ECON 133 – Securities Markets – FALL 2010, UCSC

HOMEWORK # 5 (Due Monday Nov. 8, BEGINNIG OF CLASS)

1. **CH.10.5** A zero-coupon bond with face value $1,000 and maturity of five years sells for $746.22. What is its yield to maturity? What will happen to its yield to maturity if its price falls immediately to $730?

2. **CH.10.6** Why do bond prices go down when interest rates go up? Don't investors like high interest rates?

3. **CH.10.15** A 20-year maturity bond with par value $1,000 makes semiannual coupon payments at a coupon rate of 8%. Find the bond equivalent and effective annual yield to maturity of the bond if the bond price is:

   a. $950
   b. $1,000
   c. $1,050

4. **CH.10.21** A bond has a current yield of 9% and a yield to maturity of 10%. Is the bond selling above or below par value? Explain.

5. **CH.10.36** Assume you have a one-year investment horizon and are trying to choose among three bonds. All have the same degree of default risk and mature in 10 years. The first is a zero-coupon bond that pays $1,000 at maturity. The second has an 8% coupon rate and pays the $80 coupon once a year. The third has a 10% coupon rate and pays the $100 coupon once a year.

   a) If all three bonds are now priced to yield 8% to maturity, what are their prices?

   b) If you expect their yields to maturity to be 8% at the beginning of next year, what will their prices be then? What is your rate of return on each bond during the one-year holding period?

6. **CH.10.39** The yield to maturity on one-year zero-coupon bonds is 8%. The yield to maturity on two-year zero-coupon bonds is 9%.

   a) What is the forward rate of interest for the second year?

   b) If you believe in the expectations hypothesis, what is your best guess as to the expected value of the short-term interest rate next year?

7. **CH.11.8** Find the duration of a 6% coupon bond making annual coupon payments if it has three years until maturity and a yield to maturity of 6%. What is the duration if the yield to maturity is 10%?

8. **CH.11.9** A nine-year bond has a yield of 10% and a duration of 7.194 years. If the bond's yield changes by 50 basis points, what is the percentage change in the bond's price?

9. ***The Myth of the Rational Market*, Chapter 8 Question:** How did Fisher Black measure the equity risk premium?

10. ***The Myth of the Rational Market*, Chapter 10 Question:** What conclusions regarding market efficiency can be inferred from experimental economic evidence, such as the studies done by Vernon Smith?