

## **Syllabus Real Estate Investment Strategies – FINC-GB.2341/FINC-UB.35 Spring semester AY 2015-16**

*This draft: October 14, 2015. This syllabus may be subject to future revisions*

### **Instructor**

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Office Hours: Monday 5-6pm, after class in the classroom, or by appointment.

### **Teaching Assistants**

The teaching assistant for this class is xx ([xx@stern.nyu.edu](mailto:xx@stern.nyu.edu)). S/he is here to help you with questions about the course. Do not hesitate to contact her by email with questions about the class material.

### **Class Time**

The class meets once per week on Monday from 6-9pm during 12 weeks. There is a 20 minute break around 7.40pm. The venue is KMEC, Room KMEC 5-90. The first class is on 02/08, the last class is on 05/09. There is no class on 02/15 (President's Day) and 03/14 (Spring break).

### **Content**

The course is designed for MBA and undergraduate students with a strong interest in real estate capital markets. Its target audience is students specializing in Real Estate, for whom this is a capstone course. But the course is also open to finance-oriented students who wish to gain an in-depth understanding of real estate investment analysis. More information on the Real Estate specialization for MBAs and the Real Estate track for undergraduates can be found at the end of this syllabus.

Topics covered will span the real estate equity and debt markets. The bulk of the course focuses on commercial real estate. There are three major sections in the course: Public equity markets (Equity and mortgage REITS); public debt markets (the CMBS market); and Real Estate Private Equity.

Each class will start by a 100 minute lecture by me introducing the concepts and the market setting of the topic of the day, followed by a short break. Each week, we will have a guest lecturer after the break who will speak for the last 60 minutes of the class. The expert will discuss the practical side of the topic studied that week and provide examples of real estate trading themes.

The goal of the course is to give students in-depth exposure to current trading strategies in real estate capital markets and teach the tools to analyze their own trading ideas. The home works will help students explore trading themes. Finally, a main aspect of the course is a trading competition where student teams propose a trading strategy and present the results in the last week of class in front of a panel of professional judges.

### **Prerequisites**

The only formal pre-requisite for this course is Foundations of Finance (MBA) or Foundations of Financial Markets (UG).

The course presumes basic knowledge of real estate finance at a level taught in Real Estate Primary Markets or Real Estate Capital Markets, even though those are not formal pre-requisites. For those looking for an introductory course in real estate secondary markets, the Real Estate Capital Markets course would be more appropriate. To the extent that knowledge from Real Estate Capital Markets is required, I will provide the materials as mandatory reading.

A portion of the course will go in some depth into modeling and will use quantitative tools. Intimate knowledge of time value of money is required and prior coursework in fixed income securities and valuation would also be useful.

The appropriate tools necessary for solving these problems will be developed at each stage and practiced in the homework assignments. The models we will cover have immediate applications and implications for real-world financial decisions. Every effort will be made to relate the course material to current financial news.

### **Readings**

The readings will be a mix of textbook materials, industry primers, and academic papers, with the goal of marrying sound theory and empirical analysis with relevant current events and practices. Class sessions are organized with the same goal in mind. My lectures will focus on the concepts and theory while the guest lectures from industry professionals who will focus on the practical applications.

### **Staying Up-to-Date**

You are strongly encouraged to follow real estate finance news, broadly defined. If you encounter an interesting article that you would like to share with the class, please send me an email and I will post it on the class web site. A section of the NYUclasses site will be devoted to interesting background articles, and this section will be regularly updated during the semester.

## Classroom Civility

Your behavior should respect your classmates desire to learn. Each lecture begins and ends exactly on time. I understand your busy schedules, but try not to come late. Because of the classroom layout, it is disruptive no matter how quiet you are. If you must miss a class or must come late, please let me know by email beforehand.

**Laptop, tablet, and smartphone use is not allowed during class.** While the use of such devices has advantages in the classroom, they also have the potential to disrupt your learning experience as well as that of your neighbors. Please turn them off before entering class.

Please do not engage in side conversations during the lecture. Repeated occurrence of such disruptions will be reflected in the final grade.

## Grading and Assignments

At NYU Stern, we strive to create courses that challenge students intellectually and that meet the Stern standards of academic excellence. To ensure fairness and clarity of grading, the Stern faculty have agreed that for elective courses the individual instructor or department is responsible for determining reasonable grading guidelines.

The Finance Department has elected to use the following grading guidelines for this course and all other elective courses. Instructors should award grades of “A” or “A-” to approximately 35% of students in elective courses with enrollments of more than 25 students. In elective classes of less than 25 students, the instructor is at liberty to give whatever grades they think the students deserve, while maintaining rigorous academic standards.

Grades will be based on the final exam (30 percent), the problem sets (20 percent), a final project (30 percent), a guest lecture summary (10 percent), and professionalism (10 percent). The usual Stern grading guidelines will be followed. Grades are not subject to negotiation.

### *Final exam (30%)*

The final exam tests your understanding of the key concepts in the class. They do not test your ability to memorize or to use your computer. To prepare for the exam, you should review the slides together with your own class notes, the readings, and the problem sets. The final exam covers the material of the entire semester. If you must miss an exam, you will be required to make it up after the semester is over. No laptops, tablets, or unapproved smart calculators are allowed on the exam. Standard financial calculators are allowed. You can also bring in one double-sided sheet with formulas; this sheet can be typed or handwritten and must be turned in along with the final exam.

### *Final Project (30%)*

The final project involves coming up with an investment hypothesis, selecting real estate securities to implement it, back testing the idea, and presenting the analysis in the last class of the semester in front of a panel of judges. This is a group project in teams of 4 students. This problem set will require (at least) weekly meetings in the first half of the semester, as well as an intensive preparation before the final class.

#### *Problem Sets (20%)*

There will be four problem sets over the course of the semester. Each problem set contains one excel question, emphasizing a practical implementation of a concept. The problem sets are graded on a five point scale. Late problem sets will *not be accepted*. You are encouraged to work in groups on the problems, but you must hand in your own copy and you are asked to acknowledge any help you received on the front page of your copy. This includes help from team members, other students, textbooks, newspaper articles, etc.

#### *Guest lecture report: summary, critique, and extensions (10%)*

Each team must provide a report for one of the guest lectures. The report must contain a detailed summary of the content of the guest lecture (2-3 pages), followed by a critical analysis of the lecture in terms of its strengths and weaknesses (1 page). In the last 2 pages, the team will elaborate on one of the points the guest lecture made or discuss a closely related topic that was not covered but that is of interest to the team. In this last part there is room for creativity and intellectual contribution. The report will be shared with the entire class and will be part of the material that will be covered on the final exam.

#### *Professionalism (10%)*

Each student is invited to treat the class as a business meeting. This includes creating an environment where all participants treat all others with respect (fellow students, guest lecturer, and professor). Professionalism also means exploring the course content –broadly defined- as a matter of professional interest, not just as a student completing a fixed set of requirements. The grade for professionalism will be based on three components:

- Your on-time completion of two online quizzes; one on background material in REITS and one on background material in CMBS
- My evaluation and that of the TA of your in-class participation
- Your classmates' peer evaluation of your professionalism in your team work and in class

### **Honor Code**

You are responsible for maintaining Stern's Honor Code which mandates zero tolerance for cheating and plagiarism. Violations of the honor code will be prosecuted with a minimum

penalty of failure for the course, as required by code of conduct rules. If you become aware of any violations of the honor code you must take whatever steps are necessary to stop the violators. You must include a signed statement at the top of each problem set and exam, indicating that you adhere to the honor code. The statement is: *"I pledge my honor that I have not violated the Stern Honor Code in the completion of this exam/problem set."* It is in your best interest that the market place knows that Stern takes honesty seriously; it adds to the value of your degree.

### **Study Groups**

It is highly recommended that you regularly review the class material in your study group. Don't wait until exam time to meet with your group. By then it's too late. You are encouraged to work on the problem sets with your study group, but you must hand in your own answers.

## Class Schedule

Below is a detailed schedule of the date and topic of each class. Readings are indicated in the last column (to be completed). Required readings are denoted as RR while suggested readings are denoted as SR. There is no required textbook for the course. Most of the readings will be distributed in pdf format via NYU classes.

Class and date	Topic	Readings
1. Feb. 8, 2016	Introduction; Role of REITS in long-only portfolio	RR: B pp. 4-30, 76-84; GK SR: GM 7, 21, 24, 25
2. Feb. 22, 2016	CRE sectors; Fundamental and Capital structure-based REIT strategies	RR: B pp. 31-52
3. Feb 29, 2016	REIT valuation and quantitative REIT strategies	RR: B pp. 53-75
4. Mar 7, 2016	Focus on Mortgage REITS	J pp. 3-32
5. Mar 21, 2016	CMBS structuring issues; training on the Trepp platform	E 1, 2, 3, 4, 6, 7, 8, J 2
6. Mar 28, 2016	CMBS valuation and trading strategies	E Ch 5
7. Apr 4, 2016	Agency CMBS market and GSE risk sharing programs	J 2
8. Apr 11, 2016	Private Equity: Single-Family Rental as an asset class	
9. Apr 18, 2016	Valuing MBS IOs and Mortgage Servicing Rights	
10. Apr 25, 2016	Private Equity: Direct RE Investment	
11. May 2, 2016	<b>In-class final exam</b>	
12. May 9, 2016	<b>In-class final project presentations</b>	

1. [GM] Geltner, David and Norman G Miller, Commercial Real Estate Analysis and Investments
2. [GK] Gyourko, Joseph, and Donald B. Keim, 1993, Risk and return in real estate: evidence from a real estate stock index, Financial Analysts Journal (September-October), 39-46
3. [B] Barclays REITS 101: An Introduction
4. [J] JP Morgan 2015 Securitized Products Outlook
5. [E] Commercial Real Estate Finance Council E-primer on CMBS

Additional readings for each topic will be distributed via NYU Classes.

## Information about the MBA Real Estate Specialization

The Real Estate specialization at NYU Stern provides rigorous training in (i) the economics of real estate development and investment, the financing such projects, leasing, and appraisal of buildings, (ii) the pricing/valuation and trading of financial instruments with real estate as the underlying, such Real Estate Investment Trusts (REITS), residential and commercial mortgage-backed securities (MBS), and related derivative and structured finance products such as collateralized debt obligations (CDOs), credit default swaps (CDS), and index products (CDX, ABX, etc.), and (iii) the workings of real estate primary and secondary markets, including the various participants in these markets, their roles, and (iv) the legal, taxation, and regulatory environment. Elective courses can be chosen to emphasize the commercial real estate development process or the investment strategies in real estate capital markets. With an appropriate choice of elective courses, this track provides in-depth preparation for careers in real estate development, real estate brokerage, real estate project investment for private equity firms, family offices, sovereign wealth funds, and careers in real estate finance in the fixed income or equity desks of investment banks (research, sales & trading), hedge funds, and sovereign wealth funds.

*Real estate specialization courses: **three courses** among this list must be taken for the specialization (all courses are 3 unit courses):*

1. Real Estate Primary Markets (**FINC-GB.2329**, co-req: Corporate Finance [FINC-GB.2302](#))
2. Real Estate Capital Markets (**FINC-GB.2339**)
3. Real Estate Transactions (**BSPA-GB.2300**)
4. Real Estate Development and Entrepreneurship (**OPMG-GB.2360**)
5. Real Estate Investment Strategies (**FINC-GB.2341**)
6. Urban Systems (**ECON-GB.3375**)
7. Operations in Panama (**OPMG-GB.2312**)
8. Operations in Entertainment: Las Vegas (**OPMG-GB.2360**, with approved real estate project)
9. Law and Economics of Municipal Governance (**ECON-GB.3182**)
10. At most one course from the list of pre-approved non-Stern courses:  
<http://www.stern.nyu.edu/AcademicAffairs/Specializations/RealEstate/index.htm>

Academic advisor for the real estate specialization: Prof. Stijn Van Nieuwerburgh

## Information about the Undergraduate Real Estate Track

The Real Estate Track provides rigorous training in (i) the economics of real estate development and investment, the financing such projects, leasing, and appraisal of buildings, (ii) the pricing/valuation and trading of financial instruments with real estate as the underlying, such Real Estate Investment Trusts (REITS), residential and commercial mortgage-backed securities (MBS), and related derivative and structured finance products such as collateralized debt obligations (CDOs), credit default swaps (CDS), and index products (CDX, ABX, etc.), and (iii) the workings of real estate primary and secondary markets, including the various participants in these markets, their roles, and (iv) the legal, taxation, and regulatory environment. Elective courses can be chosen to emphasize the commercial real estate development process (RED focus) or the investment strategies in real estate capital markets (REF focus). With an appropriate choice of elective courses, this track provides in-depth preparation for careers in real estate development, real estate brokerage, real estate project investment for private equity firms, family offices, sovereign wealth funds, and careers in real estate finance in the fixed income or equity desks of investment banks (research, sales & trading), hedge funds, and sovereign wealth funds.

### *Prerequisites*

- Stern Business Tools
- Law, Business, and Society
- Foundations of Financial Markets (FINC-UB.0002)

### *Essentials*

- Corporate Finance (FINC-UB.0007, req: Foundations of Financial Markets)
- Real Estate Transactions (MULT-UB.0051)
- Real Estate Primary Markets (FINC-UB. 0039, co-req: Corporate Finance)
- Real Estate Capital Markets (FINC-UB.00 38, req: Foundations of Financial Markets)

*Advanced Electives – Four courses from the following list, of which at least one of the first two courses.*

*The courses denoted by [REF] are more interesting for students who want to specialize more towards a real estate finance specialization, whereas the courses denoted with [RED] are more interesting for students who want to focus on the development, direct investment, or management of property.*

- [RED] Real Estate Development and Entrepreneurship (MULT-UB.0050)
- [REF] Real Estate Investment Strategies (FIN-UB.00XX)
  
- [RED] Urban Economics (ECON-UA 227 – CAS)
- [RED/REF] Financial Statement Analysis (ACCT-UB.0003)
- [RED] Taxation of Individuals (ACCT-UB.0063)
- [REF] Risk Management in Financial Institutions (FINC-UB.0022)
- [RED/REF] Topics in Emerging Financial Markets (FINC-UB.0023)
- [REF] Debt Instruments (FINC-UB.0026)

- [RED/REF] Behavioral Finance (FINC-UB.0029)
- [REF] Equity Valuation (FINC-UB.0041)
- [RED] Topics in Entrepreneurial Finance (FINC-UB 61)
- [RED] Mergers, Acquisitions, and Restructuring (FINC-UB 50)
- [REF] Monetary Policy and the Financial System (ECON-UB 221)
- [REF] Macroeconomic Foundations for Asset Prices (ECON-UB 233)
- [RED] Strategic Analysis (MGMT-UB 18)
- [RED/REF] Negotiation and Consensus Building (MGMT-UB 30)

For more information on the Stern undergraduate track system, please see <http://www.stern.nyu.edu/portal-partners/current-students/undergraduate/academics/tracks/index.htm>

Academic advisor for the real estate track: Prof. Stijn Van Nieuwerburgh