

**CAPITAL MARKETS**  
FNCE 238/738  
Professor Krista Schwarz  
Spring 2017

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**Class Hours** (*unless otherwise noted on Canvas*):

Tuesdays & Thursdays

FNCE 238 01

FNCE 238 02

FNCE 738 01

Office: SH-DH 2420B

Office Hours: Tuesdays 3:00 – 4:00 pm

10:30 am – 11:50 am

12:00 pm – 1:20 pm

1:30 pm – 2:50 pm

**Location** JMHH 370

### Teaching Assistants

The course TAs are available to help you with your questions about the course material, structure and grading, in office hours and by e-mail:

**Jordan Dudeck**, [jdudeck@wharton.upenn.edu](mailto:jdudeck@wharton.upenn.edu)

**Jonathan Hartley**, [harjon@wharton.upenn.edu](mailto:harjon@wharton.upenn.edu)

**Emir Okan**, [emirokan@gmail.com](mailto:emirokan@gmail.com)

*TA Office Hours will be posted on Canvas*

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### Course Objectives

Traditional economic theory gives little attention to the role of frictions, which can affect the actions of market participants and/or features of market instruments. The objective of this course is to introduce you to the broad framework of capital markets, with some historical context to understand the drivers of today's market structure and conventions. In particular, we will look at different asset classes from the perspective of the issuer and the investor, and we will see how market innovation and policy affects market dynamics.

### Application to your post-Wharton career

- **Tools to evaluate future market innovations** (profit opportunities & associated risks), given your understanding of problems that capital market participants are seeking to solve, the design, issuance and pricing structure of financial instruments, and potential arbitrage strategies that can keep their prices aligned.

- **Understanding of the potential effect of policy** (the drivers of change in market structure) on the functioning and nature of capital markets, the mechanisms that facilitate their trading and issuance, and the motivations of issuers and investors across different asset classes.
- **Perspective to discuss economic and financial stability issues** (interview/cocktail conversation!), drawing from formative market events that illustrate financing innovations and associated risks.

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## Course Structure and Materials

- (1) **LECTURE/CASE STUDY DISCUSSION:** introduce concepts and framework.
  - *Lecture slides unrelated to case material* will be available on Canvas the night prior to each class session.
  - *Spreadsheet examples/simulations* presented in class and posted to Canvas after class.
  - *Background Readings* posted to Canvas for more detail on topics, but are not required.
  - *Links* posted on Canvas to sites/documents providing more detail on course topics and topical news articles published during the semester.
- (2) **CASE STUDIES:** put into real-life context with interactive discussion.
  - *Case readings* will be assigned most weeks (purchase from Study.net).
  - *Slides* used in case discussions will be posted to Canvas **after** class discussion.
  - *HW question sets* will be posted to Canvas several days prior to the due date.
- (3) **SHORT QUIZZES:** periodic material review to identify themes and relationships.
  - *In-class quizzes* are taken via Canvas (with your laptop or tablet).
  - *Quiz dates* will be announced - occurring roughly every other week.
- (4) **FEATURED SPEAKER SESSIONS:** unique, first-hand perspective and insight.
  - *Speaker sessions* are in lieu of regularly scheduled class sessions. Times and dates TBA.

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## Grading

Your grade for the course will be comprised of 3 components as follows:

- |                              |     |
|------------------------------|-----|
| 1. Quizzes (best 5 out of 6) | 65% |
| 2. Case Homework Questions   | 25% |
| 3. Class Participation       | 10% |

## Grade Components

### 1. Quizzes

There are 6 quizzes. Dates will be posted on Canvas.

There will be **no make-up quizzes**.

There is no final exam (or quiz) in the regularly scheduled final exam period.

#### ***What will the quiz cover?***

- Any material that we cover in class may appear on the quiz, including case discussions.
- Quiz questions will be drawn from the material covered *since the previous quiz*.

#### ***What is the best way to prepare?***

- Attend class, take notes (even though you have the slides), and then review the material covered in class.
- If you feel a bit lost with the material, it may be helpful to review the background readings and links posted on Canvas. While quiz questions are not directly drawn from background readings, these may provide helpful context.
- Some students also find it helpful to discuss the material with classmates.
- If you have further questions on the material, ask the TAs in office hours or by e-mail, or schedule an appointment to discuss the material with me.

#### ***Can I use notes during the quiz?***

- Quizzes are closed-book and closed-note. Having a quiz almost every other week means that no single quiz covers an overwhelming amount of material. Staying on top of the material with periodic review also makes it easier to build on topics.
- You may use a spreadsheet or a calculator during a quiz, but not your phone.
- Having scratch paper and a pen/pencil on hand may also be helpful.

#### ***What if I miss a quiz?***

- I will drop your lowest quiz score. This provides for unexpected emergencies, recruiting conflicts, or pre-arranged travel.
- There will be **no make-up quizzes**.

The *only* nature of grade appeal that will be considered is one submitted to me, in writing, within one week after the grade in question is received, describing the nature of the appeal. A *re-grade may raise or lower your score*.

## 2. Case HW Questions

HWs are set up as brief on-line Canvas quizzes with 3 - 5 questions (typically multiple choice or T/F) about the case. The questions do not presume full understanding of the material. The aim is to ensure that you have read the case, understand the overall story and some pertinent facts.

All HW assignments are **due on Canvas at 9am**.

### ***How long should it take to complete the Case HWs?***

- Some case readings are very short and will only take 10-15 minutes to read. Some cases are considerably longer, and may take an hour to digest the material. On occasion, for longer cases I will assign only a subset of the pages to read.
- Read the case **prior** to starting the assignment! Canvas will close the assignment 10 minutes after you begin. Once you have read the case, 10 minutes is enough time to respond to the questions, and reference the case material to check details if needed.
- I will assign some case readings without a set of questions. Even in the absence of HW questions, you will still be responsible for the material discussed in class.

### ***What happens if I miss the due date/time?***

- Canvas will not accept late submissions. A late or missing HW will result in a zero grade.

### ***What if I have technical difficulties; connection disrupted, Canvas malfunction, etc.?***

- Contact the Canvas Helpdesk: [courseware@wharton.upenn.edu](mailto:courseware@wharton.upenn.edu)
- These folks can diagnose the problem with their detailed log of each students' Canvas activity, and can then provide evidence of exceptional events to the Professor.

## 3. Participation.

Participation scores are influenced by 3 factors: attendance, preparation/engagement, and demeanor.

### ***Attendance***

- You have to attend class in order to participate.
- Office visits are welcome, but these do not improve your participation score.

### ***Preparation/Engagement***

- Prepare for class so that you can engage in productive class discussion (thoughtful comments, questions and responses to questions asked).

### ***Demeanor***

- In-class attentiveness and appropriate decorum
- No phone, tablet or laptop use in class.
- Sit in same seat throughout the semester.
- **Always** display name tents.

## TENTATIVE Outline of Topics

### (1) Intro

- Bowie Bonds

### (2) Government Debt

- Debt/GDP
- Treasury Market Supply, Link to Fiscal Policy

### (3) Auctions and the Primary Market

- Auction Strategy, Stop-out Rate
- Manipulation
- ◆ Salomon and the Treasury Securities Auction HBS 9-292-114

### (4) Money and Banking System, Interbank Markets

- Banks, Panics and the Monetary System
- Unsecured Interbank Markets
- LIBOR Manipulation
- ◆ Barclays and the LIBOR: Anatomy of a Scandal Stanford ETH-03
- ◆ The U.S. Banking Panic of 1933 & FDIC HBS 9-799-077

### (5) Run Risk

- Commercial Paper, ABCP and Penn Central
- Diamond Dybvig Model of Bank Runs
- Strategies to Deter Runs: Suspend Convertibility, Lender of Last Resort, Insurance, Too Big to Fail
- Money Market Mutual Funds, Systemic Risk, and “Breaking the Buck”
- ◆ Blackrock Money Market Management in Sept’08 (A) HBS 9-209-101

### (6) Repo, Leverage and Regulatory Arbitrage

- Definition, Mechanics, Collateral and Pricing
- Adverse Feedback
- ◆ MF Global: Where’s the Money? HBS 9-312-106
- ◆ Lehman Brothers and Repo 105 HBS 9-112-050

### (7) Federal Reserve Portfolio & Operations

- Balance Sheet of the U.S. Monetary System
- Monetary Policy Implementation and the Target Interest Rate
- Crisis Policy
- ◆ The Tip of the Iceberg: JP Morgan Chase and Bear Stearns (A) HBS 9-309-001

### (8) QE and Interest on Reserves

- Quantitative Easing and Demand for Treasuries: Effect on Long Rates
- Monetary Policy Transmission and Challenges: Back to a New Normal
- ◆ Janet Yellen and the Bernanke Fed HBS 9-714-030
- ◆ QE in the Great Recession Kellogg KEL782
- ◆ The Harvard Management Company and Inflation-Protected Bonds HBS 5-202-109

### (9) Secondary Market

- Treasury Security Characteristics, Yield-to-Maturity
- Cash Flows and Portfolio Replication with STRIPS
- ◆ Pricing STRIPS and the Term Structure Darden UV2257
- (10) Yield Curve Interpretation**
  - Risk Free Rates: Benchmark to Price Riskier Securities
  - Expectations Hypothesis and Term Premium
  - Flight-to-Quality vs Flight-to-Liquidity
  - On-the-Run Premium
  - ◆ The Yield Curve and Growth Forecast Darden UV5689
  - ◆ Prudential Financial and Asset-Liability Management HBS 9-216-076
- (11) Long/short positions**
  - Specials, Short Selling and Fails
  - Close Link between Financing Rates and Collateral Value
  - Treasury Arbitrage
  - ◆ Securities Lending After the Financial Crisis HBS 9-311-130
- (12) IR Swaps**
  - Payoff and Structure
  - Relative Value Strategy
  - ◆ Long-Term Capital Management, L.P. (A, B, C, and D) HBS 9-200-007, 08, 09, 10
- (13) Risk Premia**
  - Components of Credit Spreads
  - Risk Aversion and Risk-Neutral Pricing
  - Role of Ratings Agencies
  - ◆ The Euro Zone and the Sovereign Debt Crisis Darden UV5652
  - ◆ Through the Eyes of a Whistle-Blower and Citi's Mortgage Fraud Kellogg KEP853
  - ◆ Kroll Rating Agency HBS 9-212-034
- (14) CDS**
  - Uses, Mechanics, and Pricing
  - Settlement Auction
  - Funding Risk vs Default Risk
  - ◆ Lessons Learned? Brooksley Born & OTC Derivatives (A and B) HBS 9-311-044 and 9-311-070
  - ◆ AIG- Blame for the Bailout Stanford A-203
- (15) Securitization**
  - Cash Flows: Pooling and Tranching
  - Risk Transfer?
  - Correlation and CDOs
  - Synthetic CDOs
  - Risk vs. Ambiguity
  - ◆ A Tale of Two Hedge Funds: Magnetar and Peloton Kellogg KEL402
  - ◆ The Tip of the Iceberg: JP Morgan Chase and Bear Stearns (A) HBS 9-309-001
- (16) Liquidity Risk**
  - Funding Liquidity versus Market Liquidity, Measurement

- Gloston-Milgrom Model: Role of Asymmetric Information in the Bid-Ask Spread
- Market Failure
- ◆ UBS and Auction Rate Securities HBS 9-209-119

**(17) Equity**

- Debt vs. Equity
- IPOs
- High Frequency Trading, Flash Crash, and Dark Pools
- ◆ The FLV Capital Trading Desk (A) HBS 9-215-044
- ◆ The Google IPO, a Revolution in the Making IMD IMD185
- ◆ Principal-Protected Equity-Linked Note Darden UV7126
- ◆ Knight Capital Americas LLC Ivey W15077

**CASE LIST**

1. Salomon and the Treasury Securities Auction HBS 9-292-114
2. Barclays and the LIBOR: Anatomy of a Scandal Stanford ETH-03
3. Blackrock Money Market Management in Sept'08 (A) HBS 9-209-101
4. Lehman Brothers and Repo 105 HBS 9-112-050
5. The Tip of the Iceberg: JP Morgan Chase and Bear Stearns (A) HBS 9-309-001
6. Janet Yellen and the Bernanke Fed HBS 9-714-030
7. QE in the Great Recession Kellogg KEL782
8. Pricing STRIPS and the Term Structure Darden UV2257
9. The Yield Curve and Growth Forecast Darden UV5689
10. Prudential Financial and Asset-Liability Management HBS 9-216-076
11. The Harvard Management Company and Inflation-Protected Bonds HBS 5-202-109
12. MF Global: Where's the Money? HBS 9-312-106
13. Long-Term Capital Management, L.P. (A, B, C, and D) HBS 9-200-007, 08, 09, 10
14. Kroll Rating Agency HBS 9-212-034
15. The Euro Zone and the Sovereign Debt Crisis Darden UV5652
16. Lessons Learned? Brooksley Born & the OTC Derivatives Market (A and B) HBS 9-311-044, 070
17. AIG- Blame for the Bailout Stanford A-203
18. Through the Eyes of a Whistle-Blower How Sherry Hunt Spoke Up about Citibank's Mortgage Fraud Kellogg 5-214-256
19. A Tale of Two Hedge Funds: Magnetar and Peloton Kellogg KEL402
20. UBS and Auction Rate Securities HBS 9-209-119
21. The FLV Capital Trading Desk (A) HBS 9-215-044
22. Principal-Protected Equity-Linked Note Darden UV7126
23. The Google IPO, a Revolution in the Making IMD IMD185
24. Knight Capital Americas LLC Ivey W15077
25. The U.S. Banking Panic of 1933 & Fed Deposit Insurance HBS 9-799-077

