

## EC 247 Financial Instruments and Capital Markets

### Class Exercise 2

#### Question 1

Explain why you would be more or less willing to buy a share of Polaroid stock in the following situations:

- (a) Your wealth falls.
- (b) You expect it to appreciate in value.
- (c) The bond market becomes more liquid.
- (d) You expect gold to appreciate in value.
- (e) Prices in the bond market become more volatile.

#### Question 2

Consider a \$1,000-par junk bond paying a 12% annual coupon with two years of maturity. The issuing company has 20% chance of defaulting this year; in which case, the bond would not pay anything. If the company survives the first year, paying the annual coupon payment, it then has a 25% chance of defaulting in the second year. If the company defaults in the second year, neither the final coupon payment nor par value of the bond will be paid.

- a) What price must investors pay for this bond to expect a 10% yield to maturity?
- b) At that price, what is the expected holding period return? Assume that periodic cash flows are reinvested at 10%.

#### Question 3

The demand curve and supply curve for one year 1000\$ discount bonds are estimated using the following equations:

$$B^d: \text{Price} = \frac{-2}{5} \text{Quantity} + 940$$

$$B^s: \text{Price} = \text{Quantity} + 500$$

Following a dramatic increase in the value of the stock market, many retirees started moving money out of the stock market and into bonds. This resulted in a parallel shift in the demand for bonds, such that the price of bonds at all quantities increased \$50. Assuming no change in the supply equation for bonds, what is the new equilibrium price and quantity? What is the new market interest rate?

#### Question 4

Predict what will happen to interest rates on a corporation's bond if the federal government guarantees today that it will pay creditors if the corporation goes bankrupt. What will happen to the interest rates on Treasury securities?

#### Question 5

Government economists have forecasted one-year T-bill rates for the following five years, as follows:

Year	1-year rate
1	4.25%
2	5.15%
3	5.50%
4	6.25%
5	7.10%

You have liquidity premium 0.25% for the next two years and 0.50% thereafter. Would you be willing to purchase a four-year T-bond at a 5.75% interest rate?

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