

UP 566
Structuring Real Estate Financial Deals

David Bieri

Fall 2010

Lectures:	R 4:30–7:30pm
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Office hours:	T R 11:00am–noon, or by appointment

Course description

The primary objective of this course is to introduce the basic concepts and tools used by real estate developers, investors, lenders, planners, architects, and public sector officials to analyze various financial aspects of real estate developments. The course integrates both economic and financial theory with conventional real estate practices, developing the analytical tools needed to effectively communicate with real estate professionals.

At a more macro-level level, this course covers the fundamentals of the increasing financialisation and globalisation of real estate markets, explaining the similarities and differences observed across different markets. The recent financial crisis has highlighted the importance of understanding the complex linkages between real estate markets and the global financial system. Beyond offering a mere taxonomy, this course aims to enable students to understand the role that different actors play in the process of financial globalisation, and how – through institutions – global issues in real estate development are invariably linked to global financial markets.

Prerequisites

A microeconomics course: UP 517/BA 517 or UP 613/ARCH 517. The instructor may waive prerequisites if students are comfortable with undergraduate-level treatment of microeconomics and some macroeconomics. Experience with urban and regional analysis is useful, but not indispensable.

Course Readings

Required texts

BRUEGGEMAN, W. B. AND J. D. FISHER (2011): *Real Estate Finance and Investments*. McGraw Hill Irwin, New York, NY, 14th edn. [BF]

Recommended texts

BREALEY, R. A. AND S. C. MYERS (2003): *Principles of Corporate Finance*. McGraw Hill Higher Education, New York, NY: 7th edn. [BM]

O'SULLIVAN, A. (2009): *Urban Economics*. McGraw Hill Higher Education, New York, NY: 7th edn. [OSU]

PECA, STEPHEN P. (2009): *Real Estate Development and Investment: A Comprehensive Approach*. John Wiley & Sons, Inc., Hoboken, NJ: 1st edn. [PEC]

Other assigned readings will be posted on CTools, see reading list below.

Course Requirements and Policies**Grading**

This course will *not* be graded on a curve. This means that the number of top grades is not limited and – by symmetry – the same is also true for low grades. The course-specific grading scheme is as follows:

- Homework assignments, class participation – 20%
- Exam 1 (in class)– 25%
- Exam 2 (take home) – 25%
- Team project – 30%

Details on each of these assignments will be provided in class.

Late or missed assignments

All work must be submitted by the due date. Late work will be accepted with a penalty of 50% *per lecture* past the due date. Exceptions to these rules are not granted without a note from the Dean of Students Office detailing why an excuse should be warranted. Usually, make-up exams will be oral, given as close to the exam date as possible.

Attendance policy

You are responsible for all material discussed in class. Students are expected to have read all assigned material before class so that they can take an active role in class discussions. Reading is a complement, not a substitute for class attendance.

Policy on plagiarism and academic honesty

The University of Michigan Honor Code is in effect for this course. Please take the time to read this document and make sure that you understand your responsibilities as a student. I assume that everything you turn in during the semester conforms to the Honor Code and to the usual academic standards governing appropriate student conduct. It is your responsibility to find out what constitutes plagiarism and cheating; a plea of ignorance is not acceptable as a defense. The following statement, taken from the Rackham Graduate School's [Statement on Graduate Academic and Professional Integrity](#), describes the types of violations covered under the Honor System:

A clear sense of academic honesty and responsibility is fundamental to our scholarly community. To that end, the University of Michigan expects its students to demonstrate honesty and integrity in all their academic activities [...] As professionals in training, graduate students assume various roles, depending on the academic program. These include the roles of scholar/researcher, teacher, supervisor of employees, representative to the public (of the University, the discipline and/or the profession), and professional colleague and even the role of provider of services to clients. Therefore, students are responsible for maintaining high standards of conduct while engaged in course work, research, dissertation or thesis preparation, and other activities related to academics and their profession.

Graduate training, like future professional life, includes demands that might tempt some students to violate integrity standards. There are pressures on graduate students to achieve high grades, obtain financial support, meet research or publication deadlines, gain recognition from the scholarly community, and secure employment. Although faculty members can help students to maintain academic integrity despite these pressures, each student has final responsibility for maintaining integrity in his or her individual conduct.

Finally, conduct that violates the ethical or legal standards of the University community or of ones program or field of specialization may result in serious consequences, including immediate disciplinary action and future professional disrepute. In support of the Graduate Schools commitment to maintain high standards of integrity, this policy makes provisions for bringing forward and hearing cases of academic and professional misconduct.

Be advised that plagiarism or other forms of violations of the University of Michigan Honor Code will not be tolerated. I will not hesitate to forward cases of academic dishonesty to the Dean.

Class room etiquette

Everyone who registers for this class is an adult. You are legally able to marry without parental consent, buy a home, pay taxes, vote, work, budget your money, defend your country in military service, etc. You should also be adult enough not to disturb others.

No electronic devices of any kind will be needed for this course, unless stated otherwise. Please stow away your laptops and mobile phones for the entire duration of the lecture.

CTools

The **CTools** site for UP 566 is an important component of this course. With similar functionality to Blackboard, CTools is an online environment and UP 566 is assigned a separate page within CTools and is accessible only by the course instructor and the students enrolled in the course. This system provides a convenient way to post announcements, grades, assignments, and online quizzes or homework.

You are responsible for any announcement or assignment posted on CTools, regardless of whether the announcement or assignment was discussed in class. I recommend checking CTools on a regular basis.

Important dates during the semester

Please take note of the following dates over the course of the semester:¹

M	27 Sep 10	Last day for students to drop Fall 2010 classes.
R	21 Oct 10	Exam 1 in class.
R	18 Nov 10	Exam 2 take home.
R	23 Nov 10	Exam 2 due (4pm).
W	24 Nov 10	Thanksgiving recess begins.
M	13 Dec 10	Classes end.
R	16 Dec 10	Final projects due (4pm).

Tentative Course Calendar

Compulsory readings are marked by an asterisk (*). The rest of the reading is optional, and intended for those interested in pursuing particular topics in more depth. I would encourage you to do as much of the reading as possible. Please familiarise yourself with the material before the lectures, which should enable us to engage in interesting and informed class discussions.

I. Introduction and review

Lecture 1: 9 September 2010

Introductions, syllabus review and key concepts.

Lecture 2: 16 September 2010

*BF, chapters 1–2.

BRUNNERMEIER, M. K. (2009): “Deciphering the Liquidity and Credit Crunch 2007-2008,” *Journal of Economic Perspectives*, 23(1), 77–100.

*BURR, S. I. (2010): “Practitioners Corner: An Interesting Time for Real Estate,” *Real Estate Finance*, 27(1), 12–18.

DUCA, J. V., J. MUELLBAUER, AND A. MURPHY (2010): “Housing Markets and the Financial Crisis of 2007-2009: Lessons for the Future,” *Journal of Financial Stability*, 6(4), 203–217.

FERGUS, J. T., AND J. GOODMAN, JOHN L. (1994): “The 1989-92 Credit Crunch for Real Estate: A Retrospective,” *Journal of the American Real Estate & Urban Economics Association*, 22(1), 5–33.

*MAYER, C., K. PENCE, AND S. M. SHERLUND (2009): “The Rise in Mortgage Defaults,” *Journal of Economic Perspectives*, 23(1), 27–50.

II. Finance fundamentals

Lecture 3: 23 September 2010

*BF, chapters 3, 11.

BM, chapters 1, 2, 35.

¹Dates are subject to change.

CHAN, E., M. DAVIES, AND J. GYNTELBERG (2006): “The Role of Government-supported Housing Finance Agencies in Asia,” *BIS Quarterly Review*, 11(4), 71–83.

HUD (2006): “Evolution of the U.S. Housing System: A Historical Survey and Lessons for Emerging Mortgage Markets,” Policy paper, U.S. Department of Housing and Urban Development, Washington, DC.

Lecture 4: 7 October 2010

*BF, chapters 4, 5, 12.

BM, chapters 3, 4, 23.

OSU, chapter 1.

FENDER, I., AND M. SCHEICHER (2008): “The ABX: How Do the Markets Price Subprime Mortgage Risk?,” *BIS Quarterly Review*, 13(3), 67–81.

FRANKEL, A. (2006): “Prime or Not So Prime? An Exploration of US Housing Finance in the New Century,” *BIS Quarterly Review*, 11(1), 67–87.

*WHEATON, W. C., M. S. BARANSKI, AND C. A. TEMPLETON (2009): “100 Years of Commercial Real Estate Prices in Manhattan,” *Real Estate Economics*, 37(1), 69–83.

III. Income-producing properties

Lecture 5: 14 October 2010

*BF, chapters 9, 10.

BM, chapters 11, 12, 26.

OSU, chapter 2.

PEC, chapters 1, 3.

CROCKETT, J. H. (1990): “Workouts, Deep Pockets, and Fire Sales: An Analysis of Distressed Real Estate,” *Journal of the American Real Estate & Urban Economics Association*, 18(1), 76–90.

CRONQVIST, H., P. HÖGFELDT, AND M. NILSSON (2001): “Why Agency Costs Explain Diversification Discounts,” *Real Estate Economics*, 29(1), 85–126.

Lecture 6: 21 October 2010

Exam 1, in class.

*BF, chapters 13, 15.

BM, chapter 7.

OSU, chapters 6, 7.

PEC, chapter 12.

CAPOZZA, D. R., AND G. A. SICK (1994): “The Risk Structure of Land Markets,” *Journal of Urban Economics*, 35(3), 297–319.

FENDER, I., AND J. MITCHELL (2005): “Structured Finance: Complexity, Risk and the Use of Ratings,” *BIS Quarterly Review*, 10(2), 67–79.

*SIRMANS, C. F., G. K. TURNBULL, AND J. DOMBROW (1997): “Residential Development, Risk, and Land Prices,” *Journal of Regional Science*, 37(4), 613–628.

IV. Irreversibility, uncertainty, and investment

Lecture 7: 28 October 2010

*BF, chapter 16.

BM, chapters 31, 32.

OSU, chapter 13.

PEC, chapter 10.

BROWN, D. T. (2002): “Call Options and Liquidation in Commercial Mortgage Financing,” *Real Estate Economics*, 30(1), 115–136.

CAPOZZA, D. R., AND Y. LI (1994): “The Intensity and Timing of Investment: The Case of Land,” *American Economic Review*, 84(4), 889–904.

LAI, R. N., K. WANG, AND Y. ZHOU (2004): “Sale before Completion of Development: Pricing and Strategy,” *Real Estate Economics*, 32(2), 329–357.

*PINDYCK, R. S. (1991): “Irreversibility, Uncertainty, and Investment,” *Journal of Economic Literature*, 29(3), 1110–1148.

Lecture 8: 4 November 2010

*BF, chapters 17.

BM, chapter 20.

BULAN, L., C. J. MAYER, AND C. T. SOMERVILLE (2009): “Irreversible Investment, Real Options, and Competition: Evidence from Real Estate Development,” *Journal of Urban Economics*, 65(3), 237–251.

*CUNNINGHAM, C. R. (2007): “Growth Controls, Real Options, and Land Development,” *Review of Economics and Statistics*, 89(2), 343–358.

CAPOZZA, D. R., AND Y. LI (2001): “Residential Investment and Interest Rates: An Empirical Test of Land Development as a Real Option,” *Real Estate Economics*, 29(3), 503–519.

——— (2002): “Optimal Land Development Decisions,” *Journal of Urban Economics*, 51(1), 123–142.

*GUTHRIE, G. (2010): “House Prices, Development Costs, and the Value of Waiting,” *Journal of Urban Economics*, 68(1), 56–71.

Lecture 9: 11 November 2010

UM/ULI Real Estate Conference.

OSU, chapter 15.

V. Global financial markets and real estate finance

Lecture 10: 18 November 2010

*BF, chapters 19, 20.

BM, chapter 34.

PEC, chapter 14.

*BARDHAN, A., R. EDELSTEIN, AND D. TSANG (2008): “Global Financial Integration and Real Estate Security Returns,” *Real Estate Economics*, 36(2), 285–311.

CHUI, M., D. DOMANSKI, P. KUGLER, AND J. SHEK (2010): “The Collapse of International Bank Finance During the Crisis: Evidence from Syndicated Loan Markets,” *BIS Quarterly Review*, 15(3), 39–49.

CGFS (2006): “Housing Finance in the Global Financial Market,” CGFS Papers No. 26, Committee on the Global Financial System, Basel.

Lecture 11: 25 November 2010

Thanksgiving break, no class.

Lecture 12: 2 December 2010

*BF, chapters 21, 22.

PEC, chapter 15.

ASHCRAFT, A. B., AND T. SCHUERMANN (2008): “Understanding the Securitization of Subprime Mortgage Credit,” *Foundations and Trends in Finance*, 2(3), 191–309.

BOUDRY, W. I., J. G. KALLBERG, AND C. H. LIU (2010): “An Analysis of REIT Security Issuance Decisions,” *Real Estate Economics*, 38(1), 91–120.

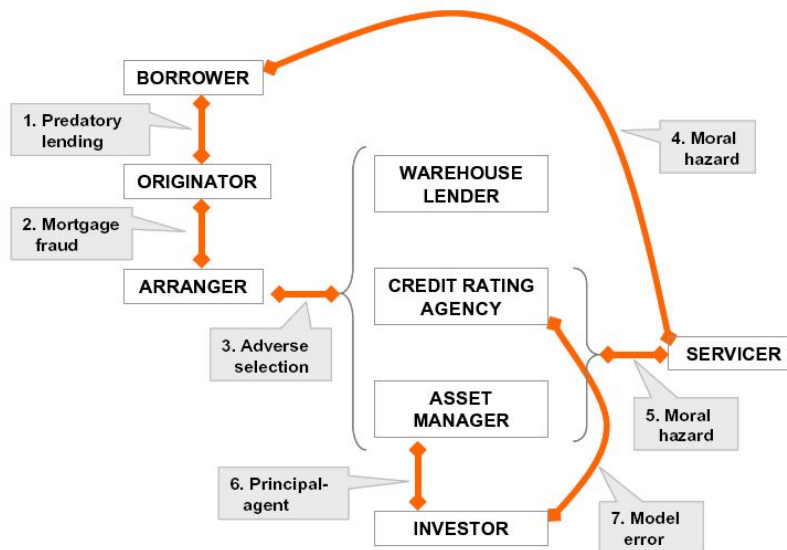
*CAPOZZA, D. R., AND S. LEE (1994): “Property Type, Size and REIT Value,” *Journal of Real Estate Research*, 10(4), 363–380.

FENDER, I., N. TARASHEV, AND H. ZHU (2008): “Credit Fundamentals, Ratings and Value-at-Risk: CDOs versus Corporate Exposures,” *BIS Quarterly Review*, 13(1), 87–101.

Lecture 13: 9 December 2010

Group presentations, in class.

Figure 1: Key players and frictions in subprime mortgage credit securitisation



Notes: The securitisation of mortgage loans is a complex process that involves a number of different players. This figure provides an overview of the players, their responsibilities, the important frictions that exist between the players, and the mechanisms used in order to mitigate these frictions. *Source*: ASHCRAFT, A. B. AND T. SCHUERMANN, "Understanding the Securitization of Subprime Mortgage Credit," *Foundations and Trends in Finance*, 2(3), July 2008: 191–309.