

Chapter 3—Structure of Interest Rates

1. In general, securities with ____ characteristics will offer ____ yields.
- favorable; higher
 - favorable; lower
 - unfavorable; lower
 - none of the above

ANS: B PTS: 1

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

ANS: D PTS: 1

3. Some financial institutions such as commercial banks are required by law to invest only in
- junk bonds.
 - corporate stock.
 - Treasury securities.
 - 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.
- True
 - False

ANS: T PTS: 1

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

ANS: A PTS: 1

6. Securities that offer ____ liquidity will need to offer a ____ yield.
- lower; higher
 - lower; lower
 - higher; higher
 - B and C

ANS: A PTS: 1

7. If all other characteristics are similar, ____ would have to offer ____.
- taxable securities; a higher after-tax yield than tax-exempt securities
 - taxable securities; a higher before-tax yield than tax-exempt securities
 - tax-exempt securities; a higher after-tax yield than taxable securities
 - 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
- is horizontal.
 - is upward sloping.
 - is downward sloping.
 - 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
- become inverted.
 - become flat.
 - become upward sloping.
 - 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
- long-term yields to rise.
 - short-term yields to decrease.
 - prices of long-term securities to decrease.
 - A and B
 - 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.
- highest; below that
 - lowest; above that
 - highest; above that
 - 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.
- negatively; negatively
 - positively; positively
 - negatively; positively
 - 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
- segmented markets theory.
 - liquidity premium theory.
 - pure expectations theory.
 - 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?
- 15.08 percent
 - 3.00 percent
 - 12.00 percent
 - 12.62 percent
 - 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
- remain flat.
 - become upward sloping.
 - become downward sloping.
 - 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.
- upward; upward
 - downward; downward
 - upward; downward
 - 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
- most debt is financed by foreign investors.
 - the Treasury's debt level is small.
 - maturity markets are segmented.
 - 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.
- greater; less
 - less; greater
 - greater; greater
 - less; less
 - 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?
- 12.67 percent
 - 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.
- greater than
 - equal to
 - less than
 - 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.
- liquidity premium theory
 - expectations theory
 - segmented markets theory
 - 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.
- large; large
 - large; small
 - small; small
 - small; large

ANS: D PTS: 1

40. The yield curve in a foreign country is
- always downward sloping.
 - non-existent.
 - the same as the United States at any point in time.
 - 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
- liquidity premium theory.
 - expectations theory.
 - segmented markets theory.
 - 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
- liquidity premium theory.
 - real interest rate theory.
 - expectations theory.
 - 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.
- long-term; long-term
 - long-term; short-term
 - short-term; long-term
 - 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
- 31.1 percent.
 - 19 percent.
 - 12.5 percent.
 - 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.
- 2.8
 - 115
 - 103
 - 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.
- 1.8
 - 9.0
 - 15.0
 - 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.
- upward; downward
 - downward; upward
 - upward; upward
 - downward; downward

ANS: D PTS: 1

48. An upward-sloping yield curve indicates that Treasury securities with ____ maturities offer ____ annualized yields.
- longer; lower
 - longer; higher
 - shorter; lower
 - shorter; higher
 - 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.
- decrease; downward
 - decrease; upward
 - increase; upward
 - 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.
- 8.0
 - 7.6
 - 7.5
 - 7.9
 - 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.
- True
 - False

ANS: F PTS: 1

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

ANS: C PTS: 1

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

ANS: F PTS: 1

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

ANS: T PTS: 1

66. Yield curves are always upward sloping.
- True
 - False

ANS: F PTS: 1

67. Which of the following statements is not true with respect to debt securities?
- Some types of debt securities always offer a higher yield than others.
 - Debt securities offer different yields because they exhibit different characteristics that influence the offered yield.
 - In general, securities with favorable characteristics will offer higher yields to entice investors.
 - 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?
- default risk
 - liquidity
 - tax status
 - term to maturity
 - 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.
- lower; higher
 - higher; higher
 - lower; lower
 - none of the above

ANS: A PTS: 1

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