

**FUNDING INVESTMENTS  
FINANCE 238/738, D. Musto  
SECOND TEST**

*Your Name:* \_\_\_\_\_

*Section you are registered for:* \_\_\_\_\_

**80 Minutes  
80 Points**

1. (10 pts) There is no established bankruptcy procedure for distressed sovereign debt (i.e. debt issued by national governments) and workouts have generally attempted voluntary exchanges. Here's a quote from an article in the latest *Economist* about distressed sovereign debt.

*Ms. Krueger [#2 at the IMF] wants to amend international law (by changing the IMF's articles of agreement) in a way that allows a supermajority (60-75%) of creditors to make the terms of a restructuring binding on all the rest.*

What sort of problem does this solve, and what problem could it create?

2. (10 pts) Here are the discount rates for A2/P2-rated commercial paper on Monday and Tuesday of last week, by days to maturity:

<i>date</i>	<i>Days to Maturity</i>					
	<i>1-day</i>	<i>7-day</i>	<i>15-day</i>	<i>30-day</i>	<i>60-day</i>	<i>90-day</i>
4/1	2.21	2.16	2.25	2.25	2.30	2.34
4/2	2.12	2.16	2.16	2.22	2.30	2.35

Which maturity experienced the largest price increase from Monday to Tuesday?

3. (10 pts) "Investment banks underwriting IPOs can prepare to support the aftermarket price by overselling initially, and later buying the shares back. The downside to this strategy is that they lose money if the price goes up." Comment on this statement carefully.
4. Here's a quote from the February 12 issue of *The Bond Buyer*:

*As of this month, single-family bonds backed by 8.0% loans have a so-called PSA speed of 493, up from 243 in February 2001. Single-family bonds backed by 6.0% loans have PSA speeds of 160, up from 111 one year ago...The huge prepayment surge is generally positive for holders of outstanding planned amortization-class bonds.*

- a. (5 pts) What could account for the difference between the PSA of 6% and 8% bonds?
- b. (5 pts) How could the prepayment surge have different implications for investors in planned amortization-class bonds?

5. (10 pts) Collateralized Loan Obligations (CLOs) are securitizations like all the others we've seen, the only difference being that the trust owns a portfolio of commercial loans, rather than of mortgages, car loans or credit-card receivables. The portfolio is actively managed by the securitization's equity-holder (i.e. the one who gets the residual payments not made to the securitization's bond-holders). The CLO's prospectus states that if the loan portfolio becomes sufficiently undiversified, then it goes into early amortization. What economic purpose could this rule serve?
6. (10 pts) There are 3 bonds outstanding: a one-year bond with a 5% coupon and selling at par, a two-year bond with a 5% coupon, also selling at par, and a two-year mortgage-backed bond with a 6% coupon. If the one-year rate is below 6% one year from now, half of the mortgage-backed bond will prepay. In one year, the one-year rate will be either 4.5%, with probability  $\frac{1}{4}$ , or 5.5% with probability  $\frac{3}{4}$ . What should the mortgage-backed bond sell for today?
7. GE has an earnings announcement coming out shortly, and  $\frac{2}{3}$  of trades come from investors who already know what it says. Other investors know only that it is either good news, in which case GE would be worth 37.8, or bad news, in which case GE would be worth 36.6, each with probability  $\frac{1}{2}$ . You are the market maker, setting your bid and ask at which you will take the next trade (for 1 share) that comes in. What are the bid and ask at which you break even?
8. Here's a quote from Bloomberg News, dated last Friday (4/5/02):

*IMPERIAL TOBACCO Group Plc is seeking to raise 1 Billion points (\$1.4 Billion) from shareholders to help pay for the \$4.6 billion acquisition of a controlling stake in Germany's Reemtsma Cigarettenfabriken GmbH ... The company is selling 208.3 million new shares at 480 pence each, or 47 percent lower than yesterday's closing price. Shareholders will be able to buy two new shares for every five they own, provided they are shareholders on April 8. Hoare Govett, Morgan Stanley Dean Witter & Co. and Deutsche Bank AG have underwritten the rights offering.*

- (5 pts) Show that the offering should succeed as long as the share price remains above 480 pence.
- (5 pts) Characterize the exposure of Hoare Govett, MSDW and Deutsche Bank to Imperial Tobacco.