

FNCE 238/738: Capital Markets

Professor Michael Schwert

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Contact Information

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Office Hours: Weekly schedule TBD

Teaching assistants: Andres Garrido Soler

or by appointment

William Wang

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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 external financing. We will explore issues from the perspectives of both issuers and investors. As most financing is raised through debt issuance, the course focuses primarily on the economic features of debt markets. However, it does cover the key features of equity issuance and recent trends in that space.

Topics covered include the Treasury market and the yield curve, money markets, short-term funding of financial institutions, corporate capital structure, securities underwriting, IPOs and SPACs, corporate bonds and loans, the pricing of credit risk, credit derivatives, structured finance, mutual funds and ETFs, hedge funds and arbitrage activity, and municipal finance.

Prerequisites

The prerequisite for this course is FNCE 100, FNCE 611, or an equivalent class from another university. Former students report that the course is challenging and moves very quickly for those who do not have a strong grasp of the core concepts covered in the prerequisite. I also expect that students are familiar enough with Microsoft Excel to construct a basic discounted cash flow spreadsheet. If you do not meet these requirements, please contact me to discuss whether the course is a good fit for you.

Course Materials

The course is in lecture format, with case discussions interspersed. I will post lecture slides and any assigned reading on the Canvas course site prior to class. Students are advised to do the

assigned readings before class and will be responsible for their content on the quizzes. I will also post additional 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 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.

Classroom Expectations

Students are expected to attend every lecture, arriving on time and remaining until the lecture is completed. We will use the Wharton Connect app to take attendance at the start of each meeting.

Students are expected to adhere to all elements of the Wharton Learning Agreement:

<https://mba-inside.wharton.upenn.edu/mba-learning-agreement/>

Students should display name tents at all times. My hope is that the lecture slides and case preparation will lead to active in-class engagement with the course content. If I find that students are not responsive when prompted in lecture, then 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.

Interaction outside of Class

We will use Piazza to aggregate student questions and answers from myself and the teaching assistants. Please use this platform to ask questions about course content and the logistics of the class. Students will also be able to ask questions directly to the teaching assistants and are encouraged to do so. To encourage thoughtful questions, anonymous posting will be disabled.

For the case preparation assignments, students are limited to discussing the case with their groupmates. To ensure an even playing field, teaching assistants will only answer clarifying questions (i.e., about the facts of the case) before the in-class discussion.

I will have office hours at two times each week, for students who prefer to ask me questions directly. These office hours will be in person and follow a weekly schedule to be determined.

Outside of office hours, students should address questions to the TAs on Piazza. If the TAs are unable to answer a question, then I will address it myself.

Grading

The grade in this class is a weighted average of three components. If the average overall score in the class is lower than 83%, then I will curve the grades upward so the average grade is B.

Quizzes (55% of total)

There will be 5 quizzes occurring periodically throughout the semester. The lowest quiz score will be dropped, so the highest 4 out of 5 scores count for the final course grade. Each quiz will take place in the first 30 minutes of class on the scheduled date. The schedule of quizzes is:

February 1	bond basics, Treasury market
February 17	financial fragility, money markets, options
March 15	corporate securities, financial distress
April 7	credit risk, structured finance
April 21	investment funds, arbitrage

Each quiz will consist of multiple choice and short answer questions. Any material covered in the lectures or the required readings, including from case discussions, may appear on the quizzes. 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 (30% of total)

There will be 6 homework assignments (5 for the MBA section). 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. The cases are challenging by design and push students to test their understanding of concepts covered in class in a more realistic setting. Students may work with up to two other classmates (i.e., groups of three students at most) and submit one writeup per group.

Participation (15% of total)

Participation will be graded based on a student's attendance record and engagement in class. Engagement will be measured based on activity during in-class discussions, asking questions, and answering poll questions on assigned reading, preparation questions from the previous lecture, and in-class example problems.

Tentative Class Schedule

UG Only denotes dates on which the MBA section does not meet.

January 13	Course Overview (UG Only) MBAs: Please review the slides before our first meeting.
January 18	Bond Basics Reading: Duffie, <i>Lecture Notes on Debt Markets</i>, Chapter 1 Basic coupon bonds, yield, duration, convexity
January 20	The Treasury Market Reading: Duffie, <i>Lecture Notes on Debt Markets</i>, Chapter 4 Treasury auctions, the yield curve, STRIPS
January 25	Case: The Yield Curve and Growth Forecasts Reading: Yield Curve Basics Homework Due: Case Preparation
January 27	Financial Fragility Models of deposit runs, prevention

February 1	<p>Money Markets I</p> <p>Quiz 1: bond basics, Treasury market</p> <p>Reading: Duffie, <i>Lecture Notes on Debt Markets</i>, Chapter 2</p> <p>Repurchase agreements</p>
February 3	<p>Money Markets II</p> <p>Fed funds, money market funds</p>
February 8	<p>Benchmark Rates and Interest Rate Swaps</p> <p>Reading: Duffie, <i>Lecture Notes on Debt Markets</i>, Section 3.3</p> <p>Benchmark rates, floating rate notes, interest rate swaps</p> <p>Optional reading: Duffie and Stein (2015), “Reforming LIBOR and Other Financial Market Benchmarks”</p>
February 10	<p>Options</p> <p>Homework Due: Repo Financing Assignment</p> <p>Binomial pricing model, connection to capital structure</p>
February 15	<p>Corporate Debt</p> <p>Reading: Duffie, <i>Lecture Notes on Debt Markets</i>, Section 5.1</p> <p>Capital structure, shareholder-creditor conflict</p>
February 17	<p>Equity Issuance I</p> <p>Quiz 2: financial fragility, money markets, options</p> <p>Equity underwriting, seasoned offerings</p>
February 22	<p>Equity Issuance II</p> <p>IPOs, SPACs, private placements</p>

February 24

Financial Distress

Reading: Duffie, *Lecture Notes on Debt Markets*, Section 5.3

Absolute priority waterfall, liquidation vs. reorganization

Optional reading: Ellias (2020), “The Law and Economics of Investing in Bankruptcy in the United States”

March 1

Debt Contracting

Covenants and contingent control rights

Optional reading: Baird and Rasmussen (2006), “Private Debt and the Missing Lever of Corporate Governance”

March 3

Case: Wells Fargo Convertible Bonds (UG Only)

Homework Due: Case Preparation

MBAs: Have a productive Opportunity Week!

March 8

Syndicated Loans

Reading: HBS Note by Ivashina, *Note on the Leveraged Loan Market*

Private vs. public debt, direct lending

March 10

Case: Momentive Performance Materials, Inc.

Homework Due: Case Preparation

March 15

Credit Risk I

Quiz 3: corporate securities, financial distress

Reading: Duffie, *Lecture Notes on Debt Markets*, Sections 6.1 and 6.2

Credit ratings, default prediction, pricing models

- March 17 **Credit Risk II**
Reading: Duffie, *Lecture Notes on Debt Markets*, Sections 7.1 and 7.2
Credit default swaps, binomial pricing model
- March 22 **Structured Finance I**
Reading: Duffie, *Lecture Notes on Debt Markets*, Section 7.3
Introduction to securitization
Optional reading: Coval, Jurek, and Stafford (2009), “The Economics of Structured Finance”
- March 24 **Structured Finance II**
Collateralized loan obligations, asset-backed securities
- March 29 **Structured Finance III**
Reading: SEC Complaint and Response from Goldman Sachs from the trial over the ABACUS 2007-AC1 CDO
Effect of securitization on incentives
- March 31 **Guest Lecture: TBD**
- April 5 **Case: Blackstone and the Sale of Citigroup’s Loan Portfolio**
Homework Due: Case Preparation
- April 7 **Mutual Funds and ETFs**
Quiz 4: credit risk, structured finance
Reading: Lettau and Madhavan (2018), “Exchange-Traded Funds 101 for Economists”
Liquidity transformation, open vs. closed end funds

- April 12 **Hedge Funds and Arbitrage**
Reading: Mitchell and Pulvino (2012), “Arbitrage Crashes”
Convergence strategies, funding fragility, redemption restrictions
- April 14 **Guest Lecture: TBD**
- April 19 **Case: Fixed Income Arbitrage in a Financial Crisis**
Homework Due: Case Preparation
- April 21 **Quiz 5: investment funds, arbitrage**
- April 26 **Guest Lecture: TBD (UG Only)**