

CAPITAL MARKETS AND INVESTMENTS

SUMMER 2023

Section 1 – Mondays and Wednesdays | 8:30 am – 11:45 am

Section 2 – Mondays and Wednesdays | 2:00 pm – 5:15 pm

Location: Geffen 590

INSTRUCTOR: Suresh Sundaresan

Office Location: 1103 Kravis Hall

E-mail: ms122@columbia.edu

Office Hours: Fridays 12:30 to 1:30 PM and via email

Bio of Instructor [here](#)

TEACHING ASSISTANTS:

Stefan Walz

Email: SWalz24@gsb.columbia.edu

TAs will maintain office hours - TBA

Review Sessions: 6/9, 6/16 and 6/30

Additional TA information will be provided later

REQUIRED COURSE MATERIAL

- Copies of slides/course readings/articles that will be distributed in class and posted in Canvas.

RECOMMENDED COURSE MATERIAL

- The following are recommended textbooks. *These texts will be available in the library.* I will provide you with detailed slide decks, and reference material in the course through canvas.
- *Investments*, by Bodie, Kane and Marcus, 10th Edition or later, Irwin/McGraw Hill.
- “Fixed-Income Markets and Their Derivatives”, Academic press, Third Edition, by Suresh Sundaresan.

REQUIRED PREREQUISITES AND CONNECTION TO THE CORE

The learning in this course will utilize, build on and extend concepts covered in the following courses: *Corporate Finance, Managerial Statistics and Business Analytics*. Students will be expected to have mastered concepts developed in these courses and be able to apply them to key policy, corporate and day-to-day questions in capital markets and investments. Our discussions of global capital markets and central banks will draw on concepts learnt in the Global Economic Environment course.

COURSE DESCRIPTION

The course will describe the major players in Capital Markets, key institutions, broad empirical regularities, and analytical tools that are used for pricing securities/portfolios, portfolio management, and risk management. Some parts of the course will be analytical while others will be largely institutional. Each session will be organized around one or two key topics. In addition, class notes will be used to supplement and clarify issues. Some selected papers will also be kept in Canvas to serve as background reading for class discussions.

I give below 10 broad topics that will be presented and discussed over the 12 meeting that we will have in our course.

TOPICS:

Topic Number	Broad Topic	Issues to be addressed
Topic 1	CAPITAL MARKETS, ARCHITECTURE AND INSTITUTIONS (Introduction and Overview)	- Size, diversity and functions of equity and debt capital markets. - OTC VERSUS EXCHANGE-TRADED MARKETS - PLAYERS: - Examples of Key capital market decisions/transactions and network of players.
Topic 2	CENTRAL BANKS, MONEY MARKETS & SHADOW BANKING	- Central Banks (CB) and their policy objectives - Tools of CBs - Repo rates;(how to take long or short positions) - Benchmarks: LIBOR & SOFR; - Equity returns & FOMC
Topic 3	BOND ANALYTICS & Term Structure of interest rates.	- Price, Yield calculations; - Yield to Maturity; Yield to Call; - Real and Nominal yields; - Break-even yields; - Stripping coupon bonds; - Spot and forward rates; - Duration measures; - Convexity and negative convexity; - Bullet and barbell portfolios;
Topic 4	SOVEREIGN BOND MARKETS	- Overview of global sovereign bond markets; - Fiscal and current account deficits; - Book building in Primary Markets; - Bidding in Sovereign bond Auctions - Sovereign Yield Curve; - Safety Premium in Sovereign Debt.
Topic 5	INVESTMENTS-1	- Expected returns and risk; - Benefits of diversification; - Capital Market Line; - Portfolio choice; - Performance of different asset classes; - Market cap weighted index; - Macro-indexes;
Topic 6	INVESTMENTS-2	- Capital Asset Pricing Model; - Systematic risk; - Arbitrage Pricing Theory; - Factor models; - Factors influencing asset returns; - Empirical evidence;
Topic 7	INVESTMENTS-3	- Portfolio choice with liabilities; - LDI-strategies; - Indexation and passive portfolio strategies; - Portfolio immunization and duration gap; - Active versus passive portfolio strategies.

Topic 8	SWAPS AND THEIR APPLICATIONS	a. Domestic and FX bond issuance decisions; b. Cross Currency Basis Swaps; c. Covered Interest Rate Parity; d. Interest Rate Swaps; e. Limits to Arbitrage; f. Credit Default Swaps;
Topic 9	MORTGAGES, GSEs, AND SECURITIZATION	1. Fixed and variable rate mortgages; 2. Prepayment option; 3. Government Sponsored Enterprises (Fannie Mae, Freddie Mac and FHLBs) 4. Securitization g. Mortgage Backed Securities (MBS)
Topic 10	Financial Institutions	1. Pension funds; 2. Mutual funds; 3. Insurance companies; a. Life insurance. b. Property and Casualty. 4. Exchange Traded Funds.

COURSE OBJECTIVES

The purpose of this course is to provide a sound and comprehensive working knowledge of capital markets and their institutions. In addition to providing the students with a clear knowledge of institutions, pricing relationships, applications and analytics, the course will help the students to think through major issues facing institutional investors, market makers, issuers, and policy makers.

ASSIGNMENTS

There will be two quizzes, each with a duration of 1 hour, which will be assigned as follows:

- At the end of session 4.
- At the end of session 8.

Students will be expected to participate responsibly in class. Class participation, punctual attendance and responsible conduct in the course will carry 20% weight.

There will be a final examination, which will be take home. The final exam (cumulative) will carry 40% weight.

METHOD OF EVALUATION

Attendance & Class participation	20%
Quiz 1	20%
Quiz 2	20%
Final Exam	40%

CLASSROOM NORMS AND EXPECTATIONS

- Attendance is mandatory for each class session. The TA will record student attendance at the commencement of class; students who arrive 5 minutes after the scheduled commencement time will not be recorded as having attended the session. In addition, informed class participation is expected. Together, as mentioned earlier, they carry 20% of the course grade.

- Students who have a medical or other emergency reason for not attending class should contact the professor in advance of the session. Once in the classroom, students are expected not to leave the room until the session is completed.
- There will be a seating chart. Students must bring their name cards and occupy the same seat in each class.
- **I would expect you NOT to use mobile phones or surf the web during class hours.**

Meeting dates and Final examination date:

Sessions	Dates
1	May 22
2	May 24
3	May 31
4	June 2 (Friday)
5	June 5
6	June 7
7	June 12
8	June 14
9	June 21
10	June 23 (Friday)
11	June 26
12	June 28

Final examination (in person) on July 6th, Thursday.