

DEBT SECURITIES, SEMESTER 1, 2012 – TUTORIAL 2

CHAPTER 3: BOND SECTORS AND INSTRUMENTS

Problem 1)

Explain whether you agree or disagree with each of the following statements:

- “The foreign bond market sector of the Japanese bond market consists of bonds of Japanese entities that are issued outside of Japan.”
- “Because bonds issued by central governments are backed by the full faith and credit of the issuing country, these bonds are not rated.”
- “A country’s semi-government bonds carry the full faith and credit of the central government.”
- “In the United States, all federal agency bonds carry the full faith and credit of the U.S. government.”

Problem 4)

Suppose a portfolio manager purchases \$1 million of par value of a Treasury inflation protected security. The real rate (determined at the auction) is 3.2%.

- Assume that at the end of the first six months the CPI-U is 3.6% (annual rate). Compute the (i) inflation adjustment to principal at the end of the first six months, (ii) the inflation-adjusted principal at the end of the first six months, and (iii) the coupon payment made to the investor at the end of the first six months.
- Assume that at the end of the second six months the CPI-U is 4.0% (annual rate). Compute the (i) inflation adjustment to principal at the end of the second six months, (ii) the inflation-adjusted principal at the end of the second six months, and (iii) the coupon payment made to the investor at the end of the second six months.

Problem 7)

Suppose that a 15-year mortgage loan for \$200,000 is obtained. The mortgage is a level-payment, fixed rate, fully amortized mortgage. The mortgage rate is 7.0% and the monthly mortgage payment is \$1,797.66.

- Compute an amortization schedule for the first six months.
- What will the mortgage balance be at the end of the 15th year?
- If an investor purchased this mortgage, what will the timing of the cash flow be assuming that the borrower does not default?

Problem 8)

- What is a prepayment?
- What do the monthly cash flows of a mortgage-backed security consist of?
- What is a curtailment?

Problem 10)

- What is the difference between a mortgage passthrough security and a collateralized mortgage obligation?
- Why is a collateralized mortgage obligation created?

Problem 19)

- What is the difference between a medium-term note and a corporate bond?
- What is a structured note?
- What factor determines the principal payment for an index amortizing note and what is the risk of investing in this type of structured note?

Problem 22)

A financial corporation with a BBB rating has a consumer loan portfolio. An investment banker has suggested that this corporation consider issuing an asset-backed security where the collateral for the security is the consumer loan portfolio. What would be the advantage of issuing an asset-backed security rather than a straight offering of corporate bonds?