

# Problem Set 1

Daniel Andrei

*To be solved on March 2*

**Exercise 1.** The value of a derivative security \_\_\_\_\_.

- a. depends on the value of the related primitive security
- b. affects the value of the related primitive security
- c. is unrelated to the value of the related primitive security
- d. has been enhanced due the recent misuse and negative publicity regarding these instruments
- e. is worthless today

**Exercise 2.** \_\_\_\_\_ are an indirect way U. S. investor can invest in foreign companies.

- a. ADRs
- b. IRAs
- c. SDRs
- d. GNMAAs
- e. Krugerrands

**Exercise 3.** Financial intermediaries exist because small investors cannot efficiently \_\_\_\_\_.

- a. diversify their portfolios
- b. gather information
- c. monitor their portfolios
- d. advertise for needed investments
- e. all of the above

**Exercise 4.** Financial assets \_\_\_\_\_.

- a. directly contribute to the country's productive capacity
- b. indirectly contribute to the country's productive capacity
- c. contribute to the country's productive capacity both directly and indirectly
- d. do not contribute to the country's productive capacity either directly or indirectly
- e. are of no value to anyone

**Exercise 5.** Investment bankers perform the following role(s) \_\_\_\_\_.

- a. market new stock and bond issues for firms
- b. provide advice to the firms as to market conditions, price, etc
- c. design securities with desirable properties
- d. none of the above
- e. a, b, and c

**Exercise 6.** Eurodollars have the following characteristics \_\_\_\_\_.

- a. are dollar-denominated deposits in foreign banks
- b. are not subject to Regulation Q
- c. are in banks exempt from U. S. reserve requirements
- d. earn tax-free income
- e. a, b, and c

**Exercise 7.** Distinguish between real and financial assets in terms of the balance sheets of corporations and individuals.

—

**Exercise 8.** Which one of the following is not a money market instrument?

- a. a Treasury bill
- b. a certificate of deposit
- c. commercial paper
- d. a Treasury bond
- e. a Eurodollar account

**Exercise 9.** T-bills are financial instruments initially sold by \_\_\_\_\_ to raise funds.

- a. commercial banks
- b. the U. S. Treasury
- c. state and local governments
- d. agencies of the federal government
- e. b and d

**Exercise 10.** Which one of the following terms best describes Eurodollars :

- a. dollar-denominated deposits in European banks.
- b. dollar-denominated deposits at branches of foreign banks in the U. S.
- c. dollar-denominated deposits at foreign and American banks outside the U. S.
- d. dollar-denominated deposits at American banks in the U. S.
- e. dollars that have been exchanged for European currency.

**Exercise 11.** Deposits of commercial banks at the Federal Reserve Bank are called \_\_\_\_\_.

- a. banker's acceptances
- b. repurchase agreements
- c. time deposits
- d. federal funds
- e. reserve requirements

**Exercise 12.** The interest rate charged by banks with excess reserves at a Federal Reserve Bank to banks needing overnight loans to meet reserve requirements is called \_\_\_\_\_.

- a. prime rate
- b. discount rate
- c. federal funds rate
- d. call money rate
- e. money market rate

**Exercise 13.** In the event of the firm's bankruptcy

- a. the most shareholders can lose is their original investment in the firm's stock.
- b. common shareholders are the first in line to receive their claims on the firm's assets.
- c. bondholders have claim to what is left from the liquidation of the firm's assets paying the shareholders.
- d. the claims of preferred shareholders are honored before those of the common shareholders.
- e. a and d.

**Exercise 14.** Which of the following is true of the Dow Jones Industrial Average?

- a. It is a value-weighted average of 30 large industrial stocks.
- b. It is a price-weighted average of 30 large industrial stocks.
- c. The divisor must be adjusted for stock splits.
- d. a and c.
- e. b and c.

**Exercise 15.** The Dow Jones Industrial Average (DJIA) is computed by :

- a. adding the prices of 30 large "blue-chip" stocks and dividing by 30.
- b. calculating the total market value of the 30 firms in the index and dividing by 30.
- c. adding the prices of the 30 stocks in the index and dividing by a divisor.
- d. adding the prices of the 500 stocks in the index and dividing by a divisor.
- e. adding the prices of the 30 stocks in the index and dividing by the value of these stocks as of some base date period.

**Exercise 16.** Use the following information to answer next three questions

Consider the following three stocks :

Stock A: Price \$60, 100 outstanding shares

Stock B: Price \$70, 500 outstanding shares

Stock C: Price \$20, 600 outstanding shares

**Question 1** The price-weighted index constructed with the three stocks is

- a. 40
- b. 50
- c. 60
- d. 70

**Question 2** The value-weighted index constructed with three stocks using a divisor of 100 is

- a. 1.5
- b. 15
- c. 530
- d. 5300

**Question 3** Assume at these prices the value-weighted index constructed with the three stocks is 530. What would the index be if stock B is split 2 for 1 and stock C 4 for 1?

- a. 265

- b. 430
- c. 355
- d. 530
- e. 1000

**Exercise 17.** A T-bill has a face value of \$10,000 and is selling for \$9,800. If the T-bill matures in 90 days, what is its effective annual yield?

- a. 8.16%.
- b. 2.04%.
- c. 8.42%.
- d. 6.12%.

**Exercise 18.** In calculating the Standard and Poor's stock price indices, the adjustment for stock split occurs :

- a. by adjusting the divisor.
- b. automatically, due to the manner in which the index is calculated.
- c. by adjusting the numerator.
- d. quarterly, on the last trading day of each quarter.
- e. none of the above.

**Exercise 19.** If the market prices of each of the 30 stocks in the Dow Jones Industrial Average (DJIA) all change by the same percentage amount during a given day, which stock will have the greatest impact on the DJIA?

- a. The stock trading at the higher dollar price per share.
- b. The stock with total equity has the higher market value.
- c. The stock having the greatest amount of equity in its capital structure.
- d. The stock having the lowest volatility.
- e. All will have an equal impact.

**Exercise 20.** You purchased XYZ stock at \$50 per share. The stock is currently selling at \$65. Your gains may be protected by placing a \_\_\_\_\_.

- a. stop-loss order
- b. limit-buy order
- c. market order
- d. limit-sell order
- e. none of the above

**Exercise 21.** You sold ABC stock short at \$80 per share. Your losses could be minimized by placing a \_\_\_\_\_.

- a. limit-sell order
- b. limit-buy order
- c. stop-loss order
- d. day-order
- e. none of them above

**Exercise 22.** Which one of the following statements regarding orders is false?

- a. A market order is simply an order to buy or sell a stock immediately at the prevailing market price.
- b. A limit sell order is where investors specify prices at which they are willing to sell a security.
- c. If stock ABC is selling at \$50, a limit-buy order may instruct the broker to buy the stock if and when the share price falls below \$45.
- d. A day order expires at the close of the trading day.
- e. None of above.

**Exercise 23.** Assume you purchased 200 shares of XYZ common stock on margin at \$60 per share from your broker. If the initial margin is 60%, how much did you borrow from the broker?

- a. \$6,000
- b. \$4,000
- c. \$7,200
- d. \$4,800

**Exercise 24.** You sold short 200 shares of common stock at \$70 per share. The initial margin is 60%. Your initial investment was

- a. \$14,000.
- b. \$12,000.
- c. \$5,600.
- d. \$8,400.
- e. none of the above.

**Exercise 25.** You purchased 100 shares of ABC common stock on margin at \$70 per share. Assume the initial margin is 50% and the maintenance margin is 30%. Below what stock price level would you get a margin call? Assume the stock pays no dividend; ignore interest on margin.

- a. \$27
- b. \$50
- c. \$60
- d. \$80
- e. none of the above

**Exercise 26.** You purchased 100 shares of common stock on margin at \$80 per share. Assume the initial margin is 50% and the stock pays no dividend. What would the maintenance margin be if a margin call is made at a stock price of \$60? Ignore interest on margin.

- a. 0.33
- b. 0.53
- c. 0.43
- d. 0.23
- e. none of the above

**Exercise 27.** You purchased 300 shares of common stock on margin for \$60 per share. The initial margin is 60% and the stock pays no dividend. What would your rate of return be if you sell the stock at \$40 per share? Ignore interest on margin.

- a. 33%
- b. -33%
- c. -44%
- d. -56%
- e. cannot be determined

**Exercise 28.** Assume you sell short 100 shares of common stock at \$50 per share, with initial margin at 50%, what would be your rate of return if you repurchase the stock at \$40/share? The stock paid no dividends during the period, and you did not remove any money from the account before making the offsetting transaction.

- a. 20%
- b. 25%
- c. 40%
- d. 50%
- e. none of the above

**Exercise 29.** You sold short 300 shares of common stock at \$55 per share. The initial margins 50%. At what stock price would you receive a margin call if the maintenance margin is 35%?

- a. \$51
- b. \$61
- c. \$35
- d. \$40
- e. none of the above

**Exercise 30.** Assume you sold short 100 shares of common stock at \$50 per share. The initial margin is 60%. What would be the price maintenance margin if a margin call is made at a stock price of \$64?

- a. 40%
- b. 30%
- c. 35%
- d. 25%
- e. none of the above

**Exercise 31.** Shares for short transactions

- a. are borrowed from other brokers.
- b. are shares held by the short seller's broker in street name.
- c. are borrowed from commercial banks.
- d. b and c.
- e. none of above.

**Exercise 32.** Which of the following orders is most useful to short sellers who want to limit their potential losses?

- a. Limit order
- b. Discretionary order
- c. Limit-loss order
- d. Stop-buy order
- e. None of the above

**Exercise 33.** Over the past year you earned a nominal rate of interest of 10 percent on your money. The inflation rate was 6 percent over the same period. The growth rate of your purchasing power was

- a. 16%.
- b. 10%.
- c. 6%.
- d. 4%.
- e. none of the above.

**Exercise 34.** Which one of the following statements regarding hedging is true?

- a. Hedging is adding securities to an existing portfolio to increase the overall return.
- b. Hedging is a strategy used by investors to increase both the risk and return of a portfolio.
- c. Hedging is a strategy used by investors to reduce the risk of a portfolio.
- d. None of the above.

**Exercise 35.** Discuss why common stocks must earn a risk premium.

—

**Exercise 36.** Discuss the law of one price and how this concept relates to the possibility of earning arbitrage profits?

—