

The Wharton School
University of Pennsylvania
FNCE 238/738: FUNDING INVESTMENTS
Prof. David K. Musto, Spring 2008

Overview - This course familiarizes students with the different funding techniques available to corporations, with particular attention to credit risk. The first half of the course covers corporate bonds, focusing on the issues related to financial distress: Chapter 11, exchange offers, ratings, and so on. The second half covers the rest of the capital structure. We discuss short-term financing such as commercial paper, securitizations, and equity - both common and preferred, with some discussion of the underwriting process. The course is generally though not entirely less quantitative than other finance courses, and is not about optimal capital structure or banking.

Course Material - There is no textbook; there are readings to read by the date indicated on the schedule. There will be a 10-20 page handout for each class. Handouts and other relevant documents will be available on webCafé.

Course Mechanics - The course is in lecture format, with two classes devoted to four cases. There are seven homeworks.

Grades – There are two tests, which are both mandatory. As a cheat sheet you will be allowed one sheet of paper, with anything you want written or printed on either side. Tests will be in class on the indicated days, and you must come to the section you are registered for. **The only excuse from either test is a signed note from a doctor stating that the student can not take the test. A document stating that the student went to the hospital is not an excuse, a prescription is not an excuse, and an interview is not an excuse. SAVE THE DATES: MARCH 5 and APRIL 21!** In event of a valid excuse, the student will take a make-up. The tests each count 30%, the cases together count 20% and the homeworks together count 20% (for each student, I will drop the lowest homework grade). Class participation counts at the margin.

Groups - Homeworks are done individually, and cases are done in groups of two to six.

Handing In Homeworks: Homeworks are due on the dates indicated on the syllabus, and they must be delivered at the beginning of class as hardcopies, and not e-mailed.

Academic Honesty: Referencing old answer keys or submitted work from earlier versions of this class in solving homeworks or cases is not allowed. Referencing old tests is allowed, and old tests are available on the course website.

Prerequisites - I will assume you know the material from an introductory Finance course (though there will be a small amount of review)

Hand-out Fees - You will be charged a fee for handouts.

Overlap with Other Courses - Some discussion of bond pricing in the early classes will overlap with *Fixed Income*. Some of the issues related to capital structure are also covered in *Advanced Corporate Finance*. The small amount of option pricing covered is also covered in *Derivative Securities*.

Accessing the Course Readings: There are three sources of readings

- Publicly-available readings on the internet: on the course schedule, these are followed by links to click on.
- E-journals available through the library: on the course schedule, these readings are followed by the name and issue of the journal, and the page numbers. You can access these journals through the library and download the articles at no cost to you (i.e. Penn has a subscription).
- The bulkpack.

Teaching Assistants – Ariel Barzideh, Joaquin Garcia, Christopher Hefty, David Wernert

TA Office Hours - TBA

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COURSE SCHEDULE

- January 16 **Intro and Overview**
Bond basics, Yield calculation, trading with accrued interest
- January 23 **Treasury Market**
Garbade, Pricing of Bonds
On/Off the run; selling by auction; synthetic bonds; using STRIPs
- January 28 **Repo Market and Securities Lending**
Lumpkin, Repurchase and Reverse-Repurchase Agreements
http://www.richmondfed.org/publications/economic_research/instruments_of_the_money_market/ch06.cfm
Keane, Repo Rate Patterns for New Treasury Notes
http://www.newyorkfed.org/research/current_issues/ci2-10.pdf
Mechanics of repos; financing with repos; shorting with repos; specialness and its relation to on/off the run
- January 30 **Market Making**
HW1 on Treasury Bonds due
Bagehot, The Only Game in Town (*Financial Analysts Journal*, Mar/Apr 1971, p12-22)
Model of Bid/Ask spread; impact of insider trading; providing vs. demanding liquidity; sunshine and basket trading
- February 4 **Brief Review of Options**
HW2 on repos due
Definitions of puts and calls, put/call parity, simple option pricing results
- February 6 **Introduction to Corporate Bonds**
Senior, Junior and convertible bonds and equity as options on firm value; incentives w/r/t project risk and debt capacity
- February 11 **Bond Contracts**
HW3 on options due
Fabozzi, Corporate Debt Instruments
Smith and Warner, On Financial Contracting: An Analysis of Bond Covenants (*Journal of Financial Economics*, June 1979, p117-161)
Economic role of common covenants; modifying covenants; defeasance; Trust Indenture Act; why bonds are junior; bond ratings

- February 13 **Guest Speaker – Marty Fridson**
- February 18 **Corporate Bankruptcy**
HW4 on debt capacity due
Teichner, Note on Bankruptcy in the United States
Weiss, The Bankruptcy Code and Violations of Absolute Priority
 Chapter 7 liquidation, Chapter 11 restructuring, voting rules in bankruptcy, violations of absolute priority
- February 20 **Restructuring Distressed Debt**
Fridson, “Coercive” Exchange Offers
McConnell and Servaes, The Economics of prepackaged bankruptcy
Gilson, Managing Default: Some Evidence on How Firms Choose Between Workouts and Chapter 11
Salamon, The Workout Crew
 Buoying-up problem, minimum participation, exit consents and other inducements to participate; prepackaged bankruptcy; Trust Indenture Act as Domsday Machine
- February 25 **Guest Speaker – Adam Cohen**
- February 27 **Convertibles and Other Alternatives to Straight Debt**
HW5 on exchange offers due
Brennan and Schwartz, The Case for Convertibles
 Good and bad reasons to sell convertibles; variations on standard convertibles; credit-sensitive, reset and other floating-rate structures
- March 3 **Cases 1 and 2: Arbitrage in the Government Bond Market?** and *RJR Hand in case writeups*
- March 5 **FIRST TEST**
- March 17 **Hybrid Securities**
 Securities that combine debt and equity treatment, regulatory rationales and tax benefits
- March 19 **Bank Runs and other Liquidity Crises**
Diamond and Dybvig, Bank Runs, Deposit Insurance and Liquidity
(Journal of Political Economy, June 1983, p. 401-419)
 Theoretical analysis of bank runs; Essential elements of bank-run risk; role of deposit insurance and suspension of convertibility; loan-sale market; downside of deposit insurance

- March 24 **Commercial Paper**
Hahn, Commercial Paper
http://www.richmondfed.org/publications/economic_research/instruments_of_the_money_market/ch09.cfm
Sellers and buyers of CP; early-exit mechanism; role of backup credit lines; direct vs. dealer-intermediated CP; alternatives to standard CP, stale pricing of money funds
- March 26 **Consumer Credit**
Musto, What Happens when Information Leaves a Market? Evidence from Post-Bankruptcy Consumers (*Journal of Business*, October 2004, p. 725-748)
Major categories: mortgage, home-equity, car, credit card; Basic mortgage math; personal bankruptcy law and recent revisions; credit bureaus and credit scores
- March 31 **Basics of Securitization**
Fabozzi, Modigliani and Ferri, Mortgage-Backed Securities Market
Quantifying prepayment speed; Causes and consequences of prepayment; pooling; tranching; weighted-average life; creating floating-rate securities
- April 2 **Securitization Design**
Planned amortization classes; subordination; reserve accounts; insurance, servicing
- April 7 **Cases 3 and 4: American Express TRS Charge-Card Receivables and Subprime RMBS analysis**
- April 9 **Mutual Funds**
HW6 on securitizing due
Carhart, On Persistence in Mutual Fund Performance (*Journal of Finance*, March 1997, p. 57-82)
Open-end funds, closed-end funds, exchange-traded funds
- April 14 **Underwriting I**
Jurin, Raising Equity in an Efficient Market
Rights offerings; underwritten seasoned offerings; IPOs; underpricing and economic rationales; price support and the Green Shoe
- April 16 **Underwriting II**
Ibbotson, Sindelar and Ritter, The Market's Problems with the Pricing of Initial Public Offerings
Smith, Raising Capital: Theory and Evidence
- April 21 **SECOND TEST**

April 23 **Other topics**

April 28 **Wrap-up**
HW7 Due