589 (15473R)

Wednesday, 6:30 to 9:30 PM, JKP 204

9/17/2008 (updated)

A. COURSE OVERVIEW

This course provides graduate-level exposure to theory and analytical methods used for valuing and pricing mortgages, mortgage-backed securities, and derivatives. In doing so, this course provides insight into not just how mortgage-backed securities and real estate capital markets operate, but also why. It provides a broad overview of mortgage-backed security, in-depth discussion of specific structure finance products, and hands-on exercises to enhance learning of key concepts.

The growth in the scale and complexity of the U. S. mortgage market since the securitization revolution of the 1980s has been enormous. The volume of outstanding mortgage related securities has grown to \$7.4 trillion as of the first quarter of 2008. In comparison, the volume of outstanding marketable Treasury securities is about \$5 trillion, total corporate debt securities is about \$5.9 trillion. The Federal agency mortgage-backed securities outstanding has increased by more than ten times over the last two decades, from about \$348 billion in 1987 to over \$3.5 trillion by the end of 2007.

At the same time, the market also witnesses the unprecedented turmoil in the secondary mortgage market led by the meltdown of the subprime market starting in late 2006 and early 2007. As one of the most recent fatalities of the subprime fallout, on July 12, 2008, FDIC seized IndyMac Bank, which had \$32 billion in assets and over 10,000 employees, in what regulators called the second-largest bank failure in U.S. history. FDIC's insurance fund has assets of about \$52 billion. The House (on July 23, 2008), and the Senate (on July 26, 2008), overwhelmingly passed a landmark housing bill – the Housing and Economic Recovery Act of 2008 – that will offer up to \$300 billion in loans to rescue some 400,000 homeowners at risk of foreclosure in the current crisis, as well as restoring investor confidence in the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac.

The primary objective of this course is to combine the theory of finance with the practice of real estate capital markets to enable you to make intelligent business decisions in increasingly complex and turbulent real estate markets.

B. COURSE ORGANIZATION AND REQUIREMENTS

The course is a combination of lectures, guest presentations, and discussions. There are several assignments which will not be graded, but suggested answer to the assignments will be posted on the blackboard.

There is also a group project to be completed by four-student teams. A list of topics for the group projects will be distributed during the semester. Each team will pick a topic and work together to complete their project before November 23<sup>rd</sup>. Each team should prepare a 15-minute PowerPoint

presentation of the highlights of the project in classes on November 26<sup>th</sup> and December 3<sup>rd</sup>. Each team will also read and prepare comments on one project prepared by another team. The discussant team should prepare a 5-minute PowerPoint presentation of the comments in classes on November 26<sup>th</sup> and December 3<sup>rd</sup>. Each project group should deliver a draft report to their discussant team and copy to me before or on November 26<sup>th</sup>. The report may not exceed 15 pages (double-spaced). The final project report is due on December 3<sup>rd</sup>.

There will be two midterms but no final exam. You must have a financial or programmable calculator that can compute annuities and present values. You are responsible for knowing how to use these functions. You will be very unhappy if you take the midterms without one.

C. COURSE GRADING

First Midterm	30%
Second Midterm	30%
Project	30%
Class Participation	<u>10%</u>
	100%

D. TEXTBOOKS AND READINGS

**Textbook:**

Andrew Davidson, Anthony Sanders, Lan-Ling Wolff and Anne Ching, (2003) *Securitization: Structuring and Investment Analysis*, Wiley Finance. ISBN: 978-0-471-02260-2.

**Optional Reference Books:**

Anjan V. Thakor and Arnoud W. A. Boot, (2008) *Handbooks In Finance: Handbook of Financial Intermediation and Banking*, North-Holland. ISBN: 978-0-444-51558-2.

Danny Ben-Shahar, Charles Ka Yui Leung and Seow Eng Ong, (2008) *Mortgage Markets Worldwide*, Blackwell Publishing. ISBN: 978-1-4051-3210-7.

E. BLACKBOARD COURSE INFO WEB SITE

Lecture notes, assignments, solutions, your grades and other communications will be posted on a Blackboard Course Info web site at <http://blackboard.usc.edu> under "20083\_FBE\_589\_15473." Your login ID to the FBE 589 course web site is the first part of your USC email ID before @usc.edu. Your password is your USC e-mail password. Please make sure you can access the course web site and download the course materials there.

F. INSTRUCTOR ACCESS

I will hold office hours on Wednesdays, 3:00pm - 5:00pm *or by appointment*. Appointments are recommended even during office hours as meeting schedules may occasionally conflict with office hours. E-mail is a dependable way to communicate with me.

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G. ACADEMIC DISHONESTY

The Use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination, or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tensions accompanying examinations. Where a clear violation has occurred, however, the instructor may disqualify the student's work as unacceptable and assign a failing mark on the paper.

H. DISABILITY STATEMENT

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open early 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

I. CLASS MEETINGS

<b>Date</b>	<b>Topics and References</b>
1. Aug. 27	<b>Introduction: Course mechanics. Overview of Real Estate Capital Markets.</b> <ul style="list-style-type: none"><li>• Davidson, Sanders, Wolff and Ching. (2003) <i>Securitization, Structuring and Investment Analysis</i>, Ch 1-4.</li></ul>
2. Sept. 3	<b>Credit Risks in the Mortgage and Mortgage-Backed Security Markets.</b> <b>Guest Speaker: Anthony Sanders, Bob Herberger Arizona Heritage Chair in Real Estate Finance, Professor of Finance, Arizona State University</b> <ul style="list-style-type: none"><li>• Davidson, Sanders, Wolff and Ching. (2003) <i>Securitization, Structuring and Investment Analysis</i>, Ch 15, Ch 17.</li></ul>
3. Sept. 10	<b>Mortgage Basics.</b> <ul style="list-style-type: none"><li>• Davidson, Sanders, Wolff and Ching. (2003) <i>Securitization, Structuring and Investment Analysis</i>, Ch 5.</li></ul>
4. Sept. 17	<b>Fixed-Income Basics: Yield Curve and Term Structure of Interest Rates, Term Structure Models and Bond Pricing Models.</b> <ul style="list-style-type: none"><li>• Davidson, Sanders, Wolff and Ching. (2003) <i>Securitization, Structuring and Investment Analysis</i>, Ch 7, Ch 10.</li></ul>
5. Sept. 24	<b>Pricing of Mortgage Prepayment Options, Option-adjusted Spreads and Monte-Carlo Simulation.</b> <ul style="list-style-type: none"><li>• Davidson, Sanders, Wolff and Ching. (2003) <i>Securitization, Structuring and Investment Analysis</i>, Ch 12-13.</li></ul>
6. Oct. 1	<b>Mortgage Pass-Through Securities.</b> <ul style="list-style-type: none"><li>• Davidson, Sanders, Wolff and Ching. (2003) <i>Securitization, Structuring and Investment Analysis</i>, Ch 6, Ch 8.</li></ul>
7. Oct. 8	<b>Stripped Mortgage-Backed Securities, CMOs, and REMICs.</b> <ul style="list-style-type: none"><li>• Davidson, Sanders, Wolff and Ching. (2003) <i>Securitization, Structuring and Investment Analysis</i>, Ch. 9, Ch 11.</li></ul>
8. Oct. 15	<b>How the Securities Markets Impact the Value of Real Estate, Transaction Volume and the Business Decisions by Investment and Financial Institutes.</b> <b>Guest Speaker: Christopher N. Macke, Vice President, GE Real Estate.</b> <ul style="list-style-type: none"><li>• Davidson, Sanders, Wolff and Ching. (2003) <i>Securitization, Structuring and Investment Analysis</i>, Ch 10, Ch 14.</li></ul>
9. Oct. 22 6:30-8:30pm	<b>First Midterm.</b>
10. Oct. 29	<b>Commercial Mortgages, Prepayment Protections and Defeasance.</b> <ul style="list-style-type: none"><li>• Davidson, Sanders, Wolff and Ching. (2003) <i>Securitization, Structuring and Investment Analysis</i>, Ch 22.</li></ul>
11. Nov. 5	<b>CMBS and CDO Markets.</b>

- Davidson, Sanders, Wolff and Ching. (2003) *Securitization, Structuring and Investment Analysis*, Ch 23.

12. Nov. 12

**REITs Case Study, Public vs. Private REITs.**

**Guest Speaker: Victor Coleman, Founder and Managing Partner, Hudson Capital, LLC.**

- Davidson, Sanders, Wolff and Ching. (2003) *Securitization, Structuring and Investment Analysis*, Ch 24.

13. Nov. 19

6:30-8:30pm

**Second Midterm.**

















14. Nov. 26

**Group Project Presentations.**

15. Dec. 3

**Group Project Presentations.**

## H. USEFUL WEBSITE LINKS

-  [Lusk Center for Real Estate](http://www.usc.edu/schools/sppd/lusk) (<http://www.usc.edu/schools/sppd/lusk>)
-  [Glossary of Finance and Economic Terms](http://www.freddiemac.com/finance/smm/a_f.htm#A) ([http://www.freddiemac.com/finance/smm/a\\_f.htm#A](http://www.freddiemac.com/finance/smm/a_f.htm#A))
-  [REMIC & SMBS Securities Glossary](http://www.fanniemae.com/markets/mbssecurities/product_info/remic/r_glossary.html) ([http://www.fanniemae.com/markets/mbssecurities/product\\_info/remic/r\\_glossary.html](http://www.fanniemae.com/markets/mbssecurities/product_info/remic/r_glossary.html))
-  [Bloomberg Market Rates](http://www.bloomberg.com/markets/rates/index.html) (<http://www.bloomberg.com/markets/rates/index.html>)
-  [U.S. Census Bureau](http://www.census.gov/pub) (<http://www.census.gov/pub>)
-  [NAHB Economic and Housing Data](http://www.nahb.org/facts/default.htm) (<http://www.nahb.org/facts/default.htm>)
-  [Financial Services Facts](http://www.financialservicefacts.org/index.html) (<http://www.financialservicefacts.org/index.html>)
-  [Office of Federal Housing Enterprise Oversight](http://www.ofheo.gov) (<http://www.ofheo.gov>)
-  [FannieMae](http://www.fanniemae.com) (<http://www.fanniemae.com>)
-  [FreddieMac](http://www.freddiemac.com) (<http://www.freddiemac.com>)
-  [National Association of Real Estate Investment Trusts](http://www.nareit.org) (<http://www.nareit.org>)
-  [Mortgage Bankers Association of America](http://www.mbaa.org) (<http://www.mbaa.org>)
-  [The Bond Market Association](http://www.bondmarkets.com) (<http://www.bondmarkets.com>)
-  [National Mortgage News](http://www.nationalmortgagenews.com) (<http://www.nationalmortgagenews.com>)
-  [American Real Estate and Urban Economics Association](http://www.areuea.org) (<http://www.areuea.org>)
-  [Urban Land Institute](http://www.uli.org) (<http://www.uli.org>)
-  [Journal of Real Estate Finance and Economics](http://www.jrefe.org) (<http://www.jrefe.org>)
-  [Real Estate Economics](http://www.areuea.org/publications/ree/) (<http://www.areuea.org/publications/ree/>)