# Econ 520 (Spring 2007)

**Problems for Chapter 7**

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## 1. Mishkin's Problems

Mishkin, p.176, Questions and Problems: 4, 6, 8, 10

## 2. Multiple-Choice Problems

Choose the one alternative that best completes the statement or answers the question.

(Note: Just for the purpose of interpreting questions in terms of stock markets in reality, keep in mind that S&P 500 was 1,418.3, its level of dividend was 25.10, its level of earnings was 82.0, and its P/E ratio was in 2006. Historically, the real interest rate has been about 1% and the risk premium for S$P 500 has been about 6%. The inflation rate (measured by CPI) has been about 2%, the dividend have grown at about 9%, and the earnings have been grown at about 11% since 2002. The average real GDP growth from 1960 to 1973 was about 4.2%, the real GDP growth from 1974 to 2006 was about 3%.)

1. Imagine the dividend per share for a stock paid over the last one year is $25.10, that dividends are expected to grow at 5%, and that the required rate of return for the stock is 9%. What will be the current price of this stock if there is no bubble?

A) 770.2
B) 658.9
C) 621.3
D) 596.4
E) 565.7

2. Imagine the earning per share for a stock over the last one year is \$82.0, that earnings are expected to grow at 5%, and that the required rate of return for the stock is 9%. What will be the current price of this stock if there is no bubble?

A) 2,478.3
B) 2,358.9
C) 2,238.4
D) 2,152.5
E) 2,058.7

3. Imagine that earnings for a stock are expected to grow at 5%, and that the required rate of return for the stock is 9%. What will be the P/E ratio of this stock if there is no bubble?

A) 26.25
B) 24.53
C) 22.31
D) 20.45
E) 18.29

4. When the P/E ratio of a stock is very high,

A) a bubble is not likely to exist for the stock.
B) a bubble is likely to exist for the stock.
C) a bubble is likely to exist in bonds.

5. If you find that stock price data are consistent with the hypothesis that stock prices follow random walks, then

A) this is evidence in favor of the efficient market hypothesis.
B) this is evidence against the efficient market hypothesis.
C) this is evidence in favor of the expectations hypothesis of the term structure of interest rates.
D) this is evidence against the expectations hypothesis of the term structure of interest rates.

6. If you find January effect for a stock, then

A) this is evidence in favor of the efficient market hypothesis.
B) this is evidence against the efficient market hypothesis.
C) this is evidence in favor of the expectations hypothesis of the term structure of interest rates.
D) this is evidence against the expectations hypothesis of the term structure of interest rates.

## 3. Short Answer/Essay Problems

(1) If the investors think that a stock has suddenly become more risky than before, what will happen to the stock price? Explain your answer using one of the valuation models.

(2) Imagine that a company's dividend has been growing at 5% and the investors had been expecting that the dividend would continue to grow at 5%. Suppose that the investors suddenly changes the expected dividend growth from 5% to 9% because of a favorable news for the company. What will happen to the stock price? Explain your answer using one of the valuation models.

(3) Imagine that the Fed chairman's comment is interpreted that the Fed will lower the short-term interest rate in the future while the short-term interest rate stays the same today. What will happen to the long-term interest rates? What will happen to the stock price? Explain your answer using one of the valuation models.