Foundations of Finance
COR1-GB.2311.91
Summer Semester II, 2018

Instructor
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Meeting Times

Monday and Wednesday	6:00 pm-8:50 pm	Westchester 1038

A class calendar can be found at the back of this syllabus.

Course Content
This course is about financial markets and how financial assets (securities) are valued and traded. Most of this course is taught from the viewpoint of the user of a financial market: an investor, investment advisor, or someone using the market to hedge risk. Although much of what we cover is relevant to corporate finance (that is, financial decisions within the firm), this area is not the primary focus of the course. Only rarely will we take the viewpoint of a corporate chief financial officer dealing with internal decisions. This perspective is covered in great detail in Corporate Finance, a separate subsequent course.

Grading
Your grade will be based on sets of concept questions and problem sets, a midterm exam, and a final exam. The problem sets and concept question sets will be worth 10%. The midterm exam will be worth 36% and cover the first half of the course. The final will be worth 54% and cover the entire course. However, if your score on the final in percentage terms is better than your midterm score in percentage terms, the final will count for the entire 90%.

The curve for this course is the one established by the Finance Department for the introductory course (sorry): A (10%); A- (10%-15%); B+(10%); B and B- (50%-60%); C+,C,C- D and F (10%-15%); IP, IF ($\leq$5%).

Exams
Both exams will be multiple choice with each question graded on a correct/incorrect basis. Both exams will be open book except for any electronic devices with internet connections (e.g., laptops, palm pilots, and iphones) which will not be allowed. Any section of the lecture notes marked (optional) is not examinable.

The midterm exam will be in the first 90 minutes of the 7th class, which is on Wednesday July 25. The final exam will be in the final class, which is on Monday August 13. Please keep these two dates free. A makeup exam will only be given in an exceptional circumstance and at a time that is mutually convenient for you and the instructor.

Concept Questions and Problem Sets

There are concept questions for each week of classes (and the last class), and 4 problem sets for the course. Concept questions will be assigned after the second class each week (and after the last class) via email, and solutions will be available on the NYU Classes course site. All but the last class's concept question assignment can be submitted, which means there are 5 concept question assignments in total that can be submitted. Each week's concept question assignment is worth 2.5% and must be submitted by 6pm on Monday of the next week to receive the 2.5%: so submitting 4 would get you the full 10%. No concept question assignments will be accepted for any reason after the final-exam class. Each of the first 3 problem sets is worth 3⅓% and each must be submitted on time to get the 3⅓%: submitting all 3 would get you the full 10%. The first three problem sets are due at the start of the 4th, 8th, and 10th classes. The course calendar at the end of the syllabus shows all the due dates for the problem sets and concept question assignments, which can be submitted in class or via email to the TA.

There is 10% available credit from the concept questions and problem sets. You can reach the 10% with any combination of concept question assignments and problem sets you like. For both the concept questions and the problem sets, you will receive full credit if you have made a good-faith effort to answer all of the questions and you hand in the problem set or concept question assignment on time. You can work on the problem sets and concept question assignments in groups, but each group member must hand in her/his own solution to receive credit.

The concept questions are designed to reinforce the concepts and methods taught in each class, while the problem sets are designed to develop a deeper understand of these concepts and methods. Finance involves understanding theory and then applying that theory to solve problems. The only way to learn how to do this is by solving problems. I strongly encourage you to do all the concept questions and all the problem sets.

Class Website

The class website is on NYU Classes and all teaching materials are, or will be, posted on this site. TA office hours and class announcements will be posted there also. Solutions to the problem sets and concept questions are or will be posted. The class web site also contains some finance links and articles. Finally, there will be a forum on the website where the TA and I will participate on a regular basis to answer your questions. You can turn to this forum to read your colleagues questions and the TA's and my answers.

Textbooks

Recommended (but not required):

Bodie, Kane and Marcus, *Investments*, 10th Edition, Irwin (B).

Solutions Manual for Investments, 10th Edition(S).

Ross, Westerfield and Jordon, *Essentials of Corporate Finance*, 7th Edition, Chapters 4, 5, and 8, Irwin (R) (a custom edition of just these three chapters bundled together with B and S is available in the NYU Professional Bookstore).

Optional:

Elton, Gruber, Brown and Goetzmann, *Modern Portfolio Theory and Investment Analysis*,

Sixth Edition, John Wiley and Sons.

Course Material

Two sets of booklets containing lecture notes and summaries will be distributed in class. The first set of booklets will be distributed in the first class and will contain material needed for the midterm. The second set of booklets will be distributed by the fifth class and will contain material for the rest of the course. I will also distribute handouts in each class that will contain any additional overheads I use in the class. All the material in the booklets and the in-class handouts will also be available on the class website. The following will also be available on the class website: 1) concept questions and problem sets; 2) solutions to the concept questions and problem sets; 3) Handouts 1 and 2; 4) formula sheets; 5) additional problems with solutions; and 6) practice midterm and final questions with solutions.

Studying

The lecture notes are an integral part of the course. Many students find the lecture notes sufficient for the course; others find the suggested texts useful as supplements to the lecture notes. I suggest waiting until after the third or fourth class before making a decision whether to buy the recommended textbooks. Reading of the *Wall Street Journal* or the financial sections of the *New York Times* is also encouraged.

Assessment for the course does not include a participation grade, but I strongly encourage you to attend as many lectures as possible. Students who are unable to attend lectures typically have trouble with the material. If you must miss a class, you can attend the same class for the other section, if convenient, or watch the streaming video, which will usually be posted on the NYU Classes site the next day.

I encourage you to form study groups to do complete the concept questions and problem sets, review the material, and prepare for the exams. I strongly recommend that you read through the assigned lecture notes before each class, and then after class do the assigned concept questions before the next class if at all possible. Once you've completed all the concept questions for a topic, then attempt the problem set questions for that topic. The problem set questions are designed to build on the knowledge and competency you've developed by completing the concept questions. Then use the practice midterm, additional practice midterm questions, and additional problems for Lectures 1-5 to prepare for the midterm exam, and the practice final questions and additional problems for Lectures 6-11 to prepare for the final exam. The summaries can be used to review the material after each class and help you to do the concept questions, problem sets, and especially the exams. The summaries are much more compact that the lecture notes, and so much easier and faster to use to answer questions.

Course Orientation

By its very nature, finance is mathematical and theory based. However, most of the theory covered in this course has immediate practical applications and implications. These will be emphasized as much as possible especially before introducing the theory so as to motivate why its being taught. Concepts will wherever possible be illustrated using real data that has been obtained from the Wall

Street Journal or some other data service. Every effort will be made to highlight how the theory and concepts taught in this course can be used by an investor when making real decisions.

Prerequisites

While the course is largely self-contained, students need to be comfortable with basic statistics, basic algebra, and microeconomics. Students are strongly encouraged to study the review handout on statistics at the beginning of the semester (Handout 1 on the class website). Alternatively or additionally, the quantitative statistics review in Appendix 7A of BKM will help you refresh the statistics material.

Help

Hyeyoon Jung is the TA for the course and her email address is:
hjung@stern.nyu.edu

Hyeyoon will teach weekly review sessions, respond to email questions, and hold office hours. I will also offer pre-exam review sessions, respond promptly to email (usually within 24 hours), and hold office hours. Our office hours and the review session times will be posted on the class website, which is another source of help.

Miscellanea

Class Attendance:

You are responsible for knowing what occurs in class which may include material not covered in the readings, modifications to the syllabus and announcements concerning exams.

Use of E-mail:

I will often use e-mail to communicate with you, so you should try and check your e-mail regularly.

Calculator:

To solve financial problems, you will need a scientific or financial calculator. In addition to the standard operations (+,-,×,÷), it should be able to compute e^x and ln(x) (the exponential and natural log functions). Standard financial calculators include the HP 17BII plus, the HP 12C, the HP 10B-II, and the TI BA-II Plus. You are expected to learn how to use your calculator on your own. However, I will provide handouts prepared by Professor Tenenbein that explain how to use the HP 17BII plus and the HP 12C, and you can get help by attending the teaching assistants' review sessions or his office hours. You will need it for homework and the exams (no electronic devices with internet connections are permitted in the exams).

Honor Code:

You are responsible for maintaining Stern's 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 of conduct rules. If you become aware of any violations of the code of conduct you must take whatever steps are necessary to stop the violators. On every assignment and exam you must include a signed statement at the top indicating that you adhered to the code of conduct. The statement is: "I pledge my honor that I have not violated the Stern Student Code of Conduct in the completion of this exam/problem set."

Organization of the Course

Class	*Topic*	*Reading* (based on 10th Edition of B)
1	Overview	B Ch1 (skim Ch 2, 4)
1-2	Time Value of Money	R Ch 4, 5
2	Equities: Characteristics and Markets	B Ch 2.3-2.4, 3.1-3.5, 3.10
2-3	Stock Positions and Portfolio Return	B Ch 3.8-3.9, 5.4
3-5	Portfolio Management	
	- Characterizing the return distribution	B Ch 5.4, 7B, Handout 1 (optional B Ch 5.6, Handout 2)
	- Asset allocation between one risky and one riskless asset	B Ch 6 (particularly 6.4)
	- Diversification and asset allocation with two risky assets	B Ch 7.1-7.3
	- Diversification and asset allocation with many risky assets	B Ch 7.4, 7A
5	Capital Asset Pricing Model (CAPM)	B Ch 9.1, 8.1-8.3, 9.2
5-6	CAPM: Performance Measures and Evidence	B Ch 24.1, 13.1
6	Multifactor Asset Pricing Models and Evidence	B Ch 10.1,13.3,10.5 (optional 13.2)
7	**Midterm Exam**	
7-8	Fixed Income Instruments: Definitions and Markets	B Ch 2.1-2.2, 14.1-14.3,14.5
8-9	Fixed Income: Valuation	B Ch 15 (not 15.5)
	- Yields on Bonds, Yield Curves and No Arbitrage	
	- Forward Contracts	
	- Theories of the Yield Curve	
9	Fixed Income Portfolio Management	B Ch 16.1, 16.3
9-10	Derivatives: Definitions, Payoffs and Markets	B Ch 20.1-20.3, 22.1-22.3
10	Options: Valuation	B Ch 20.4, 21 (not 21.3)
10-11	Forward Contracts: Valuation	B Ch 22.4, 23 (not 23.3, 23.4)
11	Valuation Models and Intro to Capital Budgeting	B Ch 18; R Ch 8
11	Market Efficiency	B Ch 11.1-11.2 (skim 11.3-11.5)
12	**Final Exam**	

Course Calendar

Month	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
July							1
	2 Class 1	3	4	5	6	7	8
	9 Class 2	10	11 Class 3	12	13	14	15
	16 Class 4 **PS 1 due** **CQ 1 due**	17	18 Class 5	19	20	21	22
	23 Class 6 **CQ 2 due**	24	25 Class 7 **Midterm**	26	27	28	29
	30 Class 8 **PS 2 due** **CQ 3 due**	31					
August			1 Class 9	2	3	4	5
	6 Class 10 **PS 3 due** **CQ 4 due**	7	8 Class 11	9	10	11	12
	13 Class 12 **Final** **CQ 5 due**	14	15	16	17	18	19