Chapter 2 Financial Instruments

Multiple Choice Questions

1. Which of the following is **not** a characteristic of a money market instrument?
   A) liquidity
   B) marketability
   C) long maturity
   D) liquidity premium
   E) C and D

   Answer: E Difficulty: Easy

   Rationale: Money market instruments are short-term instruments with high liquidity and marketability; they do not have long maturities nor pay liquidity premiums.

2. Which one of the following is **not** a money market instrument?
   A) a Treasury bill
   B) a negotiable certificate of deposit
   C) commercial paper
   D) a Treasury bond
   E) a Eurodollar account

   Answer: D Difficulty: Easy

   Rationale: Money market instruments are instruments with maturities of one year or less, which applies to all of the above except Treasury bonds. See Table 2.1, page 33.

3. T-bills are financial instruments initially sold by ________ to raise funds.
   A) commercial banks
   B) the U. S. government
   C) state and local governments
   D) agencies of the federal government
   E) B and D

   Answer: B Difficulty: Easy

   Rationale: Only the U. S. government sells T-bills in the primary market.

Chapter 2 Financial Instruments

4. The bid price of a T-bill in the secondary market is
   A) the price at which the dealer in T-bills is willing to sell the bill.
   B) the price at which the dealer in T-bills is willing to buy the bill.
   C) greater than the asked price of the T-bill.
   D) the price at which the investor can buy the T-bill.
   E) never quoted in the financial press.

   Answer: B   Difficulty: Easy

   Rationale: T-bills are sold in the secondary market via dealers; the bid price quoted in the financial press is the price at which the dealer is willing to buy the bill.

5. Commercial paper is a short-term security issued by ________ to raise funds.
   A) the Federal Reserve Bank
   B) commercial banks
   C) large, well-known companies
   D) the New York Stock Exchange
   E) state and local governments

   Answer: C   Difficulty: Easy

   Rationale: Commercial paper is short-term unsecured financing issued directly by large, presumably safe corporations.

6. 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 banks and branches of 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.

   Answer: C   Difficulty: Moderate

   Rationale: Although originally Eurodollars were used to describe dollar-denominated deposits in European banks, today the term has been extended to apply to any dollar-denominated deposit outside the U. S.

7. Deposits of commercial banks at the Federal Reserve Bank are called __________.
   A) bankers' acceptances
   B) repurchase agreements
   C) time deposits
   D) federal funds
   E) reserve requirements

   Answer: D Difficulty: Easy

   Rationale: The federal funds are required for the bank to meet reserve requirements, which is a way of influencing the money supply. No substitutes for fed funds are permitted.

8. 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 the_________.
   A) prime rate
   B) discount rate
   C) federal funds rate
   D) call money rate
   E) money market rate

   Answer: C Difficulty: Easy

9. Which of the following statements is (are) true regarding municipal bonds?

   I) A municipal bond is a debt obligation issued by state or local governments.
   II) A municipal bond is a debt obligation issued by the federal government.
   III) The interest income from a municipal bond is exempt from federal income taxation.
   IV) The interest income from a municipal bond is exempt from state and local taxation in the issuing state.

   A) I and II only
   B) I and III only
   C) I, II, and III only
   D) I, III, and IV only
   E) I and IV only

   Answer: D Difficulty: Moderate

   Rationale: State and local governments and agencies thereof issue municipal bonds on which the interest income is free from all federal taxes and is exempt from state and local taxation in the issuing state.

10. Which of the following statements is **true** regarding a corporate bond?
    A) A corporate callable bond gives the holder the right to exchange it for a specified number of the company's common shares.
    B) A corporate debenture is a secured bond.
    C) A corporate indenture is a secured bond.
    D) A corporate convertible bond gives the holder the right to exchange the bond for a specified number of the company's common shares.
    E) Holders of corporate bonds have voting rights in the company.

    Answer: D   Difficulty: Easy

    Rationale: Statement D is the only true statement; all other statements describe something other than the term specified.

11. 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 after paying the shareholders.
    D) the claims of preferred shareholders are honored before those of the common shareholders.
    E) A and D.

    Answer: E   Difficulty: Moderate

    Rationale: Shareholders have limited liability and have residual claims on assets. Bondholders have a priority claim on assets, and preferred shareholders have priority over common shareholders.

12. Which of the following is **true** regarding a firm's securities?
    A) Common dividends are paid before preferred dividends.
    B) Preferred stockholders have voting rights.
    C) Preferred dividends are usually cumulative.
    D) Preferred dividends are contractual obligations.
    E) Common dividends usually can be paid if preferred dividends have been skipped.

    Answer: C   Difficulty: Easy

    Rationale: The only advantages of preferred dividends over common dividends are that preferred dividends must be paid first and any skipped preferred dividends must be paid before common dividends may be paid.

13. 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.

    Answer: E Difficulty: Easy

    Rationale: The Dow Jones Industrial Average is a price-weighted index of 30 large industrial firms and the divisor must be adjusted when any of the stocks on the index split.

14. Which of the following indices is (are) market-value weighted?

    I) The New York Stock Exchange Composite Index
    II) The Standard and Poor's 500 Stock Index
    III) The Dow Jones Industrial Average

    A) I only
    B) I and II only
    C) I and III only
    D) I, II, and III
    E) II and III only

    Answer: B Difficulty: Moderate

    Rationale: The Dow Jones Industrial Average is a price-weighted index.

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.

    Answer: C Difficulty: Easy

    Rationale: When the DJIA became a 30-stock index, response A was true; however, as stocks on the index have split and been replaced, the divisor has been adjusted. In January 2003 the divisor was 0.146.

Chapter 2 Financial Instruments

Use the following to answer questions 16-18:

Consider the following three stocks:

Stock	Price	Number of shares outstanding
Stock A	$40	200
Stock B	$70	500
Stock C	$10	600

16. The price-weighted index constructed with the three stocks is
A) 30
B) 40
C) 50
D) 60
E) 70

Answer: B Difficulty: Easy

Rationale: ($40 + $70 + $10)/3 = $40.

17. The value-weighted index constructed with the three stocks using a divisor of 100 is
A) 1.2
B) 1200
C) 490
D) 4900
E) 49

Answer: C Difficulty: Moderate

Rationale: The sum of the value of the three stocks divided by 100 is 490: [($40 x 200) + ($70 x 500) + ($10 x 600)] /100 = 490.

18. Assume at these prices the value-weighted index constructed with the three stocks is 490. 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) 490
E) 1000

Answer: D Difficulty: Moderate

Rationale: Value-weighted indexes are not affected by stock splits.

Chapter 2 Financial Instruments

19. The price quotations of Treasury bonds in the Wall Street Journal show an ask price of 104:08 and a bid price of 104:04. As a buyer of the bond what is the dollar price you expect to pay?
A) $10,480.00
B) $10,425.00
C) $10,440.00
D) $10,412.50
E) $10,404.00

Answer: B Difficulty: Moderate

Rationale: You pay the asking price of the dealer, 104 8/32, or 104.25% of $10,000, or $10,425.00.

20. An investor purchases one municipal and one corporate bond that pay rates of return of 8% and 10%, respectively. If the investor is in the 20% marginal tax bracket, his or her after tax rates of return on the municipal and corporate bonds would be ________ and ______, respectively.
A) 8% and 10%
B) 8% and 8%
C) 6.4% and 8%
D) 6.4% and 10%
E) 10% and 10%

Answer: B Difficulty: Moderate

Rationale: $r_c = 0.10(1 - 0.20) = 0.08$, or 8%; $r_m = 0.08(1 - 0) = 8\%$.

21. If a Treasury note has a bid price of $975, the quoted bid price in the Wall Street Journal would be
A) 97:50.
B) 97:16.
C) 97:80.
D) 94:24.
E) 97:75.

Answer: B Difficulty: Easy

Rationale: Treasuries are quoted as a percent of $1,000 and in 1/32s.

22. In calculating the Standard and Poor's stock price indices, the adjustment for stock split occurs:
    A) by adjusting the divisor.
    B) automatically.
    C) by adjusting the numerator.
    D) quarterly, on the last trading day of each quarter.
    E) none of the above.

    Answer: B Difficulty: Easy

    Rationale: The calculation of the value-weighted S&P indices includes both price and number of shares of each of the stocks in the index. Thus, the effects of stock splits are automatically incorporated into the calculation.

23. Which of the following statements regarding the Dow Jones Industrial Average (DJIA) is **false**?
    A) The DJIA is not very representative of the market as a whole.
    B) The DJIA consists of 30 blue chip stocks.
    C) The DJIA is affected equally by changes in low and high priced stocks.
    D) The DJIA divisor needs to be adjusted for stock splits.
    E) The value of the DJIA is much higher than individual stock prices.

    Answer: C Difficulty: Easy

    Rationale: The high priced stocks have much more impact on the DJIA than do the lower priced stocks.

24. The index that includes the largest number of actively traded stock is:
    A) the NASDAQ Composite Index.
    B) the NYSE Composite Index.
    C) the Wilshire 5000 Index.
    D) the Value Line Composite Index.
    E) the Russell Index.

    Answer: C Difficulty: Easy

    Rationale: The Wilshire 5000 is the largest readily available stock index, consisting of the stocks traded on the organized exchanges and the OTC stocks.

Chapter 2 Financial Instruments

25. A 5.5% 20-year municipal bond is currently priced to yield 7.2%. For a taxpayer in the 33% marginal tax bracket, this bond would offer an equivalent taxable yield of:
    A) 8.20%.
    B) 10.75%.
    C) 11.40%.
    D) 4.82%.
    E) none of the above.

    Answer: B Difficulty: Moderate

    Rationale: $0.072 = r_m (1-t)$; $0.072 = r_m / (0.67)$; $r_m = 0.1075 = 10.75\%$.

26. 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 highest 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.

    Answer: A Difficulty: Moderate

    Rationale: Higher priced stocks affect the DJIA more than lower priced stocks; other choices are not relevant.

27. The Value Line Index is an equally weighted geometric average of the return of about 1,700 firms. What is the value of an index based on the geometric average returns of three stocks, where the returns on the three stocks during a given period were 20%, -10%, and 5%?
    A) 4.3%
    B) 5.0%
    C) 11.7%
    D) 13.4%
    E) 12.2%

    Answer: A Difficulty: Moderate

    Rationale: $[(1.2)(0.9)(1.05)]^{1/3} - 1 = 4.28\%$.

Chapter 2 Financial Instruments

28. The stocks on the Dow Jones Industrial Average
    A) have remained unchanged since the creation of the index.
    B) include most of the stocks traded on the NYSE.
    C) are changed occasionally as circumstances dictate.
    D) consist of stocks on which the investor cannot lose money.
    E) B and C.

    Answer: C Difficulty: Easy

    Rationale: The stocks on the DJIA are only a small sample of the entire market, have been changed occasionally since the creation of the index, and one can lose money on any stock. See text box on page 50 for a list of DJIA stock changes.

29. Federally sponsored agency debt
    A) is legally insured by the U. S. Treasury.
    B) would probably be backed by the U. S. Treasury in the event of a near-default.
    C) has a small positive yield spread relative to U. S. Treasuries.
    D) B and C.
    E) A and C.

    Answer: D Difficulty: Easy

    Rationale: Federally sponsored agencies, such as the FHLB, are not government owned. These agencies' debt is not insured by the U.S. Treasury, but probably would be backed by the Treasury in the event of an agency near-default. As a result, the issues are very safe and carry a yield only slightly higher than that of U. S. Treasuries.

30. Brokers' calls
    A) are funds used by individuals who wish to buy stocks on margin.
    B) are funds borrowed by the broker from the bank, with the agreement to repay the bank immediately if requested to do so.
    C) carry a rate that is usually about one percentage point lower than the rate on U.S. T-bills.
    D) A and B.
    E) A and C.

    Answer: D Difficulty: Easy

    Rationale: Brokers' calls are funds borrowed from banks by brokers and loaned to investors in margin accounts.

Chapter 2 Financial Instruments

31. A form of short-term borrowing by dealers in government securities is
    A) reserve requirements.
    B) repurchase agreements.
    C) banker's acceptances.
    D) commercial paper.
    E) brokers' calls.

    Answer: B Difficulty: Easy

    Rationale: Repurchase agreements are a form of short-term borrowing where a dealer sells government securities to an investor with an agreement to buy back those same securities at a slightly higher price.

32. Which of the following securities is a money market instrument?
    A) Treasury note
    B) Treasury bond.
    C) municipal bond.
    D) commercial paper.
    E) mortgage security.

    Answer: D Difficulty: Easy

    Rationale: Only commercial paper is a money market security. The others are capital market instruments.

33. The call provision in Treasury securities

    I) is used with Treasury Notes.
    II) is used with Treasury Bonds.
    III) gives the Treasury the right to repurchase the security at par.
    IV) gives the Treasury the right to repurchase the security at a premium over par.

    A) II and III are correct.
    B) II and IV are correct.
    C) I, II and III are correct.
    D) I, II and IV are correct.
    E) Only II is correct.

    Answer: A Difficulty: Moderate

    Rationale: Call provisions, giving the Treasury the right to repurchase the security at par, are included in some Treasury Bonds. No callable bonds have been issued since 1984.

Chapter 2 Financial Instruments

34. The yield to maturity reported in the financial pages for Treasury securities
    A) is calculated by compounding the semiannual yield.
    B) is calculated by doubling the semiannual yield.
    C) is also called the bond equivalent yield.
    D) is calculated as the yield-to-call for premium bonds.
    E) Both B and C are true.

    Answer: E   Difficulty: Easy

    Rationale: The yield to maturity shown in the financial pages is an APR calculated by doubling the semi-annual yield.

35. Which of the following is **not** a mortgage-related government or government sponsored agency?
    A) The Federal Home Loan Bank
    B) The Federal National Mortgage Association
    C) The U.S. Treasury
    D) Freddie Mac
    E) Ginnie Mae

    Answer: C   Difficulty: Easy

    Rationale: Only the U.S. Treasury issues securities that are not mortgage-backed.

36. The Tax Reform Act of 1986 limited the issue of mortgage revenue and tax-exempt bonds
    A) to $150 billion per state.
    B) to the larger of $50 per capita or $150 million per state.
    C) to the amount outstanding in 1980.
    D) to maturities of 20 years or less.
    E) None of the above statements are correct.

    Answer: B   Difficulty: Moderate

    Rationale: The Tax Reform Act of 1986 limited the issue of mortgage revenue and tax exempt bonds for each state to $50 per capita or $150 million in order to limit the drain of potential tax revenue from the Federal Government.

Chapter 2 Financial Instruments

37. In order for you to be indifferent between the after tax returns on a corporate bond paying 8.5% and a tax-exempt municipal bond paying 6.12%, what would your tax bracket need to be?
    A) 33%
    B) 72%
    C) 15%
    D) 28%
    E) Cannot tell from the information given

    Answer: D   Difficulty: Moderate

    Rationale: .0612 = .085(1-t); (1-t) = 0.72; t = .28

38. Which of the following are true about Treasury Bills?
    A) T-Bills are capital market instruments.
    B) T-Bills yields are quoted in the financial pages as effective annual rates of return. C At the T-Bill's maturity, the holder receives the face value of the Bill.
    C) Both A and C are correct.
    D) All of the above.

    Answer: D   Difficulty: Moderate

39. What does the term, "negotiable" mean with regard to negotiable certificates of deposit?
    A) The CD can be sold to another investor if the owner needs to cash it in before its maturity date.
    B) The rate of interest on the CD is subject to negotiation.
    C) The CD is automatically reinvested at its maturity date.
    D) The CD has staggered maturity dates built in.
    E) The interest rate paid on the CD will vary with a designated market rate.

    Answer: A   Difficulty: Easy

40. Freddie Mac and Ginnie Mae were organized to provide
    A) a primary market for mortgage transactions.
    B) liquidity for the mortgage market.
    C) a primary market for farm loan transactions.
    D) liquidity for the farm loan market.
    E) a source of funds for government agencies.

    Answer: B   Difficulty: Easy

41. The type of municipal bond that is used to finance commercial enterprises such as the construction of a new building for a corporation is called
    A) a corporate courtesy bond.
    B) a revenue bond.
    C) a general obligation bond.
    D) a tax anticipation note.
    E) an industrial development bond.

    Answer: E   Difficulty: Easy

42. Suppose an investor is considering a corporate bond with a 7.17% before-tax yield and a municipal bond with a 5.93% before-tax yield. At what marginal tax rate would the investor be indifferent between investing in the corporate and investing in the muni?
    A) 15.4%
    B) 23.7%
    C) 39.5%
    D) 17.3%
    E) 12.4%

    Answer: D   Difficulty: Moderate

    Rationale: t_m = 1-(5.93%/7.17%) = 17.29%

43. An individual can invest in student loan securities by buying
    A) Sallie Maes
    B) Ginnie Maes
    C) Fanny Maes
    D) Freddie Macs
    E) Stacey Joes

    Answer: A   Difficulty: Easy

Chapter 2 Financial Instruments

44. Which of the following are characteristics of preferred stock?

    I) It pays its holder a fixed amount of income each year, at the discretion of its managers.
    II) It gives its holder voting power in the firm.
    III) Its dividends are usually cumulative.
    IV) Failure to pay dividends may result in bankruptcy proceedings.

    A) I, III, and IV
    B) I, II, and III
    C) I and III
    D) I, II, and IV
    E) I, II, III, and IV

    Answer: C   Difficulty: Moderate

45. Bond market indexes can be difficult to construct because
    A) they cannot be based on firms' market values.
    B) bonds tend to trade infrequently, making price information difficult to obtain.
    C) there are so many different kinds of bonds.
    D) prices cannot be obtained for companies that operate in emerging markets.
    E) corporations are not required to disclose the details of their bond issues.

    Answer: B   Difficulty: Moderate

46. With regard to a futures contract, the long position is held by
    A) the trader who bought the contract at the largest discount.
    B) the trader who has to travel the farthest distance to deliver the commodity.
    C) the trader who plans to hold the contract open for the lengthiest time period.
    D) the trader who commits to purchasing the commodity on the delivery date.
    E) the trader who commits to delivering the commodity on the delivery date.

    Answer: D   Difficulty: Easy

Chapter 2 Financial Instruments

47. In order for you to be indifferent between the after tax returns on a corporate bond paying 9% and a tax-exempt municipal bond paying 7%, what would your tax bracket need to be?
    A) 17.6%
    B) 27%
    C) 22.2%
    D) 19.8%
    E) Cannot tell from the information given

    Answer: C Difficulty: Moderate

    Rationale: .07 = .09(1-t); (1-t) = 0.777; t = .222

48. In order for you to be indifferent between the after tax returns on a corporate bond paying 7% and a tax-exempt municipal bond paying 5.5%, what would your tax bracket need to be?
    A) 22.6%
    B) 21.4%
    C) 26.2%
    D) 19.8%
    E) Cannot tell from the information given

    Answer: B Difficulty: Moderate

    Rationale: .055 = .07(1-t); (1-t) = 0.786; t = .214

49. An investor purchases one municipal and one corporate bond that pay rates of return of 6% and 8%, respectively. If the investor is in the 25% marginal tax bracket, his or her after tax rates of return on the municipal and corporate bonds would be ________ and ______, respectively.
    A) 6% and 8%
    B) 4.5% and 6%
    C) 4.5% and 8%
    D) 6% and 6%
    E) None of the above

    Answer: D Difficulty: Moderate

    Rationale: r_c = 0.08(1 - 0.25) = 0.06, or 6%; r_m = 0.06(1 - 0) = 6%.

Chapter 2 Financial Instruments

50. An investor purchases one municipal and one corporate bond that pay rates of return of 7.2% and 9.1%, respectively. If the investor is in the 15% marginal tax bracket, his or her after tax rates of return on the municipal and corporate bonds would be ________ and ______, respectively.
   A) 7.2% and 9.1%
   B) 7.2% and 7.735%
   C) 6.12% and 7.735%
   D) 8.471% and 9.1%
   E) None of the above

   Answer: B Difficulty: Moderate

   Rationale: r_c = 0.091(1 - 0.15) = 0.07735, or 7.735%; r_m = 0.072(1 - 0) = 7.2%.

51. For a taxpayer in the 25% marginal tax bracket, a 20-year municipal bond currently yielding 5.5% would offer an equivalent taxable yield of:
   A) 7.33%.
   B) 10.75%.
   C) 5.5%.
   D) 4.125%.
   E) none of the above.

   Answer: A Difficulty: Moderate

   Rationale: 0.055= r_m(1-t); 0.0733 = r_m / 0.75).

52. For a taxpayer in the 15% marginal tax bracket, a 15-year municipal bond currently yielding 6.2% would offer an equivalent taxable yield of:
   A) 6.2%.
   B) 5.27%.
   C) 8.32%.
   D) 7.29%.
   E) none of the above.

   Answer: D Difficulty: Moderate

   Rationale: 0.062= r_m(1-t); 0.062 = r_m / (0.85); r_m = 0.0729 = 7.29%.

Chapter 2 Financial Instruments

53. With regard to a futures contract, the short position is held by
    A) the trader who bought the contract at the largest discount.
    B) the trader who has to travel the farthest distance to deliver the commodity.
    C) the trader who plans to hold the contract open for the lengthiest time period.
    D) the trader who commits to purchasing the commodity on the delivery date.
    E) the trader who commits to delivering the commodity on the delivery date.

    Answer: E   Difficulty: Easy

54. A call option allows the buyer to
    A) sell the underlying asset at the exercise price on or before the expiration date.
    B) buy the underlying asset at the exercise price on or before the expiration date.
    C) sell the option in the open market prior to expiration.
    D) A and C.
    E) B and C.

    Answer: E   Difficulty: Easy

    Rationale: A call option may be exercised (allowing the holder to buy the underlying asset) on or before expiration; the option contract also may be sold prior to expiration.

55. A put option allows the holder to
    A) buy the underlying asset at the striking price on or before the expiration date.
    B) sell the underlying asset at the striking price on or before the expiration date.
    C) sell the option in the open market prior to expiration.
    D) B and C.
    E) A and C.

    Answer: D   Difficulty: Easy

    Rationale: A put option allows the buyer to sell the underlying asset at the striking price on or before the expiration date; the option contract also may be sold prior to expiration.

56. The ____ index represents the performance of the German stock market.
    A) DAX
    B) FTSE
    C) Nikkei
    D) Hang Seng
    E) None of the above

    Answer: A   Difficulty: Easy

57. The ____ index represents the performance of the Japanese stock market.
    A) DAX
    B) FTSE
    C) Nikkei
    D) Hang Seng
    E) None of the above

    Answer: C Difficulty: Easy

58. The ____ index represents the performance of the U.K. stock market.
    A) DAX
    B) FTSE
    C) Nikkei
    D) Hang Seng
    E) None of the above

    Answer: B Difficulty: Easy

59. The ____ index represents the performance of the Hong Kong stock market.
    A) DAX
    B) FTSE
    C) Nikkei
    D) Hang Seng
    E) None of the above

    Answer: D Difficulty: Easy

60. The ultimate small stock index in the U.S. is the
    A) Wilshire 5000.
    B) DJIA.
    C) S&P 500.
    D) Russell 2000.
    E) None of the above.

    Answer: A Difficulty: Easy

Chapter 2 Financial Instruments

61. The ____ is an example of a U.S. index of large firms.
    A) Wilshire 5000
    B) DJIA
    C) DAX
    D) Russell 2000
    E) All of the above

    Answer: B Difficulty: Easy

62. The ____ is an example of a U.S. index of small firms.
    A) S&P 500
    B) DJIA
    C) DAX
    D) Russell 2000
    E) All of the above

    Answer: D Difficulty: Easy

Short Answer Questions

Use the following to answer questions 63-64:

	P_0	Q_0	P_1	Q_1	P_2	Q_2
Stock A	$70	200	$72	200	$36	400
Stock B	$85	500	$81	500	$81	500
Stock C	$105	300	$98	300	$98	300

63. Based on the information given, for a price-weighted index of the three stocks calculate:
    a. the rate of return for the first period (t=0 to t=1).
    b. the value of the divisor in the second period (t=2). Assume that Stock A had a 2-1 split during this period.
    c. the rate of return for the second period (t=1 to t=2).

    Difficulty: Difficult

    Answer:
    A. The price-weighted index at time 0 is (70+85+105)/3 = 86.67. The price-weighted index at time 1 is (72+81+98)/3 = 83.67. The return on the index is 83.67/86.67 – 1 = -3.46%.
    B. The divisor must change to reflect the stock split. Because nothing else fundamentally changed, the value of the index should remain 83.67. So the new divisor is (36+81+98)/83.67 = 2.57. The index value is (36+81+98)/2.57 = 83.67.
    C. The rate of return for the second period is 83.67/83.67-1 = 0.00%

64. Based on the information given for the three stocks, calculate the first-period rates of return (from t=0 to t=1) on
    a. a market-value-weighted index.
    b. an equally-weighted index.
    c. a geometric index.

    Difficulty: Difficult

    Answer:
    A. The total market value at time 0 is $70*200 + $85*500 + $105*300 = $88,000. The total market value at time 1 is $72*200 + $81*500 + $98*300 = $84,300. The return is $84,300/$88,000 – 1 = -4.20%.
    B. The return on Stock A for the first period is $72/$70-1 = 2.86%. The return on Stock B for the first period is $81/$85-1 = -4.71%. The return on Stock C for the first period is $98/$105-1 = -6.67%. The return on an equally weighted index of the three stocks is (2.86%-4.71%-6.67%)/3 = -2.84%.
    C. The geometric average return is $[(1+.0286)(1-.0471)(1-.0667)]^{(1/3)}-1 = [(1.0286)(0.9529)(0.9333)]^{0.3333} -1 = -2.92\%$

Chapter 2 Financial Instruments

65. Distinguish between U. S. Treasury debt and U. S Agency debt.

    Answer: Debt issued by the U. S. Treasury is backed by the full taxing power of the U. S. Treasury. Such instruments are considered to be free of default risk. Some agencies of the U. S. government issue debt also. Technically, this debt is not backed by the U. S. Treasury. However, most investors think that if any U. S. agency were having trouble meeting a debt commitment, the U. S. Treasury would come to the rescue of the agency. Thus, as a result, U. S. agency issues are considered almost as safe as U. S. Treasury issues and earn a yield only slightly higher than that of U. S. Treasury issues.

    The purpose of this question is to ascertain whether or not the student understands the subtle differences between Treasury and agency issues.

    Difficulty: Moderate

66. Discuss the advantages and disadvantages of common stock ownership, relative to other investment alternatives.

    Answer: The advantages of common stock ownership are: The stockholder is allowed to participate in earnings, that is, if the firm is doing well, these benefits are passed on to the shareholder in the form of dividends and/or increased market price of the stock (with fixed income investments, such as bonds and preferred stock, the investor receives a fixed payment, regardless of the earnings of the firm); in addition, common stock investment represents ownership in the firm, giving the shareholder voting rights; and finally, the shareholder is liable only for the amount of the shareholder's investment in the stock. That is, unlike a sole proprietorship or partnership, the common stockholder has limited liability.

    The disadvantages of common stock ownership are: The cash flow from dividends (if any) and the appreciation of the stock are uncertain, the firm makes no commitment to the common shareholder regarding future income resulting from common stock ownership; in addition, the claims of the bondholders and other creditors come before the benefits of the common shareholders; the preferred shareholders must receive dividends prior to common shareholders, if preferred dividends are skipped, these dividends are cumulative and skipped preferred dividends must be paid before common dividends are paid. Thus, the claims of the common shareholder are residual; that is, only after all other creditors' and investors' claims have been met will the claims of the common shareholder be honored.

This question was designed to determine whether the student understands the priorities of claims upon a firm, and the benefits and risks associated with common stock ownership.

Difficulty: Moderate

67. The Dow Jones Industrial Average and the New York Stock Exchange Index have unique characteristics. Discuss how these indices are calculated and any problems/advantages associated with the specific indices.

Answer: The Dow Jones Industrial Average (DJIA) is the oldest index. The index consists of 30 "blue chip" industrial firms. Thus, the index is comprised of a small sample and is not representative of the market as a whole. The index is "price-weighted", that is, the only market variables in the calculation of the index are the prices of the stocks on the index. As the stocks on the index split, the divisor must be adjusted downward. In January 2003, the value of the divisor was 0.146. The result of the small divisor is the very large value of the average, which is not representative of the average price of stock in anyone's portfolio! Thus, the movements in the average, when quoted in absolute numbers are quite large, which cause many people to think that the market is very volatile. A more realistic way to assess the market's movement is to look at the percent change in the value of the index from one day to the next. Finally, the movements of the index are influenced much more by price changes in the higher priced stocks in the index than by changes in the lower priced stocks.

The New York Stock Exchange Index is a value-weighted index comprised of every stock listed on the NYSE. "Value-weighted" means that each stock is represented by price per share times number of shares, as a percent of the entire value of the NYSE. As a result of this calculation, no divisor manipulation is necessary. Obviously, this index is much more representative of the market, as a whole, than is the DJIA.

This question is designed to determine whether the student understands the various types of calculations involved in the representative indexes and the advantages and disadvantages of these indexes.

Difficulty: Moderate