Chapter 2
The Global Financial Environment: Markets, Institutions, Interest Rates, and Exchange Rates

(Difficulty: E = Easy, M = Medium, T = Tough)

MULTIPLE CHOICE
CONCEPTUAL

Derivative security **Answer: c Diff: E**

1. Any asset whose value is derived from the value of some other underlying real or financial asset best describes a(n)

   a. Financial instrument.
   b. Property, plant, and equipment.
   c. Derivative security.
   d. Current assets.
   e. Accounts receivable.

Types of markets **Answer: d Diff: E**

2. Which of the following statements is not correct?

   a. A market in which a corporation issues securities for the first time and, in return, receives money is the IPO market.
   b. A market in which a corporation issues securities and, in return, receives money is the primary market.
   c. A market in which an individual issues securities and, in return, receives money is the mortgage market.
   d. A market in which an individual issues securities and, in return, receives money is the secondary market.
   e. A market in which individuals trade already-issued securities is the secondary market.

Financial markets **Answer: d Diff: E**

3. The markets in which participants agree today to buy or sell an asset at some future date are known as

   a. Physical asset markets.
   b. Spot markets.
   c. Money markets.
   d. Futures markets.
   e. Capital markets.

Financial markets **Answer: e Diff: E**

[4]. The financial markets for equity and for intermediate- or long-term debt (one year or longer) are

a. Consumer credit markets.
b. Spot markets.
c. Money markets.
d. Currency markets.
e. Capital markets.

Financial markets **Answer: b Diff: E**

[5]. The markets in which transactions for foreign exchange occur are known as

a. Consumer credit markets.
b. Currency markets.
c. Spot markets.
d. Capital markets.
e. Money markets.

Cross-listing **Answer: d Diff: E**

[6]. Cross-listing occurs when

a. A firm offers shares to the public for the first time.
b. Global financial institutions maintain offices in different time zones around the world and offer anytime trading.
c. The exchange rate is determined by supply and demand for currency.
d. A company lists shares of stock on multiple exchanges to increase its global recognition.
e. A country abandons its own currency and adopts the U.S. dollar as its legal tender.

Around-the-clock trading **Answer: a Diff: E**

[7]. Around-the-clock trading occurs when

a. Global financial institutions maintain offices in different time zones around the world and offer anytime trading.
b. There is significant government intervention to control the exchange rate via manipulation of the currency's supply and demand.
c. A company lists shares of stock on multiple exchanges to increase its global recognition.
d. A country locks its currency to a specific currency or basket of currencies at a fixed exchange rate.
e. A firm offers shares to the public for the first time.

Exchange rates **Answer: c Diff: E**

[8]. Which of the following statements best defines exchange rate?

a. The price paid to borrow debt capital.
b. The actual rate charged on a loan that compensates investors for postponing consumption, inflation, and risk.
c. The number of units of a given currency that can be purchased for one unit of another currency.
d. The nominal, risk-adjusted rate of return that is actually published in financial publications.
e. The rate of interest that offsets inflation and provides the required real return on a riskless investment.

International monetary terminology **Answer: b Diff: E**

[9]. The framework within which exchange rates are determined today is called

a. The eurocurrency market.
b. The international monetary system.
c. The Bank for International Settlements (BIS) network.
d. The Bretton Woods system.
e. None of the above.

Marginal investor **Answer: d Diff: M**

[10]. Which of the following statements most closely describes the role of the marginal investor?

a. Facilitates the transfer of funds from savers to demanders of capital.
b. Underwrites and distributes new investment securities and helps businesses obtain financing.
c. Maintains offices in different time zones around the world to offer anytime trading.
d. Decisions and resulting actions determine the market interest rate.
e. Specializes in maintaining inventory of certain stocks in the electronic markets.

Cost of money **Answer: d Diff: M**

[11]. Which of the following statements is correct?

a. The interest rate is the minimum rate of return on a common stock that will induce a stockholder to purchase the stock.
b. In a financial market context, risk is the chance that an investment will provide a high return.
c. The exchange rate is the price paid to borrow debt capital.
d. Production opportunities are the returns available within an economy from investment in productive real assets.
e. The exchange rate is the amount by which prices are expected to increase over time.

Cost of money **Answer: b Diff: M**

[12]. Four fundamental factors interact to determine supply and demand and, hence, the price (or cost) of capital. Factor(s) on the demand side include

a. The expected rate of inflation.
b. Production opportunities.
c. Risk.
d. Time preferences for consumption.
e. Only statements a and b are correct.

Interest rates **Answer: b Diff: M**

[13]. Which of the following statements is correct?

a. The nominal risk-free rate compensates investors for postponing consumption, inflation, and risk.
b. The nominal risk-free rate offsets inflation and provides the required real return on a riskless investment.
c. The nominal risk-free rate is correctly calculated as the required real rate plus the expected inflation rate.
d. The inflation premium is calculated as the required real rate multiplied by the expected inflation rate.
e. Another name for the quoted (or stated) rate is the required real rate.

Exchange rate risk premium **Answer: e Diff: M**

[14]. Which of the following statements best defines the exchange rate risk premium?

a. A premium that occurs when the bond is denominated in the investor's home currency and reflects the risk that arises from investing or doing business in a particular country.
b. A premium that reflects interest rate risk.
c. A premium added to the equilibrium interest rate on a security if that security cannot be converted to cash on short notice and at close to "fair market value."
d. A premium that results when a bond is denominated in the investor's home currency and results from the possibility that an exchange rate change will lead to a loss in a bond's value.
e. A premium that results when a bond is denominated in a currency other than the investor's home currency and results from the possibility that an exchange rate change will lead to a loss in a bond's value.

Country risk premium **Answer: a Diff: M**

[15]. Which of the following statements best defines the country risk premium?

a. A premium that reflects the risk that arises from investing or doing business in a particular country and it depends on the country's business climate.
b. A premium that reflects interest rate risk.
c. A premium added to the equilibrium interest rate on a security if that security cannot be converted to cash on short notice and at close to "fair market value."
d. A premium that reflects the difference between the interest rate on a U.S. Treasury bond and a corporate bond of equal maturity and marketability.
e. A premium that results when a bond is denominated in a currency other than the investor's home currency and results from the possibility that an exchange rate change will lead to a loss in a bond's value.

Financial institutions **Answer: e Diff: T**

[16]. Indirect transfers of money and securities can be accomplished in several ways. Which of the following transactions might represent an indirect transaction?

a. Miriam Collins places money in a certificate of deposit (CD) at her commercial bank.
b. Bill Williams buys a share of IBM stock on the NYSE.
c. Marvin Matthews buys 100 shares of a company's stock from Goldman Sachs in an IPO.
d. All of the statements above are indirect transfers.
e. Only statements a and c are indirect transfers.

Interest rate determination **Answer: e Diff: T**

[17]. The nominal, risk-free rate of return

a. Is the rate of return that both offsets inflation and provides the required real return on a riskless investment.
b. Is calculated by adding the real, risk-free rate and the inflation rate.
c. Cannot be observed directly but is often approximated by the quoted rate on U.S. or foreign government securities.
d. All of the statements above are correct.
e. Only statements a and c are correct.

Risk premia **Answer: c Diff: T**

18. Which of the following statements is most correct?

a. Interest rates on U.S. Treasury bonds do not contain any type of risk premia at all. This is why they are used as the nominal, risk-free rate.
b. Interest rates on U.S. Treasury securities are not truly risk free (although nearly so) because they contain a maturity risk premium and a default risk premium.
c. Interest rates on U.S. Treasury securities are not truly risk free (although nearly so) because they contain a country risk premium and an exchange rate risk premium.
d. The difference in required interest rates on U.S. Treasury securities and equivalent corporate bonds is explained almost entirely by the existence of a liquidity premium and a maturity risk premium.
e. Both statements b and c are correct.

Exchange rates **Answer: a Diff: T**

19. If the nominal one-year risk-free interest rate in the U.S. is 5 percent and the nominal one-year risk-free interest rate in another country is 8 percent, which of the following statements must be true if the markets are in equilibrium and there are no restrictions on capital flows?

a. The foreign currency is expected to decrease in value relative to the U.S. dollar.
b. Investors will prefer to invest their money in the foreign country because they like to earn a higher interest rate.
c. Investors will prefer to invest their money in the foreign country because their total rate of return in one year will be higher.
d. The foreign currency is expected to increase in value relative to the U.S. dollar.
e. Knowing only the interest rates in the two countries does not give us enough information to make an informed judgment of the direction of movement in the value of the currency.

Perfect currency **Answer: e Diff: T**

20. The text characterized a "perfect," or ideal, currency as one having three characteristics. Included in the list of ideal characteristics is (are) which of the following?

a. The currency should be freely floating against the currencies of the country's major trading partners so that the market determines the exchange rate without government intervention.
b. Each country would set its own monetary and fiscal policy solely on the basis of its own economic situation.
c. Complete and unrestricted monetary flows should be permitted, allowing investors and businesses to move their wealth as they choose.
d. All of the statements above are characteristics of an ideal currency.
e. Only statements b and c are correct.

Monetary arrangements **Answer: d Diff: T**

[21]. Which of the following statements regarding monetary arrangements is correct?

a. A managed-float arrangement occurs when a country has its own currency but commits to exchange it for a specified foreign money unit at a fixed exchange rate and legislates domestic currency restrictions, unless it has the foreign currency reserves to cover requested exchanges.
b. A fixed peg arrangement occurs when a country locks its currency to a specific currency or basket of currencies at a fixed exchange rate, and the exchange rate is allowed to vary only within plus or minus one percent of the target rate.
c. In a freely-floating-exchange-rate regime, governments may occasionally intervene in the market to buy or sell their currency in order to stabilize fluctuations, while in a managed-float arrangement there is significant government intervention to manage the exchange rate by manipulating the currency's supply and demand.
d. Statements b and c are correct.
e. All of the statements are correct.

Monetary arrangements **Answer: a Diff: T**

[22]. A currency board arrangement for managing the value of a country's currency occurs when

a. The country's currency can be exchanged at a fixed rate into a foreign money unit (such as the euro or dollar) and is backed with sufficient foreign currency reserves to cover requested changes.
b. The country uses a managed float to set the exchange rate for its currency but does not reveal the target rate set by the currency board of the central bank.
c. The central bank of a country pegs the value of the currency to some other money unit but allows it to deviate a small amount (such as $\pm$1%), but which requires explicit approval from a designated committee, called the currency board, to reset the central rate around which the deviations are measured.
d. Withdraws its own currency from circulation and uses the money unit of another country as its official currency.
e. None of the statements above.

Choosing a monetary regime **Answer: e Diff: T**

[23]. Many emerging market countries would prefer to use a floating rate currency regime but are forced by circumstances to adopt a fixed rate regime. The reasons they would prefer to use a floating rate regime include which of the following?

a. Helps in the fight against inflation because countries must intervene domestically to take counterinflationary actions.
b. Governments can follow domestic policies to reduce unemployment or to stimulate growth without having to explicitly consider international implications of the exchange rate.
c. International reserves do not have to be used to preserve the exchange rate because it is allowed to find its own equilibrium level.
d. All of the statements above are correct.
e. Only statements b and c are correct.

PROBLEMS

Inflation rate **Answer: b Diff: E**

24. A financial analyst has the following data:

Inflation premium (IP) = 5.25%
Real, risk-free rate, r* = 3.2%

According to this information, what is the inflation rate?

a. 2.0525%
b. 5.0872%
c. 3.9570%
d. 4.7500%
e. 6.2500%

Nominal risk-free rate **Answer: d Diff: E**

25. A financial analyst has the following data:

Inflation premium (IP) = 5.25%
Real, risk-free rate, r* = 3.2%

According to this information, what is the nominal risk-free rate?

a. 4.75%
b. 5.09%
c. 6.25%
d. 8.45%
e. 7.50%

Exchange rate risk premium **Answer: a Diff: E**

26. A German investor recently purchased a U.S. blue-chip, A-rated corporate bond with a 10-year maturity. The yield on the bond is 8.2 percent. The default risk premium is 0.5 percent and the liquidity premium is 0.1 percent. The real risk-free rate of return is 2.8 percent and the inflation premium (calculated over 10 years) is 3.3 percent. The maturity risk premium is 1.0 percent, and the country risk premium is 0.3 percent. The nominal risk-free rate of return is 6.1 percent. Given these data, what was the exchange rate risk premium (ERP) on the bond?

a. 0.2%
b. 0.5%
c. 0.8%
d. 1.2%
e. 1.5%

Interest rates **Answer: b Diff: M**

[27]. You observe from The Wall Street Journal that the 1-year Treasury bill rate is currently 6.0 percent and consider that it is a reasonable proxy for the nominal, risk-free rate. Your economic advisory service is also forecasting that the expected inflation rate for the next year (1-year rate) is 3.0 percent. With this information, calculate the real risk-free return, r*, and the inflation premium, IP.

a. r* = 2.8302%; IP = 3.1698%
b. r* = 2.9126%; IP = 3.0874%
c. r* = 2.9633%; IP = 3.0367%
d. r* = 3.0000%; IP = 3.0000%
e. r* = 3.0275%; IP = 2.9725%

Exchange rates **Answer: c Diff: M**

[28]. Given the following data (all for 1-year):

	U.S.	Country X
r*	3%	3%
I	2	4

Today's spot exchange rate is 10.5 pesos per dollar. In equilibrium, what is the expected future spot rate (EFS) in one year?

a. P10.7000/$
b. P11.2476/$
c. P10.7059/$
d. P11.2350/$
e. None of the above.

Exchange rates **Answer: c Diff: M**

[29]. A financial analyst has the following data:

	United States	Ireland
r*	2.75%	2.75%
I	3.30%	7.00%

Ireland's currency is the euro and today's spot exchange rate is $1.2182 per euro. In equilibrium, what should be the exchange rate one year from now?

a. $0.8503 = 1€
b. $0.9750 = 1€
c. $1.1760 = 1€
d. $1.2500 = 1€
e. $1.3750 = 1€

Nominal interest rate **Answer: e Diff: M**

30. A U.S. investor recently purchased a U.S. Treasury bond with a 10-year maturity to earn a yield of 4.8 percent. A European investor just purchased a U.S. AAA-rated, "blue-chip" corporate bond with a 10-year maturity for 5.75 percent. This bond can be converted to cash very quickly, so its liquidity premium is small, 0.1 percent. The spread between U.S. Treasury bonds and AAA-rated bonds with similar maturity and liquidity is 0.2 percent. Another European investor purchased a U.S. BBB-rated, corporate bond with a 10-year maturity. The liquidity premium for this BBB-rated bond is 0.5 percent, and the spread between U.S. Treasury bonds and BBB-rated bonds with similar maturity and liquidity is 1.5 percent. What yield will the European investor earn on the U.S. BBB-rated, corporate bond?

a. 6.00%
b. 6.40%
c. 8.75%
d. 6.80%
e. 7.45%

SHORT ANSWER
ESSAY

Capital transfers **Diff: E**

31. Briefly explain the three different ways that transfers of capital take place.

Price of money **Diff: E**

32. Identify and briefly explain the four fundamental factors that interact to determine the price of capital making sure to note whether they affect the demand or supply side.

Exchange rates **Diff: E**

33. Differentiate between spot and forward exchange rates.

Exchange rates **Diff: E**

34. Differentiate between fixed and floating exchange rates.

International monetary terminology **Diff: E**

35. Differentiate between a soft versus a hard currency.

Nominal, risk-adjusted return **Diff: M**

36. The general formula used for the nominal, risk-adjusted required rate of return can be written as r_{RF} + RP. Identify and briefly explain the five different components comprising RP.

International monetary terminology **Diff: M**

37. Differentiate between devaluation/revaluation of a currency versus depreciation/appreciation of a currency.

Impossible trinity **Diff: M**

38. Summarize the three characteristics of a perfect, or ideal, currency and identify the name economists have given to describe these three characteristics.

Impossible trinity **Diff: M**

[39]. Is it possible to have a perfect, or ideal, currency? Explain your answer using the United States and China as illustrations.

Monetary arrangements **Diff: M**

[40]. Currency regimes can be divided into two broad groups: floating rates and fixed rates. Identify and briefly explain the two subgroups under floating exchange rates.

Monetary arrangements **Diff: M**

[41]. Currency regimes can be divided into two broad groups: floating rates and fixed rates. Identify and briefly explain the three subgroups under fixed exchange rates.

Monetary arrangements **Diff: M**

[42]. What factors have been offered for and against fixed exchange rates? Provide at least two factors for each position.

Monetary arrangements **Diff: M**

[43]. What factors have been offered for and against floating exchange rates? Provide at least two factors for each position.

Dollarization **Diff: M**

[44]. What is dollarization? Give the arguments for and against dollarization.

PROBLEMS

Nominal risk-free rate **Diff: E**

[45]. If the real risk-free rate is 2.75 percent and the expected inflation rate is 3.5 percent, what is the nominal risk-free rate, r_{RF}?

Inflation premium **Diff: E**

[46]. An analyst has the following information:

Expected inflation rate, I = 3.8%
Real, risk-free rate, r* = 2.5%

What is the inflation premium, IP?

Nominal risk-free rate **Diff: M**

[47]. An analyst has the following information:

Expected inflation rate, I = 3.8%
Real, risk-free rate, r* = 2.5%

What is the nominal risk-free rate, r_{RF}?

Exchange rates **Diff: M**

[48]. A financial analyst has the following data:

	United States	India
r*	2.25%	2.25%
I	3.60%	12.50%

India's currency is the rupee and today's spot exchange rate is 45.84 rupees per U.S. dollar. In equilibrium, what amount of rupees should be exchanged for one U.S. dollar one year from now?

Nominal interest rate **Diff: M**

[49]. A U.S. investor recently purchased a U.S. Treasury bond with a 15-year maturity to earn a yield of 4.45 percent. A British investor just purchased a U.S. AAA-rated, "blue-chip" corporate bond with a 15-year maturity for 5.3 percent. This bond can be converted to cash very quickly, so its liquidity premium is small, 0.15 percent. The spread between U.S. Treasury bonds and AAA-rated bonds with similar maturity and liquidity is 0.25 percent. Another British investor purchased a U.S. A-rated, corporate bond with a 15-year maturity. The liquidity premium for this A-rated bond is 0.35 percent, and the spread between U.S. Treasury bonds and A-rated bonds with similar maturity and liquidity is 1 percent. What yield will the British investor earn on the U.S. A-rated, corporate bond?

Chapter 2
Answers and Solutions

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[1]. **Derivative security** **Answer: c Diff: E**

The correct choice is statement c. A financial instrument is best defined as pieces of paper or electronic entries in account ledgers with contractual provisions that spell out their owners' claims on specific real assets. Property, plant, and equipment, current assets, and accounts receivable are all assets; however, their values are not derived from another real or financial asset.

[2]. **Types of markets** **Answer: d Diff: E**

Statement d is not correct. Secondary markets are markets in which existing securities are traded among investors, and the issuer of the security is not involved in the transaction.

[3]. **Financial markets** **Answer: d Diff: E**

The correct choice is statement d. Physical asset markets are also known as tangible or real asset markets. Capital budgeting decisions are important to these markets. Spot markets are the markets in which assets are bought or sold for "on-the-spot" delivery. Money markets are the financial markets in which funds are borrowed or loaned for short periods (less than one year). Capital markets are the financial markets for equity and for intermediate- or long-term debt (one year or longer).

[4]. **Financial markets** **Answer: e Diff: E**

The correct choice is statement e. Consumer credit markets are those that involve loans on autos, appliances, education, vacations, and the like. Spot markets are the markets in which assets are bought or sold for "on-the-spot" delivery. Money markets are the financial markets in which funds are borrowed or loaned for short periods (less than one year). Currency markets are the markets in which transactions for foreign exchange occur.

[5]. **Financial markets** **Answer: b Diff: E**

The correct choice is statement b. Consumer credit markets are those that involve loans on autos, appliances, education, vacations, and the like. Spot markets are the markets in which assets are bought or sold for "on-the-spot" delivery. Capital markets are the financial markets for equity and for intermediate- or long-term debt (one year or longer). Money markets are the financial markets in which funds are borrowed or loaned for short periods (less than one year).

[6]. **Cross-listing** **Answer: d Diff: E**

The correct choice is statement d. Statement a is the definition for an initial public offering, while statement b is the definition for around-the-clock trading. Statement c is the definition for a freely-floating currency regime, while statement e is the definition for dollarization.

[7]. **Around-the-clock trading** **Answer: a Diff: E**

The correct choice is statement a. Statement b is the definition for managed float, while statement c is the definition for cross-listing. Statement d is the definition for a fixed peg arrangement, while statement e is the definition for an initial public offering.

[8]. **Exchange rates** **Answer: c Diff: E**

The correct choice is statement c. Statement a is the definition for the interest rate, while statement b is the definition for the nominal, risk-adjusted rate of return. Statement d is the definition for the quoted (or stated) interest rate, while statement e is the definition for the nominal, risk-free rate.

[9]. **International monetary terminology** **Answer: b Diff: E**

Statement b is correct (see page 43). The post-World War II system was the Bretton Woods system (statement d), but that was abandoned formally in 1976. The BIS (statement c) is the central banks' central bank and has nothing to do directly with exchange rates. The eurocurrency market (statement a) is a major short-term money market in many different currencies, but it is not directly involved with the determination of exchange rates.

[10]. **Marginal investor** **Answer: d Diff: M**

The correct answer is statement d. The marginal investor is a representative investor whose actions reflect beliefs of those people who are currently lending capital. It is the marginal investor who determines the market interest rate and a firm's stock price and cost of capital.

[11]. **Cost of money** **Answer: d Diff: M**

The correct choice is statement d. The interest rate is the price paid to borrow debt capital, so statements a and c are false. In a financial market context, risk is the chance that an investment will provide a low or negative return, so statement b is false. The expected rate of inflation is the amount by which prices are expected to increase over time, so statement e is false.

[12]. **Cost of money** **Answer: b Diff: M**

Statement b is correct (see page 34). The other three factors determine the supply of money.

[13]. **Interest rates** **Answer: b Diff: M**

The correct choice is statement b. The nominal risk-free rate compensates investors for postponing consumption and inflation but it needs to be adjusted to compensate investors for risk. Therefore, statement a is false. Statement c is false because the nominal risk-free rate is equal to the required real rate plus the expected inflation rate and the required real rate times the expected inflation rate. Statement c incorrectly ignores the interactive term. Statement d is false because the inflation premium is equal to the expected inflation rate plus the interactive term of the required real rate multiplied by the expected inflation rate. Statement e is false because another name for the quoted (or stated) rate is the nominal, risk-adjusted rate of return.

[14]. **Exchange rate risk premium** **Answer: e Diff: M**

The correct choice is statement e. Statements a and d cannot be correct because the exchange rate risk premium occurs only when a bond is denominated in a currency other than the investor's home currency. Statement b is the definition of the maturity risk premium, while statement c is the definition of the liquidity premium.

[15]. **Country risk premium** **Answer: a Diff: M**

The correct choice is statement a. Statement b is the definition for the maturity risk premium, while statement c is the definition for the liquidity premium. Statement d is the definition for the default risk premium, while statement e is the definition for the exchange rate risk premium.

[16]. **Financial institutions** **Answer: e Diff: T**

Statement b is not an indirect transfer because the NYSE is a secondary market and the trade is with another investor, not with the issuer of the underlying security. Statement a assumes that the commercial bank takes the deposit and lends it out to a company. Statement c is a classic example of an indirect transfer using an investment banking house.

[17]. **Interest rate determination** **Answer: e Diff: T**

Statements a and c are correct (see page 37), but statement b is incorrect. The nominal, risk-free rate is calculated by adding the real risk-free rate and the inflation premium, not the inflation rate. When inflation is low, some people ignore the difference between the inflation rate and the inflation premium (given as r*I in the text) and add the inflation rate to the real rate, but this is only an approximation that is not always valid.

[18]. **Risk premia** **Answer: c Diff: T**

Statement c is correct because they do contain these two risk premia. They also include a maturity risk premium if they are long-term, but the statement is still true as far as it goes. Statement a is incorrect because we have identified risk premia that are present, but answer b is incorrect because U.S. Treasuries contain no default risk premiums (with the reasonable assumption that they are denominated in U.S. dollars). Statement d is incorrect because the difference in otherwise equivalent securities would be caused by the existence of a default risk premium on the corporate bonds.

[19]. **Exchange rates** **Answer: a Diff: T**

Statement a is correct (see Figure 2-2 on page 42) because the gain from the higher foreign interest rate is offset by the decrease in the value of the foreign currency in equilibrium. In equilibrium, investors should be indifferent about where they invest because they expect to earn exactly the same return from investments in both countries. As we will see in more detail in Chapter 3, knowing the two interest rates is all the information we need to judge the direction of movement in the value of the currencies.

[20]. **Perfect currency** **Answer: e Diff: T**

Statement e is correct. Statement a is not correct because the ideal currency would be fixed in value with respect to the currencies of the trading partners (see page 45).

[21]. **Monetary arrangements** **Answer: d Diff: T**

The correct choice is statement d. Statement a is the definition of a currency board arrangement; so statements a and e are false. Statements b and c are correct.

[22]. **Monetary arrangements** **Answer: a Diff: T**

Statement a is correct (see page 47). Statement b is called a managed float and may or may not have an oversight body with the name "currency board." Statement d is what the text calls "dollarization," although euros, yen, or any other foreign currency could be deemed the official money unit for the country.

[23]. **Choosing a monetary regime** **Answer: e Diff: T**

From Table 2-4 on page 48, we see that statement a is a factor favoring fixed rates rather than floating rates, so it is incorrect. Statements b and c are given in the table as favoring floating rates, so the correct answer is statement e.

[24]. **Inflation rate** **Answer: b Diff: E**

$$IP = I + r^*I$$
$$0.0525 = I + 0.032I$$
$$0.0525 = 1.032I$$
$$I = 0.050872 = 5.0872\%.$$

[25]. **Nominal risk-free rate** **Answer: d Diff: E**

$r_{RF} = r^* + IP$
$= 3.2\% + 5.25\%$
$= 8.45\%.$

Alternatively, one could solve the problem using a longer method:

$IP = I + r^*I$
$0.0525 = I + 0.032I$
$0.0525 = 1.032I$
$I = 0.050872 = 5.0872\%.$

$r_{RF} = r^* + I + r^*I$
$= 0.032 + 0.050872 + (0.032)(0.050872)$
$= 0.0845 = 8.45\%.$

[26]. **Exchange rate risk premium** **Answer: a Diff: E**

$r = r_{RF} + DRP + LP + MRP + CRP + ERP$
$8.2\% = 6.1\% + 0.5\% + 0.1\% + 1.0\% + 0.3\% + ERP$
$ERP = 0.2\%.$

[27]. **Interest rates** **Answer: b Diff: M**

$(1 + r_{RF}) = (1 + r^*)(1 + I)$
$1.06 = (1 + r^*)(1.03)$
$(1 + r^*) = 1.06/1.03 = 1.029126$
$r^* = 2.9126\%.$

$IP = r_{RF} - r^* = 0.06 - 0.029126 = 0.030874 = 3.0874\%.$

Or, $IP = I + r^*(I) = 0.03 + 0.029126(0.03) = 0.030874 = 3.0874\%.$

The correct answer is b.

[28]. **Exchange rates** **Answer: c Diff: M**

Step 1: Find r_{RF} for both countries:
U.S.: $(1 + r_{RF}) = (1.03)(1.02) = 1.0506 = 5.06\%.$
X: $(1 + r_{RF}) = (1.03)(1.04) = 1.0712 = 7.12\%.$

Step 2: Find the equilibrium exchange rate in one year:
$1.00(1.0506) = $1.0506 in one year investing in the U.S.
$1.00(P10.50/$) = P10.50 today.
P10.50(1.0712) = P11.2476 in one year investing in Country X.

P11.2476/EFS = $1.0506 in equilibrium
EFS = P11.2476/$1.0506 = P10.7059/$.

[29]. **Exchange rates** **Answer: c Diff: M**

First, convert the quotation so that it is in terms of number of euros per dollar by simply calculating the reciprocal, 1/$1.2182/€ = €0.8209/$.

Suppose you have $1,000 to invest today. (You can start with any amount and you will arrive at the same answer.)

Today			1 Year Later
		invest at (1.0275)(1.033) – 1 = 6.14%	
U.S.:	$1,000	⟶	$1,061.40

Ireland: €0.8209/$ invest at (1.0275)(1.07) – 1 = 9.94%
€820.90 ⟶ €902.52

€902.52/x = $1,061.40
x = €0.8503.

Next year's exchange rate would be €0.8503/$ or $1.176/€.

[30]. **Nominal interest rate** **Answer: e Diff: M**

$r_{T\text{-}10} = \underbrace{r^* + IP + MRP} + \underbrace{DRP + LP + CRP + ERP}$

= 4.8% + 0
= 4.8%.

$r_{AAA} = \underbrace{r^* + IP + MRP} + DRP + LP + CRP + ERP$

5.75% = 4.8% + 0.2% + 0.1% + CRP + ERP
0.65% = CRP + ERP.

$r_{BBB} = \underbrace{r^* + IP + MRP} + DRP + LP + CRP + ERP$

= 4.8% + 1.5% + 0.5% + 0.65%
= 7.45%.

[31]. **Capital transfers** **Diff: E**

Transfers of capital between savers and borrowers take place in the following three ways:

1. Direct transfers occur when a business sells its shares or bonds directly to savers without using a financial institution.
2. Transfers may go through an investment banking house. Here the company sells its shares or bonds to the investment bank, which in turn sells these same securities to savers. The firms' securities and the savers' money merely pass through the investment banking house.
3. Transfers can also be made through a financial intermediary. Here the intermediary first obtains funds from savers in exchange for its own securities, and then it uses the money to purchase and hold other assets.

[32]. **Price of money** **Diff: E**

Supply and demand determine the price of capital, and four fundamental factors interact to determine this cost. Three of the factors interact on the supply side: time preferences for consumption, the expected rate of inflation, and risk. Production opportunities affect the demand side.

Supply side:
1. Time preferences for consumption. This factor reflects consumer preferences for current consumption as opposed to saving for future consumption.
2. Expected rate of inflation. This factor is the amount by which prices are expected to increase over time.
3. Risk. In a financial market context, this is the chance that an investment will provide a low or negative return.

Demand side:

1. Production opportunities. These are the returns available within an economy from investments in productive real assets.

[33]. **Exchange rates** **Diff: E**

A spot exchange rate is the quoted price for a unit of foreign currency to be delivered "on the spot," or within a very short period of time. A forward exchange rate is the quoted price for a unit of foreign currency to be delivered at a specified date in the future.

[34]. **Exchange rates** **Diff: E**

A fixed exchange rate for a currency is set by the government and allowed to fluctuate only slightly (if at all) around the desired rate, called the par value. A floating or flexible exchange rate is one that is not regulated by the government, so supply and demand in the market determine the currency's value.

[35]. **International monetary terminology** **Diff: E**

A soft (weak) currency is one that is expected to depreciate against most other currencies or else is being artificially maintained at an unrealistically high fixed rate by the government through open market purchases. A hard (strong) currency is expected to appreciate against most other currencies or else is being artificially maintained by the government at an unrealistically low fixed rate.

[36]. **Nominal, risk-adjusted return** **Diff: M**

The risk premium actually consists of at least five different components:

1. Default risk premium. This premium reflects the difference between the interest rate on a U.S. Treasury bond and a corporate bond of equal maturity and marketability.
2. Liquidity premium. This premium is added to the equilibrium interest rate on a security if that security cannot be converted to cash on short notice and at close to "fair market value."
3. Maturity risk premium. This premium reflects interest rate risk, which is the risk of capital losses to which investors are exposed due to rising interest rates.
4. Country risk premium. This premium reflects the risk that arises from investing or doing business in a particular country, and it depends on the country's social, political, and economic environment, or its business climate.
5. Exchange rate risk premium. This premium results from the possibility that an exchange rate change will lead to a loss in a bond's value. This premium only occurs when a bond is denominated in a currency other than the investor's home currency.

[37]. **International monetary terminology** **Diff: M**

Devaluation (revaluation) is the technical term referring to the decrease (increase) in the par value of a currency whose value is fixed. This decision is made by the government, usually without warning. Depreciation (appreciation) of a currency refers to a decrease (increase) in the foreign exchange value of a floating currency. These changes are caused by market forces rather than by governments.

[38]. **Impossible trinity** **Diff: M**

Economists list three characteristics that are highly desirable in a currency as follows:

1. The currency's value should be fixed with respect to the currency used by the country's trading partners and other important nations; that is, its exchange rate should be stable. This allows investors and businesses to plan with greater certainty regarding the future value of receipts and payments.
2. Each country sets its own domestic monetary and fiscal policy solely on the basis of its own economic situation. This includes policies regarding interest rates, managing inflation, fostering full employment, and ensuring economic prosperity for all.
3. Complete and unrestricted monetary flows should be permitted, allowing investors and businesses to move their wealth as they choose.

Many economists call these three characteristics "The Impossible Trinity" because it is impossible to achieve all three objectives together.

[39]. **Impossible trinity** **Diff: M**

No, it is not possible to achieve a perfect currency. This is why economists call the three characteristics that are highly desirable in a money unit the "impossible trinity." For example, the U.S. has a floating-exchange-rate regime, no capital or exchange controls, and its monetary and fiscal policies are driven by domestic considerations. However, the U.S. dollar has not been stable against the currencies of its major trading partners—specifically, Canada, Europe, and Japan. On the other hand, China maintains a fixed exchange rate with the U.S. dollar and independent monetary and fiscal policies, but the only way it can keep these policies intact is to impose strict capital and exchange controls. These illustrations show that it is possible for a country to maintain two of the three characteristics, but allowing all three to operate is impossible.

[40]. **Monetary arrangements** **Diff: M**

Main subgroups under floating-exchange-rate regime:

1. Freely floating. Here the exchange rate is determined by the supply and demand for the currency. Under this type of arrangement, governments may occasionally intervene in the market to buy or sell their currency in order to stabilize fluctuations, but they do not attempt to alter the absolute level of the exchange rate.
2. Managed floating. Here there is significant government intervention to manage the exchange rate by manipulating the currency's supply and demand.

[41]. **Monetary arrangements** **Diff: M**

Types of fixed-exchange-rate regimes:

1. No local currency. This is the most extreme position. Here the country either uses another country's currency as its legal tender (such as the U.S. dollar in Panama and Ecuador) or else it belongs to a group of countries that share a common currency (such as the euro).
2. Currency board arrangement. Here a country technically has its own currency but commits to exchange it for a specified foreign money unit at a fixed exchange rate. This requires it to impose domestic currency restrictions unless it has the foreign currency reserves to cover requested exchanges.
3. Fixed peg arrangement. Here the country locks its currency to another currency or basket of currencies at a fixed exchange rate. It allows the currency to vary only slightly from its desired

rate, and if the currency moves outside specified limits, it intervenes to force the currency back to within the limits.

[42]. **Monetary arrangements** **Diff: M**

Factors favoring fixed exchange rates:

1. More stable and predictable exchange rates, which reduce risks in international commerce.
2. Helps in the fight against inflation because countries must intervene domestically to take counter-inflationary actions to maintain the exchange rate at a fixed level.

Factors against fixed exchange rates:

1. Significant international reserves must be available for use in defending the currency.
2. If the fixed rate is inconsistent with the country's fundamental economic condition, either painful adjustments must be made in the domestic economy or the target exchange rate must be changed.

[43]. **Monetary arrangements** **Diff: M**

Factors favoring floating exchange rates:

1. The market adjusts automatically for changing economic fundamentals, and no government intervention is needed.
2. Governments can follow domestic policies to reduce unemployment or to stimulate growth without having to explicitly consider international implications of the exchange rate.
3. International reserves do not have to be used to preserve the exchange rate because it is allowed to find its own equilibrium level.

Factors against floating exchange rates:

1. Future exchange rates are less stable and less predictable, which increases the risks inherent in international transactions.
2. Distortions in the domestic economy can persist for longer periods if the government is not bound to intervene to defend its currency.

[44]. **Dollarization** **Diff: M**

Dollarization occurs when a country abandons its own currency and adopts the U.S. dollar as its legal tender. It is the most extreme fixed-rate position for a country.

The benefits to the adopting country of dollarization are:

1. There is complete stability with the dollar, and, at least theoretically, the possibility of a future currency crisis is eliminated.
2. It is easier to become more economically integrated with the United States when the currencies are the same.
3. Monetary policy is taken out of the hands of local politicians; hence, it cannot be used for political purposes that might destabilize the economy—for example, printing money or giving public employees outsized pay raises.

The arguments against dollarization are:

1. The country loses sovereignty over its monetary policy. This could be significant in countries that are ultranationalistic.
2. The local central bank cannot create money, so it cannot serve effectively as a lender of last resort during a financial crisis.
3. The country loses the ability to profit from printing money.

[45]. **Nominal risk-free rate** **Diff: E**

$r_{RF} = r^* + I + r^*I$
$= 0.0275 + 0.035 + (0.0275)(0.035)$
$= 0.06346 = 6.346\%$.

[46]. **Inflation premium** **Diff: E**

$IP = I + r^*I$
$= 0.038 + (0.025)(0.038)$
$= 0.03895 = 3.895\%$.

[47]. **Nominal risk-free rate** **Diff: M**

To answer this problem, you must first solve for the inflation premium, and then substitute this value into the nominal risk-free equation.

$IP = I + r^*I$
$= 0.038 + (0.025)(0.038)$
$= 0.03895 = 3.895\%$.

$r_{RF} = r^* + IP$
$= 2.5\% + 3.895\%$
$= 6.395\%$.

[48]. **Exchange rates** **Diff: M**

Suppose you have \$1,000 to invest today. (You can start with any amount and you will arrive at the same answer.)

	Today		1 Year Later
U.S.:	\$1,000	invest at (1.0225)(1.036) – 1 = 5.931% →	\$1,059.31
India:	Rs45.84/\$ Rs45,840	invest at (1.0225)(1.125) – 1 = 15.03125% →	Rs52,730.325

Rs52,730.325/x = \$1,059.31
x = Rs49.7780.

Next year's exchange rate would be Rs49.7780/\$.

[49]. **Nominal interest rate** **Diff: M**

$r_{T\text{-}15} = \underbrace{r^* + IP + MRP}_{} + \underbrace{DRP + LP + CRP + ERP}_{}$

$= \quad 4.45\% \quad + \quad 0$

$= 4.45\%.$

$r_{AAA} = \underbrace{r^* + IP + MRP}_{} + DRP + LP + CRP + ERP$

$5.3\% = \quad 4.45\% \quad + 0.25\% + 0.15\% + CRP + ERP$

$0.45\% = CRP + ERP.$

$r_A = \underbrace{r^* + IP + MRP}_{} + DRP + LP + CRP + ERP$

$= \quad 4.45\% \quad + 1.0\% + 0.35\% + \quad 0.45\%$

$= 6.25\%.$