Homework 2. Quantitative Methods for fixed Income Securities

CHAPTER 2-4 (Tuckman)

4.1 The Treasury 5s of February 15, 2011, which was issued on February 15, 2001, is purchased on May 15, 2001, for a quoted price of 96-23 $^{1}/_{2}$. What is the invoice price (i.e. full price) on $100,000 face amount?

2.2 You invested $100 for three years and, at the end of those three years, your investment was worth $120. What was your semiannually compounded rate of return?

2.3 Using your answers to Question 1.3 to derive the spot rates for 6 months, 1 year, and 1.5 years.

3.2 On May 15, 2001, the price of the 6.75s of May 15, 2005, was 106-21 $^{1}/_{8}$. Use a calculator or spreadsheet to find the yield of the bond.

3.7 A 60-year-old retired woman is considering purchasing an annuity that pays $25,000 every six months for the rest of her life. Assume that the term structure of semiannually compounded rates is flat at 6%.

a. If the annuity cost $575,000 and the woman expects to live another 25 years, will she purchase the annuity? What if she expects to live another 15 years?