

Syllabus Foundations of Financial Markets

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Fall Semester 2011-2012

FINC-UB.0002 Sections 01,02,03

1 Instructor

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2 General Information

Class Time The class meets twice per week on M and W from 8:00-9:15am (section 01), from 9:30-10:45pm (section 02) and from 2:00-3:15pm (section 03). The first class is on W 09/07, the last class is on W 12/14. All sections will meet in T-201. The final exam will be on M 12/19 from 8-9:50am (section 02), from 2-3:50pm (section 03), and on W 12/21 from 8-9:50pm (section 01).

Teaching Assistants The teaching assistants and their office hours will be announced on the Blackboard site.

Attendance and Classroom Civility Class attendance is mandatory and part of a students grade. Absences may be excused only in the case of documented serious illness, family emergency, religious observance, or civic obligation. If you will miss class for religious observance or civic obligation, you must inform you instructor no later than the first week of class. Recruiting activities are not acceptable reasons for class absence. If you cannot attend class for any reason at any time, you must notify the professor in advance.

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.
- Laptops, cell phones, Smartphones, iPads and other electronic devices with wireless connections are not allowed during class. While laptops have advantages in the classroom, on balance, I believe they hamper your own learning experience as well as that of your neighbors. All electronic devices, including the ones above, and any other type of 'audible alert device' must be turned off prior to the start of each class meeting.
- Do not engage in side conversations during the lecture.
- During exams follow closely the provided instructions.

Students with Disabilities Students whose class performance may be affected due to a disability should notify the professor immediately so that arrangements can be made in consultation with the Henry and Lucy Moses Center for Students with Disabilities <http://www.nyu.edu/csd/> to accommodate their needs.

3 Readings

The textbooks for this class are:

- 1 "Essentials of Investments" by Zvi Bodie, Alex Kane, Alan J. Marcus, 8th edition.
- 2 "Solutions Manual for use with Essentials of Investments" by Zvi Bodie, Alex Kane, Alan J. Marcus, Alan Marcus, 8th edition
- 3 Selected Materials from "Essentials of Corporate Finance" by Stephen A. Ross, Randolph W. Westerfield, Bradford D. Jordan, 6th edition

We will mainly use [1], abbreviated BKM below. If you have an *earlier edition* of BKM (sixth or seventh), you are fine. There are only minor changes between editions. Page and chapter numbers may vary though. If you use an older edition it is *your responsibility* to find out the differences with the latest edition.¹

Book [2] will come in handy to solve practice questions. We will only use chapters 4 and 5 from book [3], abbreviated RWJ. These two chapters come as a *supplement* in the class material packet if you purchased your class material through the bookstore. The supplement [3] will only be used in classes 3 and 4. If you did not buy [1] through the bookstore, you can purchase [3] separately on the publisher's web site.²

¹The main role of the textbooks is to serve as a source where you can review the material. BKM is at times very good and tightly linked to the material I cover, but the link to the material I cover in class is a bit weaker on some other topics. That being said, it is currently the best book on the market for our purposes, and you will need it to prepare before class and go over the material after class.

²Go to <https://create.mcgraw-hill.com/shop/>

Instructions are posted on Blackboard. Item [2] is \$19.07. Item [3] is \$14.63.

Additionally I will post on Blackboard the course powerpoint slides that I use in class, handouts with important material, problem sets, and practice exams. You will want to take notes during class; the handouts are there to alleviate the amount of writing you need to do.

Staying Up-to-Date The class web site on Blackboard contains links to recent articles in the financial press that complement the lectures. You are encouraged to follow financial and macroeconomic news in the Financial Times, Wall Street Journal, or The Economist. If you encounter an interesting article related to one topic discussed in class, send me an email and I will post it on the class web site. This section of the Blackboard site is regularly updated during the semester.

4 Calculator and Excel

You need a calculator for this class. Make sure to bring yours to every lecture. It is a distinct advantage to have a financial calculator. If you plan to take other finance classes, you will get good use out of a financial calculator anyways. Standard financial calculators include the HP 12C, the HP 10B-II (costs about \$30) and the TI BA-II Plus (costs about \$30). You are expected to learn how to operate the calculator on your own. However, you can get help by attending the teaching assistants' office hours. I have included some useful slides on Blackboard on how to work with the calculator.

Every student of Stern is expected to be comfortable with EXCEL tools. In particular any Finance area major is expected on graduation to have a knowledge of these tools that extends beyond familiarity to an individual awareness of the uses and limitations of this technology.

5 Communication

Blackboard The class web site is on Blackboard at <http://sternclasses.nyu.edu/>. This is the central location where all teaching materials are posted. TA office hours and class announcements will be posted here. Problem sets are posted there as well. Solutions to the problem set will be posted no later than one week after the due date; they will not be distributed in paper form in class.

The class web site also contains the home quizzes (see below), suggested problems, and some finance links and articles. Finally, there is a discussion board where the TAs and myself will participate. You are encouraged to answer each others' questions, and doing so may positively impact your participation grade. If you have a question, first turn to the discussion board; chances are the question has been asked and answered there already.

Email Only use NYU domain addresses (myname@stern.nyu.edu or myname@nyu.edu) when communicating with the instructor or other class members. Communications from anonymous mail addresses (such as gmail or yahoo) may not be answered. I

process daily a high volume of email. To ensure that your question or notification receives prompt attention, please start any class related email with the class name initials (FFM) on the subject line. For example: "FFM Question about the midterm exam".

6 Exams and Assignments

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. Per request of the dean, 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.

Grades Grades will be based on the final exam (45 percent), the midterm exam (30 percent), problem sets (15 percent) and class participation (10 percent). The participation grade is determined by 1) class attendance, using name tags, and answering questions in class (50 percent). And 2) by the home quizzes on Blackboard (50 percent). Inappropriate classroom behavior (such as coming late repeatedly, disrupting the class, etc.) will negatively affect your final grade.

At Stern, we want to ensure fair and consistent grading across core courses. As such, grades for this course will be distributed following the Stern Grading guidelines for Core Courses at the Undergraduate College.

- 25%-35% of students can expect to receive A's for excellent work
- 50%-70% of students can expect to receive B's for good or very good work
- 5%-15% of students can expect to receive C's or less for adequate or below work

Grading is not a process of negotiation. In line with the Guidelines of the NYU Stern Undergraduate College, students are encouraged to respect the integrity and authority of the professor's grading system and discouraged from pursuing arbitrary challenges to it.

If you feel that an inadvertent error has been made in the grading of your exam or overall course grade, a request to have the grade re-evaluated can be submitted. Students should submit such requests in writing to the professor within 7 days of receiving the grade, including a brief written statement of why he or she believes that an error in grading has been made.

Exams The midterm and final exams test your understanding of the key concepts in the class. They do not test your ability to memorize or to use your calculator. Rather they probe your deeper understanding of the material. To prepare for these exams, you should review the slides together with your own class notes, the handouts (at the end of the course pack), the home quizzes, the required readings, the problem sets, the sample exams (located in your course pack behind the homework), and preferably the suggested problem sets and suggested readings. The final exam is *cumulative*.

You will be allowed one double-sided page of notes at the midterm exam and two double-sided pages of notes at the final exam. The sheets must be no larger than 8.5 inch by 11 inch. There are no restrictions on the content of the formula sheets.

You are not allowed to take the exam questions home, and no written answers will be provided. There will be a post-midterm discussion. Once graded, you are allowed to come visit your midterm in my office, during office hours or by appointment. The same rules apply to the final. If you must miss an exam, you will be required to make it up after the semester is over. No laptops, iPhones or PDAs are allowed on the exam.

Due to University regulations as confirmed through the Dean's office, students must take the final examination with their assigned Section. Unfortunately, the Professor has no discretion on this matter.

Home Quizzes After every other class, home quizzes are posted on Blackboard under course documents. The home quizzes test your understanding of the main concepts taught in the class of that day and the previous class. Usually, there are between 5 and 10 multiple choice questions per test. After you have reviewed the material from class, it should take you no more than 10 minutes to complete these quizzes. Every test is available for *10 days*. More specifically, the quizzes will be posted at 4pm each time and will disappear at 11:59pm ten days after. If you like to keep the home quizzes for your records, you must print them out while the test is on-line. I do not distribute these questions by email and do not make the link available after the initial ten day period.

Participation in the home quizzes *counts towards your participation grade*. However, I will not keep track of whether you answered the questions correctly or not. I will only track whether you completed each test. Basically, they are good preparation for the exam and a device that gives you an extra incentive not to fall behind. You are allowed to miss one home quiz during the semester without affecting your grade.

Problem Sets There will be 5 problem sets over the course of the semester. Most problem sets contain one excel question, emphasizing a practical implementation of a concept. The problem sets are graded on a 3 point scale. 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. The homework questions will be in the same spirit of the exam questions, but slightly easier. After all, they are your first encounter with the implementation of the material.

Problem sets must be turned in at the *beginning* of the class they are due. Late problem sets will *not be accepted*.

Suggested Problems Suggested problems are posted on Blackboard under *Assignments*. These questions are intended to give you extra practice over and above the homework. You do not have to turn them in, and there is no credit for them. You can look up solutions in your solution manual [2]. Practice makes perfect: You are strongly encouraged to take the suggested problems seriously.

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.

7 Final Remarks

This class is both exciting and demanding based on the quality and quantity of the covered material. Students who do well in this class typically do *all* of the following:

- They come to class well prepared. Good preparation includes (i) reviewing the material from the previous lecture and (ii) going over the required readings in advance to each lecture.
- They check Blackboard for updates often (several times a week).
- They review the problem set solutions to make sure every conceptual step there is well understood.
- They spend lots of time solving problems!

8 Course Content and Class Schedule

Content The course is a rigorous, quantitative introduction to financial market structure and financial asset valuation. The main topics of the course are arbitrage, portfolio selection, equilibrium asset pricing (CAPM), fixed income securities and derivative pricing. There is a small section on project valuation.

You are expected to understand valuation formulas and be able to apply them to new problems. 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.

Prerequisites Students must be comfortable with statistics, linear algebra, calculus and microeconomics. Students are strongly encouraged to study the review handout on statistics at the beginning of the semester (Handout H0), and the Quantitative Review appendix of BKM.

Detailed Outline Below is a detailed schedule of the date and topic of each class. Required readings are indicated as RR, suggested readings as SR. The readings starting with 'H' are handouts, situated at the end of your course packet.

Class 1: Financial Instruments (W 09/07)

Overview of class RR: Syllabus
Financial Instruments RR: BKM 1.1-4, SR: BKM 1.5-7, 2

Class 2: Financial Markets (M 09/12)

Financial Markets RR: BKM 3.1-3, 3.5, 3.7 SR: BKM 3.4, 3.6, 3.8

Homework 1 is due in class.

Class 3: Performance of Securities (W 09/14)

PV, FV, annuities, perpetuities RR: **RWJ** 4, 5.1-2, H1-2

Class 4: Performance of Securities (M 09/19)

Compounding and Return measures RR: **RWJ** 5.3-4, BKM 5.1-2, 5.4, H3-5 SR: BKM 5.3

Class 5: Portfolio Theory (W 09/21)

Positions and Portfolio Returns RR: H6-8, BKM 5.5

Efficient Portfolios with Two Risky Securities RR: BKM 6.1-2, H9

Class 6: Portfolio Theory (M 09/26)

Efficient Portfolios with Two Risky Securities RR: BKM 6.1-2, H9

Optimal Portfolios and Investor Preferences RR: BKM 5.2

Homework 2 is due in class.

Class 7: Portfolio Theory (W 9/28)

Efficient and Optimal Portfolios with Riskless Asset RR: BKM 5.5-6, 6.3-4

Class 8: Portfolio Theory (M 10/03)

Efficient and Optimal Portfolios w/ Multiple Risky Assets RR: BKM 6.4-5, H10-11 SR: BKM 6.6

Introduction to Capital Asset Pricing Model RR: BKM 7.1

Class 9: Capital Asset Pricing Model (W 10/5)

The Capital Asset Pricing Model RR: BKM 7.1-2, H12

Class 10: Capital Asset Pricing Model (W 10/12)

Applications of the CAPM RR: BKM: 7.4-5, H13-14 SR: BKM 7.3

Class 11: Beyond the Capital Asset Pricing Model and Market Efficiency (M 10/17)

Beyond the CAPM RR: BKM: 7.3-5

Market Efficiency RR: BKM 8 SR: BKM 9

Homework 3 is due in class.

Class 12: Review (W 10/19)

Pre-midterm review

Class 13: Midterm (M 10/24)

Midterm exam.

Class 14: Equity Valuation (W 10/26)

Dividend Discount Models and Valuation Ratios RR: BKM 13.1 – 4, H16-17 , SR: BKM 13.5-6

Class 15: Equity Valuation (M 10/31)

Dividend Discount Models and Valuation Ratios RR: BKM 13.1 – 4, H16-17 , SR: BKM 13.5-6

Midterm evaluation (20 mins)

Class 16: Equity Valuation (W 11/02)

Dividend Discount Models and Valuation Ratios RR: BKM 13.1 – 4, H16-17 , SR: BKM 13.5-6

Class 17: Arbitrage (M 11/07)

Arbitrage and the Law of One Price RR: H15

Class 18: Fixed Income Securities (W 11/09)

Bond Prices and Yields RR: BKM 10.1 – 4, H18-19, SR: BKM 10.5

Class 19: Fixed Income Securities (M 11/14)

Bond returns, Forward Rates, and Yield Curve Theories RR: BKM 10.6, H20-22

Class 20: Fixed Income Securities (W 11/16)

Yield Curve Theories and Duration RR: BKM 11.1-3, H23-24 SR: BKM 11.4

Class 21: Options (M 11/21)

Options Basics and Strategies RR: BKM 15.1-2, H25-26

Homework 4 is due in class.

Class 22: Options (W 11/23)

Options Strategies and Minimum Value RR: BKM 15.2, 16.1, H26-27 SR: BKM 15.3-4

Class 23: Options (M 11/28)

Options Strategies and Minimum Value

RR: BKM 15.2, 16.1, H26-27 SR: BKM 15.3-4

Class 24: Options (W 11/30)

Black-Scholes Option Pricing Formula RR: BKM 16.2-4 SR: BKM 16.5

Class 25: Options (M 12/5)

Black-Scholes Option Pricing Formula RR: BKM 16.2-4 SR: BKM 16.5

Class 26: Futures (W 12/07)

Futures RR: BKM 17.1, 17.3-5, H28

SR: BKM 17.2

Homework 5 is due in class.

Class 27: Futures and Swaps (M 12/12)

Futures and swaps RR: BKM 17.1, 17.3-5, H28

SR: BKM 17.6

Class 28: Review (W 12/14)

Pre-final review

Final Exam (M 12/19)

Sections 02 (8-9:50am) and 03 (2-3:50pm)

Final Exam (W 12/21)

Section 01 (8-9:50am)