***Financial Markets and Institutions, 7e* (Saunders)**

**Chapter 5 Money Markets**

1) Everything else equal, an effective annual rate will be greater than the bond equivalent yield on the same security.

Answer: TRUE

Difficulty: 1 Easy

Topic: Yields on Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

2) Money markets exist to help reduce the opportunity cost of holding cash balances.

Answer: TRUE

Difficulty: 1 Easy

Topic: Money Markets

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

3) The majority of money market securities are low-denomination, low-risk investments designed to appeal to individual investors with excess cash.

Answer: FALSE

Difficulty: 1 Easy

Topic: Money Markets

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

4) Commercial paper is a short-term obligation of the U.S. government issued to cover government budget deficits and to refinance maturing government debt.

Answer: FALSE

Difficulty: 1 Easy

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

5) Commercial paper, Treasury bills, and banker's acceptance rates are all quoted as discount yields.

Answer: TRUE

Difficulty: 2 Medium

Topic: Yields on Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.; 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

6) Euro commercial paper is a short-term obligation of the European Central Bank.

Answer: FALSE

Difficulty: 1 Easy

Topic: Euro money markets

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-05 Examine the extent to which foreign investors participate in U.S. money markets.

Accessibility: Keyboard Navigation

7) The U.S. Treasury switched from a discriminating price auction to a single price auction because the latter lowered the average price paid by investors.

Answer: FALSE

Difficulty: 1 Easy

Topic: Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-03 Examine the process used to issue Treasury securities.

Accessibility: Keyboard Navigation

8) In the T-bill secondary market the ask yield will normally be less than the bid yield.

Answer: TRUE

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

9) The largest secondary money market in the United States is the secondary market for T-bills.

Answer: TRUE

Difficulty: 1 Easy

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

10) Fed funds are short-term unsecured loans while repos are short-term secured loans.

Answer: TRUE

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

11) 360/*n* times the difference between the face value and the current value divided by the face value gives you the discount yield on an instrument.

Answer: TRUE

Difficulty: 3 Hard

Topic: Yields on Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

12) The bond equivalent yield times 365/360 is equal to the single payment yield.

Answer: FALSE

Difficulty: 2 Medium

Topic: Yields on Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

13) LIBOR is the rate that would be charged when banks borrow from other banks in Eurodollar market.

Answer: TRUE

Difficulty: 1 Easy

Topic: Euro money markets

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-05 Examine the extent to which foreign investors participate in U.S. money markets.

Accessibility: Keyboard Navigation

14) Maturities on Eurodollar CDs are usually more than one year.

Answer: FALSE

Difficulty: 1 Easy

Topic: Euro money markets

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-05 Examine the extent to which foreign investors participate in U.S. money markets.

Accessibility: Keyboard Navigation

15) In general, the federal funds rate is slightly lower than the LIBOR.

Answer: TRUE

Difficulty: 1 Easy

Topic: Euro money markets

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-05 Examine the extent to which foreign investors participate in U.S. money markets.

Accessibility: Keyboard Navigation

16) For the purposes for which they are used, money market securities should have which of the following characteristics?

I.  Low trading costs

II.  Little price risk

III.  High rate of return

IV.  Life greater than one year

A) I and III

B) II and IV

C) III and IV

D) I and II

E) I, II, and III

Answer: D

Difficulty: 1 Easy

Topic: Money Markets

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

17) Money market securities exhibit which of the following?

I.  Large denomination

II.  Maturity greater than one year

III.  Low default risk

IV. Contractually determined cash flows

A) I, II, and III

B) I, III, and IV

C) II, III, and IV

D) II and IV

E) I, II, III, and IV

Answer: B

Difficulty: 2 Medium

Topic: Money Markets

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

18) A repo is in essence a collateralized

A) banker's acceptance.

B) certificate of deposit.

C) Fed funds loan.

D) commercial paper loan.

E) Eurodollar deposit.

Answer: C

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

19) A short-term unsecured promissory note issued by a company is

A) commercial paper.

B) a T-bill.

C) a repurchase agreement.

D) a negotiable CD.

E) a banker's acceptance.

Answer: A

Difficulty: 1 Easy

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

20) A time draft payable to a seller of goods with payment guaranteed by a bank is a

A) commercial paper security.

B) T-bill.

C) repurchase agreement.

D) negotiable CD.

E) banker's acceptance.

Answer: E

Difficulty: 1 Easy

Topic: Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

21) In the T-bill auction process, the competitive bidder is guaranteed a \_\_\_\_\_\_\_\_ and a noncompetitive bidder is guaranteed a \_\_\_\_\_\_\_\_.

A) minimum price; maximum price.

B) maximum price; minimum price.

C) maximum price; given quantity.

D) minimum price; maximum quantity.

E) None of these choices are correct.

Answer: C

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-03 Examine the process used to issue Treasury securities.

Accessibility: Keyboard Navigation

22) A dealer is quoting a $10,000 face 180-day T-bill quoted at 2.75 bid, 2.65 ask. You could buy this bill at \_\_\_\_\_\_\_\_ or sell it at \_\_\_\_\_\_\_\_.

A) $9,869.23; $9,864.36.

B) $9,864.36; $9,869.23.

C) $9,867.50; $9,862.50.

D) $9,862.50; $9,867.50.

E) None of these choices are correct.

Answer: C

Explanation: Buy at 10,000 × [1 − (0.0265 × 180/360)]; sell at 10,000 × [1 − (0.0275 × 180/360)].

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

23) Rates on federal funds and repurchase agreements are stated

A) on a bond equivalent basis with a 360-day year.

B) on a bond equivalent basis with a 365-day year.

C) as a discount yield with a 360-day year.

D) as an EAR.

E) as a discount yield with a 365-day year.

Answer: A

Difficulty: 2 Medium

Topic: Yields on Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

24) The discount yield on a T-bill differs from the T-bill's bond equivalent yield (BEY) because

I. the discount yield is the return per dollar of face value and the BEY is a return per dollar originally invested.

II. a 360-day year is used on the discount yield and the BEY uses 365 days.

III. the discount yield is calculated without compounding, and the BEY is calculated with compounding.

A) I only

B) II only

C) I and II only

D) II and III only

E) I, II, and III

Answer: C

Difficulty: 3 Hard

Topic: Yields on Money Market Securities

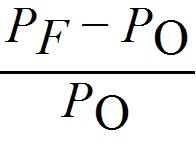
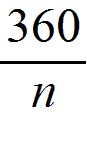
Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

25) The following formula is used to calculate the \_\_\_\_\_\_\_\_ of a money market investment.

 × 

A) EAR

B) APR

C) single-payment yield

D) discount yield

E) BEY

Answer: C

Difficulty: 2 Medium

Topic: Yields on Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

26) The rate of return on a repo is

A) determined by the rate of return on the underlying collateral.

B) strongly affected by the current Fed funds rate at the time of the repo.

C) determined at the time of the repo.

D) determined by the rate of return on the underlying collateral and determined at the time of the repo.

E) strongly affected by the current Fed funds rate at the time of the repo and determined at the time of the repo.

Answer: E

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

27) Which one of the following statements about commercial paper is *not* true? Commercial paper issued in the United States

A) is an unsecured short-term promissory note.

B) has a maximum maturity of 270 days.

C) is virtually always rated by at least one ratings agency.

D) has no secondary market.

E) carries an interest rate above the prime rate.

Answer: E

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

28) A negotiable CD

A) is a bank-issued transactions deposit.

B) is a registered instrument.

C) is a bank-issued time deposit.

D) has denominations ranging from $50,000 to $10 million.

E) pays discount interest.

Answer: C

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

29) A 180-day $3 million CD has a 4.25 percent annual rate quote. If you buy the CD, how much will you collect in 180 days?

A) $3,047,439

B) $3,045.678

C) $3,062,877

D) $3,063,750

E) $3,127,500

Answer: D

Explanation: $3 million × [1 + (0.0425 × 180/360)]

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Analyze; Apply; Evaluate

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

30) A banker's acceptance is

A) a time draft drawn on the exporter's bank.

B) a method to help importers evaluate the creditworthiness of exporters.

C) a liability of the importer and the importer's bank.

D) an add-on instrument.

E) for greater than one year maturity.

Answer: C

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

31) The most liquid of the money market securities are

A) commercial paper.

B) banker's acceptances.

C) T-bills.

D) Fed funds.

E) repurchase agreements.

Answer: C

Difficulty: 1 Easy

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

32) In dollars outstanding in 2016, the largest money market security was

A) commercial paper.

B) banker's acceptances.

C) T-bills.

D) Fed funds and repos.

Answer: D

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

33) You buy a $10,000 par Treasury bill at $9,575 and sell it 60 days later for $9,675. What was your EAR?

A) 4.44 percent

B) 6.29 percent

C) 6.35 percent

D) 6.52 percent

E) 6.67 percent

Answer: D

Explanation: (9,675/9,575)(365/60) − 1 = .06524 = 6.52%

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

34) LIBOR is generally \_\_\_\_\_\_\_\_ the Fed funds rate because foreign bank deposits are generally \_\_\_\_\_\_\_\_ than domestic bank deposits.

A) greater than; less risky

B) less than; more risky

C) the same as; equally risk

D) greater than; more risky

E) less than; less risky

Answer: D

Difficulty: 2 Medium

Topic: International Aspects of Money Markets

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-05 Examine the extent to which foreign investors participate in U.S. money markets.

Accessibility: Keyboard Navigation

35) A U.S. exporter sells $150,000 of furniture to a Latin American importer. The exporter requires the importer to obtain a letter of credit. When the bank accepts the draft, the exporter discounts the 120-day note at a 5.25 percent discount. What is the exporter's true effective annual financing cost?

A) 5.52 percent

B) 5.42 percent

C) 5.34 percent

D) 5.29 percent

E) 5.25 percent

Answer: A

Explanation: 150,000 × [1 − (0.0525 × 120/360)] = 147,375; (150,000/147,375)365/120 − 1 = 5.52%

Difficulty: 3 Hard

Topic: Money Market Securities

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

36) A Chinese exporter sells $200,000 of toys to a French importer. The Chinese exporter requires the French importer to obtain a letter of credit. When the bank accepts the draft, the exporter discounts the 90-day note at a 4 percent discount. What is the exporter's true effective annual financing cost?

A) 4.00 percent

B) 4.04 percent

C) 4.10 percent

D) 4.16 percent

E) 4.22 percent

Answer: D

Explanation: 200,000 × [1 − (0.04 × 90/360)] = 198,000; (200,000/198,000)365/90 − 1 = 4.16%

Difficulty: 3 Hard

Topic: Money Market Securities

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

37) If a $10,000 par T-bill has a 3.75 percent discount quote and a 90-day maturity, what is the price of the T-bill to the nearest dollar?

A) $9,625.

B) $9,906.

C) $9,908.

D) $9,627.

E) None of these choices are correct.

Answer: B

Explanation: 10,000 × [1 − (0.0375 × 90/360)] = 9,906

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

38) A 90-day T-bill is selling for $9,900. The par is $10,000. The effective annual return on the T-bill is (watch your rounding)

A) 4.00 percent.

B) 4.16 percent.

C) 4.10 percent.

D) 4.04 percent.

E) 4.21 percent.

Answer: B

Explanation: (10,000/9,900)(365/90) − 1

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

39) Suppose that $10 million face value commercial paper with a 270-day maturity is selling for $9.55 million. What is the BEY on the paper?

A) 4.71 percent

B) 6.42 percent

C) 6.37 percent

D) 6.28 percent

E) 4.50 percent

Answer: C

Explanation: ((10 million/9.55 million) − 1) × (365/270)

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

40) A $2 million jumbo CD is paying a quoted 3.55 percent interest rate on 180-day maturity CDs. How much money will you have at maturity if you invest in the CD?

A) $2,000,000

B) $2,035,014

C) $2,035,500

D) $2,071,000

E) $2,088,400

Answer: C

Explanation: 2,000,000 × [1 + (0.0355 × 180/360)]

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

41) From 1990 to 2016, which one of the following money market securities actually declined in terms of dollar amount outstanding?

A) Commercial paper

B) Treasury bills

C) Federal funds and repos

D) Negotiable CDs

E) Banker's acceptances

Answer: E

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

42) A 50-day maturity money market security has a bond equivalent yield of 3.60 percent. The security's EAR is

A) 3.69 percent.

B) 3.61 percent.

C) 3.55 percent.

D) 3.87 percent.

E) 3.66 percent.

Answer: E

Explanation: EAR = (1 + (0.0360/(365/50)))365/50 − 1 = 3.66%

Difficulty: 3 Hard

Topic: Money Market Securities

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

43) In a Treasury auction, preferential bidding status is granted to

A) competitive bidders.

B) noncompetitive bidders.

C) short sale committed bidders.

D) commercial bank bidders.

E) no group of bidders.

Answer: B

Difficulty: 1 Easy

Topic: Money Market Securities

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-03 Examine the process used to issue Treasury securities.

Accessibility: Keyboard Navigation

44) If your firm enters into an overnight reverse repurchase agreement, your firm is

A) borrowing Fed funds temporarily.

B) selling a security now while agreeing to buy it back tomorrow.

C) giving an unsecured loan to the counterparty.

D) procuring a banker's acceptance.

E) None of these choices are correct.

Answer: E

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

45) Eurodollar CDs would include

A) CDs denominated in Euros.

B) dollar investments by European entities in the United States.

C) dollars deposited in Caribbean banks.

D) dollars deposited in Europe.

E) dollars deposited in Caribbean banks and dollars deposited in Europe.

Answer: E

Difficulty: 2 Medium

Topic: International Aspects of Money Markets

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-05 Examine the extent to which foreign investors participate in U.S. money markets.

Accessibility: Keyboard Navigation

46) Which of the following descriptions does not apply to money market securities?

A) Short-term

B) Low-risk

C) Highly liquid

D) Long maturity

E) High denominations

Answer: D

Difficulty: 1 Easy

Topic: Money Markets

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

47) The most active and important participant in the U.S. money market

A) is the U.S. Treasury.

B) are the large banks.

C) are the investment banks.

D) are the insurance companies.

E) is the Federal Reserve.

Answer: E

Difficulty: 1 Easy

Topic: Money markets participants

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-04 List the main participants in money markets.

Accessibility: Keyboard Navigation

48) The most significant borrower in the U.S. money markets?

A) Are commercial banks

B) Are large corporations

C) Is the U.S. Treasury

D) Are the investment banks

E) Are the insurance companies

Answer: C

Difficulty: 1 Easy

Topic: Money markets participants

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-04 List the main participants in money markets.

Accessibility: Keyboard Navigation

49) A noncompetitive bid for Treasury bill auction provides

A) all noncompetitive bidders the same price.

B) all competitive bidders the same price.

C) all noncompetitive bidders the same quantity.

D) all noncompetitive bidders lesser price than the competitive bidders.

E) all competitive bidders the same quantity.

Answer: A

Difficulty: 2 Medium

Topic: Treasury Bills

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-03 Examine the process used to issue Treasury securities.

Accessibility: Keyboard Navigation

50) What is the price of 182-day money market security with face value of $7,000 if the BEY is 3.574%?

A) $6,877.44

B) $6,925.48

C) $6,634.47

D) $6,725.36

E) $6,452.39

Answer: A

Explanation: (7,000 − P)/P × 365/182 = 0.03574

(7,000 − P)/P = 0.01782

P = $6,877.44

Difficulty: 3 Hard

Topic: Yields on Money Market Securities

Bloom's: Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

51) Why do most money market securities have large denominations?

Answer: The market has developed for institutional investors because institutional investors have large enough quantities of money to make it costly for them to not invest their excess funds. For most individual investors, the dollars lost by not keeping fully invested in interest-bearing assets is very minimal.

Difficulty: 1 Easy

Topic: Money Markets

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

52) Given the functions of the money markets, why is it necessary for money market securities to have a maturity of one year or less and low default risk?

Answer: Because these markets are designed to provide safe investments with little or no chance of principal loss. If you could lose principal, you would be very unlikely to invest funds that are shortly needed. Low default risk implies that the promised cash flows will in all likelihood be paid in full and on time. The short maturity ensures that the value of these securities will be relatively insensitive to interest rate changes and, also, there is not much time for the issuer's condition to change—this also limits the risk.

Difficulty: 2 Medium

Topic: Money Markets

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-01 Define money markets.

Accessibility: Keyboard Navigation

53) What is the difference between a discriminating auction and a single price auction? How is the final price determined in a single price auction? Why did the Treasury switch to a single price auction?

Answer: In a discriminating price auction, different bidders pay a different price for the same securities. In a single price auction, all successful bidders pay the same price, regardless of the specific price they bid. The final price is set as the lowest price of the competitive bids accepted. The Treasury switched to single price auctions because they found that in single price auctions, there tended to be more winning bidders and that bidders bid more aggressively (made higher bids), resulting in overall higher bid prices and revenues for the government.

Difficulty: 3 Hard

Topic: Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-03 Examine the process used to issue Treasury securities.

Accessibility: Keyboard Navigation

54) A government securities dealer needs to make a 7 percent pretax annual return on $10 million of capital employed to make it worthwhile to make a market in T-bills. If the bid discount on $10,000 face value 90-day T-bills is 3.50 percent, and the dealer can expect to do 5,200 round trip deals today, what must the ask discount be? Hint: A round trip is a buy and a sell transaction.

Answer: Bid Price = $10,000 × [1 − .035 × (90/360)] = $9,913

$10 million × (0.07/365) = (Required Ask Price − $9,913) × 5,200 deals

Required Ask = $9,913.37

Ask Discount = (($10,000 − $9,913.37)/$10,000) × (360/90) = 3.465%

Difficulty: 3 Hard

Topic: Yields on Money Market Securities

Bloom's: Analyze; Apply; Evaluate

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-01 Define money markets.; 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

55) How does a repo differ from a Fed funds transaction? How do their rates compare?

Answer: A repo is basically a collateralized loan, whereas Fed funds are uncollateralized. The repo rate will typically be slightly below the equivalent maturity Fed funds rate because the repos are collateralized. Repos are likely to be for longer maturity than Fed funds, although both may involve transfers of deposits held at the Fed. Fed funds loans can be arranged more quickly because no change of title of securities is involved.

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

56) As a corporate treasurer who is unsure how soon funds will be needed, which type of money market investment might you prefer? Explain the trade-offs. Would your answer differ if you had a definite time period during which you would not need the money? Explain.

Answer: If liquidity is a primary concern, then T-bills may be the best choice because they are by far the most liquid. They also typically offer the lowest rate of return because of government backing and high liquidity. If you knew for certain (or with high probability) that the funds will not be needed, then term repos, commercial paper, or banker's acceptances may offer better rates of return.

Difficulty: 2 Medium

Topic: Money Market Securities; Money Market Participants

Bloom's: Understand; Analyze; Evaluate

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.; 05-04 List the main participants in money markets.

Accessibility: Keyboard Navigation

57) A corporate treasurer is looking to invest about $4 million for 60 days. Commercial paper rates are a 3.65 percent discount and CD rates are 3.66 percent. Comparing the bond equivalent yields over a 365-day year, which is the best alternative? What is the opportunity cost of leaving the funds idle? (Watch your rounding.)

Answer: Find the BEY on each

CP: Price = $4 million × [1 − 0.0365 × (60/360)] = $3,975,667

[($4 million/$3,975,667) − 1] × (365/60) = 3.7233% BEY

CD: $4 million × [1 + 0.0366 × (60/360)] = $4,024,400

[($4,024,400/$4 million) − 1] × (365/60) = 3.7108% BEY

The best deal is the CP and the opportunity cost is 3.7233%.

Difficulty: 3 Hard

Topic: Money Market Securities; Money Market Participants

Bloom's: Analyze; Apply; Evaluate

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.; 05-04 List the main participants in money markets.

Accessibility: Keyboard Navigation

58) How does a banker's acceptance (BA) help create more international trade?

Answer: Importers do not wish to pay until they receive the goods and exporters do not wish to ship until they receive payment. The creation of a BA allows the exporter to ship prior to receipt of payment, while substituting the creditworthiness of a large international bank for the unknown creditworthiness of the importer.

Difficulty: 1 Easy

Topic: Money Market Securities

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

59) Who are the major participants in money markets?

Answer: U.S. Treasury

Commercial banks

Federal Reserve

Brokers and dealers

Corporations

Other financial institutions

Difficulty: 1 Easy

Topic: Money Market Participants

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 05-04 List the main participants in money markets.

Accessibility: Keyboard Navigation

60) One-hundred-eighty-day commercial paper can be bought at a 3.75 percent discount. What are the bond equivalent yield and the effective annual rate on the commercial paper? Why do these rates differ?

Answer: Commercial paper price/100 of par = 100 × (1 − (0.04 × 180/360)) = 98

Effective annual rateCP = (100/98)365/180 − 1 = 4.182%

Bond equivalent yield = [(100 − 98)/98] × 365/180 = 4.139%

The discount quote is an annual quote calculated as (Par − Price)/Par, assuming that there are 360 days in a year. The bond equivalent yield is an annual rate calculated as (Par − Price)/Price, which is the normal way to express a percentage return ($ return per $ invested), assuming that there are 365 days in the year. The effective annual return or EAR is the same as the bond equivalent yield, except that the EAR annualizes the rate of return assuming the proceeds from each 180-day period are reinvested during the next 180-day period, and so on.

Difficulty: 2 Medium

Topic: Money Market Securities

Bloom's: Understand; Analyze; Apply

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.

Accessibility: Keyboard Navigation

61) You are a corporate treasurer for Esso Oil. The quoted rate on dollar-denominated euro commercial paper has just blipped down recently. Your firm can issue $10 million of 180-day euro commercial paper in the London markets at 3.45 percent. You can also invest the proceeds in the United States in comparable maturity negotiable dollar-denominated CDs, which are quoting 3.95 percent. Ignoring any transactions costs, how much money, if any, can Esso make by borrowing in the euro markets and investing in the United States? Is this a good deal or not? Should you expect it to last? Explain.

Answer: Initial proceeds from issuing euro commercial paper (CP) = $10 million × [1 − (0.0345 × 180/360)] = $9,827,500; invest the proceeds of $9,827,500 in 180-day CDs and you will wind up with $9,827,500 × [1 + (0.0395 × 180/360)] = $10,021,593.

Repay the $10,000,000 owed on the CP and Esso will clear $21,593.

If the CDs are not very risky, then this represents an arbitrage opportunity for Esso; because they are not using their own money, the rate of return is infinite. Since this is an arbitrage strategy, we would not expect this big a difference in the rates to persist. (Exxon constructed a similar arbitrage several years ago using euro commercial paper and T-bills.)

Difficulty: 3 Hard

Topic: Money Market Securities; International Aspects of Money Markets; Money Market Participants

Bloom's: Analyze; Evaluate

AACSB: Reflective Thinking; Analytical Thinking

Learning Goal: 05-02 Identify the major types of money market securities.; 05-05 Examine the extent to which foreign investors participate in U.S. money markets.; 05-04 List the main participants in money markets.

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