

## Answer Outline

ECONOMICS 353 (SECTION 2)  
EXERCISE 8: 6 POINTS TOTAL

L. Tesfatsion/Spring 04  
DUE: Tuesday, March 9, 2:10pm

**\*\*IMPORTANT REMINDER: LATE ASSIGNMENTS CANNOT BE ACCEPTED – NO EXCEPTIONS\*\***

### EXERCISE INSTRUCTIONS:

- Please **fill in your name and student ID number** on Side 1 of your bubble sheet and write **353-2 Exercise 8** in the top margin of Side 1.
- Use a number 2 pencil to **mark your answers** on Side 1 of the bubble sheet to the first five questions Q1 through Q5, below, which are in multiple choice format.
- The sixth question Q6 is a stretch question focusing on the attached *Economist* article on stock dividends. Please put your **name and student ID number** at the top of your answer sheet for Q6 along with **353-2 Exercise 8** and **separately** hand in your answer sheet for Q6 in addition to your answer bubble sheet for questions Q1 through Q5.
- Each question Q1 through Q6 is worth 1 point.

**Q1.** In the one-period stock valuation model presented in Mishkin [Chapter 7, equation (1)], the current price  $P_0$  of a stock share is equal to the

- A. present value of the future sales price  $P_1$ .
- B. present value of the dividend  $Div_1$  received during the one-period holding period.
- \*\*C.** present value of the dividend  $Div_1$  plus the present value of the future sales price  $P_1$ .
- D. sum of the dividend  $Div_1$  and the future sales price  $P_1$ .

**Q2.** Using the one-period stock valuation model [Mishkin, Chapter 7, equation (1)], assuming a year-end dividend of \$0.11, a future sales price  $P_1 = \$110$ , and a required return on equity investment of  $k_e = 0.10$ , the current price  $P_0$  of the stock share would be

- A. \$110.11
- B. \$121.12
- C. \$100.00
- D. \$99.10
- \*\*E.** \$100.10

- Q3.** In the Generalized Dividend Valuation Model discussed by Mishkin on page 143, a future sales price far into the future does not significantly affect the current stock price because
- A. the present value cannot be computed.
  - \*\*B.** the present value of this future sales price is close to zero.
  - C. the current stock price does not depend on future sales prices.
  - D. the stock might never be sold.
  - E. the issuing company might suffer bankruptcy.
- Q4.** Using the Gordon Growth Model discussed by Mishkin on pages 143-144, the current price of a stock share will INCREASE if
- A. the dividend growth rate  $g$  decreases.
  - B. the required return on equity investment  $k_e$  increases.
  - \*\*C.** the dividend growth rate  $g$  increases.
  - D. the current dividend  $D_0$  decreases.
  - E. none of the above.
- Q5.** According to Mishkin's analysis (p. 147) using the Gordon Growth Model, the Enron scandal caused an immediate DECREASE in stock prices because, following the scandal,
- A. investors anticipated a lower dividend growth rate  $g$ .
  - B. investors had a higher required return on equity investment  $k_e$ .
  - C. investors had a lower required return on equity investment  $k_e$ .
  - D. both A and C.
  - \*\*E.** both A and B.

**Q6. (DISCUSSION QUESTION)** The attached article from the *Economist* titled “Dividend’s End” (Print Edition, January 10, 2002) discusses a financial puzzle regarding dividends. Specifically, in apparent contradiction to fundamental views of stock price determination, dividend payouts by U.S. companies have been undergoing a long-term decline despite a long-term rise in the average price of U.S. stock shares.

Based on your reading of the attached article and of Mishkin Chapter 7: Part A (pp. 141-147), provide a short but clear response to the following question:

Does the existence of a long-term decline in U.S. dividend payouts juxtaposed with a long-term rise in average U.S. stock prices necessarily refute the validity of the Generalized Dividend Valuation Model (GDVM), a fundamental view of stock price determination discussed by Mishkin on page 143 of Chapter 7? Explain why or why not.

**Answer Outline for Q6:**

The short answer to the posed question is “no.” As noted by Mishkin on page 143, in accordance with the GDVM, even a firm that has paid *no* dividends to date can have positively priced stock shares as long as buyers of the stock expect the firm will pay dividends at some time in the future. Moreover, as the attached article points out, a decline in dividend payout is consistent with a concurrent rise in stock share price under the following two scenarios:

- First, suppose a firm decides to profitably invest its retained earnings instead of using them for dividend payouts. Increased profitability of the firm should lead to an increased ability of the firm to pay out dividends in the future. If this increased profitability is anticipated today, it could increase the current demand for the firm’s stock shares and hence the current price of these stock shares.
- Second, suppose a firm decides as a general policy to use a portion of its earnings in each time period to buy back its own shares (decreasing share supply) instead of using these earnings for dividend payouts. This switch from dividend payout to share buy-back could be tax-efficient for shareholders if capital gains are taxed at a lower rate than dividends. Consequently, current shareholders might be perfectly happy to continue holding the shares and potential buyers might be induced to purchase shares. The combination of a reduced supply for the firm’s shares and a retained or even increased demand for the firm’s shares in each successive time period should lead to an increase in the price of the firm’s stock shares in each time period.