B7306 Capital Markets and Investments
Professor Jane Li
Syllabus – Spring 2023

Instructor Details

Professor Jane Li
Office hours: by appointment
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I. Course Description

This course has three goals:

1. To understand and apply the principles of investing. The course covers the valuation of bonds, stocks, and options. Key applications include personal and professional portfolio management, risk management, security valuation, and capital structure.
2. To develop the following concepts: risk-return trade-offs, diversification, systematic and idiosyncratic risk, expected returns, market efficiency, performance evaluation, arbitrage, the term structure of interest rates, bond duration, and options.
3. To provide sufficient background knowledge for students seeking an overview of capital markets and an introduction to advanced finance courses.

<u>Topic Summary</u>

3 classes: Overview of Capital Markets

5 classes: Fixed Income Securities

6 classes: Equities, Portfolio Choice, and the CAPM

3 classes: Investment Performance Analysis

2 classes: Behavioral Finance

4 classes: Valuation of Options

Throughout the course, we will address two basic questions:

1. How should we manage and evaluate portfolios of investments?
2. Which methods do we use to value securities?

Connection with the Core

Capital Markets builds on knowledge from Corporate Finance, Managerial Statistics, and Business Analytics courses by advancing students' understanding of asset valuation and investment decisions. **The corporate finance and statistics courses or their equivalents are co-requisites for Capital Markets.** We build on the valuation tools in Corporate Finance, such as time value of money, risk-return trade-offs, the CAPM, cost of capital, and arbitrage. Capital Markets uses many concepts from Statistics, including statistical modeling, random variables and distributions, parameter estimators, hypothesis testing, and regression. Particularly in the portfolio and risk management section, the course uses optimization methods and modeling tools from Business Analytics. Finally, our discussions of the economy's impact on financial markets, especially bond markets, build on ideas from the Global Economic Environment course.

II. Course Materials

Class Notes – We post PDFs of lecture notes and other reading materials on Canvas. Students download, view, and mark up lectures on their (CBS) tablets or other e-devices.

Readings – The textbook below is a **useful but optional** supplement for this course:

- *Investments* by Bodie, Kane, and Marcus (hereafter BKM), 10th or later edition
- *Solutions Manual for Investments* by Nicholas Racculia, 10th or later edition

The book and solutions manual are available on reserve in Watson library. The course outline below lists relevant chapters in BKM that correspond to each lecture. The three most recent editions of BKM (10 to 12) have the same chapter topics and numbers.
Beyond the textbook, **supplementary readings** are available on Canvas, including articles from industry, academia, and the media that relate to key lecture topics.

III. Course Administration

Finance and Economics Division: Michelle Zern: mz2492@gsb.columbia.edu
Teaching assistant: TBD

Review Sessions

Optional weekly review sessions led by the teaching assistant will be held throughout the semester to help students with questions about cases, problem sets, or lectures.

Groups – Cases and problem sets should be done in **groups.** Students are responsible for organizing these groups and should add all group members to one of the Assignment Groups on Canvas. Groups can be formed across both sections.

IV. Grading

Students' course grades are based on applying the standard CBS elective grading distribution to overall course scores. The CBS grading curve applies only to the overall course score, not to individual assignments. The six components of the overall course score appear below:

- 20% Cases (team)
- 20% Problem sets (team)
- 20% Midterm exam (individual)
- 30% Final exam (individual)
- 10% Class participation (individual)

Cases – There will be four case assignments. All assignments must be submitted online via Canvas. Cases and solutions will be available only on Canvas. Submitted cases will be graded on a 0 to 3 scale. Because we may discuss case solutions in class, **late cases cannot be accepted**.

Problem Sets – There will be four problem sets. All assignments must be submitted online via Canvas. Problem sets and solutions will be available only on Canvas. Submitted problem sets will be graded on a 0 to 3 scale. **Late problem sets cannot be accepted.**

Midterm Examination – The midterm will be a timed 3-hour exam administered by OSA. The exam can be taken virtually.

Final Examination – The final will be a timed 3-hour exam administered by OSA. The exam can be taken virtually.

Exam/quiz Rules: Students can use any books, references, or computing equipment on exams/quizzes but they cannot communicate with others. During exam/quiz periods, students who have taken the exam/quiz must not discuss the exam/quiz with other students who have not yet taken the exam/quiz. The CBS Honor Code applies.

Class Participation – We use Poll Everywhere software to record in-person and synchronous remote attendance. To receive full attendance credit, students must submit responses to all in-lecture Poll Everywhere questions. Submit an **Excused Absence Form** on the course home page if you must miss class for an excused reason, such as an illness. Interviews are not excused. If you have an excused absence or permission to attend lecture asynchronously, watch the recorded lecture, and for attendance credit submit the asynchronous quiz on Canvas by 8am two days after lecture.