

**I. DEFINITIONS**

**AMERICAN DEPOSITORY RECEIPT**

- a 1. A security issued in the United States that represents shares of a foreign stock and allows that stock to be traded in the United States is called a(n):
  - a. American Depository Receipt.
  - b. Yankee bond.
  - c. Yankee stock.
  - d. Eurostock.
  - e. foreign obligation trust certificate.

**CROSS-RATE**

- b 2. The implicit exchange rate between two currencies when both are quoted in some third currency is called a(n):
  - a. open exchange rate.
  - b. cross-rate.
  - c. backward rate.
  - d. forward rate.
  - e. interest rate.

**EUROBONDS**

- c 3. International bonds issued in multiple countries but denominated in a single currency are called:
  - a. Treasury bonds.
  - b. Bulldog bonds.
  - c. Eurobonds.
  - d. Yankee bonds.
  - e. Samurai bonds.

**EUROCURRENCY**

- d 4. Money deposited in a financial center outside the country whose currency is involved is called:
  - a. a foreign depository receipt.
  - b. an international exchange certificate.
  - c. Euroyen.
  - d. Eurocurrency.
  - e. Eurodollars.

**FOREIGN BONDS**

- e 5. International bonds issued in a single country and denominated in that country's currency are called:
- a. Treasury bonds.
  - b. Eurobonds.
  - c. gilts.
  - d. Brady bonds.
  - e. foreign bonds.

**YANKEE BOND**

- c 6. A foreign bond issued in the United States and denominated in dollars is called a(n):
- a. American Depository Receipt.
  - b. European Currency Unit.
  - c. Yankee bond.
  - d. swap bond.
  - e. Eurobond.

**SAMURAI BOND**

- d 7. A foreign bond issued in Japan and denominated in yen is called a(n):
- a. American Depository Receipt.
  - b. European Currency Unit.
  - c. swap bond.
  - d. Samurai bond.
  - e. Eurobond.

**GILTS**

- a 8. Gilts are government securities issued by:
- a. Britain and Ireland.
  - b. Japan.
  - c. Germany.
  - d. Australia and New Zealand.
  - e. Italy.

**LONDON INTERBANK OFFER RATE**

- b 9. The rate most international banks charge one another for overnight Eurodollar loans is called the:
- a. Eurodollar yield to maturity.
  - b. London Interbank Offer Rate.
  - c. Paris Opening Interest Rate.
  - d. United States Treasury bill rate.
  - e. international prime rate.

**FOREIGN EXCHANGE MARKET**

- c 10. The foreign exchange market is where:
- a. one country's stocks are exchanged for another's.
  - b. one country's bonds are exchanged for another's.
  - c. one country's currency is traded for another's.
  - d. international banks make loans to one another.
  - e. international businesses finalize import/export relationships with one another.

**EXCHANGE RATE**

- d 11. The price of one country's currency expressed in terms of another country's currency is:
- a. by definition, one unit of currency.
  - b. the cross inflation rate.
  - c. the depository rate.
  - d. the exchange rate.
  - e. the foreign interest rate.

**SPOT TRADE**

- e 12. An agreement to trade currencies based on the exchange rate today for settlement within two business days is called a(n) \_\_\_\_\_ trade.
- a. swap
  - b. option
  - c. futures
  - d. forward
  - e. spot

**SPOT EXCHANGE RATE**

- a 13. The exchange rate on a spot trade is called the \_\_\_\_\_ exchange rate.
- a. spot
  - b. forward
  - c. triangle
  - d. cross
  - e. open

**FORWARD TRADE**

- b 14. An agreement to exchange currencies at some point in the future using an agreed-upon exchange rate is called a \_\_\_\_\_ trade.
- a. spot
  - b. forward
  - c. swap
  - d. floating
  - e. triangle

**FORWARD EXCHANGE RATE**

- c 15. The agreed-upon exchange rate used in a forward trade is called the \_\_\_\_\_ exchange rate.
- a. spot
  - b. swap
  - c. forward
  - d. parity
  - e. triangle

**PURCHASING POWER PARITY**

- d 16. The idea that the exchange rate adjusts to keep buying power constant among currencies is called:
- a. the unbiased forward rates condition.
  - b. uncovered interest rate parity.
  - c. the international Fisher effect.
  - d. purchasing power parity.
  - e. interest rate parity.

**ABSOLUTE PURCHASING POWER PARITY**

- b 17. \_\_\_\_\_ explains the absolute level of the exchange rate.
- a. The forward exchange rate
  - b. Absolute purchasing power parity
  - c. The international Fisher effect
  - d. Relative purchasing power parity
  - e. The Fisher effect

**ABSOLUTE PURCHASING POWER PARITY**

- b 18. The idea that commodities have the same value no matter where they are purchased or what currency is used is known as \_\_\_\_\_ parity.
- a. forward exchange rates
  - b. absolute purchasing power
  - c. interest rate
  - d. relative purchasing power
  - e. uncovered interest rate

**COVERED INTEREST ARBITRAGE**

- b 19. \_\_\_\_\_ holds because of the possibility of covered interest arbitrage.
- a. Uncovered interest parity
  - b. Interest rate parity
  - c. The international Fisher effect
  - d. Unbiased forward rates
  - e. Purchasing power parity

**INTEREST RATE PARITY**

- e 20. The condition stating that the interest rate differential between two countries is equal to the percentage difference between the forward exchange rate and the spot exchange rate is called:
- a. the unbiased forward rates condition.
  - b. uncovered interest rate parity.
  - c. the international Fisher effect.
  - d. purchasing power parity.
  - e. interest rate parity.

**UNBIASED FORWARD RATES**

- a 21. The condition stating that the current forward rate is an unbiased predictor of the future spot exchange rate is called:
- a. the unbiased forward rates condition.
  - b. uncovered interest rate parity.
  - c. the international Fisher effect.
  - d. purchasing power parity.
  - e. interest rate parity.

**UNCOVERED INTEREST PARITY**

- b 22. The condition stating that the expected percentage change in the exchange rate is equal to the difference in interest rates between the countries is called:
- a. the unbiased forward rates condition.
  - b. uncovered interest parity.
  - c. the international Fisher effect.
  - d. purchasing power parity.
  - e. interest rate parity.

**INTERNATIONAL FISHER EFFECT**

- c 23. The theory that real interest rates are equal across countries is called:
- a. the unbiased forward rates condition.
  - b. uncovered interest rate parity.
  - c. the international Fisher effect.
  - d. purchasing power parity.
  - e. interest rate parity.

**EXCHANGE RATE RISK**

- d 24. The risk related to having international operations in a world where relative currency values vary is called \_\_\_\_\_ risk.
- a. international
  - b. diversifiable
  - c. purchasing power
  - d. exchange rate
  - e. political

**POLITICAL RISK**

- e 25. The risk related to changes in value that arise because of political actions is called \_\_\_\_\_ risk.
- a. international
  - b. diversifiable
  - c. purchasing power
  - d. exchange rate
  - e. political

**II. CONCEPTS**

**FOREIGN EXCHANGE MARKET**

- b 26. Which of the following statements are correct concerning the foreign exchange market?
- I. The trading floor of the foreign exchange market is located in London, England.
  - II. The foreign exchange market is the world's largest financial market.
  - III. The four primary currencies that are traded in the foreign exchange market are the U.S. dollar, the British pound, the Canadian dollar, and the euro.
  - IV. Importers and exporters are key players in the foreign exchange market.
- a. I and III only
  - b. II and IV only
  - c. I and II only
  - d. III and IV only
  - e. I and IV only

**TRIANGLE ARBITRAGE**

- c 27. Triangle arbitrage:
- I. is a profitable situation involving three separate currency exchange transactions.
  - II. helps keep the currency market in equilibrium.
  - III. opportunities can exist in either the spot or the forward market.
  - IV. only involves currencies other than the U.S. dollar.
- a. I and IV only
  - b. II and III only
  - c. I, II, and III only
  - d. II, III, and IV only
  - e. I, II, III, and IV

**SPOT TRADES**

- c 28. Spot trades must be settled:
- a. on the day of the trade.
  - b. on the day following the day of the trade.
  - c. within two business days.
  - d. within three business days.
  - e. within one week of the trade date.

**PREMIUM/DISCOUNT**

- d 29. Assume that the euro is selling in the spot market for \$1.10. Simultaneously, in the 3-month forward market the euro is selling for \$1.12. Which one of the following statements correctly describes this situation?
- The spot market is out of equilibrium.
  - The forward market is out of equilibrium.
  - The dollar is selling at a premium relative to the euro.
  - The euro is selling at a premium relative to the dollar.
  - None of the other four statements correctly describes this situation.

**ABSOLUTE PURCHASING POWER PARITY**

- c 30. Which one of the following formulas expresses the absolute purchasing power parity relationship between the U.S. dollar and the British pound?
- $S_0 = P_{UK} \times P_{US}$
  - $R_{US} = F_t \times R_{UK}$
  - $P_{UK} = S_0 \times P_{US}$
  - $F_t = R_{US} \times R_{UK}$
  - $S_0 \times F_t = P_{UK} \times P_{US}$

**ABSOLUTE PURCHASING POWER PARITY**

- e 31. Which of the following conditions exist if absolute purchasing power parity exists?
- the goods are identical
  - the goods have equal economic values
  - transaction costs are equal to zero
  - there are no trade barriers
- I and III only
  - II and IV only
  - I, III, and IV only
  - I, II, and III only
  - I, II, III, and IV

**ABSOLUTE PURCHASING POWER PARITY**

- c 32. Absolute purchasing power parity is most apt to exist for which one of the following items?
- house
  - computer
  - silver
  - car
  - refrigerator

**RELATIVE PURCHASING POWER PARITY**

- b 33. Relative purchasing power parity:
- states that identical items should cost the same regardless of the currency used to make the purchase.
  - relates differences in inflation rates to changes in exchange rates.
  - compares the real rate of return to the nominal rate of return.
  - looks at the factors that determine the changes in interest rates.
  - analyzes the changes in inflation rates to determine the cause.

**RELATIVE PURCHASING POWER PARITY**

## CHAPTER 22

- a 34. Which one of the following formulas correctly describes the relative purchasing power parity relationship?
- a.  $E(S_t) = S_0 \times [1 + (h_{FC} - h_{US})]^t$
  - b.  $E(S_t) = S_0 \times [1 - (h_{FC} - h_{US})]^t$
  - c.  $E(S_t) = S_0 \times [1 + (h_{US} + h_{FC})]^t$
  - d.  $E(S_t) = S_0 \times [1 - (h_{US} - h_{FC})]^t$
  - e.  $E(S_t) = S_0 \times [1 + (h_{US} - h_{FC})]^t$

### CURRENCY APPRECIATION

- c 35. Which one of the following statements is correct assuming that exchange rates are quoted as units of foreign currency per dollar?
- a. The exchange rate moves opposite to the value of the dollar.
  - b. The exchange rate rises when the U.S. inflation rate is higher than the foreign country's.
  - c. When a foreign currency appreciates in value it strengthens relative to the dollar.
  - d. The exchange rate falls as the dollar strengthens.
  - e. The exchange rate is unaffected by differences in the inflation rates of the two countries.

### COVERED INTEREST ARBITRAGE

- d 36. Covered interest arbitrage involves:
- a. the use of forward rates but not spot rates.
  - b. the use of spot rates but not forward rates.
  - c. neither spot rates nor forward rates.
  - d. both spot and forward rates.
  - e. currency forward and futures rates but not spot rates.

### INTEREST RATE PARITY

- a 37. Interest rate parity:
- a. eliminates covered interest arbitrage opportunities.
  - b. exists when spot rates are equal for multiple countries.
  - c. means that the nominal risk-free rate of return must be the same across countries.
  - d. exists when the spot rate is equal to the futures rate.
  - e. eliminates exchange rate fluctuations.

### INTEREST RATE PARITY

- c 38. The interest rate parity approximation formula is:
- a.  $F_t = S_0 \times [1 + (R_{FC} + R_{US})]^t$
  - b.  $F_t = S_0 \times [1 - (R_{FC} - R_{US})]^t$
  - c.  $F_t = S_0 \times [1 + (R_{FC} - R_{US})]^t$
  - d.  $F_t = S_0 \times [1 + (R_{FC} \times R_{US})]^t$
  - e.  $F_t = S_0 \times [1 - (R_{FC} + R_{US})]^t$



**UNBIASED FORWARD RATES**

- e 39. The unbiased forward rate is a:
- condition where a future spot rate is equal to the current spot rate.
  - guarantee of a future spot rate at one point in time.
  - condition where the spot rate is expected to remain constant over a period of time.
  - relationship between the future spot rate of two currencies at an equivalent point in time.
  - predictor of the future spot rate at the equivalent point in time.

**UNBIASED FORWARD RATES**

- d 40. The forward rate market is dependent upon:
- current forward rates exceeding current spot rates.
  - current spot rates exceeding current forward rates over time.
  - current spot rates equaling current forward rates on average over time.
  - forward rates equaling the actual future spot rates on average over time.
  - current spot rates equaling the actual future spot rates on average over time.

**UNCOVERED INTEREST PARITY**

- b 41. Uncovered interest parity is defined as:
- $E(S_t) = S_0 \times [1 + (h_{FC} - h_{US})]^t$ .
  - $E(S_t) = S_0 \times [1 + (R_{FC} - R_{US})]^t$ .
  - $E(S_t) = S_0 \times [1 - (R_{FC} - R_{US})]^t$ .
  - $E(S_t) = S_0 \times [1 + (h_{FC} + h_{US})]^t$ .
  - $E(S_t) = S_0 \times [1 + (R_{FC} + R_{US})]^t$ .

**INTERNATIONAL FISHER EFFECT**

- e 42. The international Fisher effect says that \_\_\_\_\_ rates are equal across countries.
- spot
  - one-year future
  - nominal
  - inflation
  - real

**INTERNATIONAL FISHER EFFECT**

- d 43. The international Fisher effect is expressed as:
- $E(S_1) = S_0 \times [1 + (h_{FC} - h_{US})]$ .
  - $E(S_1) = S_0 - [1 \times (h_{FC} - h_{US})]$ .
  - $R_{US} + h_{US} = R_{FC} + h_{FC}$ .
  - $R_{US} - h_{US} = R_{FC} - h_{FC}$ .
  - $R_{US} \times h_{US} = R_{FC} \times h_{FC}$ .

**HOME CURRENCY APPROACH**

- b 44. The home currency approach:
  - a. discounts all of a project's foreign cash flows using the current spot rate.
  - b. employs uncovered interest parity to project future exchange rates.
  - c. computes the net present value (NPV) of a project in the foreign currency and then converts that NPV into U.S. dollars.
  - d. utilizes the international Fisher effect to compute the NPV of foreign cash flows in the foreign currency.
  - e. utilizes the international Fisher effect to compute the relevant exchange rates needed to compute the NPV of foreign cash flows in U.S. dollars.

**HOME CURRENCY APPROACH**

- b 45. The home currency approach:
  - a. generally produces more reliable results than those found using the foreign currency approach.
  - b. requires an applicable exchange rate for every time period for which there is a cash flow.
  - c. uses the current risk-free nominal rate to discount all of the cash flows related to a project.
  - d. stresses the use of the real rate of return to compute the net present value (NPV) of a project.
  - e. converts a foreign denominated NPV into a dollar denominated NPV.

**FOREIGN CURRENCY APPROACH**

- c 46. The foreign currency approach to capital budgeting analysis:
  - I. is computationally easier to use than the home currency approach.
  - II. produces the same results as the home currency approach.
  - III. utilizes the uncovered interest parity relationship.
  - IV. computes the net present value of a project in both the foreign and in the domestic currency.
  - a. I and III only
  - b. II and IV only
  - c. I, II, and IV only
  - d. II, III, and IV only
  - e. I, II, III, and IV

**EXCHANGE RATE RISK**

- c 47. An international firm which imports raw materials can reduce their \_\_\_\_\_ exposure to \_\_\_\_\_ rate risk by entering into a forward contract.
  - a. long-term; inflation
  - b. short-term; inflation
  - c. short-run; exchange
  - d. long-run; exchange
  - e. total; interest

**EXCHANGE RATE RISK**

- d 48. The changes in the relative economic conditions between countries are referred to as the:
- international Fisher effect.
  - international exchange rate effect.
  - translation exposure to exchange rate risk.
  - long-run exposure to exchange rate risk.
  - the interest rate parity risk.

**EXCHANGE RATE RISK**

- b 49. The translation exposure to exchange rate risk is best described as:
- the risk that a positive net present value (NPV) project could turn into a negative NPV project because of changes in the exchange rate between two countries.
  - the problems encountered by accountants of international firms who are trying to record balance sheet account values.
  - the fluctuation in prices faced by importers of foreign goods.
  - the variance in relative pay rates based on the currency utilized to pay an employee.
  - the variance in revenue between an exporter who utilizes forward rates and an equivalent exporter who does not.

**EXCHANGE RATE RISK**

- a 50. Which of the following statements are correct?
- The usage of forward rates can help reduce the short-run exposure to exchange rate risk.
  - Accounting translation gains are recorded on the income statement as other income.
  - The long-run exchange rate risk faced by an international firm can be reduced if the firm borrows money in the foreign country where they have operations.
  - Unexpected changes in economic conditions are classified as short-run exposure to exchange rate risk.
- I and III only
  - II and IV only
  - II and III only
  - I and IV only
  - I and II only

**III. PROBLEMS****CURRENCY CONVERSION**

- b 51. How many euros can you get for \$2,500 given the following exchange rates?

	<u>Country</u>	<u>U.S. \$ Equivalent</u>	<u>Currency per U.S. \$</u>
	Euro	1.0609	.9426
a.	€2,306		
b.	€2,357		
c.	€2,451		
d.	€2,652		
e.	€2,675		

**CURRENCY CONVERSION**

- a 52. You are planning a trip to Australia. Your hotel will cost you A\$150 per night for five nights. You expect to spend another A\$2,000 for meals, tours, souvenirs, and so forth. How much will this trip cost you in U.S. dollars given the following exchange rates?

	<u>Country</u>	<u>U.S. \$ Equivalent</u>	<u>Currency per U.S. \$</u>
	Australia	.7004	1.4278
a.	\$1,926		
b.	\$2,007		
c.	\$2,782		
d.	\$2,856		
e.	\$3,926		

**CURRENCY CONVERSION**

- c 53. You want to import \$45,000 worth of rugs from India. How many rupees will you need to pay for this purchase if one rupee is worth \$.0218?
- 1,843,010Rs
  - 2,032,018Rs
  - 2,064,220Rs
  - 2,075,002Rs
  - 2,076,289Rs

**CROSS-RATE**

- e 54. Currently, \$1 will buy C\$1.36 while \$1.10 will buy €1. What is the exchange rate between the Canadian dollar and the euro?
- C\$1 = €1.10
  - C\$1 = €1.9091
  - C\$1 = €1.2364
  - C\$1.36 = €1.10
  - C\$1.36 = €1.9091

**CROSS-RATE**

- e 55. Assume that ¥107.62 equal \$1. Also assume that 7.5415Skr equal \$1. How many Japanese yen can you acquire in exchange for 6,200 Swedish krona?
- ¥419
  - ¥434
  - ¥41,719
  - ¥46,757
  - ¥88,476

**CROSS-RATE**

- d 56. You just returned from some extensive traveling throughout the Americas. You started your trip with \$10,000 in your pocket. You spent 1.4 million pesos while in Chile. You spent another 40,000 bolivars in Venezuela. Then on the way home, you spent 34,000 pesos in Mexico. How many dollars did you have left by the time you returned to the U.S. given the following exchange rates?

<u>Country</u>	<u>U.S. \$ Equivalent</u>	<u>Currency per U.S. \$</u>
Chile	?	633.31
Mexico	.0882	?
Venezuela	?	1919.39

- a. \$3,887  
 b. \$4,039  
 c. \$4,117  
 d. \$4,244  
 e. \$4,299

**TRIANGLE ARBITRAGE**

- b 57. Assume that you can buy 250 Canadian dollars with 100 British pounds. Which one of the following statements is correct given the following exchange rates? Assume that you start out with British pounds.

<u>Country</u>	<u>U.S. \$ Equivalent</u>	<u>Currency per U.S. \$</u>
Canada	?	1.3500
U.K.	1.8305	?

- a. You can earn a profit of C\$2.47 by using triangle arbitrage.  
 b. You can earn a profit of £1.17 by using triangle arbitrage.  
 c. You can earn a profit of C\$1.17 by using triangle arbitrage.  
 d. You can earn a profit of £2.47 by using triangle arbitrage.  
 e. You can not earn a profit given the current exchange rates.

**TRIANGLE ARBITRAGE**

- a 58. Assume that you can buy 245 Canadian dollars with 100 British pounds. How much profit can you earn on a triangle arbitrage given the following rates if you start out with 100 U.S. dollars?

<u>Country</u>	<u>U.S. \$ Equivalent</u>	<u>Currency per U.S. \$</u>
Canada	?	1.3500
U.K.	1.8305	?

- a. \$.86  
 b. \$.93  
 c. \$1.09  
 d. \$1.37  
 e. \$1.55

**CURRENCY APPRECIATION/DEPRECIATION**

- e 59. Today, you can exchange \$1 for £.5428. Last week, £1 was worth \$1.88. If you had converted £100 into dollars last week you would now have a:
- profit of \$2.05.
  - loss of \$2.01.
  - profit of £2.01.
  - loss of \$2.05.
  - profit of £2.05.

**CURRENCY APPRECIATION/DEPRECIATION**

- e 60. Today, you can get either 140 Canadian dollars or 1,140 Mexican pesos for 100 U.S. dollars. Last year, 100 U.S. dollars was worth 139 Canadian dollars and 1,160 Mexican pesos. Which one of the following statements is correct given this information?
- \$100 invested in Canadian dollars last year would now be worth 1,148.20 Mexican pesos.
  - \$100 invested in Mexican pesos last year would now be worth \$98.28.
  - \$100 invested in Mexican pesos last year would now be worth \$102.03
  - \$1,200 invested in Canadian dollars last year would now be worth \$1,208.63.
  - \$1,200 invested in Canadian dollars last year would now be worth \$1,191.43.

**ABSOLUTE PURCHASING POWER PARITY**

- d 61. The camera you want to buy costs \$399 in the U.S. If absolute purchasing power parity exists, the identical camera will cost \_\_\_\_\_ in Canada if the exchange rate is C\$1 = \$.7349.
- \$266.67
  - \$293.23
  - \$505.09
  - \$542.93
  - \$566.67

**ABSOLUTE PURCHASING POWER PARITY**

- a 62. A new sweater costs 1,449.95 Russian rubles. How much will the identical sweater cost in euros if absolute purchasing power parity exists and the following exchange rates apply?

	<u>Country</u>	<u>U.S. \$ Equivalent</u>	<u>Currency per U.S. \$</u>
	Russia	?	29.0190
	Euro	1.2159	?
a.	€41.09		
b.	€43.08		
c.	€45.90		
d.	€58.25		
e.	€60.75		

**ABSOLUTE PURCHASING POWER PARITY**

- c 63. Assume that \$1 can buy you either ¥107 or £.55. If a TV in London costs £500, what will that identical TV cost in Tokyo if absolute purchasing power parity exists?
- ¥95,255
  - ¥96,667
  - ¥97,273
  - ¥98,008
  - ¥118,889

**RELATIVE PURCHASING POWER PARITY**

- d 64. In the spot market, \$1 is currently equal to A\$1.42. The expected inflation rate is 3 percent in Australia and 2 percent in the U.S.. What is the expected exchange rate one year from now if relative purchasing power parity exists?
- A\$1.4058
  - A\$1.4062
  - A\$1.4286
  - A\$1.4342
  - A\$1.4484

**RELATIVE PURCHASING POWER PARITY**

- b 65. In the spot market, \$1 is currently equal to £.55. The expected inflation rate in the U.K. is 2 percent and in the U.S. 4 percent. What is the expected exchange rate one year from now if relative purchasing power parity exists?
- £.536
  - £.539
  - £.541
  - £.544
  - £.564

**RELATIVE PURCHASING POWER PARITY**

- d 66. In the spot market, \$1 is currently equal to £.55. The expected inflation rate in the U.K. is 4 percent and in the U.S. 3 percent. What is the expected exchange rate two years from now if relative purchasing power parity exists?
- £.5391
  - £.5445
  - £.5555
  - £.5611
  - £.5667

**COVERED INTEREST ARBITRAGE**

- b 67. The current spot rate is C\$1.400 and the one-year forward rate is C\$1.344. The nominal risk-free rate in Canada is 4 percent while it is 8 percent in the U.S. Using covered interest arbitrage you can earn an extra \_\_\_\_\_ profit over that which you would earn if you invested \$1 in the U.S.
- \$ .0000
  - \$ .0033
  - \$ .0040
  - \$ .0833
  - \$ .0840

**COVERED INTEREST ARBITRAGE**

- d 68. The current spot rate is C\$1.362 and the one-year forward rate is C\$1.371. The nominal risk-free rate in Canada is 6 percent while it is 3.5 percent in the U.S. Using covered interest arbitrage you can earn an extra \_\_\_\_\_ profit over that which you would earn if you invested \$1 in the U.S.
- a. \$.0018
  - b. \$.0045
  - c. \$.0120
  - d. \$.0180
  - e. \$.0240

**INTEREST RATE PARITY**

- a 69. The spot rate for the Japanese yen currently is ¥106 per \$1. The one-year forward rate is ¥105 per \$1. A risk-free asset in Japan is currently earning 5 percent. If interest rate parity holds, approximately what rate can you earn on a one-year risk-free U.S. security?
- a. 6.00 percent
  - b. 6.12 percent
  - c. 6.20 percent
  - d. 6.25 percent
  - e. 6.33 percent

**INTEREST RATE PARITY**

- e 70. The spot rate for the British pound currently is £.55 per \$1. The one-year forward rate is £.58 per \$1. A risk-free asset in the U.S. is currently earning 3 percent. If interest rate parity holds, approximately what rate can you earn on a one-year risk-free British security?
- a. 4.01 percent
  - b. 4.31 percent
  - c. 6.22 percent
  - d. 6.87 percent
  - e. 8.62 percent

**INTEREST RATE PARITY**

- a 71. A risk-free asset in the U.S. is currently yielding 3 percent while a Canadian risk-free asset is yielding 2 percent. The current spot rate is C\$.72 is equal to \$1. What is the approximate two-year forward rate if interest rate parity holds?
- a. C\$.7057
  - b. C\$.7128
  - c. C\$.7136
  - d. C\$.7189
  - e. C\$.7272



**INTEREST RATE PARITY**

- b 72. Suppose that the spot rate on the Canadian dollar is C\$1.40. The risk-free nominal rate in the U.S. is 8 percent while it is only 4 percent in Canada. Which one of the following one-year forward rates best establishes the approximate interest rate parity condition?
- C\$1.278
  - C\$1.344
  - C\$1.355
  - C\$1.456
  - C\$1.512

**INTEREST RATE PARITY**

- b 73. Suppose that the spot rate on the Canadian dollar is C\$1.18. The risk-free nominal rate in the U.S. is 5 percent while it is only 4 percent in Canada. Which one of the following three-year forward rates best establishes the approximate interest rate parity condition?
- C\$1.120
  - C\$1.145
  - C\$1.192
  - C\$1.216
  - C\$1.239

**UNCOVERED INTEREST PARITY**

- a 74. You are considering a project in Poland which has an initial cost of 250,000PLN. The project is expected to return a one-time payment of 400,000PLN 5 years from now. The risk-free rate of return is 3 percent in the U.S. and 4 percent in Poland. The inflation rate is 2 percent in the U.S. and 5 percent in Poland. Currently, you can buy 375PLN for 100USD. How much will the payment 5 years from now be worth in U.S. dollars?
- \$101,490
  - \$142,060
  - \$1,462,350
  - \$1,489,025
  - \$1,576,515

**UNCOVERED INTEREST PARITY**

- c 75. You are expecting a payment of 500,000PLN 3 years from now. The risk-free rate of return is 4 percent in the U.S. and 2 percent in Poland. The inflation rate is 4 percent in the U.S. and 1 percent in Poland. Currently, you can buy 380PLN for 100USD. How much will the payment 3 years from now be worth in U.S. dollars?
- \$138,700
  - \$138,900
  - \$139,800
  - \$142,300
  - \$144,169

**UNCOVERED INTEREST PARITY**

- b 76. You are expecting a payment of C\$100,000 four years from now. The risk-free rate of return is 3 percent in the U.S. and 4 percent in Canada. The inflation rate is 3 percent in the U.S. and 2 percent in Canada. The current exchange rate is C\$1 = \$.72. How much will the payment four years from now be worth in U.S. dollars?
- a. \$68,887
  - b. \$69,191
  - c. \$69,300
  - d. \$72,222
  - e. \$74,953

**INTERNATIONAL FISHER EFFECT**

- b 77. The current spot rate for the Norwegian krone is \$1 = Nkr6.83. The expected inflation rate in Norway is 2 percent and in the U.S. 4 percent. A risk-free asset in the U.S. is yielding 5 percent. What risk-free rate of return should you expect on a Norwegian security?
- a. 2 percent
  - b. 3 percent
  - c. 4 percent
  - d. 5 percent
  - e. 6 percent

**INTERNATIONAL FISHER EFFECT**

- c 78. The current spot rate for the Norwegian krone is \$1 = Nkr6.83. The expected inflation rate in Norway is 3 percent and in the U.S. 2 percent. A risk-free asset in the U.S. is yielding 4.5 percent. What real rate of return should you expect on a risk-free Norwegian security?
- a. 4.5 percent
  - b. 5.0 percent
  - c. 5.5 percent
  - d. 6.0 percent
  - e. 6.5 percent

**INTERNATIONAL FISHER EFFECT**

- d 79. The expected inflation rate in Finland is 2 percent while it is 4 percent in the U.S. A risk-free asset in the U.S. is yielding 5.5 percent. What real rate of return should you expect on a risk-free Norwegian security?
- a. 2.0 percent
  - b. 2.5 percent
  - c. 3.0 percent
  - d. 3.5 percent
  - e. 4.0 percent

**FOREIGN CURRENCY APPROACH**

- c 80. You want to invest in a project in Canada. The project has an initial cost of C\$1.2 million and is expected to produce cash inflows of C\$600,000 a year for 3 years. The project will be worthless after the first 3 years. The expected inflation rate in Canada is 4 percent while it is only 3 percent in the U.S. The applicable interest rate in Canada is 8 percent. The current spot rate is C\$1 = \$.69. What is the net present value of this project in Canadian dollars using the foreign currency approach?
- a. C\$335,974
  - b. C\$342,795
  - c. C\$346,258
  - d. C\$349,721
  - e. C\$356,750

**FOREIGN CURRENCY APPROACH**

- b 81. You want to invest in a riskless project in Sweden. The project has an initial cost of SKr2.1 million and is expected to produce cash inflows of SKr810,000 a year for 3 years. The project will be worthless after the first 3 years. The expected inflation rate in Sweden is 2 percent while it is 5 percent in the U.S. A risk-free security is paying 6 percent in the U.S. The current spot rate is \$1 = SKr7.55. What is the net present value of this project in Swedish krona using the foreign currency approach? Assume that the international Fisher effect applies.
- a. SKr185,607
  - b. SKr191,175
  - c. SKr196,910
  - d. SKr197,867
  - e. SKr202,818

**HOME CURRENCY APPROACH**

- a 82. You are analyzing a very low-risk project with an initial cost of £120,000. The project is expected to return £40,000 the first year, £50,000 the second year and £60,000 the third and final year. The current spot rate is £.54. The nominal return relevant to the project is 4 percent in the U.K. and 3 percent in the U.S. Assume that uncovered interest rate parity exists. What is the net present value of this project in U.S. dollars?
- a. \$33,232
  - b. \$34,040
  - c. \$34,067
  - d. \$34,422
  - e. \$35,009

### HOME CURRENCY APPROACH

- e 83. You are analyzing a project with an initial cost of £80,000. The project is expected to return £10,000 the first year, £40,000 the second year and £50,000 the third and final year. The current spot rate is £.56. The nominal risk-free return is 5 percent in the U.K. and 7 percent in the U.S. The return relevant to the project is 8 percent in the U.K. and 9.25 percent in the U.S. Assume that uncovered interest rate parity exists. What is the net present value of this project in U.S. dollars?
- a. \$7,787
  - b. \$8,002
  - c. \$8,312
  - d. \$8,511
  - e. \$8,885

### IV. ESSAYS

#### TRIANGLE ARBITRAGE

84. What is triangle arbitrage? Using the U.S. dollar, the Canadian dollar, and the euro, construct an example in which triangle arbitrage exists, and then show how to exploit it.

Students should construct an example similar to Example 22.2 in the text.

#### INFLATION AND EXCHANGE RATES

85. A recent article in the “Foreign Exchange” column of *The Wall Street Journal* contained the following headline: “Dollar Rally Seen Unlikely Due to Fears U.S. Inflation is Picking Up Momentum”. What is the relationship between the value of the dollar (relative to foreign currencies) and the rate of inflation in the United States?

The question asks the student to define and discuss the absolute and relative purchasing power parity (PPP) theories as well as some of the market frictions that keep PPP relationships from holding precisely.

#### RELATIVE PPP AND UIP

86. How well do you think relative purchasing power parity (PPP) and uncovered interest parity (UIP) behave? That is, do you think it’s possible to forecast the expected future spot exchange rate accurately? What complications might you run into?

Each of the variables in these equations must be estimated so it is unlikely, even unrealistic, to expect them to hold with any high degree of accuracy. In addition, most countries manage the value of their currencies to some extent which adds a significant amount of noise to the exchange rate process.

**ABSOLUTE PURCHASING POWER PARITY**

87. What is required for absolute purchasing power parity (PPP) to hold? Do you think absolute PPP would hold in the case where a computer retailer in the U.S. sits directly across the border from a computer retailer in Canada? How about Houston, Texas, and Winnipeg, Manitoba?

The requirements for absolute PPP to hold are zero trading costs, lack of trade barriers, and identical goods. Absolute PPP would likely hold to some degree for U.S. and Canadian firms sitting on the border directly across from one another, especially with the reduction of trading costs brought about by NAFTA. However, absolute PPP most likely does not hold for the Houston and Winnipeg firms because of the significant transportation and search costs between these two disparate locations.

**INTERNATIONAL CAPITAL BUDGETING**

88. Describe the foreign currency and home currency approaches to capital budgeting. Which is better? Which approach would you recommend a U.S. firm use? Justify your answer.

In the home currency approach, you must forecast both the foreign cash flows and the future expected exchange rates, convert the foreign currency cash flows into dollars, and discount those dollar cash flows at the cost of capital for dollar-denominated investments. In the foreign currency approach, you forecast the foreign cash flows, determine the discount rate appropriate for cash flows denominated in the foreign currency and discount those cash flows to the present. You then convert the NPV to dollars using the current exchange rate. If done properly, both approaches give identical results. However, the foreign currency approach is computationally somewhat more straightforward.

**EXCHANGE RATES AND FIRM VALUE**

89. Are exchange rate changes between the U.S. dollar and the Japanese yen necessarily good or bad for Japanese automakers? Explain your reasoning.

On the plus side, a strengthened dollar makes Japanese cars less expensive in dollars, thus increasing the automaker's export sales. In addition, American cars sold in Japan will be relatively more expensive, thus making Japanese cars more price competitive in their home market. On the other hand, raw materials and any other goods and services purchased from America will be more expensive for the manufacturer, creating upward pressure on its cost structure and squeezing profits. The net result may very well be a tradeoff of higher sales volume versus lower per unit profits.