

# Foundations of Finance

Fall 2015

FINC-UB.0002.04

FINC-UB.0002.05

FINC-UB.0002.06

## 1. Instructor

Prof. Theresa Kuchler

Office 9-86 KMC 9th floor

Email [tkuchler@stern.nyu.edu](mailto:tkuchler@stern.nyu.edu)

Office hours Tuesday, 3:30pm to 4:30pm and by appointment

## 2. Class Time

The class meets twice a week on Tuesday (T) and Thursday (R). There are three sections meeting at the following times

- FINC-UB.0002.04: 9:30–10:45am
- FINC-UB.0002.05: 11:00–12:15am
- FINC-UB.0002.06: 2:00–3:15pm

The first class is on Thursday 9/3 and the last class is on Tuesday 12/15. There are is no class on October 13 and on Thanksgiving Day. The classroom is Tisch UC25 for all sections.

**Classroom civility:** Respect your classmates. Each lecture starts and ends on time. I understand your busy schedules, but try not to arrive late. Turn off cellphones and other audible devices before entering class. Do not engage in side conversations. Repeated class disruption will be reflected in your final grade.

### 3. Examination Times

Midterm exam: Thursday 10/22 during regular class time  
Final exam: Scheduled by the school. Once published, the exact date can be found at:  
<http://www.stern.nyu.edu/portal-partners/registrar/academic-calendars>

Problem set 1 due: Tuesday, 9/22  
Problem set 2 due: Thursday, 10/8  
Problem set 3 due: Thursday, 11/19  
Problem set 4 due: Thursday, 12/10

### 4. Reading materials

The main class material is in the course pack that I will hand out in the first class. It contains all PowerPoint slides that I use in class, handouts with important material covered in class, problem sets, and practice exam questions. Be sure to take notes during class; space is available next to the slides and on the left page. The handouts at the end of the course pack are there to alleviate the amount of writing you need to do.

The textbooks for the course are

- 1 “Essentials of Investments” by Zvi Bodie, Alex Kane, Alan J. Marcus, 9th edition;
- 2 “Student Solutions Manual to accompany Essentials of Investments” by Zvi Bodie, Alex Kane, Alan J. Marcus, Alan Marcus, 9th edition;
- 3 Selected material from “Essentials of Corporate Finance” by Stephen A. Ross, Randolph W. Westerfeld, Bradford D. Jordan, 6th edition.

Most of the class material is covered in [1], abbreviated BKM below. If you have an earlier, but recent edition of BKM you are fine, there are only minor changes between recent editions. However, page and chapter numbers may vary. If you use an older edition, it is your responsibility to find out the differences with the latest edition. The solution manual [2] will come in handy when doing practice problems. The material in book [3], abbreviated RWJ, is covered only in classes 3 and 4, and we will only use chapters 5 and 6. These two chapters are included with the course materials available from the NYU bookstore. If you did not buy your course materials through the bookstore, you can purchase [3] separately on the publisher’s web site (Go to <https://create.mcgraw-hill.com/shop/#/catalog/details/?isbn=9780390169501>. The booklet can be found under Prof. Stijn van Nieuwerburgh’s name. Item [3], ISBN: 9780390169501, price: \$14.63.)

The textbooks are your source to review the material. BKM is often very good and tightly linked to what we will cover, but at other times the link is weaker. That said, it is currently the best book on the market for our purposes, and you will likely find it useful to prepare before class and to go over the material after class. While it is possible to succeed in this class without relying on the textbooks, I recommend purchasing them.

## 5. Calculator

You need a calculator for this class. It is an advantage to have a financial calculator, but not a requirement. If you plan to take other finance classes, you will get good use out of a financial calculator. Please bring your calculator to class.

You are expected to learn how to operate the calculator on your own. However, you can get help by attending the TAs' review session (after class 2) or their office hours. I have also included some slides in the course pack on how to work with the calculator. Standard financial calculators include the HP 12C (costs about \$60), the HP 10B-II (costs about \$25) and the TI BA-II Plus (costs about \$30).

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

## 6. Communication

The class website is on NYU Classes. This is the central location containing all teaching materials. Class announcements will be posted here. Solutions to each problem set will be posted after the due date; solutions will not be distributed in class.

The class website also contains concept questions (see below), suggested problems, and some finance-related links and articles. There is a discussion board where the TAs and I will participate on a regular basis to answer your questions. You are encouraged to answer each others' questions. If you have a question, try the discussion board; chances are the question has been answered there already.

## 7. Exams, Assignments, and Grades

Grades will be based on the final exam (45 percent), the midterm exam (30 percent), problem sets (20 percent), and participation (5 percent). The participation grade will be based on class participation and participation in the concept questions (see below).

At NYU Stern, we want to ensure fair and consistent grading across our 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 As for excellent work;

50–70% of students can expect to receive Bs for good or very good work;

5–15% of students can expect to receive Cs or less for adequate or below work.

**Academic Integrity:** You are responsible for adhering to the NYU Stern Student Code of Conduct, which mandates zero tolerance for cheating and plagiarism. Violations of the Code of Conduct will be prosecuted with a minimum penalty of failure for the course, as required by code rules. If you become aware of any violations of the 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 Code of Conduct. The statement is: *"I pledge my honor that I have not violated the NYU Stern*

*Code of Conduct in the completion of this exam/problem set.*” It is in your best interest that potential employers know that Stern takes honesty seriously. Stern’s reputation adds to the value of your degree.

**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. As a result, they may be more challenging than the exams you are used to. 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 concept questions, the textbook readings, the problem sets, the sample exam questions, 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 inches by 11 inches. There are no restrictions on the content of the formula sheets, except that you are not allowed to reprint my PowerPoint slides verbatim.

You are not allowed to take the exam questions home, and no written answers will be provided. 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 have to miss an exam, you will be required to make it up after the semester is over. Due to University regulations as confirmed by the Dean’s office, students must take the final exam with their assigned section.

**Concept Questions:** After every class, concept questions are posted on the course website. The concept questions test your understanding of the key ideas covered in class on that day. There are typically five multiple choice questions per test. After you have reviewed the material from class, it should take you no more than 10 minutes to complete the concept questions.

Every concept test is available for ten days, starting at the end of class. When you submit your answers, you will see a screen with your score and the correct answers. I will re-post the concept questions as the midterm and final exams approach.

The concept questions are good preparation for the exam and a useful tool for keeping up with the material. Whether or not you take them (but not how you score) will also be factored into your participation grade.

**Problem Sets:** There will be 4 problem sets over the course of the semester. Each problem set contains an Excel question, emphasizing a practical implementation of a concept from class.

Late problem sets are not 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 submission. The homework questions are in the spirit of the exam questions, but slightly easier. They are meant to help you begin to apply the tools developed in class.

**Suggested Problems:** Suggested problems are posted on the course website. 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]. The solutions to the questions in the RWJ booklet are included in your course material from the bookstore. Solving lots of practice problems is key in this class.

**Study Groups:** I highly recommend that you form study groups and regularly review the class material in your group. Groups of about 4 students tend to work best. Do not wait until exam time to meet with your group. By then it will be too late. Remember to hand in your own answers to the problem sets and to note the names of other students you worked with.

## 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 the time value of money, portfolio selection, equilibrium asset pricing (CAPM), arbitrage pricing, fixed income securities and derivatives.

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:** It is necessary for this class to be comfortable with statistics, calculus, and microeconomics. You are strongly encouraged to study the review handout on statistics at the beginning of the semester (handout H0 located at the end of the course pack). Alternatively or additionally, the Quantitative Review in Appendix A of BKM will help you refresh the statistics material.

**Course Outline:** Below is a detailed schedule of the date and topic of each class. Main readings are marked “MR” and suggested readings are marked “SR”. Handouts are marked “H” (they can be found at the end of your course pack). Note the homework due dates.

1. (Thursday 9/3) Financial Instruments. Course overview; financial instruments.  
MR: Syllabus; BKM 1.1-4. SR: BKM 1.5-1.7, Chapter 2.
2. (Tuesday 9/8) Financial Markets. Financial Markets.  
MR: BKM 3.1-3, 3.5, 3.7. SR: BKM 3.4, 3.6, 3.8, 3.9.
3. (Thursday 9/10) Performance of Securities. Present and future value, annuities, perpetuities.

MR: RWJ 4, 5.1-2; H 1-2.

4. (Tuesday 9/15) Performance of Securities. Compounding and measuring returns.

MR: RWJ 5.3-4; BKM 5.1-2, 5.4; H 3-5. SR: BKM 5.3.

5. (Thursday 9/17) Portfolio Choice. Portfolio choice and portfolio returns; Efficient portfolios with two risky securities.

MR: H 6-9; BKM 5.5, 6.1-2.

6. (Tuesday 9/22) Portfolio Choice. Efficient portfolios with two risky securities; Optimal portfolios and investor preferences.

MR: BKM 5.2, 6.1-2; H 9.

**Homework 1 due in class.**

7. (Thursday 9/24) Portfolio Choice. Efficient and optimal portfolios with a riskless asset.

MR: BKM 5.5-6, 6.3-4.

8. (Tuesday 9/29) Portfolio Choice. Efficient and optimal portfolios with multiple risky assets; Introduction to the Capital Asset Pricing Model.

MR: BKM 6.4-5, 7.1; H 10-11. SR: BKM 6.6.

9. (Thursday 10/1) The CAPM. The Capital Asset Pricing Model.

MR: BKM 7.1-2; H 12. SR: BKM 6.6.

10. (Tuesday 10/6) The CAPM. Applications of the CAPM.

MR: BKM 7.4; H 13-14. SR: BKM 7.3.

11. (Thursday 10/8) Market Efficiency. Return anomalies and market efficiency.

MR: BKM 8. SR: BKM 9.

**Homework 2 due in class.**

- \* (Tuesday 10/13) No class.
12. (Thursday 10/15) The CAPM. Beyond the CAPM.  
MR: BKM 7.4-5; H 13-14.
13. (Tuesday 10/20) Review. Midterm review.
14. (Thursday 10/22) Midterm. Midterm exam.
15. (Tuesday 10/27) Equity Valuation. Dividend discount models and valuation ratios;  
Midterm evaluation.  
MR: BKM 13.1-4; H 15-16. SR: BKM 13.5-6.
16. (Thursday 10/29) Equity Valuation. Dividend discount models and valuation ratios.  
MR: BKM 13.1-4; H 15-16. SR: BKM 13.5-6.
17. (Tuesday 11/3) Arbitrage. Arbitrage and the Law of One Price.  
MR: H 17.
18. (Thursday 11/5) Fixed Income Securities. Bond prices and yields.  
MR: BKM 10.1-4, H 18-19. SR: BKM 10.5.
19. (Tuesday 11/10) Fixed Income Securities. Bond returns, forward rates, and the yield  
curve.  
MR: BKM 10.6, H 20-22.

20. (Thursday 11/12) Fixed Income Securities. The yield curve; Duration.  
MR: BKM 10.6, 11.1-3; H 23-24. SR: BKM 11.4.
21. (Tuesday 11/17) Fixed Income Securities. Duration and immunization.  
MR: BKM 11.1-3; H 23-24. SR: BKM 11.4.
22. (Thursday 11/19) Options. Option basics and strategies.  
MR: BKM 15.1-2; H 25-26.  
**Homework 3 due in class.**
23. (Tuesday 11/24) Review and Practice Problems.
- \* (Thursday 11/26) Thanksgiving Day. No class.
24. (Tuesday 12/1) Options. Option strategies and arbitrage bounds.  
MR: BKM 15.2, 16.1; H 26-27. SR: BKM 15.3-4.
25. (Thursday 12/3) Options. The Black-Scholes-Merton option pricing formula.  
MR: BKM 16.1-4. SR: BKM 16.5.
26. (Tuesday 12/8) Options and futures. Futures.  
MR: BKM 17.1, 17.3-5; H 28. SR: BKM 17.2.
27. (Thursday 12/10) Futures. Futures and swaps.  
MR: BKM 17.5-6.  
**Homework 4 due in class.**
28. (Tuesday 12/15) Review. Final review.



Finance exists in the real world. It impacts everyone: individuals, families, companies, and governments. Along the way, you can get an inside look at financial reports from companies such as Walmart and Toys "R" Us, the IPOs of Microsoft and Facebook, and even the data that go into personal financial decisions, such as deciding whether to buy a car. You are here. Home. Foundations of Finance. Foundations of Finance. Title. Foundations of Finance. Publication Type. Journal Article. Year of Publication. 1976. Authors. Finance & Financial Research Projects for £20 - £250. the topic is on foundations of finance. It has to do with working outs. ... Completed. Foundations of Finance. Budget £20-250 GBP. Freelancer.