DEBT SECURITIES, SEMESTER 1, 2012 – TUTORIAL 11

CHAPTER 11: ASSET-BACKED SECTOR OF THE BOND MARKET

Problem 4)
Suppose that the collateral for an asset-backed securities structure has a gross weighted average coupon of 8.6%. The servicing fee is 50 basis points. The tranches issued have a weighted average coupon rate of 7.1%. What is the excess servicing spread?

Problem 5)
Suppose that the structure for an asset-backed security transaction is as follows:

senior tranche	$220 million
subordinate tranche 1	$50 million
subordinate tranche 2	$30 million

and that the value of the collateral for the structure is $320 million. Subordinate tranche 2 is the first loss tranche.

a. How much is the overcollateralization in this structure?
b. What is the amount of the loss for each tranche if losses due to defaults over the life of the structure total $15 million?
c. What is the amount of the loss for each tranche if losses due to defaults over the life of the structure total $35 million?
d. What is the amount of the loss for each tranche if losses due to defaults over the life of the structure total $85 million?
e. What is the amount of the loss for each tranche if losses due to defaults over the life of the structure total $110 million?

Problem 7)
An asset-backed security has been credit enhanced with a letter of credit from a bank with a single A credit rating. If this is the only form of credit enhancement, explain why this issue is unlikely to receive a triple A credit rating.

Problem 24)
What is the difference between a single month mortality rate and an absolute prepayment speed?

Problem 36)
Consider the following CDO transaction:

1. The CDO is a $200 million structure. That is, the assets purchased will be $200 million.
2. The collateral consists of bonds that all mature in 8 years and the coupon rate for every bond is the 8-year Treasury rate plus 600 basis points.
3. The senior tranche comprises 75% of the structure ($150 million) and pays interest based on the following coupon formula: LIBOR plus 90 basis points.
4. There is only one junior tranche ($30 million) with a coupon rate that is fixed. The coupon rate is the 8-year Treasury rate plus 300 basis points.
5. The asset manager enters into an agreement with a counterparty in which it agrees to pay the counterparty a fixed rate each year equal to the 8-year Treasury rate plus 120 basis points and receive LIBOR. The notional amount of the agreement is $150 million.

a. How much is the equity tranche in this CDO?
b. Assume that the 8-year Treasury rate at the time the CDO is issued is 6%. Assuming no defaults, what is the cash flow for each year and how is it distributed?
c. Ignoring the asset management fee, what is the amount available each year for the equity tranche?