

**COLUMBIA UNIVERSITY
GRADUATE SCHOOL OF BUSINESS**

**Finance B 8314
Real Estate Finance
M.B.A. Real Estate Program Core Course
Fall 1999
M/W: 1:20 - 2:40 pm, Uris 142**

**Professor Lynne B. Sagalyn
Uris 708
854-4418
lbs4@columbia.edu
Office Hours: W: 10:00 - 12 noon**

COURSE OVERVIEW

This course focuses on concepts and techniques used to analyze and finance income-producing property. It aims to provide you as future entrepreneurs, investors, investment bankers or lenders with quantitative skills and a critical perspective for making financial decisions about real estate. Special emphasis is given to examining the nature of real estate risk, at both the level of the individual project and the investment portfolio. Relying heavily on case discussions, class sessions consider how economic characteristics of the property and the local market, motives of different actors and institutional arrangements interact to shape financial decision making in real estate.

COURSE STRUCTURE

Part I: FINANCIAL ANALYSIS FOR REAL PROPERTY

Covers the nature of the real estate asset, property economics and discounted cash flow analysis, valuation, market analysis, the mechanics of leverage and debt financing, the taxation of real estate and risk analysis. *Optional review sessions will be held on Friday (time to be determined). These sessions will cover the basic mechanics of real estate (mortgage schedules, depreciation and other tax concepts, growth assumptions used in valuation and sensitivity analysis).*

Part II: EVALUATING INVESTMENT RISK AND RETURN

Applies the tools developed in Part I through case problems, developed by the Real Estate Program of Columbia Business School. The cases ask you to examine the investment parameters surrounding acquisition pricing, entrepreneurial development, and opportunistic investment. Through the cases, this section forces a comparison between institutional and entrepreneurial objectives and strategies for investing in real estate.

Part III: FINANCIAL STRATEGIES AND STRUCTURES

Focuses on the issue of capital structure and address the question: how much debt for a project, in what form? Topics include debt instruments, construction financing, REITs and financial structures for managing the risk of equity investments.

The course relies on the case method of instruction to blend theory with practice. With case discussions of actual problem-solving situations you learn through in-depth analysis prior to class, and, most importantly, through the dynamics of group discussion in class. You should be prepared to discuss all elements of the case, and I reserve the right to call upon any student during the class to present his or her views on the issues of the case.

COURSE MATERIALS

There are three required purchases for the course:

Available at Papyrus Book Store:

(1) a text (T), W.B. Brueggeman and J.D. Fisher, *Real Estate Finance*, tenth edition (Homewood, Il.: Irwin, 1993).

(2) Lynne B. Sagalyn, *Cases in Real Estate Finance and Investment Strategy* (Washington, D.C.: Urban Land Institute, 1999). (CB)

Available at Operations at Uris Hall:

(3) a case packet (R) containing additional required reading material listed on the syllabus, available through Operations/Uris.

In addition, I recommend:

C purchase of *Barron's Dictionary of Real Estate Terms*, 4th Edition, 1997;

C browsing the various real estate web sites, listed as *References* in your reader (R).

WRITTEN ASSIGNMENTS

1. **The Associate's Task Quantitative Exercise and Investment Recommendations**: This exercise consists of two parts, the first (submission of the numbers) is due October 4; the second (recommended investment strategies for each of the two investors of the case) is due October 13. Associate's Task can be completed on a computer spreadsheet; the template (without the formulas) is on the web page for the course.

Quantitative Exercise (Associate's Task, Part I). You may work with two other persons (who must be identified on your submissions) in developing the spread-sheet model, though some people have found this less than ideal because they learn best by doing themselves. My suggestion is to work in groups to figure out the concepts.

If you construct the model together, make sure that each of you works on the formulas or a particular exhibit and maintains your own disk copy of the file. If you work in a group, please turn in only one assignment and make sure to list the group members on the submission's front page.

Investment Recommendations (Associate's Task, Part II). The second task of this case is to develop a set of investment recommendations for the two investors. Prepare a business memo comprised of three sections. In the first section, lay out the issues relating to the pros and cons of acquiring each property. In the next two sections, give specific investment advice to each of the investors; your recommendations should match the investment objectives of each investor with the projected risk and return attributes of the proposed property acquisition. *This assignment should not exceed three single-spaced typewritten pages.* [You are encouraged to append up to three **summary** financial exhibits in support of points in your text.] *While you may discuss this*

assignment with other group members, the investment memo due October 13 is to be 100% individual work.

2. **Case Analyses.** Working individually, you are to prepare ONE written case analysis from the list below. of no more than three pages (typed, with 1-1/2" margins left, right, top, and bottom) plus exhibits.

- Bidding on 1800 L Street
- Loft Building , SoHo
- * EBD Portfolio (1)
- * Structuring the Burnswell Deal
- * Graybar Syndications

Although you may discuss the cases in a study group, **the text plus any quantitative analysis must be prepared individually.** If you do discuss the case as part of a study group, you must list the names of those you worked with on the front of the case write up. These written assignments are due at the beginning of class the day the case is to be discussed. Late submissions are not accepted. You are expected to be in class on the day that your written case is discussed.

3. **Case Précis.** The syllabus incorporates six (6) cases of applied financial decision making for real estate. For three (3) cases, you are required to submit at the beginning of class a brief analysis of the nature of the problem to be solved and the key analytical components (qualitative and/or quantitative) of the case. The goal here is cultivate a quick-read approach to problem solving. These must be no more than one page. These will not be returned nor will they be assigned a numerical grade, but failure to submit will count against your grade. Also, submitting a sloppy or very incomplete précis is not a wise idea.

Limited Presentation Option: For those cases * above, it is possible for groups of two to prepare a presentation to the class in lieu of submitting two (of three) required case précis. Given the size of the class and constraints of time, only six groups (up to 12 people) can be accommodated for this option. So, this option will be allocated on a first-come basis. If you are interested in this option, please let me know of your group, ASAP. I will post the names within the first two weeks of class. Should you subsequently change your mind, you are free to trade cases or groups, any such trades being the responsibility of the individuals. I need to be notified of any adjustments.

The group presentation will be graded by both the class and the professor. At the end of each class, students will fill out a short form rating the group presentation on a number of areas, including conciseness, logic and presentation quality. These ratings, along with the professor's comments, will be distributed to the presenters at the end of class. This is an excellent opportunity for you to develop presentation skills. If you would like, you can distribute presentation materials to the class. If the group leaves the materials in my office by 9:00 a.m. the day of the presentation, I will ensure that they are copied for the class. Alternatively, the presenters can copy the materials themselves.

Presentations should be 5-10 minutes in length. In preparing your presentation, you should pay attention to the following guidelines: 1) Take a position and defend it. In considering the argument you make, think of the class as an investment committee which is trying to decide what to do. Do not be wishy-washy. 2) Retain balance. While you are defending a point of view, you should recognize the strengths and weaknesses of your position. In preparing your remarks, think about the questions your audience is likely to ask. 3) Do not just reiterate the facts of the case. Assume an informed and knowledgeable audience. Since everyone will have read the case, we will not need to be given background. 4) Prepare a handout for the class if the case involves quantitative

calculations.

GRADING

Course grades will be determined on the following basis:

| | |
|-------------------------------------|-----|
| The Associates Task | 20% |
| Case Write Up/Précises/Presentation | 35% |
| Take-Home Final Exam | 25% |
| Class Participation | 20% |

TEACHING ASSISTANTS

Name

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FALL 1999

PROFESSOR LYNNE SAGALYN

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| PART I: | FINANCIAL ANALYSIS FOR REAL PROPERTY |
| September 8 (W) | Introduction to Real Estate and Course Overview |
| September 13 (M) | The Basis of Valuation: Income and Expense Analysis |
| September 15 (W) | The Contractual Stream of Payments: Lease Analysis and Cash Flows |
| September 17 (F) | Review Session #1: Mortgage Mechanics |
| September 20 (M) | NO CLASS/RELIGIOUS HOLIDAY |
| September 22 (W) | Debt Finance: Leverage and Risk |
| September 24 (F) | MAKE-UP CLASS: 9-10:20 amCTax Treatment of Real Estate: Operations |
| September 24 (F) | Review Session #2: Associates Task: Before-Tax Analysis |
| September 27(M) | Tax Treatment of Real Estate: Transactions |
| September 29 (W) | Real Estate Markets: Supply and Demand in Space Markets |
| October 1 (F) | Review Session #3: Associates Task: After-Tax Analysis |
| October 4 (M) | Case: <i>The Associates Task</i> Part I: Financials Due |
| October 6 (W) | Risk Analysis |
| October 8 (F) | Review Session #4: Sensitivity Analysis |
| October 11 (M) | Real Estate Markets: Supply and Demand in Asset Markets |
| October 13 (W) | <i>The Associates Task</i> Part II: Investment Recommendations Due |
| PART II: | INVESTMENT ANALYSIS: RISK AND RETURN |
| October 18 (M) | Institutional Investment in Real Estate: Case: <i>Bidding on 1800 L Street</i> |
| October 20 (W) | Entrepreneurial Acquisition of an Investment Portfolio Guest: Paul Pariser, MBA '78, Taconic Investment Partners |
| October 25 (M) | Entrepreneurial Development Case: <i>Loft Building SoHo</i> Guest: Eric Hadar, MBA '89, Allied Partners, Inc. |
| October 27 (W) | Private Equity Investment Case: <i>EDB Portfolio (1)</i> |
| PART III: | FINANCIAL STRATEGIES AND STRUCTURES |
| November 3 (W) | Real Estate Capital Markets |
| November 8 (M) | Debt Choices: CMBS Financing versus Whole Loans Guest: Barbara Chu, MBA '87; Adjunct Professor and Managing Director, Acquisitions, Jack Resnick & Sons |
| November 10 (W) | Construction Financing Guest: Patricia Goldstein, Division Executive, Citicorp Commercial Real Estate |
| November 15 (M) | Financing Corporate Real Estate: On and Off the Balance Sheet Guest: W.P. Carey and Gordon Whiting, W. P. Carey |
| November 17 (W) | Equity Financing in the Public Markets |
| November 22 (M) | Structuring An Investment Partnership Case: <i>Structuring The Burnswell Deal</i> |
| November 29 (M) | Capital Structure and Financial Claims Case: <i>Graybar Syndications</i> (Harvard Business School 9-313-324 Rev. 7/87)) |
| December 1 (W) | Real Estate M&A Guest: Matt Lustig, Managing Director, Lazard Frères & Co. |

December 6 (M)

Applying Corporate Finance to Real Estate

Case: *Rockefeller Center Properties, Inc. (1)*

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Assignment and Reading List

PART I: FINANCIAL ANALYSIS FOR REAL PROPERTY

September 8: INTRODUCTION TO REAL ESTATE AND COURSE OVERVIEW

Introduction to the real estate business and the asset. Overview of analytical framework for project finance.

REQUIRED:

Mark Zandi, *What the New Economy Might Imply for Real Estate Markets*, @ *Real Estate Finance* 15(Winter 1999), pp. 7-25. (R)

C. B. Leinberger, *Strategy for Real Estate Companies: Marketing, Finance, Organization* (Washington, D.C.: The Urban Land Institute, 1993), Chapter 3. (R)

BACKGROUND/GETTING STARTED:

Terrence M. Clauretie, *Useful Web Sites for the Real Estate Professional*, @ *Real Estate Finance Journal*, Spring 1999 and Summer 1999. (R)

Jonathan Falik, *Excel Modeling Tips*, @ March 22, 1999. (R)

September 13: THE BASICS OF VALUATION INCOME AND EXPENSE ANALYSIS

Pro-forma analysis, before-tax cash-flow accounting, financial ratios, rate-of-return measures.

REQUIRED:

W.B. Brueggeman and J.D. Fisher, *Real Estate Finance*, tenth edition (Homewood, Il.: Irwin, 1996), pp. 236-257, 307-313. Subsequently, referenced as BF. (T)

V. Martin III, *Nine Abuses Common in Pro Forma Cash Flow Projections*, @ *Real Estate Review* 18(Fall 1988): 20-25. (R)

September 15: THE CONTRACTUAL STREAM OF PAYMENTS C LEASE ANALYSIS AND CASH FLOWS

Reading a lease and converting its terms into effective rent; gross versus net rents. Valuation implications.

REQUIRED ASSIGNMENT:

ACharles River Corporate Center@ [To Be Distributed]

BF, *Real Estate Finance*, pp. 315-323. (T)

William C. Wheaton, APercentage Rent In Retail Leasing: The Alignment Of Landlord-Tenant Interests,@ MIT Center for Real Estate WP #75, January 1999. (R)

RECOMMENDED:

L. Graham and S. M. Giliberto, AAltering Lease Flexibility with Cyclical Implications on Office Property Returns,@ Salomon Brothers, US Real Estate Research, Office Properties, April 2, 1993. (R)

September 22: DEBT FINANCE C LEVERAGE AND RISK

The borrower-s perspective: measuring the cost of mortgage debt C the mortgage constant versus the cost of capital. Financial leverage and financial risk.

REQUIRED:

BF, *Real Estate Finance*, pp. 85-97, 102-105, 356-368. (T)

RECOMMENDED:

Joshua Stein, AMortgage Loan Structures for the 1990s,@ *Real Estate Review* 24(Spring 1994), pp. 15-20. (R)

September 24: TAX TREATMENT OF REAL ESTATE C OPERATIONS

Federal income tax impacts on real property investments during operating phase. Tax-shelter concepts.

REQUIRED:

BF, *Real Estate Finance*, pp. 336-347. (T)

M. M. Shenkman and J. Marshall, ACommercial Real Estate and the 1993 Tax Act C Part I,@ *The Real Estate Finance Journal*, 10(Summer 1994), pp. 9-16. (R)

M. M. Shenkman and J. Marshall, ACommercial Real Estate and the 1993 Tax Act C Part II,@ *The Real Estate Finance Journal*, 10(Fall 1994), pp. 15-20. (R)

September 27: TAX TREATMENT OF REAL ESTATE C TRANSACTIONS

Disposition taxation. Deferral strategies. Tax-policy impacts on investment behavior.

REQUIRED:

Marvin L. Bouillon and Timothy D. West, "The Taxpayer Relief Act of 1997 and Its Effect on Income Property Values," *The Real Estate Finance Journal*, 14(Fall 1999), pp. 18-21, selected pages. (R)

September 29: REAL ESTATE MARKETS C SUPPLY AND DEMAND IN SPACE MARKETS

REQUIRED:

D. DiPasquale and W.C. Wheaton, "The Markets for Real Estate Assets and Space: A Conceptual Framework," *Journal of the American Real Estate and Urban Economics Association* 20(Summer 1992). (R)

S.R. Grendier, "The Persistence of Real Estate Cycles," *Journal of Real Estate Finance and Economics*, 10(March 1995), pp. 95-199. (R)

RECOMMENDED:

David K. Guilkey, "How Good Are MSA Forecasts? A Review of the Major Supply- and Demand-Side Information Providers," *Real Estate Finance* 15(Winter 1999), pp. 27-41. (R)

October 4: WORKING THE NUMBERS OF REAL ESTATE INVESTMENT ANALYSIS

REQUIRED SUBMISSION: *The Associates Task*, CBSRE, 1998. [To be distributed.] See assignment sheet; only the number-crunching portion of the assignment is due today.

October 6: RISK ANALYSIS

Techniques for evaluating project risk: sensitivity analysis, partitioning the rate of return.

REQUIRED:

BF, *Real Estate Finance*, pp. 324-336. (T)

Samuel Zell, "Modern Sardine Management," *Real Estate Issues*, Spring/Summer 1986, pp. 1-5.

RECOMMENDED:

A. Jaffee and C.F. Sirmans, *Real Estate Investment Decision Making*, pp. 437, 439-445. (R)

October 11: REAL ESTATE MARKETS C SUPPLY AND DEMAND IN ASSET MARKETS

Risk premiums for real estate; cap rates, total returns.

REQUIRED:

Wayne R. Archer and David C. Ling, "The Three Dimensions of Real Estate Markets: Linking Space, Capital, and Property Markets," *Real Estate Finance* 13(Fall 1997), pp. 7-14. (R)

Joseph L. Pagliari, "Inside the Real Estate Yield," *Real Estate Review*, Fall 1991, pp. 48-53. (R)

October 13: INVESTMENT RECOMMENDATIONS DUE

Balancing quantitative measures of risk and return with qualitative, judgmental factors. Discussion of investment criteria.

REQUIRED SUBMISSION: Recommendations for *The Associates Task* due. See assignment sheet.

PART II: INVESTMENT ANALYSIS CRISK AND RETURN

October 18: INSTITUTIONAL INVESTMENT IN REAL ESTATE

REQUIRED CASE: *Bidding on 1800 L Street*, in Lynne B. Sagalyn, *Cases in Real Estate Finance and Investment Strategy* (Washington, D.C.: Urban Land Institute, 1999) (CB), pp. 5-8, 41-101. Assignment within case.

October 20: ENTREPRENEURIAL ACQUISITION OF AN INVESTMENT PORTFOLIO

Guest: Paul Pariser, MBA '78, Taconic Investment Partners

October 25: ENTREPRENEURIAL DEVELOPMENT

REQUIRED CASE: *Loft Building SoHo*. Columbia Business School, MBA Real Estate Program, 1998. (R)

Guest: Eric Hadar, MBA '89, Principal, Allied Partners, Inc.

October 27: PRIVATE EQUITY INVESTMENT

REQUIRED CASE: *EDB Portfolio (1)*, (CB), pp. 103-106. Assignment within the case.

PART III: FINANCE STRATEGIES AND STRUCTURES

November 3: REAL ESTATE CAPITAL MARKETS

Trends in the flow of funds for real estate, changing sources of capital and the role of securitization.

REQUIRED:

M. Miles and N. Tolleson, "A Revised Look at How Real Estate Compares with Other Major Components of Public and Private Markets," *Real Estate Finance*, 14 (Spring 1997), pp. 11-20. (R)

Raymond C. Mikulich and Nicole A. Kaplan, "Evolution In The Real Estate Capital Markets," *Wharton Real Estate Review* III (Spring 1999), pp. 30-37. (R)

Lynne B. Sagalyn, "Thoughts on the Topic: Is Real Estate *Real* in Today's Stock Market?" unpublished briefing memo prepared for the Columbia Real Estate Forum, June 1, 1999. (R)

Flow-of-Funds exercise [to be distributed].

RECOMMENDED:

BF, Chapter 19. (T)

November 8: DEBT CHOICES C CMBS FINANCING VERSUS WHOLE LOANS

Strategy for debt financing. Evaluation of all-in costs across different debt options.

Guest Lecturer: Barbara Chu, MBA '87; Adjunct Professor; Managing Director, Acquisitions, Jack Resnick & Sons.

REQUIRED:

Gregory M. Weston, "The CMBS Market: A 1998 Review and the Top Ten Trends for 1999," *Real Estate Finance Journal* 15(Summer 1999), pp. 14-17. (R)

November 10: CONSTRUCTION FINANCING

What is collateral value of a development project? How do you underwrite a construction project and create a lending structure that protects downside risk?

Guest Lecturer: Patricia Goldstein, Division Executive, Citicorp Commercial Real Estate

REQUIRED: BF, Chapter 17. (T)

November 15: FINANCING CORPORATE REAL ESTATE ON AND OFF THE BALANCE SHEET
Real estate from the non-real estate perspective, as a business cost.

Guest Lecturer: W.P. Carey, Chairman and Director, W. P. Carey
Gordon Whiting, Senior Vice President, W.P. Carey

REQUIRED:

Peter Linneman, *The Coming Disposal of Corporate Real Estate*, @ *Wharton Real Estate Review* 2(Fall 1998), pp. 1-6. (R)

Peter Linneman, *Corporate Real Estate Strategies*, @ *Wharton Real Estate Review* 3(Spring 1999), pp. 1-6. (R)

November 17: EQUITY FINANCING IN THE PUBLIC MARKETS

The emergence of the public equity market for real estate companies. REIT investment characteristics.

REQUIRED:

L. Sagalyn, *Institutional Options: Publicly Traded REITs and Privately Held Real Estate Investments*, @ *Journal of Real Estate Investment Trusts*, Summer 1995. (R)

J. Thomas Black, *The REIT Renaissance: The Corporatization of Income-Producing Real Estate*, Urban Land Institute, Special Report, 1995. (R)

November 22: STRUCTURING AN INVESTMENT PARTNERSHIP

REQUIRED CASE: *Structuring the Burnswell Deal*. (CB), pp. 127-134. Assignment within case.

November 29: CAPITAL STRUCTURE AND FINANCIAL CLAIMS

REQUIRED CASE: *Graybar Syndications*, HBS 9-313-324 (Rev. 7/87). (R) Visit the Graybar Building at 42nd Street and Lexington Avenue.

RECOMMENDED:

50 Years of Rental Success, @ *Real Estate Forum*, October 1977. (R)

J. R. White, *Financing Building Leaseholds and Leased Fees*, @ in *The Office Building: From Concept to Investment Reality*, ed. J.R. White (Chicago: Counselors of Real Estate, SIOR, 1993), pp. 476-479. (R)

December 1: REAL ESTATE M&A

Guest Lecturer: Matt Lustig, Managing Director, Lazard Frères

REQUIRED:

Dale Reiss and Elizabeth Plzak, *AREIT Mergers and Acquisitions, @Real Estate Investment Trusts: Structure, Analysis, and Strategy*, R.T. Garrigan and J.F.C. Parsons, eds. (New York: McGraw-Hill, 1998, pp. 208-228.

December 6: APPLYING CORPORATE FINANCE TO REAL ESTATE

REQUIRED CASE: *Rockefeller Center Properties, Inc. (1)*, (CB), pp. 419-422. Assignment within case.
