

The Stock Market
ECON 4673
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Answers

1. *If the public expects a corporation to lose \$5 per share this quarter and it actually loses \$4, what does the efficient market hypothesis predict will happen to the price of the stock when the \$4 loss is announced?*

The stock price will rise. Even though the company is suffering a loss, the price of the stock reflects an even larger expected loss. When the loss is less than expected, efficient markets theory then indicates that the stock price will rise.

2. *If you read in the Wall Street Journal that the “smart money” on Wall Street expects stock prices to fall, should you follow that lead and sell all your stocks?*

No, because this is publicly available information and is already reflected in stock prices. The optimal forecast of stock returns will equal the equilibrium return, so there is no benefit from selling your stocks.

3. *“An efficient market is one in which no one ever profits from having better information than the rest of the market participants.” Is this statement true, false, or uncertain? Explain your answer.*

False. The people with better information are exactly those who make the market more efficient by eliminating unexploited profit opportunities. These people can profit from their better information.

4. *Compute the price of a share of stock that pays a \$1 per year dividend and that you expect to be able to sell in one year for \$20, assuming you require a 15% return. You can also assume your first dividend is received right before you expect sell the stock.*

$$\frac{\$1}{1.15} + \frac{\$20}{1.15} = \$18.26$$

5. *After careful analysis, you have determined that a firm’s dividends should grow at 7%, on average, in the foreseeable future. The firm’s current dividend is \$3. Compute the current price of this stock, assuming the required return is 18%.*

$$P_0 = \$3 \times (1.07) / (0.18 - 0.07) = \$29.18$$

6. *The current price of a stock is \$65.88. If dividends are expected to be \$1 per share for the next five years, and the required return is 10%, then what should the price of the stock be in 5 years when you plan to sell it?*

$$\begin{aligned} \$65.88 &= \$1/(1.1) + \$1/(1.1)^2 + \$1/(1.1)^3 + \$1/(1.1)^4 + \$1/(1.1)^5 + P_5/(1.1)^5 \\ P_5 &= [\$65.88 - \$1/(1.1) - \$1/(1.1)^2 - \$1/(1.1)^3 - \$1/(1.1)^4 - \$1/(1.1)^5] \times (1.1)^5 \\ P_5 &= [\$65.88(1.1)^5 - \$1 \times (1.1)^5 - \$1 \times (1.1)^4 + \$1 \times (1.1)^3 + \$1 \times (1.1)^2 + \$1 \times (1.1)] = \$100 \end{aligned}$$

7. *A company has just announced a 3-for-1 stock split, effective immediately. Prior to the split, the company had a market value of \$5 billion with 100 million shares outstanding. Assuming the split conveys no new information about the company, what is the value of the company, the number of shares outstanding, and the price per share after the split?*

Prior to the split, each share was worth \$5 billion/100 million, or \$50/share. If the split conveys no new information, the market value of the company does not change, remaining at \$5 billion. But with the split, every share becomes three shares, so 300 million shares are outstanding. The new price/share is \$5 billion/300 million, or \$16.67/share.