

FNCE 238/738: Capital Markets

Professor Michael Schwert

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Contact Information

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Course Objectives

The objective of this course is to introduce students to the economics of capital markets and the ways that firms and governments raise financing. As most external financing is raised through debt issuance, the course focuses primarily on the features of different debt instruments and how to value them. We will explore issues from the perspectives of both issuers and investors.

Topics covered include basic fixed income calculations, the Treasury market, short-term funding of financial institutions and the associated fragility, corporate capital structure and its interaction with the real activities of the firm, the pricing of credit risk, impediments to arbitrage activity, mutual funds, and municipal finance.

Course Materials

The course is in lecture format, with some case discussions interspersed. I will post lecture slides and any assigned reading on the Canvas course site several days prior to class. Students are advised to do the assigned readings prior to class and will be responsible for their content on the quizzes. I will also post optional readings that are not subject to testing except to the extent that we discuss them in class. In general, students are responsible for any content discussed in class, regardless of whether it appears in the assigned reading or the lecture slides.

Readings will come from a variety of sources, including Lecture Notes on Debt Markets, by Darrell Duffie of the Stanford Graduate School of Business, and some academic journal articles.

There is a required course pack consisting of cases that students will prepare for in-class discussion. In addition, there is an optional course pack including three cases that serve as useful background reading for students who want further engagement with the course material.

I owe a debt of gratitude to Darrell Duffie, David Musto, and Krista Schwarz for their contributions to the materials used in this course.

Grading

Quizzes 60%

There will be 6 quizzes occurring about every two weeks throughout the semester. The best 5 out of 6 quiz scores will count for the final grade. This is intended to accommodate student travel for job interviews without the need for make-up quizzes. **There will be no make-up quizzes, with no exceptions to this rule.**

Each quiz will take place in the first 30 minutes of class on the scheduled dates. Any material covered in class, including from case discussions, may appear on the quiz. In general, the questions will focus on material covered since the prior quiz, but questions will often build on concepts developed earlier in the course. Quizzes are closed-book and closed-note, so it is important to stay on top of the material. You will need a calculator, but may not use your phone or laptop on the quizzes.

To appeal a quiz score, you must submit a request to me in writing, within one week after the grade in question is received, describing the nature of the appeal. After receiving a request, I will personally re-grade the entire quiz, which may raise or lower the score.

There is no final exam in the regularly scheduled final exam period.

Homework Assignments 40%

There will be 5 homework assignments, most of which are preparation for case discussions. All 5 homework scores will count for the final grade. Homework assignments are to be submitted to Canvas **before** class on the date specified in the course schedule. **There will be no extensions of deadlines or make-up assignments, with no exceptions.**

The assignments consist of preparation questions for the case discussions and other small projects intended to build understanding of the course materials. Homework assignments are to be submitted individually. Students are free to discuss homework with their classmates, as long as they list the other students with whom they discussed the assignment in the submission.

Faculty Lunches

In an effort to get to know more of you personally, I plan to take between 3 and 6 students to lunch at a nearby restaurant at a regular frequency throughout the semester. Because I teach on Mondays and Wednesdays and often have other lunchtime commitments on Thursdays and Fridays, I generally schedule these lunches on Tuesdays at noon. There is a sign-up schedule on the Canvas course site. If a group of students cannot meet for lunch on Tuesday at noon and wish to schedule an alternative time, please email me and I will do my best to accommodate you.

Classroom Expectations

Students are expected to attend every lecture and refrain from using electronic devices for non-educational purposes. Students should arrive on time for class and remain until the lecture is completed. Arrivals and departures during class time interfere with the educational process and are disrespectful to other students and to the instructor.

Students should display name tents at all times. My hope is that the lecture slides and case preparation will lead to active engagement with the course materials. If I find that students are not attempting to answer questions when prompted in lecture, I will resort to cold calling.

Students should not use laptops, phones, or other electronic devices during class. Laptops will be allowed for students that wish to take electronic notes, but in this case, the students will need to get permission from me beforehand and e-mail me a copy of their typed notes after each lecture. Accessing e-mail or the Internet during class is not permitted, as doing so can be distracting for others.

There is no participation component to the grading rubric for this course, but I reserve the right to adjust final grades in response to repeated violations of this standard of classroom behavior.

Tentative Class Schedule

January 16	Course Overview
January 23	Bond Basics Reading: Duffie, <i>Lecture Notes on Debt Markets</i>, Chapter 1 Basic coupon bonds, yield, duration, convexity
January 28	The Treasury Market Reading: Duffie, <i>Lecture Notes on Debt Markets</i>, Chapter 4.1 Treasury auctions, the yield curve, STRIPS
January 30	Case: The Yield Curve and Growth Forecasts HW: Case Preparation

- February 4 **Financial Fragility**
Liquidity transformation, models of deposit runs, prevention
Optional case reading: “BlackRock Money Market Management”
- February 6 **Market-Making**
Quiz 1: Bond Basics and Treasuries
Bid-ask spreads, insider trading
- February 11 **Money Markets**
Reading: Duffie, *Lecture Notes on Debt Markets, Chapter 2*
Repurchase agreements, Fed Funds, LIBOR, floating rate notes
Optional reading: “Haircuts” by Gorton and Metrick
- February 13 **Interest Rate Derivatives**
Reading: Duffie, *Lecture Notes on Debt Markets, Chapter 3*
Forward rate agreements, interest rate swaps, floors and caps
Optional case reading: “Barclays and the LIBOR: Anatomy of a Scandal”
- February 18 **Money Markets II**
Guest lecture by Sebastian Infante, Federal Reserve Board of Governors
- February 20 **Corporate Debt**
HW: Repo Financing Assignment
Reading: Duffie, *Lecture Notes on Debt Markets, Chapter 5.1*
Capital structure, shareholder-creditor conflict

- February 25 **Options**
Quiz 2: Money Markets, IR Derivatives, and Market-Making
Binomial pricing model, connection to capital structure
- February 27 **Financial Distress**
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 5.3
Absolute priority waterfall, liquidation vs. reorganization
- March 11 **Debt Contracting**
Covenants and contingent control rights
Optional reading: Baird and Rasmussen (2006), “Private Debt and the Missing Lever of Corporate Governance”
- March 13 **Syndicated Loans**
Reading: HBS Note by Ivashina, Note on the Leveraged Loan Market
Private vs. public debt, direct lending
- March 18 **Case: Momentive Performance Materials, Inc.**
HW: Case Preparation
- March 20 **Convertible Debt**
Quiz 3: Corporate Debt, Options, and Financial Distress
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 5.5
Contract terms, preferred stock, convertible arbitrage
- March 25 **Credit Risk**
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 6
Credit ratings, default prediction, pricing models

- March 27 **Credit Derivatives**
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 7.1-2
Credit default swaps, binomial pricing model
- April 1 **Structured Finance**
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 7.3
Securitization, collateralized debt obligations
- April 3 **Asset Backed Securities**
Quiz 4: Credit Risk
Mortgage backed securities, prepayment risk
- April 8 **Securities Underwriting**
Public vs. private deals, equity offerings (IPOs, SEOs)
- April 10 **Case: Blackstone and the Sale of Citigroup's Loan Portfolio**
HW: Case Preparation
- April 15 **Mutual Funds and ETFs**
Liquidity transformation, open vs. closed end funds
- April 17 **Hedge Funds and Arbitrage**
Quiz 5: Structured Products and Underwriting
Convergence strategies, redemption restrictions
Optional case reading: "Long-Term Capital Management, L.P."

April 22

Limits to Arbitrage

Reading: Mitchell and Pulvino (2012), “Arbitrage Crashes”

Funding fragility, arbitrage crashes

April 24

Case: Fixed Income Arbitrage in a Financial Crisis

HW: Case Preparation

April 29

Financial Crises

Bank capital requirements, effects on the real economy

May 1

Municipal Finance

Quiz 6: Arbitrage and Crises

Tax exemption, pension crisis and restructuring