ECONOMICS 173A:
Financial Markets

Fall 2021

Basic information

Lectures	A: Tu/Th 11:00-12:20, PETER 104
	B: Tu/Th 12:30-13:50, PETER 104
Instructor	Prof. Alexis Akira Toda
Office hours	TBA
Email	atoda@ucsd.edu
Webpage	`https://alexisakira.github.io/`
TA	Tjeerd de Vries, tjdevrie@ucsd.edu
	Connor Goldstick, cgoldsti@ucsd.edu
Discussion sessions	A: W 17:00-17:50, MOS 0204
	B: W 18:00-18:50, MOS 0204

Course description

Economics 173A (Financial Markets) is an upper division course on finance. We study some institutional details on the financial markets, bond pricing (including duration analysis), optimal portfolio problem, mutual fund theorem, Capital Asset Pricing Model, and option pricing (including bounds on option prices, suboptimality of early exercise of American call options, put-call parity, binomial option pricing). The course requires good analytical skills (basic calculus). To solve numerical examples, we will learn programming in MATLAB, although no prior knowledge is necessary.

Lectures are based on the textbook *Investments*, 11th edition, McGraw Hill by Bodie, Kane, and Marcus. The course will cover the following topics (in this order):

1. Introduction to personal finance and MATLAB,
2. Introduction to financial markets (Chapters 2–4),
3. Bond pricing (Chapters 14–16),

4. Optimal portfolio and Capital Asset Pricing Model (Chapters 5, 6, 9)

5. Options pricing (Chapters 20, 21).

I will be using slides and MATLAB live scripts that cover part of the textbook plus some additional materials. The discussion sessions will mostly solve end-of-chapter exercises.

Textbook

As mentioned above, the required textbook is

- "Investments", 11th edition, McGraw Hill by Bodie, Kane, and Marcus.

There is a newer 12th edition, but it is more expensive and the material is nearly identical to the 11th edition, so it is up to you to choose the edition.

If you google "Bodie Kane Marcus investments 11th edition pdf", you can find plenty of cheap options. I do not endorse any particular option: please decide how to obtain the book at your own responsibility and risk.

Other recommended readings (not required) are:

- "A Random Walk Down Wall Street" by Malkiel,
- "The Richest Man in Babylon" by Clason.

The latter is no longer copyrighted and you can find free copies by googling.

Evaluation

The course grade will be based on two midterms and a final. Please mark your calendar:

Midterm 1 Friday October 15, 18:00-19:20, MANDE B-210

Midterm 2 Friday November 12, 18:00-19:20, MANDE B-210

Final Saturday December 4, 11:30-14:30, location TBA

Each of the midterm and final will be graded on some scale (say 0–100). Your course grade will be determined by the formula

$$G = 0.2M_1 + 0.3M_2 + 0.5F,$$

where G is the course grade and M_1, M_2, F are the scores on the two midterms and final. The course grade G will be converted to letter grades

at my discretion (i.e., "curved") at the end of the quarter. (So please don't ask me questions like "What is the letter grade corresponding to x points in midterm?")

All exams will take the form of Canvas Quizzes. I and the former TAs have invested significant effort to create large pools of multiple choice and numerical questions that are closely related to end-of-chapter exercises of relevant chapters/sections in the textbook. To maintain academic integrity and fairness, each student will be assigned questions randomly (e.g., n_X random questions from Chapter X material, n_Y random questions from Chapter Y material, etc., independent across students). I will provide practice exams (optional to take) in identical formats a few days before the actual exam. Exams will be automatically graded as soon as you submit and you will see whether your answer was correct or not, although we will provide no answer keys (to prevent students from saving correct answers from practice exams). However, we may solve some questions in lectures or discussion sessions. To take the exams, you will need to bring a laptop computer with internet access and an appropriate computing software. (We recommend MATLAB but it can be anything, such as Python or some basic spreadsheets. However, financial calculators are not allowed.) More details on the exam logistics will be announced through Canvas announcements.

Questions

The best opportunity to ask questions is *during* the class, for two reasons. First, you can resolve your question immediately (assuming—well—I know the answer). Second, your classmates are likely to have similar questions, so they can benefit from questions being resolved and I benefit by saving time. So, don't be shy, please ask questions. If you have a question outside of class that cannot be resolved by a Google search or discussing with your friends, please first ask your TA. If still unresolved, you can show up during my office hour listed above (no appointment necessary). I and the TAs reserve the right not to respond to questions by emails. Most questions can be resolved by Google searches; if not, please use the office hours.

Miscellaneous

- Academic integrity: click "Academic Integrity" tab on Canvas
- Email writing tips:
  `https://alexisakira.github.io/misc/email`
- Letter of recommendation policy:
  `https://alexisakira.github.io/misc/letter-of-recommendation`