

Foundations of Finance
B01.2311.12
Summer Semester, 2009
(Very Preliminary; May be Subject to Modification)

Instructor

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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 problem sets, a midterm exam and a final exam. The problem 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 grade on the final is better than your midterm grade, 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 ($\leq 5\%$).

Problem Sets

There are 5 problem sets but you are only required to hand in the first 4. Each of these 4 problem sets is worth 2½%. These problem sets are due in the 4th, 6th, 8th and 10th classes. For each of these problem sets, you will receive full credit if you have made a good-faith effort to answer all of the questions, you hand in the problem set on time and you have included and signed Stern's Honor Code statement. Late problem sets will not be accepted. Answers to the problem set must be your own. You are encouraged to acknowledge any help you received on the front page of your problem set solution. These questions are designed to reinforce concepts learnt in class. Finance involves applying theory to solve problems and the only way to learn how to do this is by solving problems. This is why completion of the problem sets is worth 10%.

Exams

Both exams will be multiple choice with each question graded on a correct/incorrect basis. Both exams will be open book except for laptops and palm pilots which will not be permitted.

The midterm exam will be in the first 90 minutes of the 7th class. The final exam will be in the final class. 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.

Class Website

The class website is on Blackboard at

<http://w4.stern.nyu.edu/sternlinks>

and all teaching materials are posted here. TA office hours and class announcements will be posted here also. Solutions to the problem sets will be posted no later than one day after the due date. The class web site also contains some finance links and articles. Finally, there is a discussion board where the TA and I will participate on a regular basis to answer your questions. You can turn to the discussion board to read your colleagues questions and the TA's and my answers to their questions.

Textbooks

Suggested(but not required):

Bodie, Kane and Marcus, *Investments*, 8th Edition, Irwin (B).

Solutions Manual (S).

Ross, Westerfield and Jordon, *Essentials of Corporate Finance*, 4th 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.

Supplementary Material

Two booklets of lecture notes, problem sets, additional problems with solutions and practice midterm and final questions will be distributed in class. The first booklet will be distributed in the first class and will contain all the material needed for the midterm. The second booklet will be distributed in the first 5 weeks of class and will contain all other material for the course. The material in the booklets will also be available on the class website. 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 the second or third week 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.

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 would be used by an investor to make real decisions.

Help

The TA for this course is to be announced and will teach a weekly review session. His/her office hours and weekly review session times will be announced in class. I will also offer regular review

sessions and my office hours will also be announced in class. The class website 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 financial calculator. In addition to the standard operations (+, -, \times , \div), it should be able to compute e^x and $\ln(x)$ (the exponential and natural log functions) and should be able to compute present and future values of simple sums and annuities. An ability to compute internal rates of return is sometimes useful but is not required. You are expected to learn how to use a calculator on your own. You will need it for homework and the exam (no laptops or palm pilots 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 (to be updated)

<i>Class</i>	<i>Topic</i>	<i>Reading (based on 7th Edition of B)</i>
1	Overview	B Ch 1, 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, 3.8
2-3	Stock Positions and Portfolio Return	B Ch 3.6-3.7, 5.4
3-5	Portfolio Management	
	- Characterizing the return distribution	B Ch 5.4, 5.6, 7B, Handouts
	- Asset allocation between one risky and one riskless asset	B Ch 6 (partic. 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 10.1,10.6,10.5,13.2,13.3
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 20.1-20.4,22.1-22.3
10	Options: Valuation	B Ch 20.4, 21 (not 21.3)
11	Futures and Forward Contracts: Valuation	B Ch 22.4, 23 (not 23.3, 23.5)
11	Valuation Models and Intro to Capital Budgeting	B Ch 18; R Ch 8
11	Market Efficiency	B Ch 11.1-11.2; skim 11.3-11.4
12	Final Exam	