BASIC

(Questions 1–17)

1. **Interpreting Bond Yields** [LO1] Is the yield to maturity on a bond the same thing as the required return? Is YTM the same thing as the coupon rate? Suppose today a 10 percent coupon bond sells at par. Two years from now, the required return on the same bond is 8 percent. What is the coupon rate on the bond then? The YTM?
2. **Interpreting Bond Yields** [LO2] Suppose you buy a 7 percent coupon, 20-year bond today when it's first issued. If interest rates suddenly rise to 15 percent, what happens to the value of your bond? Why?
3. **Valuing Bonds** [LO2] Even though most corporate bonds in the United States make coupon payments semiannually, bonds issued elsewhere often have annual coupon payments. Suppose a German company issues a bond with a par value of €1,000, 23 years to maturity, and a coupon rate of 5.8 percent paid annually. If the yield to maturity is 4.7 percent, what is the current price of the bond?
4. **Bond Yields** [LO2] A Japanese company has a bond outstanding that sells for 91.53 percent of its ¥100,000 par value. The bond has a coupon rate of 3.4 percent paid annually and matures in 16 years. What is the yield to maturity of this bond?
5. **Coupon Rates** [LO2] Essary Enterprises has bonds on the market making annual payments, with eight years to maturity, a par value of $1,000, and selling for $948. At this price, the bonds yield 5.9 percent. What must the coupon rate be on the bonds?
6. **Bond Prices** [LO2] Sqeekers Co. issued 15-year bonds a year ago at a coupon rate of 4.1 percent. The bonds make semiannual payments and have a par value of $1,000. If the YTM on these bonds is 4.5 percent, what is the current bond price?
7. **Bond Yields** [LO2] Heginbotham Corp. issued 20-year bonds two years ago at a coupon rate of 5.3 percent. The bonds make semiannual payments. If these bonds currently sell for 105 percent of par value, what is the YTM?
8. **Coupon Rates** [LO2] DMA Corporation has bonds on the market with 14.5 years to maturity, a YTM of 5.3 percent, a par value of $1,000, and a current price of $965. The bonds make semiannual payments. What must the coupon rate be on these bonds?
9. **Zero Coupon Bonds** [LO2] You find a zero coupon bond with a par value of $10,000 and 17 years to maturity. If the yield to maturity on this bond is 4.9 percent, what is the price of the bond? Assume semiannual compounding periods.
10. **Valuing Bonds** [LO2] Yan Yan Corp. has a $2,000 par value bond outstanding with a coupon rate of 4.9 percent paid semiannually and 13 years to maturity. The yield to maturity of the bond is 3.8 percent. What is the price of the bond?
11. **Valuing Bonds** [LO2] Union Local School District has a bond outstanding with a coupon rate of 3.7 percent paid semiannually and 16 years to maturity. The yield to maturity on this bond is 3.9 percent, and the bond has a par value of $5,000. What is the price of the bond?

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12. **Calculating Real Rates of Return** [LO4] If Treasury bills are currently paying 5.1 percent and the inflation rate is 2.2 percent, what is the approximate real rate of interest? The exact real rate?
13. **Inflation and Nominal Returns** [LO4] Suppose the real rate is 1.9 percent and the inflation rate is 3.1 percent. What rate would you expect to see on a Treasury bill?
14. **Nominal and Real Returns** [LO4] An investment offers a total return of 11.5 percent over the coming year. Janice Yellen thinks the total real return on this investment will be only 9 percent. What does Janice believe the inflation rate will be over the next year?
15. **Nominal versus Real Returns** [LO4] Say you own an asset that had a total return last year of 11.65 percent. If the inflation rate last year was 3.4 percent, what was your real return?
16. **Using Treasury Quotes** [LO2] Locate the Treasury issue in Figure 7.4 maturing in February 2038. What is its coupon rate? What is its bid price? What was the *previous* day's asked price? Assume a par value of $10,000.
17. **Using Treasury Quotes** [LO2] Locate the Treasury bond in Figure 7.4 maturing in August 2039. Is this a premium or a discount bond? What is its current yield? What is its yield to maturity? What is the bid–ask spread in dollars? Assume a par value of $10,000.

INTERMEDIATE

(Questions 18–31)

18. **Bond Price Movements** [LO2] Bond X is a premium bond making semiannual payments. The bond pays a coupon rate of 8.5 percent, has a YTM of 7 percent, and has 13 years to maturity. Bond Y is a discount bond making semiannual payments. This bond pays a coupon rate of 7 percent, has a YTM of 8.5 percent, and also has 13 years to maturity. What is the price of each bond today? If interest rates remain unchanged, what do you expect the price of these bonds to be one year from now? In three years? In eight years? In 12 years? In 13 years? What's going on here? Illustrate your answers by graphing bond prices versus time to maturity.