

Econ 520 (Spring 2007)
Answers to Problems for Chapters 5-6
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CHAPTER 5

2. Multiple-Choice Problems

There were important typos for the first problem. Here is the corrected version.

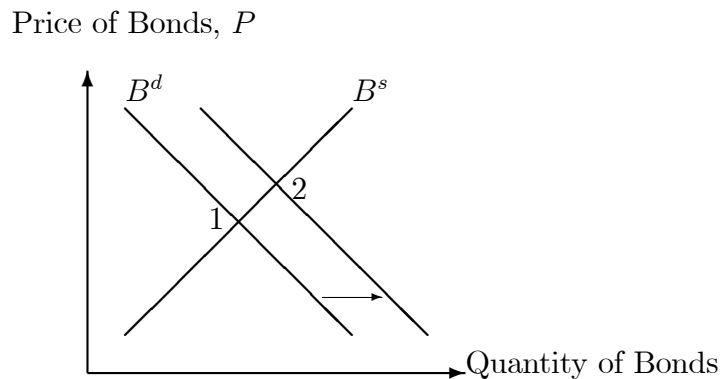
1. When prices in the stock market become more uncertain, the demand curve for bonds (with the price of bonds on the vertical axis) shifts to the _____ and the interest rate _____ .

- A) right; rises
- B) right; falls
- C) left; falls
- D) left; rises

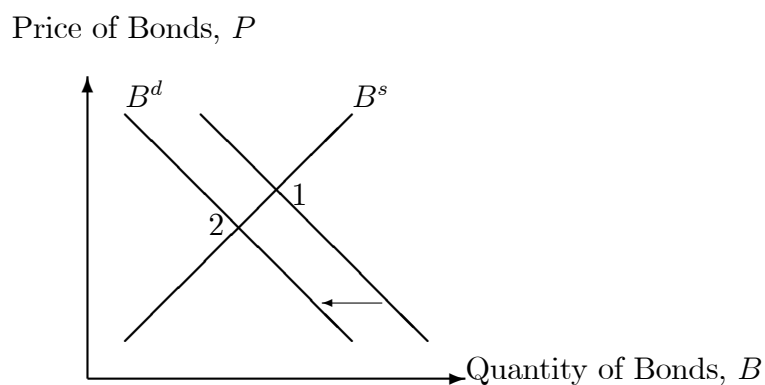
1-B; 2-B;

3. Short Answer/Essay Problems

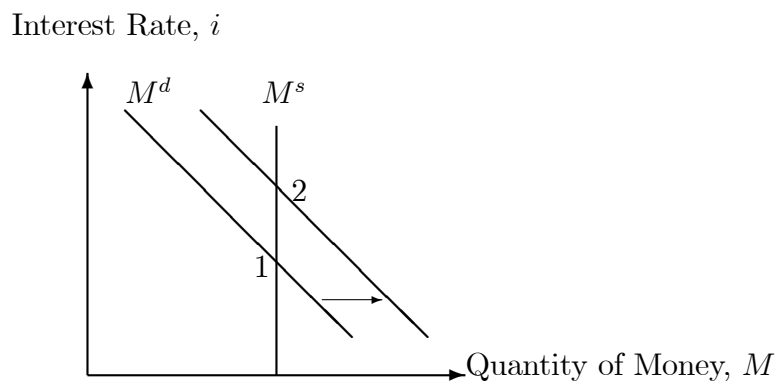
(1) A sudden increase in volatility of stock prices means that bonds are relatively safer and this causes the demand curve for bonds to shift to right. The price of the bond will rise as in the following figure. Therefore, the interest rate will fall.



(2) A sudden fall in brokerage commissions on stocks means that bonds are relatively less liquid and this causes the demand curve for bonds to shift to the left. The price of the bond will fall as in the following figure. Therefore, the interest rate will rise.

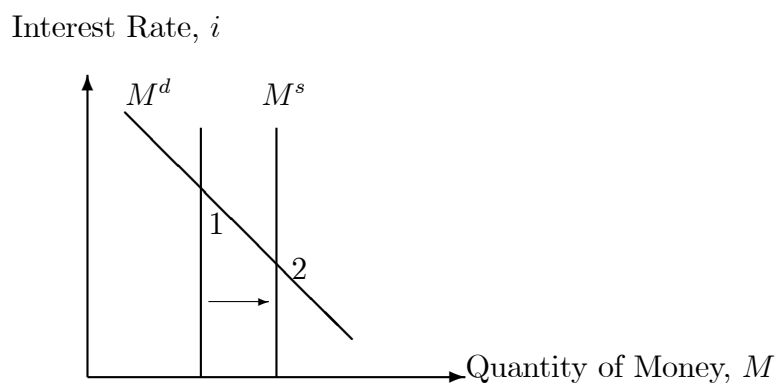


(3.a) The demand curve shifts to the right because money demand is positively related to real income. The interest rate rises as in the following figure.



(3.b) The demand curve shifts to the right because people will want to hold the same amount of money in real terms. The interest rate rises as in the figure for (3.a).

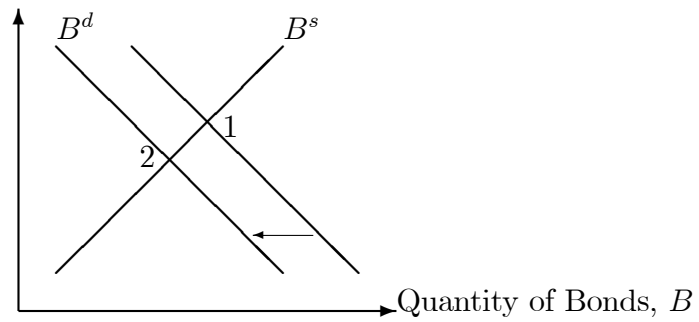
(3.c) The supply curve shifts to the right because M^s/P increases when the numerator increases. The interest rate falls.



(4.a) The expected return falls because the expected future price of the bond falls.

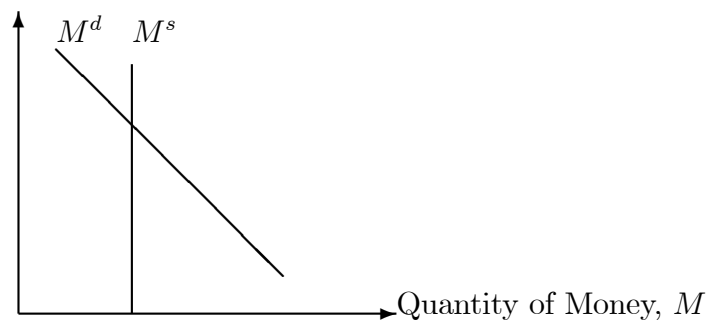
(4.b) The demand curve shifts to the left because the expected return for 10-year bonds falls. The price of the 10-year bond falls as in the following figure, and hence the 10-year interest rate rises.

Price of Bonds, P

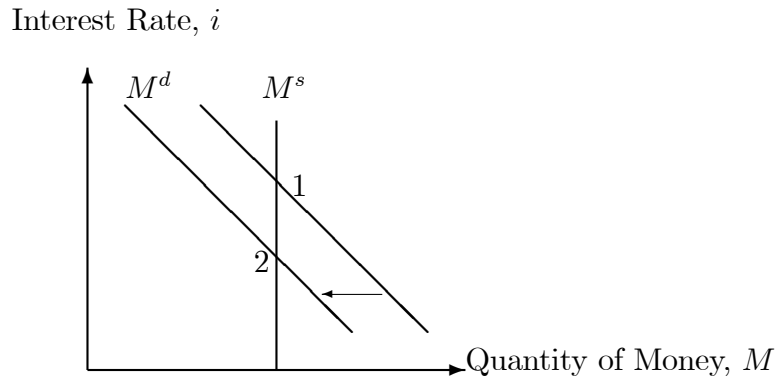


(5.a) No curves shift. So the nominal interest stays the same. This answer is not consistent with a stylized fact that the nominal interest rate tends to fall when the expected inflation rate falls.

Interest Rate, i



(5.b) The demand curve shifts to the left because money demand is positively related to real income. The interest rate falls. This answer is consistent with the stylized fact mentioned in part (5.a).

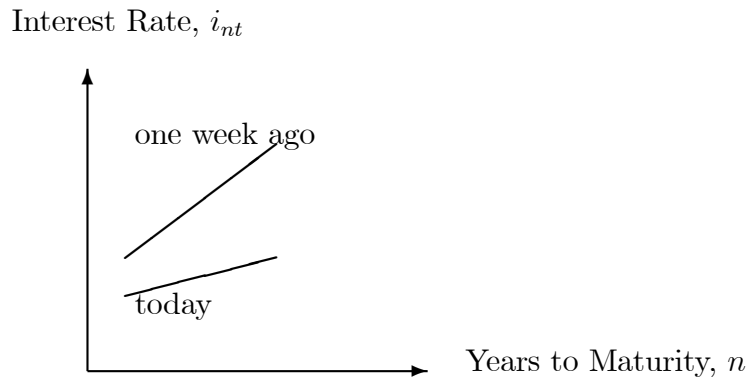


CHAPTER 6

2. Short Answer/Essay Problems

(1.a) According to the expectations hypothesis, the 2-year interest rate is the average of the current and expected future 1-year interest rates. Hence the 2-year interest will be $(4 + 6)/2 = 5$ percent.

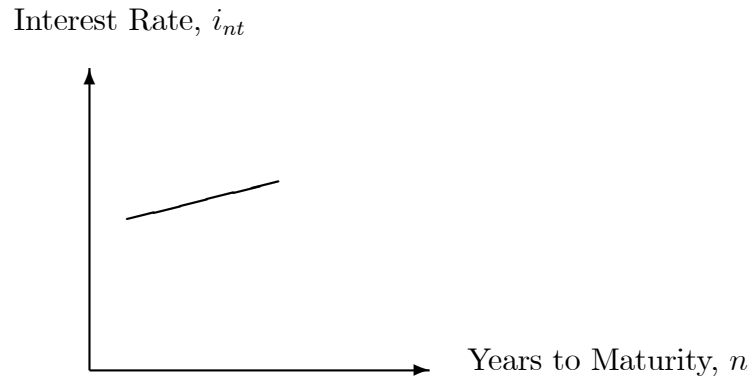
(1.b)



(2.a)

$$i_{2t} = \frac{4 + 6}{2} = 5 \quad (1)$$

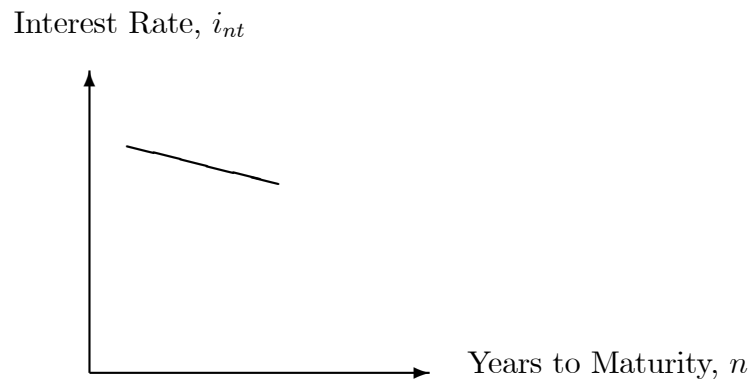
The 2-year interest rate will be 5%.



(2.b)

$$i_{2t} = \frac{8 + 4}{2} + 1 = 7 \quad (2)$$

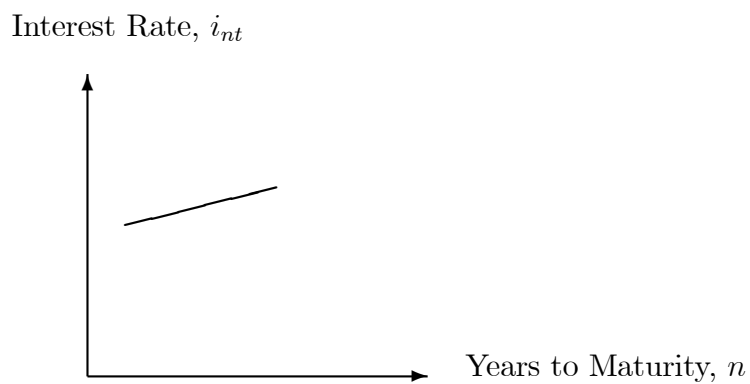
The 2-year interest rate will be 7%.



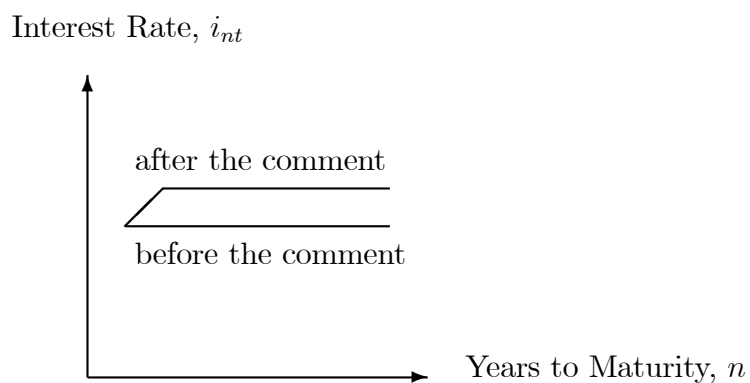
(2.c)

$$8 = \frac{7 + i_{t+1}^e}{2} + 1 \quad (3)$$

Solving this equation for i_{t+1}^e , we obtain $i_{t+1}^e = 7$. So the expected 1-year interest rate will be 7%.



(3.a) The yield curve is flat before the Bernanke's comment and the yield curve after the Bernanke's comment is above the curve before the comment as in the following figure.



(3.b) According to the present value formula, other things being equal, higher interest rates cause stock prices to fall. Hence one would expect lower stock prices after the Bernanke's comment.