

The Wharton School
University of Pennsylvania
FNCE 238/738: FUNDING INVESTMENTS
Prof. David K. Musto, Fall 2006

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 in the bulkpack, 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 at <http://finance.wharton.upenn.edu/~musto/funding.html>

Course Mechanics - The course is in lecture format, with two classes devoted to four cases, and another class to a project. 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: OCTOBER 19 AND NOVEMBER 30!** In event of a valid excuse, the student will take a make-up. The tests each count 30%, the cases together count 10%, the project counts 5%, and homeworks together count 25% (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 five.

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*.

Teaching Assistants - Jamin Byun, Brian Conway and Evan Fox

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COURSE SCHEDULE

- September 7 **Intro and Overview**
Bond basics, Yield calculation, trading with accrued interest
- September 12 **Treasury Market**
Garbade, Pricing of Bonds
On/Off the run; selling by auction; synthetic bonds; using STRIPs
- September 14 **Repo Market and Securities Lending**
Lumpkin, Repurchase and Reverse-Repurchase Agreements
Keane, Repo Rates for New Treasury Notes
Mechanics of repos; financing with repos; shorting with repos; specialness and its relation to on/off the run
- September 19 **Market Making**
HW1 on Treasury Bonds due
Bagehot, The Best Game in Town
Model of Bid/Ask spread; impact of insider trading; providing vs. demanding liquidity; sunshine and basket trading
- September 21 **Brief Review of Options**
HW2 on repos due
Definitions of puts and calls, put/call parity, simple option pricing results
- September 26 **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
- September 28 **Bond Contracts**
HW3 on options due
Fabozzi, Corporate Debt Instruments
Smith and Warner, On Financial Contracting: An Analysis of Bond Covenants
Economic role of common covenants; modifying covenants; defeasance; Trust Indenture Act; why bonds are junior; bond ratings
- October 3 **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

- October 5 **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 Doomsday Machine
- October 10 **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
- October 12 **Cases 1 and 2: Coke and Arbitrage in the Government Bond Market?**
Hand in case writeups
- October 17 **Hybrid Securities**
 Securities that combine debt and equity treatment, regulatory rationales and tax benefits
- October 19 **FIRST TEST**
- October 26 **Bank Runs and other Liquidity Crises**
Diamond and Dybvig, Bank Runs, Deposit Insurance and Liquidity
 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
- October 31 **Commercial Paper**
Hahn, Commercial Paper
 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
- November 2 **Consumer Credit**
Musto, What Happens when Information Leaves a Market? Evidence from Post-Bankruptcy Consumers
 Major categories: mortgage, home-equity, car, credit card; Basic mortgage math; personal bankruptcy law and recent revisions; credit bureaus and credit scores
- November 7 **Cases 3 and 4: Continental Illinois and Long Term Capital Management**
Hand in Case writeups

- November 9 **Securitizing Mortgages**
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
- November 14 **Allocating prepayment and default risk**
Targeted amortization classes; subordination; reserve accounts; insurance; revolving structures
- November 16 **Mutual Funds**
HW6 on securitizing due
Carhart, On Persistence in Mutual Fund Performance
Performance persistence; Flow/performance relation and effect on portfolio choice; stale-price trading and solutions
- November 21 **Issuing Equity: Seasoned and Initial**
Jurin, Raising Equity in an Efficient Market
Rights offerings; underwritten seasoned offerings; IPOs; underpricing and economic rationales; price support and the Green Shoe
- November 28 **Event Studies of Corporate Financing Decisions**
Ibbotson, Sindelar and Ritter, The Market's Problems with the Pricing of Initial Public Offerings
Smith, Raising Capital: Theory and Evidence
HW7 on equity offerings due
- November 30 **SECOND TEST**
- Hand in Project Writeups by 5PM December 2*
- December 5 **Projects**
- December 7 **Wrap-up**