Exercise 6
6/19/08

1. Simon purchases a bond, newly issued by the Amalgamated Corporation, for $1000. The bond pays $60 to its holder at the end of the first and second years and pays $1060 upon its maturity at the end of the third year.
   a. What are the principal amount, the term, the coupon rate, and the coupon payment for Simon’s bond?

   b. After receiving the second coupon payment (at the end of the second year), Simon decides to sell his bond in the bond market. What price can he expect for his bond if the one-year interest rate at that time is 3 percent? 8 percent?

   c. Can you think of a reason that the price of Simon’s bond after two years might fall below $1,000, even though the market interest rate equals the coupon rate?

2. Shares in Brothers Grimm, Inc., manufacturers of gingerbread houses, are expected to pay a dividend of $5.00 in one year and to sell for $100 per share at that time. How much should you be willing to pay today per share of Grimm:

   a. If the safe rate of interest is 5 percent and you believe that investing in Grimm carries no risk?

   b. If the safe rate of interest is 10 percent and you believe that investing Grimm carries no risk?
c. If the safe rate of interest is 5 percent, but your risk premium is 3 percent?

d. Repeat parts a to c, assuming that Grimm is not expected to pay a dividend, but the expected price is unchanged.

3. Your financial investments consists of U.S. government bonds maturing in 10 years and shares in a start-up company doing research in pharmaceuticals. How would you expect each of the following news items to affect the value of your assets? Explain your reasoning.

a. Interest rates of newly issued government bonds rise.

In part b to e, interest rates on newly issued government bonds are assumed to remain unchanged.

b. Large swings in the stock market increase financial investors’ concerns about market risk.

c. The start-up company whose stock you own announces the development of a valuable new drug. However, the drug will not come to market for at least five years.

d. The pharmaceutical company announces that it will not pay a dividend next year.