



NEW YORK UNIVERSITY
Stern Graduate School of Business

Topics in Real Estate Finance: MBS
Course Number: B40.3178.30
Classroom: Tisch UC59
Meeting Time: Wed 7:00-8:20 PM

Professor Richard M. Levine
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Office Hours: Mon 7-8:30 PM
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Course Description: This class will analyze mortgage-backed securities (MBS) and markets. We will construct and value residential and commercial MBS.

Textbooks Used:

1. Michael Lewis, *Liar's Poker*, 1989, Penguin Books. (“**LP**”)
2. Frank Fabozzi, *Handbook of Mortgage-Backed Securities*, 1995, 4th Edition, McGraw-Hill Professional Publishing. (“**F**”)
3. Fabozzi and Modigliani: *Mortgage & Mortgage-Backed Securities Markets*, 1992, Harvard Business School Press. (“**FM**”)

Grading System: There will be three valuation problem sets, a term project (see below) and a final exam. Grading will be calculated as follows:

50% Final Exam
30% Project
20% Problem Sets (2 Sets - 10% each)

Project: Students will construct an MBS model to “reverse engineer” an actual issued CMO. The project will be due _____. Details of the project will be forthcoming. Projects submitted late will be penalized a full letter grade for each day overdue.

Other: We will often discuss course topics in the context of a current industry event. As such, students should read the *Wall Street Journal* and/or the business section of the *New York Times* on a daily basis. Reading of at least one other business periodical such as *Barrons*, *The Economist*, *Business Week*, *Forbes*, *Fortune* and *Money* is also strongly encouraged.

COURSE SCHEDULE [subject to revision]

<i>Topic</i>	<i>Date</i>	<i>Reading</i>
1. Introduction / Overview of MBS Market A. Course Overview B. Origination of Market C. Market Overview	20-Jan	LP: Chap. 1-3 F: Chap. 1 FM: Chap. 1-2
2. Mortgage Origination & Servicing A. Mortgage Originators B. The Origination Process C. Mortgage Servicing and Insurance D. The Traditional Mortgage I	27-Jan	FM: Chap. 3-5 F: Chap. 2 LP: Chap. 4-6
3. ARMs and Pass-Through Securities A. The Traditional Mortgage II B. Creation of Variable Rate Mortgages (ARMs) C. The Tilt Problem D. Features of Pass-Through Securities	3-Feb	FM: Chap. 6-8 F: Chap. 4 LP: rest of book
4. Price and Yield Conventions for Passthroughs A. Risks of MBS Investments B. Benchmark Prepayment Conventions C. Projecting Cash Flows D. Yield Calculations E. Weighted Average Life	10-Feb	FM: Chap. 9 Salomon Bros. Reading
5. Prepayment Analysis A. Factors Affecting Prepayment Behavior B. Modifying the PSA Curve for New Mortgages C. Mortgage Prepayment Forecasting	17-Feb	F: Chap. 10-11 FM: Chap. 10
6. Stripped MBS / Introduction to CMOs A. Overview B. Types of SMBS C. Recent Developments D. Investment Characteristics E. Introduction to Collateralized Mortgage Obligations	24-Feb	F: Chap. 14-15 FM: Chap. 11
7. Collateralized Mortgage Obligations I A. Sequential structures B. PACs and TACs C. Companions or Support Classes D. Accrual or Z Bonds E. Floating /Inverse Floating Rate CMOs F. Interest Only / Principal Only Classes	3-Mar	F: Chap. 16-21

<i>Topic</i>	<i>Date</i>	<i>Reading</i>
8. Collateralized Mortgage Obligations II A. Complex CMOs B. Pool Characteristics C. Agency CMO Example	10-Mar	F: Chap. FM: Chap. 12
SPRING BREAK	17-Mar	
9. MBS Risk Management A. Price / yield relationships B. Duration and convexity C. Effective duration and convexity D. Total return calculations	24-Mar	F: Chap. 28-30
10. Option Adjusted Spreads (OAS) A. What is OAS? B. The Binomial Tree C. Evaluating embedded options D. Simple OAS Analysis E. Applications of OAS	31-Mar	FM: Chap. 13 F: Chap. 28
11. Commercial Mortgage-Backed Securities I A. Introduction to CMBS B. Origination of CMBS Market C. Overview of current CMBS market D. Analyzing a mortgage note	7-Apr	F: Chap. 25
12. Commercial Mortgage-Backed Securities II A. Trends and Structures in CMBS B. The cash flow waterfall C. Prepayment considerations D. Impact of defaults and losses	14-Apr	F: Chap. 25 Class Handout
13. Commercial Mortgage-Backed Securities III A. Mechanics of CMBS deals B. Role of the Servicer C. Techniques for analyzing CMBS D. Analyzing a CMBS issue	21-Apr	F: Chap. 26 Class Handout
14. Course Review / Case Study A. Questions and Answers B. The Future of the MBS Market C. Sample "Test" Problems	28-Apr	
FINAL EXAM	5-May	7:35 - 9:35 PM