Chapter 3—Structure of Interest Rates

1. In general, securities with _____ characteristics will offer _____ yields.
   a. favorable; higher
   b. favorable; lower
   c. unfavorable; lower
   d. none of the above

   ANS: B PTS: 1

2. Default risk is likely to be highest for
   a. short-term Treasury securities.
   b. AAA corporate securities.
   c. long-term Treasury securities.
   d. BBB corporate securities.

   ANS: D PTS: 1

3. Some financial institutions such as commercial banks are required by law to invest only in
   a. junk bonds.
   b. corporate stock.
   c. Treasury securities.
   d. investment-grade bonds.

   ANS: D PTS: 1

4. Credit ratings are most commonly used to indicate which financial institutions have available funds that they can lend to borrowers.
   a. True
   b. False

   ANS: T PTS: 1

5. If a security can easily be converted to cash without a loss in value, it
   a. is liquid.
   b. has a high after-tax yield.
   c. has high default risk.
   d. is illiquid.

   ANS: A PTS: 1

6. Securities that offer _____ liquidity will need to offer a _____ yield.
   a. lower; higher
   b. lower; lower
   c. higher; higher
   d. B and C

   ANS: A PTS: 1

7. If all other characteristics are similar, _____ would have to offer _____.
   a. taxable securities; a higher after-tax yield than tax-exempt securities
   b. taxable securities; a higher before-tax yield than tax-exempt securities
   c. tax-exempt securities; a higher after-tax yield than taxable securities
   d. tax-exempt securities; a higher before-tax yield than taxable securities

ANS: B PTS: 1

8. Assume an investor's tax rate is 25 percent. The before-tax yield on a security is 12 percent. What is the after-tax yield?
   a. 16.00 percent
   b. 9.25 percent
   c. 9.00 percent
   d. 3.00 percent
   e. none of the above

   ANS: C PTS: 1

9. An investor's tax rate is 30 percent. What must the before-tax yield on a security be to have an after-tax yield of 11 percent?
   a. 7.7 percent
   b. 15.71 percent
   c. 130 percent
   d. 11.00 percent
   e. none of the above

   ANS: B PTS: 1

10. A firm in the 35 percent tax bracket is aware of a tax-exempt security that is paying a yield of 7 percent. To match this yield, taxable securities must offer a before-tax yield of
    a. 7.0 percent.
    b. 10.8 percent.
    c. 20.0 percent.
    d. none of the above

    ANS: B PTS: 1

11. Holding other factors such as risk constant, the relationship between the maturity and annualized yield of securities is called the
    a. term structure of interest rates.
    b. default structure of interest rates.
    c. liquidity structure of interest rates.
    d. tax structure of interest rates.
    e. none of the above

    ANS: A PTS: 1

12. The term structure of interest rates defines the relationship
    a. between risk and return.
    b. between risk and maturity.
    c. between maturity and yield.
    d. between default risk ratings and maturity.

    ANS: C PTS: 1

13. Interest income from municipal bonds is exempt from state taxes but is subject to federal taxes.
    a. True
    b. False

    ANS: F PTS: 1

14. If shorter term securities have higher annualized yields than longer term securities, the yield curve
    a. is horizontal.
    b. is upward sloping.
    c. is downward sloping.
    d. cannot be determined unless we know additional information (such as the level of market interest rates).

    ANS: C PTS: 1

15. Assume that annualized yields of short-term and long-term securities are equal. If investors suddenly believe interest rates will increase, their actions may cause the yield curve to
    a. become inverted.
    b. become flat.
    c. become upward sloping.
    d. be unaffected.

    ANS: C PTS: 1

16. If issuers of securities (borrowers) and investors suddenly expect interest rates to decrease, their actions to benefit from their expectations should cause
    a. long-term yields to rise.
    b. short-term yields to decrease.
    c. prices of long-term securities to decrease.
    d. A and B
    e. none of the above

    ANS: E PTS: 1

17. Within the category of capital market securities, municipal bonds have the ____ before-tax yield, and their after-tax yield is typically ____ of Treasury bonds from the perspective of investors in high tax brackets.
    a. highest; below that
    b. lowest; above that
    c. highest; above that
    d. lowest; below that

    ANS: B PTS: 1

18. The yield offered on a debt security is ____ related to the prevailing risk-free rate and ____ related to the security's risk premium.
    a. negatively; negatively
    b. positively; positively
    c. negatively; positively
    d. positively; negatively

    ANS: B PTS: 1

19. The theory for the term structure of interest rates that says the shape of the yield curve is determined solely by expectations of future interest rates is called the
    a. segmented markets theory.
    b. liquidity premium theory.
    c. pure expectations theory.
    d. theory of rational expectations.

    ANS: C PTS: 1

20. Assume investors are indifferent among security maturities. Today, the annualized 2-year interest rate is 12 percent, and the 1-year interest rate is 9 percent. What is the forward rate according to the pure expectations theory?
    a. 15.08 percent
    b. 3.00 percent
    c. 12.00 percent
    d. 12.62 percent
    e. 11.41 percent

    ANS: A PTS: 1

21. Assume the yield curve is flat. If investors flood the short-term market and avoid the long-term market, they may cause the yield curve to
    a. remain flat.
    b. become upward sloping.
    c. become downward sloping.
    d. none of the above

    ANS: B PTS: 1

22. According to pure expectations theory, if interest rates are expected to decrease, there will be ____ pressure on the demand for short-term funds by borrowers and ____ pressure on the demand for long-term funds issued by borrowers.
    a. upward; upward
    b. downward; downward
    c. upward; downward
    d. downward; upward

    ANS: C PTS: 1

23. The degree to which the Treasury's debt management policy could affect the term structure of interest rates is greatest if
    a. most debt is financed by foreign investors.
    b. the Treasury's debt level is small.
    c. maturity markets are segmented.
    d. A and B

    ANS: C PTS: 1

24. According to the pure expectations theory of the term structure of interest rates, the ____ the difference between the implied one-year forward rate and today's one-year interest rate, the ____ is the expected change in the one-year interest rate.
    a. greater; less
    b. less; greater
    c. greater; greater
    d. less; less
    e. C and D

    ANS: E PTS: 1

25. Assume that today, the annualized two-year interest rate is 12 percent, and the one-year interest rate is 9 percent. A three-year security has an annualized interest rate of 14 percent. What is the one-year forward rate two years from now?
    a. 12.67 percent
    b. 113 percent

c. 195 percent
d. 15.67 percent
e. none of the above

ANS: E PTS: 1

26. Assume that a yield curve is influenced by interest rate expectations and a liquidity premium. Assume the yield curve is initially flat. If liquidity suddenly was no longer important, the yield curve would now have a ____ (assuming no other changes).
a. slight downward slope
b. slight upward slope
c. steep upward slope
d. steep downward slope

ANS: A PTS: 1

27. According to the liquidity premium theory, the expected yield on a two-year security will ____ the expected yield from consecutive investments in one-year securities.
a. equal
b. be less than
c. be greater than
d. B and C are possible, depending on the size of the liquidity premium

ANS: C PTS: 1

28. Assume that the current yield on one-year securities is 6 percent, and that the yield on a two-year security is 7 percent. If the liquidity premium on a two-year security is 0.4 percent, then the one-year forward rate is
a. 8.0 percent.
b. 7.6 percent.
c. 3.0 percent.
d. 7.0 percent.

ANS: B PTS: 1

29. If liquidity influences the yield curve, but is not considered when deriving the forward interest rate, the forward interest rate ____ the market's expectation of the future interest rate.
a. overestimates
b. accurately estimates
c. underestimates
d. is an unbiased forecast of (it has an equal chance of overestimating or underestimating)

ANS: A PTS: 1

30. If the liquidity premium exists, a flat yield curve would be interpreted as the market expecting ____ in interest rates.
a. no changes
b. a slight decrease
c. a slight increase
d. a large increase

ANS: B PTS: 1

31. The theory of the term structure of interest rates, which states that investors and borrowers choose securities with maturities that satisfy their forecasted cash needs, is the
a. pure expectations theory.

b. liquidity premium theory.
c. segmented markets theory.
d. liquidity habitat theory.

ANS: C PTS: 1

32. According to the segmented markets theory, if most investors suddenly preferred to invest in short-term securities and most borrowers suddenly preferred to issue long-term securities there would be
a. upward pressure on the price of long-term securities.
b. upward pressure on the price of short-term securities.
c. downward pressure on the yield of long-term securities.
d. A and C

ANS: B PTS: 1

33. A theory states that while investors and borrowers may normally concentrate on a particular natural maturity market, conditions may cause them to change maturity markets. This theory is called the
a. liquidity premium theory.
b. efficient markets theory.
c. pure expectations theory.
d. preferred habitat theory.

ANS: D PTS: 1

34. According to segmented markets theory, if investors have mostly short-term funds available and borrowers want long-term funds, there would be ____ pressure on the supply of short-term funds provided by investors and ____ pressure on the yield of long-term securities.
a. upward; upward
b. downward; downward
c. upward; downward
d. downward; upward

ANS: A PTS: 1

35. If a yield curve is upward sloping, the investment strategy of buying long-term securities, then selling them after a short period (say, one year) is called
a. riding the yield curve.
b. liquidating the yield curve.
c. segmenting the yield curve.
d. a forward roll.
e. none of the above

ANS: A PTS: 1

36. Other things equal, the yield required on A-rated bonds should be ____ the yield required on B-rated bonds whose other characteristics are exactly the same.
a. greater than
b. equal to
c. less than
d. All of the above are possible, depending on the size of the bond offering.

ANS: C PTS: 1

37. Assume that the Treasury bond yield today is 2% higher than it was one year ago. Also assume that the credit (default) risk premium of an A-rated bond declined by 0.4% since one year ago. A newly issued A-rated bond will likely offer a yield today that is ____ the yield that was offered on an A-rated bond issued one year ago.
   a. greater than
   b. equal to
   c. less than
   d. A or B are both common

   ANS: A PTS: 1

38. In some time periods there is evidence that corporations initially financed long-term projects with short-term funds. They planned to borrow long-term funds once interest rates were lower. This specifically supports the ____ for explaining the term structure of interest rates.
   a. liquidity premium theory
   b. expectations theory
   c. segmented markets theory
   d. A and C

   ANS: B PTS: 1

39. According to expectations theory, the sudden expectation of lower interest rates in the future will cause a ____ supply of short-term funds provided by investors, and a ____ supply of long-term funds.
   a. large; large
   b. large; small
   c. small; small
   d. small; large

   ANS: D PTS: 1

40. The yield curve in a foreign country is
   a. always downward sloping.
   b. non-existent.
   c. the same as the United States at any point in time.
   d. none of the above

   ANS: D PTS: 1

41. If research showed that anticipation about future interest rates was the only important factor for all investors in choosing short-term or long-term securities, this would support the argument made by the
   a. liquidity premium theory.
   b. expectations theory.
   c. segmented markets theory.
   d. A and B

   ANS: B PTS: 1

42. If research showed that all investors attempt to purchase securities that perfectly match their time in which they will have available funds, this would specifically support the argument made by the
   a. liquidity premium theory.
   b. real interest rate theory.
   c. expectations theory.
   d. segmented markets theory.

   ANS: D PTS: 1

43. If the Treasury uses a relatively large proportion of ____ debt to finance the deficit, this may place upward pressure on ____ interest rates, and corporations may reduce their investment in fixed assets.
   a. long-term; long-term
   b. long-term; short-term
   c. short-term; long-term
   d. B and C

   ANS: A PTS: 1

44. You are considering the purchase of a tax-exempt security that is paying a yield of 10.08 percent. You are in the 28 percent tax bracket. To match this after-tax yield, you would consider taxable securities that pay
   a. 31.1 percent.
   b. 19 percent.
   c. 12.5 percent.
   d. 14 percent.

   ANS: D PTS: 1

45. The annualized yield on a three-year security is 13 percent; the annualized two-year interest rate is 12 percent, while the one-year interest rate is 9 percent. The forward rate one-year ahead is ____ percent.
   a. 2.8
   b. 115
   c. 103
   d. 15.1

   ANS: D PTS: 1

46. The annualized yield on a three-year security is 13 percent; the annualized two-year interest rate is 12 percent, while the one-year interest rate is 9 percent. The forward rate two years ahead is ____ percent.
   a. 1.8
   b. 9.0
   c. 15.0
   d. none of the above

   ANS: C PTS: 1

47. According to segmented markets theory, if investors have mostly long-term funds available and borrowers want short-term funds, this will place ____ pressure on the demand for long-term funds issued by borrowers and the yield curve will be ____ sloping.
   a. upward; downward
   b. downward; upward
   c. upward; upward
   d. downward; downward

   ANS: D PTS: 1

48. An upward-sloping yield curve indicates that Treasury securities with ____ maturities offer ____ annualized yields.
   a. longer; lower
   b. longer; higher
   c. shorter; lower
   d. shorter; higher
   e. B and C

   ANS: E PTS: 1

49. Assume that the Treasury experiences a large decrease in the budget deficit and purchases a large number of T-bills. This action will ____ the supply of T-bills in the market and places ____ pressure on the yield of T-bills.
a. decrease; downward
b. decrease; upward
c. increase; upward
d. increase; downward

ANS: B PTS: 1

50. Vaughn Corporation is considering the issue of commercial paper and would like to know the yield it should offer on its commercial paper. The corporation believes that a 0.2 percent default risk premium, a 0.1 percent liquidity premium, and a 0.3 percent tax adjustment are necessary to sell its commercial paper to investors. Furthermore, annualized T-bill rates are 7 percent. Based on this information, Vaughn should offer ____ percent on its commercial paper.
a. 8.0
b. 7.6
c. 7.5
d. 7.9
e. none of the above

ANS: B PTS: 1

51. If liquidity influences the yield curve, the forward rate underestimates the market's expectation of the future interest rate.
a. True
b. False

ANS: F PTS: 1

52. The yield curve for corporate bonds.
a. would typically lie below the Treasury yield curve.
b. is identical to the Treasury yield curve.
c. typically has the same slope as the Treasury yield curve.
d. is irrelevant to investors.

ANS: C PTS: 1

53. Some types of debt securities always offer a higher yield than others.
a. True
b. False

ANS: T PTS: 1

54. Investors will always prefer the purchase of risk-free Treasury securities, since other securities have a higher level of risk.
a. True
b. False

ANS: F PTS: 1

55. The higher a bond rating, the lower the perceived default risk.
a. True
b. False

ANS: T PTS: 1

56. Treasury securities are exempt from federal and state income taxes.
a. True
b. False

ANS: F PTS: 1

57. The term structure of interest rates defines the relationship between maturity and annualized yield, holding other factors such as risk constant.
a. True
b. False

ANS: T PTS: 1

58. The graphic comparison of maturities and annualized yields is known as the interest rate curve.
a. True
b. False

ANS: F PTS: 1

59. According to the segmented markets theory, the term structure of interest rates is determined solely by expectations of future interest rates.
a. True
b. False

ANS: F PTS: 1

60. The forward rate is commonly used to represent the market's forecast of the future interest rate.
a. True
b. False

ANS: T PTS: 1

61. Other things being equal, an expected decrease in interest rates will increase the demand for long-term funds by borrowers.
a. True
b. False

ANS: F PTS: 1

62. The preference for more liquid short-term securities places downward pressure on the slope of the yield curve.
a. True
b. False

ANS: F PTS: 1

63. When expectations theory is combined with the liquidity theory, the yield on a security will always be equal to the yield from consecutive investments in shorter-term securities over the same investment horizon.
a. True
b. False

ANS: F PTS: 1

64. The segmented markets theory suggests that although investors and borrowers may normally concentrate on a particular natural maturity market, certain events may cause them to wander from it.
a. True
b. False

ANS: F PTS: 1

65. If the yield curve is upward sloping, some investors may attempt to benefit from the higher yields on longer-term securities, even when they have funds for only a short period of time. This strategy is known as riding the yield curve.
a. True
b. False

ANS: T PTS: 1

66. Yield curves are always upward sloping.
a. True
b. False

ANS: F PTS: 1

67. Which of the following statements is not true with respect to debt securities?
a. Some types of debt securities always offer a higher yield than others.
b. Debt securities offer different yields because they exhibit different characteristics that influence the offered yield.
c. In general, securities with favorable characteristics will offer higher yields to entice investors.
d. All of the above are true with respect to debt securities.

ANS: C PTS: 1

68. Which of the following is not a characteristic affecting the yields on debt securities?
a. default risk
b. liquidity
c. tax status
d. term to maturity
e. All of the above affect yields on debt securities.

ANS: E PTS: 1

69. All other characteristics being equal, securities with ____ liquidity would have to offer a ____ yield to be preferred.
a. lower; higher
b. higher; higher
c. lower; lower
d. none of the above

ANS: A PTS: 1

70. A downward-sloping yield curve indicates that Treasury securities with ____ maturities offer ____ annualized yields.
a. longer; lower

b. longer; higher
c. shorter; lower
d. shorter; higher
e. Answers A and D are correct.

ANS: E PTS: 1

71. Assume that the Treasury experiences a large increase in the budget deficit and issues a large number of T-bills. This action will ____ the supply of T-bills in the market and place ____ pressure on the yield of T-bills.
a. decrease; downward
b. decrease; upward
c. increase; upward
d. increase; downward

ANS: D PTS: 1

72. If the liquidity premium theory completely describes the term structure of interest rates, then, on the average, the yield curve should be
a. flat.
b. downward sloping.
c. upward sloping.
d. none of the above.

ANS: C PTS: 1

73. If interest rates are expected to decrease, the yield on new short-term securities may be expected to ____, and the yield curve should be ____ sloping.
a. increase; upward
b. increase; downward
c. decrease; upward
d. decrease; downward

ANS: B PTS: 1

74. According to segmented markets theory, if investors have mostly long-term funds available and borrowers want short-term funds, this will place ____ pressure on the demand for short-term funds by borrowers and the yield curve will be ____ sloping.
a. upward; downward
b. downward; upward
c. upward; upward
d. downward; downward

ANS: A PTS: 1

75. The ____ theory suggests that although investors and borrowers may normally concentrate on a particular natural maturity market, certain events may cause them to wander from it.
a. pure expectations
b. liquidity premium
c. segmented markets
d. preferred habitat

ANS: D PTS: 1

76. If the Treasury uses a relatively large proportion of ____ debt to finance a budget deficit, this would place ____ pressure on long-term yields.

a. short-term; downward
b. long-term; downward
c. short-term; upward
d. long-term; upward

ANS: D PTS: 1