

FNCE 238/738: Capital Markets

Professor Michael Schwert

Fall 2019

Contact Information

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or by appointment

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 economic features of debt markets. We will explore issues from the perspectives of both issuers and investors.

Topics covered include basic fixed income calculations, the Treasury market and the yield curve, money markets, short-term funding of financial institutions and associated fragility, corporate credit markets and the pricing of credit risk, credit derivatives, structured finance, hedge funds and 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 55%

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, and 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 35%

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.

Participation 10%

Attendance and adherence to the classroom expectations are required. I will take attendance each class and take notes on student participation. Asking and answering questions will be increase your participation grade, while using electronic devices or engaging in other distracting behavior will lower it. There is no need to let me know each time you will miss class – I understand you are busy people – but if you *regularly* miss class, this will also have an adverse effect on your participation grade. Note that case discussions will carry extra weight in your participation grade because students lead the conversation in these classes.

Classroom Expectations

Students are expected to attend every lecture, arriving on time and remaining 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 and tablets 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.

Faculty Lunches

In an effort to get to know more of you personally, I plan to take between 3 and 5 students to lunch at a nearby restaurant at a regular frequency throughout the semester. I will announce these lunches in class about a week ahead of time and post the sign-up sheet on the Canvas site.

Tentative Class Schedule

Note: This schedule is subject to change throughout the semester as guest speakers are scheduled or other adjustments are needed. I will not move quizzes or graded assignments without at least one week's notice.

August 27	Course Overview
August 29	Bond Basics Reading: Duffie, <i>Lecture Notes on Debt Markets</i>, Chapter 1 Basic coupon bonds, yield, duration, convexity
September 3	The Treasury Market Reading: Duffie, <i>Lecture Notes on Debt Markets</i>, Chapter 4 Treasury auctions, the yield curve, STRIPS

- September 5 **Case: The Yield Curve and Growth Forecasts**
HW: Case Preparation
Reading: Yield Curve Basics
- September 10 **Financial Fragility**
Quiz 1: Bond Basics and Treasuries
Models of deposit runs, prevention
- September 12 **Money Markets**
Reading: Duffie, *Lecture Notes on Debt Markets, Chapter 2*
Repurchase agreements
Optional reading: Duffie and Stein (2015), “Reforming LIBOR and Other Financial Market Benchmarks”
- September 17 **Money Markets II**
Fed funds, money market funds
Optional reading: Shin (2009), “Reflections on Northern Rock: The Bank Run that Heralded the Global Financial Crisis”
- September 19 **Interest Rate Derivatives**
Reading: Duffie, *Lecture Notes on Debt Markets, Chapter 3*
Floating rate notes, Forward rate agreements, interest rate swaps
- September 24 **Options**
Quiz 2: Money Markets and IR Derivatives
Binomial pricing model, connection to capital structure

- September 26 **Money Markets III**
Guest lecture by Sebastian Infante, Federal Reserve Board of Governors
HW: Repo Financing Assignment
- October 1 **Corporate Debt**
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 5.1
Capital structure, shareholder-creditor conflict
- October 3 **Financial Distress**
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 5.3
Absolute priority waterfall, liquidation vs. reorganization
- October 8 **Debt Contracting**
Covenants and contingent control rights
Optional reading: Baird and Rasmussen (2006), “Private Debt and the Missing Lever of Corporate Governance”
- October 15 **Syndicated Loans**
Quiz 3: Corporate Debt, Options, and Financial Distress
Reading: HBS Note by Ivashina, Note on the Leveraged Loan Market
Private vs. public debt, direct lending
- October 17 **Credit Risk**
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 6
Credit ratings, default prediction, pricing models
- October 22 **Credit Derivatives**
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 7.1-2
Credit default swaps, binomial pricing model

- October 24 **Case: Momentive Performance Materials, Inc.**
HW: Case Preparation
- October 29 **Convertible Debt**
Quiz 4: Credit Risk and Debt Contracting
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 5.5
Contract terms, preferred stock, convertible arbitrage
- October 31 **Flex Day: Guest Speaker or Catch-up Lecture**
- November 5 **Structured Finance**
Reading: Duffie, *Lecture Notes on Debt Markets*, Chapter 7.3
Introduction to securitization
Optional reading: Coval, Jurek, and Stafford (2009), “The Economics of Structured Finance”
- November 7 **Structured Finance II**
CDOs, CLOs, ABS
- November 12 **Structured Finance III**
Reading: SEC Complaint and Response from Goldman Sachs from the trial over the ABACUS 2007-AC1 CDO
Incentive distortions from securitization
- November 14 **Case: Blackstone and the Sale of Citigroup’s Loan Portfolio**
HW: Case Preparation

November 19

Mutual Funds and ETFs

Quiz 5: Structured Finance

Liquidity transformation, open vs. closed end funds

Optional reading: Lettau and Madhavan (2018), “Exchange-Traded Funds 101 for Economists”

November 21

Hedge Funds and Arbitrage

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

Convergence strategies, funding fragility, redemption restrictions

November 26

Equity Issuance

Seasoned equity offerings, private placements, IPOs

December 3

Case: Fixed Income Arbitrage in a Financial Crisis

HW: Case Preparation

December 5

Municipal Finance

Quiz 6: Arbitrage and Equity Issuance

Tax exemption, pension crisis and restructuring

Optional reading: Novy-Marx and Rauh (2009), “The Liabilities and Risks of State-Sponsored Pension Plans”