Stern School of Business
Finance Department
New York University

Draft as of 11/16/08

B40.2329.30 - Principles of Real Estate Finance
T 6:00 to 9:00 PM

Course Overview
Adjunct Professor Edward A. Glickman
Spring 2009

Course Outline

This course will provide the student with an introduction to real estate finance and investment. The course begins with an overview of real estate as an asset class including the legal, tax and accounting conventions as well as the nature of the cash flows generated and how they are valued. An in-depth discussion of the sources of capital and the structures used for investment in real estate follows. We will look at the evolution of the Financial Crisis and its impact of on the real estate capital markets. The course ends with an overview of a selection of particular types of real estate investments.

Each class begins with a 10 question multiple choice quiz on the assigned reading. This is followed by a brief review of the prior week's topic, a lecture covering that week's new material and an interactive discussion of the assignment given at the end of the prior class. Class participation is strongly encouraged. Each week your advance preparation will include a reading assignment and an exercise set (or case) designed to help you develop your financial modeling skills.

I look forward to meeting all of you and to learning with you as we explore the exciting real estate industry together.

Contact Information

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Blackboard	eag2110@nyu.edu

Course Requirements

Readings and homework are assigned each week. All assignments must be submitted by Tuesday mid-night in advance of class. Late assignments will not be accepted. All file attachments must be labeled: yourlastname week number.filetype or yourlastname casename.filetype. [Examples: Smith week one.xls or Smith Casename.xls]

The weekly reading quizzes, the mid-term and the final exam are all graded. Homework is graded complete / incomplete. There are no-make up quizzes or homeworks.

Solution sets for each week's assignment will be posted on Blackboard on Tuesday prior to class so that you can review your work and prepare any questions that you may have.

Honor Code

All work submitted for grading must be your individual work with the exception of group projects. Please review the Stern School Honor Code if you have any questions.

Grades

1	Quizzes & Assignments	40%
2	Class Participation	10%
3	Midterm (20%)	
	Final (30%)	50%
		100%

You must be present in class to take the quizzes. Please check the class schedule before making your travel plans.

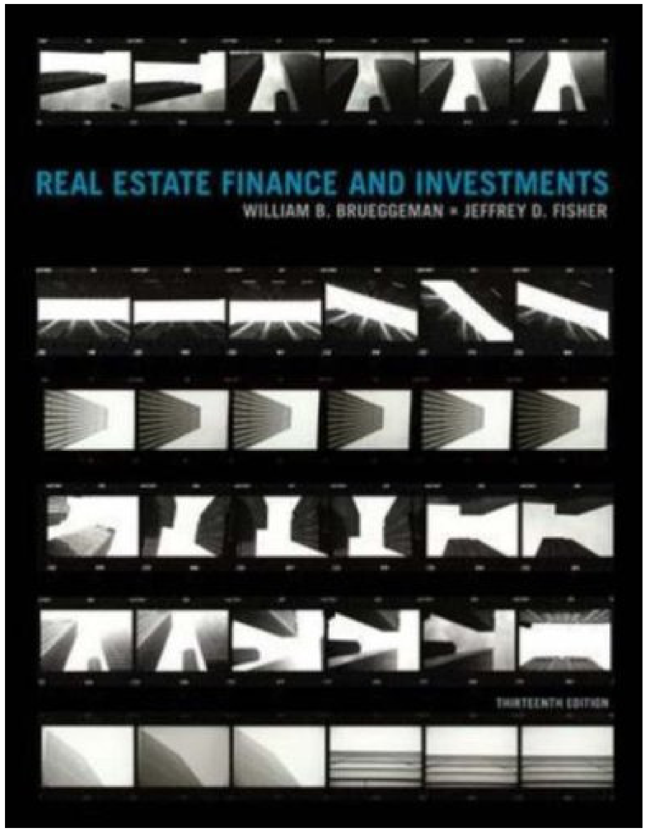
Textbook

Real Estate Finance & Investments, 13/e

William B Brueggeman, Southern Methodist University
Jeffrey Fisher, Indiana University - Bloomington

- **Hardcover:** 672 pages
- **Publisher:** McGraw-Hill/Irwin; 13 edition (November 10, 2006)
- **Language:** English
- **ISBN-10:** 0073524719
- **ISBN-13:** 978-0073524719

- **Product Dimensions:** 10.1 x 8 x 1.2 inches



There will be supplemental readings.

Week	Date	Topic(See note below)	Readings	Case	Guest
0		Read Ahead	B&F Ch. 1, {Ch 3 (a)}		
1	02/10	Legal and Accounting	B&F Ch. 9, Ch. 11	Accounting Exercise	TBD
2	02/17	Cash Flow and Taxation	B&F Ch.10, Ch 14	Pro-Forma Exercise I	TBD
3	02/24	Valuation	B&F Ch 13,	**Angus Cartwright**	TBD
4	03/03	Capital Markets	B&F Ch. 2, Ch. 4, {Ch.5(b)}	**Midterm**	TBD
5	03/10	Debt: Basics	B&F Ch. 19, Ch. 20	Mortgage Finance Exercise	TBD
6	03/24	Debt: Advanced	B&F Ch. 18	CMBS Exercise	TBD
7	03/31	Equity	B&F Ch. 12	Waterfall	TBD

				Exercise	
8	04/07	Capital Structure	B&F Ch. 16, Ch. 17	Optimization Exercise	TBD
9	04/14	Development	B&F Ch. 21	REIT Math Exercise	TBD
10	04/21	REITs	B&F Ch. 15	Pre Final	TBD
11	04/28	Corporate / International		**Final**	TBD
12	05/05	The Future			TBD

(a) Skim only if you need a refresher.
(b) Briefly skim to understand general concept of ARM.

Assignments in **BOLD** will be graded..

NOTE: The topic listed is the topic that will be covered in that week. Readings and exercises are listed the week that they are assigned. They are due the following week. For example, the first week's lecture will cover Law and Accounting , the Accounting Exercise and associated readings are assigned in week one and are due for the second class.

Week 1. Legal, Taxation, Accounting

The form of ownership utilized to hold a real property investment impacts the tax and accounting treatment afforded to ownership. Taxation impacts cash flow. Government uses taxation as a vehicle for policy implementation. Government programs can incentivize or dissuade investment. Accounting implications impact the valuation of an asset from the perspective of a corporate owner. Collectively these factors can play heavily into real estate financing and investment decisions.

Week 2. Cash Flow

As a subset of the general class of financial assets, the value of a real property asset is determined by the amount of cash which it can generate. This week we look at the determinants of real property cash flow including revenue sources, types of expenses and ongoing capital requirements. These factors will be compared across different type of properties and across assets at different stages of their life cycles. The goal of this class is to give you a framework for the financial analysis of a property which can be used as a foundation for valuation and the analysis of financing alternatives

Week 3. Valuation

The valuation of a real property is generally determined by an analysis of its cash flow. In this class we will review the mechanics of evaluating cash flow streams including methods such as NPV and IRR. We will discuss the use of discount rates in valuation calculations and the impact of terminal value on overall valuation. We will then discuss how to determine the appropriate discount rate to use in a valuation calculation. This discussion will include the relationship between real estate discount rates and general market conditions, sources of market data and how the fundamentals of a particular property can impact its discount rate. At the conclusion of Week 3 the student should be able to develop a cash flow model for a property and apply a valuation methodology.

Week 4. Capital Markets

Over the last twenty years the real estate capital markets have matured and expanded. Sources of real estate investment capital include individual investors seeking current income with inflation protection and institutional investors providing diversification and stability to broadly invested global portfolios. This capital seeks differing levels of risk from opportunistic equity investment to traditional single asset mortgage financing. In today's hypercompetitive markets real estate is in constant competition with many other asset classes for the investor's capital. This freedom of capital flow has been brought about by the development of secondary markets for many previously illiquid property interests. The CMBS (Collateralized Mortgage Backed Securities) and publicly traded REIT (Real Estate Investment Trust) securities markets are evidence of this trend.

Week 5. Debt: Basic

The Mortgage is the most basic form of real estate debt investment. The traditional Mortgage is a loan whose proceeds have been used to allow an investor to purchase a property. The amount and interest rate of the loan is determined by the open market value of the property, the amount and quality of the cash flow, the term of the financing and the seniority of the lenders claim against the property. The typical mortgage is repaid over the term of the loan through monthly payments that include interest and a portion of the principal. Mortgage bankers, who may be independent brokers or affiliated with commercial banks, investment banks, insurance companies or pension funds, help borrowers structure mortgages that optimize each asset's borrowing capacity. These investors may hold the loan for their own investment account or may sell the loan, or an interest therein, in an active secondary market.

Week 6. Debt: Advanced and the impact of the Financial Crisis

Using our understanding of mortgages as a starting point we expand into a deeper view of real estate debt financing. Not all properties are fully built out and tenanted and debt can be structured to reflect the particular stages of an assets life cycle (development, construction, take out or permanent financing). For property types that have characteristics of inventory (land parcels, condominiums) debt can be structured to facilitate the sale of completed inventory (end loans). Debt can also be structured for the financial buyer or opportunity fund (mezzanine debt) borrower that seeks a high loan to value ratio.

The breadth of the real estate debt market is also reflected in the variety of capital sources and products for investors. Commercial mortgages are aggregated in pools and various types of interests are derived from the cash flows generated by these portfolios. Large, complex debt transactions are often shared my multiple lenders forming syndicates. Many owners of property move between corporate and asset financing for their properties depending on market appetite for each type of investment. Credit agencies have become critical financial experts providing guidance to investors by performing financial analysis on the structure and credit of the ever more complex array of debt financing vehicles.

At the moment, the real estate debt markets, as a critical part of the world capital markets, are in a tremendous state of flux. The future of commercial and residential real estate financing structures is evolving day by day. We will look at the current state of these markets and the implications for the industry and for the broader capital markets.

Week 7. Equity: Basic

Once the expenses of a property are paid, funds are set aside for recurring capital expenditures and debt service the residual interest economic interest in a property is owned by its equity investors. As a residual interest, subject to many prior claims, the equity absorbs the majority of the risk of the property marketplace and reaps the majority of the rewards. Over the years, property ownership has spread from the unique province of wealthy individuals to the mass investor as new vehicles have formed to aggregate investment capital. Real Estate Investment Trusts, Master Limited Partnerships and Syndicated Limited Partnerships have all been used successfully to aggregate capital from individual investors to purchase major commercial properties and portfolios. These vehicles issue equity securities which can trade in a secondary market providing a source of liquidity for property investors which is more immediate than that available in the property markets.

Week 8. Capital Structure / Advanced Financing Techniques

There are many alternative sources of capital available to the owner of real property. These include traditional forms of debt and equity as well as more recently developed hybrids and derivatives. The unique cash flow generation ability of real estate and the legal, tax and accounting environment provide a set of constraints around which we need to structure the financing of real property assets. The availability and cost of capital are impacted by these asset specific variables and general conditions in the capital markets. The optimization of capital structure can significantly impact the value and liquidity of a real property investment.

There are limitless ways in which the benefits of property ownership can be segmented to attract specific pools of capital thus optimizing the financing for an asset. The line between debt and equity has blurred as mezzanine debt and preferred equity structures have arisen to facilitate more creative financing of projects. Methods have been developed to segment tax attributes of property investment for use by investors with specific goals. Government programs in support of economic development, environmental remediation, historic preservation and other societal goals provide supplemental project financing through tax incentives. These structures, once exotic, are now commonplace in the financing of major commercial properties.

Week 9. Development Financing

There are three stages to the development process. The first stage is the pre-development stage in which a site is identified and a project is planned and entitled. The second stage involves the construction of the project from site preparation, to shell construction to interior and exterior finish. The last stage, for most projects, is lease-up and economic stabilization. At each stage of the development cycle the project will have a different capital requirement and financial risk profile. Due to their complex and changing nature development projects require the full array of real estate financing techniques.

Week 10. REITs

Created by an act of Congress in 1960s, Real Estate Investment Trusts were seen as an investment vehicle that would allow the common man to aggregate capital for commercial real estate investment and enjoy the tax benefits previously only available to wealthy investors. During the following thirty years, a number of companies were formed that used the REIT structure to purchase portfolios of shopping centers, apartments and small office buildings with varied degrees of success. In the early 1990's, a new tax structure, known as an operating partnership, allowed REITs to acquire appreciated properties without triggering a tax consequence to the seller. Overnight, REITs became the strategic choice for the financially pressured entrepreneurial investor seeking liquidity in an unfriendly real estate market and the public investor seeking to participate at the perceived bottom of the market. In the last ten years, REITs have become the investment vehicle of choice for individuals and institutions seeking liquidity and transparency in their real estate investments.

Week 11. Corporate and International Real Estate

For many corporations, real estate in its many forms is a critical part of their asset base and cost structure. Corporations can have a number of different relationships with their real property assets from direct ownership, to long term lease, to short term rental. The choice between these relationships depends on the strategic relationship between the real estate property and the overall corporate mission and strategy. These choices can also have profound implications for the corporate balance sheet and financial performance.

Foreign investment implies exposure to a new set of diverse risks and potential rewards. The risks and rewards of investing in real estate are now shadowed by geopolitical risk, currency risk, foreign legal and taxation systems and rules on investment and repatriation of capital. Many foreign markets lack the depth and sophistication of the US capital markets.

Expanding any business into new markets makes logistical demands on management. Operating overseas in different time zones, in different languages and in different cultures requires a high level of sophistication. Communication is complicated and involves considerable effort and costs in time and travel which are not present in local markets. Historically the real estate business has been a fragment industry dominated by local experts. Is this about to change?

Does international investment in real estate warrant the required effort? Do foreign markets provide diversification and above average returns or do they correlate with the behavior of the US markets.

What are the new challenges for US players in foreign markets in the post 9/11 world? What are the risks of accepting foreign capital and joint venture partnership opportunities in the age of the Patriot Act?

Week 12. The Future

Markets are in a constant state of flux. Funds flow to real estate changes as a result of the perceived relative attractiveness of alternative investments. Investment structures change in response to availability of capital and the ability of industry participants to utilize that capital. We close this semester with a discussion on the future of the real estate market.