Along with the flows of goods and services being traded between countries, there are corresponding flows of money. For example, in order to buy goods from Japan, we must acquire yen, the Japanese currency. In order for the Japanese to buy American goods, they must acquire dollars. Americans who want yen, Japanese who want dollars, and other traders buy and sell national currencies in foreign exchange markets. The price of one currency in terms of another country’s currency is called the exchange rate, which is determined by the interaction of demand and supply for the currency in a floating exchange rate system. Fluctuations in a nation’s exchange rate can have a significant impact on the nation’s ability to import or export goods. A rise in the price of a nation’s currency, called appreciation, can cause its exports to fall and imports to rise. Similarly, a decline in the price of a nation’s currency, called depreciation, can cause its exports to rise and imports to fall.

The financing of a nation’s international trade and its other financial transactions with the rest of the world are recorded in its balance of payments. The balance on current account itemizes the nation’s imports and exports, its income receipts and payments on investment, and its unilateral transfers of funds. The balance on capital account itemizes changes in foreign asset holdings in the nation and the nation’s asset holdings abroad. A deficit in the current account balance is matched by a surplus in the capital account balance. What defines a balance of payments problem? A current account deficit can be a problem for a country if it is forced to pay for the deficit by running down its stocks of foreign currencies, selling its assets to acquire other currencies, or borrowing other currencies excessively. Borrowing creates international debt. Moreover, interest must be paid on international debt. When the interest payments on the debt become too high a percentage of a nation’s exports, the debt can become burdensome, resulting in a significant depreciation of the country’s currency and a decline in living standards.

After studying this chapter, you should be able to:

- Explain how currencies are bought and sold on foreign exchange markets.
- Describe the factors that affect the demands for currencies and their supplies.
- Show how floating exchange rates allow currencies to appreciate and depreciate.
- Give an example of arbitrage in foreign exchange markets.
- Explain how fixed exchange rates work.
- Relate the balance on current account to the balance on capital account in the balance of payments.
- Present a set of options that a country might employ to service its international debt.
Concept Check — See how you do on these multiple-choice questions.

What is being traded in a foreign exchange market?

1. The purpose of foreign exchange markets is to allow people to
   a. practice arbitrage
   b. increase their country’s current account balances
   c. increase their country’s capital account balances
   d. finance international debt
   e. buy and sell different currencies

   It makes sense to purchase a good (or a currency) where its price is low and sell it where its price is high.

2. Arbitrage creates mutually consistent exchange rates because
   a. it causes a currency to appreciate to balance imports with exports
   b. it causes a currency to depreciate to balance exports with imports
   c. floating exchange rates are always in a state of flux
   d. when a currency is purchased at a low price in one market and sold at a high price in another, the prices converge
   e. when a currency is sold at a low price in one market and purchased at a high price in another, the prices converge

   Think about problems that countries encounter when trying to maintain fixed exchange rates.

3. One potential problem for a country with fixed exchange rates is that
   a. a decrease in the demand for its currency can create a drain on foreign exchange reserves used to maintain the exchange rate
   b. the currency is probably prone to depreciation
   c. exchange rates are fixed as a result of the devaluation of the currency
   d. a current account deficit will result
   e. merchandise imports will exceed merchandise exports

   How do households typically handle temporary cash flow problems? How do countries do the same?

4. The International Monetary Fund was created to aid countries that have foreign exchange reserves problems by
   a. devaluing the country’s currency
   b. lending the country foreign exchange reserves through purchase-and-resale agreements
   c. helping to re-establish the country’s exchange rate at a higher level
   d. purchasing the country’s assets abroad and converting them to foreign currencies
   e. helping the country find new markets for exports

   Remember that the ultimate long-run solution to a balance of trade problem is for a country to become more productive.

5. A negative balance of trade for a country will not be a long-run problem if
   a. the country’s foreign exchange reserves are depleted in order to finance it
   b. the country imports new capital equipment to improve its competitiveness in world markets
   c. the IMF stops lending the country foreign exchange reserves
   d. the country can sell important national assets to finance it
   e. the country also imports large quantities of services from the rest of the world
Am I on the Right Track?

Your answers to the questions above should be e, d, a, b, and b. Foreign exchange rates are determined by the interaction of demand and supply in foreign exchange markets, just as prices of other goods are determined in markets. The impact of erratic fluctuations in exchange rates can undermine the advantages of international trade because they contribute to uncertainty about the prices of imports and exports. Fixed exchange rates may appear to be a solution to floating exchange rates. However, fixed exchange rates create problems of their own, not the least of which is the possibility of accumulating excessive international debt in order to maintain the exchange rate. There are many key terms for this chapter. A key to your success in the chapter is understanding the new key terms and how they are used to explain the determination of exchange rates, the balance of payments, and international debt.

Key Terms Quiz — Match the terms on the left with the definitions in the column on the right.

1. foreign exchange market _____ a. a rise in the price of a nation’s currency relative to foreign currencies
2. balance of payments _____ b. a rate determined and maintained by government by buying and selling its own currency on the foreign exchange market
3. exchange rate _____ c. an itemized account of a nation’s foreign economic transactions
4. balance on current account _____ d. transfers of currency made by individuals, businesses, or the government of one nation to individuals, businesses, or governments in other nations without anything being given in exchange
5. floating exchange rate _____ e. tariffs and quotas used by government to limit a nation’s imports
6. balance of trade _____ f. a market in which currencies of different nations are bought and sold
7. appreciation _____ g. an exchange rate determined strictly by the demands and supplies for a nation’s currency
8. unilateral transfers _____ h. a category that itemizes changes in foreign asset holdings in a nation and that nation’s asset holdings abroad
9. depreciation _____ i. interest payments on international debt as a percentage of a nation’s merchandise exports
10. balance on capital account _____ j. a system in which the government, as the sole depository of foreign currencies, exercises complete control over how these currencies can be used
11. arbitrage _____ k. the stock of foreign currencies held by a government
12. international debt _____ l. a category that itemizes a nation’s imports and export of merchandise and services, income receipts and payments on investment, and unilateral transfers
13. fixed exchange rate _____ m. the practice of buying a foreign currency in one market at a low price and selling it in another at a higher price
14. debt service _____ n. the number of units of foreign currency that can be purchased with one unit of domestic currency
15. foreign exchange reserves _____ o. government policy that lowers the nation’s exchange rate, i.e., fewer units of foreign currency for a unit of its own currency
16. import controls _____ p. the difference between the value of a nation’s merchandise exports and its merchandise imports
17. devaluation  
q. an international organization formed to make loans of foreign currencies to countries facing balance of payments problems

18. exchange controls  
r. the total amount of borrowing a nation is obligated to repay other nations and international organizations

19. International Monetary Fund (IMF)  
s. a fall in the price of a nation’s currency relative to foreign currencies

**Graphing Tutorial**

Foreign exchange markets can be represented using demand and supply graphs. Buyers and sellers of different nations’ currencies make exchanges in these markets, just as buyers and sellers of other goods make exchanges in markets. The equilibrium price in a foreign exchange market is called the exchange rate. The demand and supply graph presented below shows the foreign exchange market for zaps, the currency for the imaginary nation Zapland, priced in dollars. On the vertical axis we show the price of zaps in dollars — dollars per zap. On the horizontal axis we measure the quantity of zaps. The demand and supply curves are drawn to show the exchange rate — the equilibrium price of zaps measured in dollars — equal to $5 per zap.

Why is the demand for zaps downward sloping? As the price of zaps measured in dollars decreases, goods from Zapland become more attractive to American consumers, and the quantity demanded of zaps increases. Why is the supply of zaps upward sloping? People in Zapland supply zaps in order to buy goods produced in the United States. As the price of zaps measured in dollars increases, U.S. goods are relatively cheaper for Zaplanders, so they supply larger quantities of zaps for dollars.

What causes the demand curve for zaps to shift? Suppose incomes in the United States increase. With higher incomes, Americans will buy more goods from Zapland; hence they will demand more zaps at all exchange rates. The demand for zaps shifts to the right, and the exchange rate for zaps increases from the $5 per zap level. A change in tastes would also shift the demand curve for zaps. If goods from Zapland become more fashionable, the demand for zaps will increase, causing the demand curve to shift to the right and the exchange rate to rise. Changes in interest rates in the United States and Zapland will influence the demand for zaps. If the interest rate in Zapland rises relative to the interest rate in the United States, then the demand for zaps increases as U.S. savers take advantage of the higher return in Zapland.
The supply curve of zaps is shifted by changes in the same factors in Zapland. If incomes in Zapland increase, they will demand more goods from the United States, and the supply of zaps shifts to the right. If Zaplanders’ tastes change so that U.S. goods are more appealing, the supply of zaps shifts to the right. If interest rates in the United States rise relative to interest rates in Zapland, the supply curve shifts to the right as Zaplanders take advantage of saving opportunities in the United States.

A floating exchange rate is one determined strictly by the demand for and supply of a nation’s currency. The factors that determine the demand for zaps and the supply of zaps would naturally change over time, causing the exchange rate of dollars per zaps to fluctuate. If the exchange rate increases from $5 per zap to $7 per zap, we say the dollar has depreciated (or weakened) relative to the zap because more dollars are required to purchase a zap. If the exchange rate decreases from $5 per zap to $3 per zap, the dollar has appreciated (or strengthened) relative to the zap because fewer dollars are required to purchase a zap. Erratic fluctuations in free-floating exchange rates can cause problems for businesses that import and export because unexpected changes in exchange rates result in unexpected changes in the price of goods being traded internationally.

Suppose that to avoid the problems of uncertainties associated with floating exchange rates, the U.S. government fixes the exchange rate at $5 per zap. Suppose further that the demand for zaps increases from $D$ to $D'$ as shown in the graph below.

If the exchange rate were floating, it would rise from $5 per zap to $7 per zap — the new equilibrium exchange rate. However, the fixed exchange rate policy mandates that all exchanges of dollars for zaps occur at the $5 per zap rate. The graph shows an excess demand for zaps equal to 30,000 zaps at $5 per zap. The U.S. government must come up with its own supply of zaps — 30,000 in this case — to satisfy the excess demand. Problems with the fixed exchange rate policy could arise if the U.S. government runs out of zaps. These are described in detail in your text.

**Graphing Pitfalls**

Problems with labeling the axes sometimes arise when graphing foreign exchange markets. Remember that if the exchange rate measured along the vertical axis is dollars per zap, then zaps are being measured on the horizontal axis. Recall the fish market we examined in Chapter 3. The price of fish is measured in dollars...
per fish. Therefore, fish are measured on the horizontal axis. Don’t make the mistake shown in the graph below of putting the exchange rate of dollars per zap on the vertical axis and dollars on the horizontal axis.

If the exchange rate on the vertical axis is dollars per zap, then the horizontal axis measures zaps, not dollars as shown above.

**True-False Questions** — If a statement is false, explain why.

1. The foreign exchange market is where the international trade of goods and services takes place. (T/F)

2. An exchange rate is the number of units of one currency required to purchase one unit of another currency. (T/F)

3. As a nation’s income increases, its demand for imports increases, creating an increase in its demand for foreign currencies. (T/F)

4. A currency depreciates if less of that currency is required to buy one unit of another currency. (T/F)

5. The supply curve of a currency will shift to the right when interest rates in that country fall relative to interest rates in other countries. (T/F)
6. If exports of merchandise are greater than imports of merchandise, then a favorable balance of trade exists. (T/F)

7. Arbitrage is the process whereby currencies are purchased in markets with low prices and sold in markets with high prices, creating mutually consistent exchange rates. (T/F)

8. One problem with a fixed exchange rate is that if the demand for imports continually increases, an excess demand for foreign currency will be generated at the fixed exchange rate that may deplete foreign currency reserves. (T/F)

9. An exchange control system requires exporters to convert any foreign exchange earned by trade into the domestic currency in order to replenish the government's supply of foreign exchange. (T/F)

10. The balance of payments account is an itemized account of a country’s exports and imports of merchandise. (T/F)

11. Exports of goods and services and income receipts on investments from the rest of the world represent dollar inflows in the balance on current account. (T/F)

12. Low productivity contributes to a favorable balance of trade by making the domestic producers' goods relatively cheaper than goods from other countries. (T/F)

13. An American taking a vacation in Cancun has the same effect on Mexico's balance on current account as a Mexican businessperson exporting goods and services to the United States. (T/F)

14. The balance on capital account shows changes in the capital stock of all industries within a country. (T/F)

15. Foreign investment in the United States represents a capital inflow to the United States. (T/F)

Multiple-Choice Questions

1. One effect of an appreciation of the U.S. dollar is that
   a. it increases the demand for U.S. labor
   b. Americans can buy imports more cheaply
   c. American incomes decrease
   d. foreigners will demand more U.S. exports
   e. U.S. labor will become less productive
2. An increase in income in the United States will
   a. increase the demand for foreign currencies
   b. cause United States exports to increase
   c. cause the value of the dollar measured in foreign currencies to increase
   d. decrease the demand for foreign currencies
   e. shift the supply curve of dollars to the left

3. All of the following are useful options for the government to pursue to bolster foreign exchange reserves except to
   a. impose exchange controls
   b. impose export controls
   c. adjust the exchange rate
   d. borrow foreign currencies
   e. permit a free floating exchange rate

4. An example of dollar inflows on the balance on current account is
   a. the export of services
   b. unilateral transfers of dollars to U.S. students in Europe
   c. changes in U.S. assets abroad
   d. the payments on foreign investments in the United States
   e. the import of services

5. The balance of trade is given by
   a. income receipts minus income payments on investments
   b. the balance of unilateral transfers
   c. merchandise exports plus service exports minus the sum of merchandise and service imports
   d. merchandise exports minus merchandise imports
   e. the balance on current account

6. If the U.S. dollar appreciates relative to the Japanese yen, then
   a. more yen will be required to purchase one dollar
   b. fewer yen will be required to purchase one dollar
   c. the dollar has weakened relative to the yen
   d. Japan’s demand for U.S. goods will increase
   e. the Japanese supply of yen will increase

7. The balance on current account includes all of the following items except
   a. merchandise exports minus merchandise imports
   b. exports of services minus imports of services
   c. income receipts minus income payments on investments
   d. changes in U.S. assets owned abroad and foreign assets owned in the U.S.
   e. unilateral transfers of currency by individuals

8. Given an unfavorable balance of trade, the current account can still be in surplus if
   a. there is a larger value for merchandise imports
   b. exports of services are less than imports of services
   c. unilateral transfers of dollars out of the United States exceed unilateral transfers of dollars into the United States
   d. sales of U.S. assets to foreigners increase
   e. exports of services are greater than imports of services by enough to offset the unfavorable trade balance
9. People who practice arbitrage will create mutually consistent exchange rates if
   a. they operate in a country that practices exchange controls
   b. exchange rates are set properly by government
   c. productivity increases in the economy of the country whose currency is being traded
   d. they buy a currency in one market at a low price and then sell at a high price in another market
   e. the currency being traded appreciates

10. The impact of an Indonesian businessman purchasing a U.S. bond is to
    a. increase the current account deficit in the United States
    b. increase the balance on capital account in the United States
    c. increase the U.S. government budget deficit
    d. cause U.S. interest rates to rise
    e. contribute to a balance of payments problem in the United States

11. A consequence of China’s policy of keeping the yuan at an exchange rate that is artificially weak relative to the dollar is
    a. a persistent and increasing trade surplus with the United States
    b. sanctions imposed by the WTO on China’s illegal practice
    c. the expectation that the yuan will continue to appreciate relative to the dollar
    d. very cheap American imports for Chinese consumers
    e. the reduction and lifting of tariffs on Chinese imports to the United States

12. The supply curve of U.S. dollars on the foreign exchange market reflects the
    a. willingness of people in the United States to supply goods and services on the international market
    b. willingness of foreigners to demand U.S. goods and services on the international market
    c. willingness of people in the United States to demand foreign goods and services on the international market
    d. willingness of foreigners to demand U.S. dollars on the foreign exchange market
    e. the net exports (exports minus imports) that U.S. producers sell on the international market

13. In an economy’s balance of payments account,
    a. the capital and current accounts must add to one
    b. the current account is always greater than the capital account
    c. both the balance on current account and the balance on capital account are zero
    d. the capital plus current account balances must equal zero
    e. capital outflows must equal capital inflows

14. Floating exchange rates refer to
    a. the ability of exchange rates to even out when displaced by shocks to the foreign exchange market
    b. new issues of foreign exchange offered on the market
    c. an exchange rate determined by the demand for and supply of a nation's currency
    d. an excess demand for a nation's currency that causes its devaluation
    e. an excess supply of a nation's currency that causes its appreciation

15. If the current account for a country is in deficit, then there must be
    a. a surplus in the government budget
    b. low interest rates
    c. high productivity
    d. a capital account surplus
    e. the presence of attractive investment opportunities
16. If Elrod is a student at the University of Toronto in Ontario, Canada, and his parents in Fresno, California, send him $75, the money is a
   a. private unilateral transfer, shown as a U.S. dollar outflow in the U.S. balance of payments account
   b. private unilateral transfer, shown as a Canadian dollar outflow in the Canadian balance of payments account
   c. current account transfer, shown as a U.S. dollar inflow in the U.S. balance of payments account
   d. capital account payment, shown as a U.S. dollar inflow in the U.S. balance of payments account
   e. capital account payment, shown as a Canadian dollar outflow in the U.S. balance of payments account

17. If the International Monetary Fund provides a loan of yen to the United States to help finance its unfavorable balance of trade, the
   a. IMF’s supply of foreign reserves will increase
   b. United States balance on capital account will increase
   c. IMF will expect the U.S. to repurchase the dollars used to acquire the yen at a later date
   d. U.S. balance on current account will increase
   e. Japanese balance on current account will decrease

18. Debt service refers to
   a. interest payments on international debt as a percentage of a nation's merchandise exports
   b. the outflows from a nation's capital account to pay for its imports of foreign services
   c. the outflows from a nation's current account to pay for its imports of foreign services
   d. debt owed to a nation for the export of its services
   e. international debt representing all the services transacted on all nations' balance of payments accounts

19. A potential problem with free floating exchange rates is that
   a. people who practice arbitrage may gain from the losses of others
   b. uncertainty in exchange rate fluctuations may hinder international trade
   c. exchange rates may never reach equilibrium
   d. the currency markets may become monopolized
   e. less-developed countries may issue too much currency

20. Some countries may not worry about an unfavorable balance on current account because
   a. they know they can always borrow to cover the deficit
   b. they import capital goods to build up export industries that will eventually eliminate the deficit
   c. deficits are always a stimulant to economic growth, which is a higher priority
   d. they can, if necessary, fix the exchange rate to wipe out the deficit
   e. their capital account will be favorable since the balance of payments always ends up at zero

The following questions relate to the applied and global perspectives in the text.

21. If a tourist from Canada and a tourist from Japan compare notes on the cost in Canadian dollars and Japanese yen, respectively, of trips to the United States in 1960 and 2006 they will find that
   a. the trip was more expensive in 2006 in Canadian dollars and less expensive in Japanese yen in 2006
   b. the trip was less expensive in 2006 in Canadian dollars and more expensive in Japanese yen in 2006
   c. the trips cost exactly the same in both currencies in 2006 as they did in 1960
   d. both the Canadian dollar and the Japanese yen appreciated relative to the dollar
   e. both the Canadian dollar and the Japanese yen depreciated relative to the dollar
22. A country that devalues its currency in order to improve its balance of trade is pursuing a beggar-thy-neighbor policy because
   a. its exports will become more expensive for trading partners
   b. its balance of trade improves while the trade balances for its trading partners deteriorate
   c. imports will increase and exports will decrease
   d. its trading partners will devalue their currencies in retaliation
   e. the IMF typically must make emergency loans to countries that devalue when the policy fails

23. Which of the following assertions regarding the economic impact of the euro is incorrect?
   a. The euro will increase Europe’s global economic power.
   b. Trade among European countries will be simplified.
   c. The euro will quickly replace the dollar as the international currency.
   d. Countries within the European Union will be unable to pursue their own national economic interests.
   e. National central banks in Europe are replaced by the European central bank.

24. Because debts in many LDCs to foreign creditors are beyond repayment, one approach that is being discussed to deal with the problem is
   a. to forgive the debts and to lend more to the LDCs in order to finance development projects
   b. to forgive the debts but not to lend any more
   c. forgive the debt and insist on policies to improve education and reduce poverty
   d. seize land in the LDCs as payment for the debts
   e. impose tariffs on LDC exports in order to punish them for not paying their debts

Fill in the Blanks

1. If the dollar-for-Mexican peso exchange rate falls, then Mexican goods are ____________________ for Americans, and the quantity demanded of pesos will ________________.

2. The ______________________ for Mexican pesos reflects the U.S. demand for Mexican goods and services, and the ____________________________ of Mexican pesos reflects the Mexican demand for U.S. goods and services.

3. If a government finds it difficult to maintain a fixed exchange rate, the government can resort to policies such as ________________, ________________, ________________, or ________________.

4. If foreigners find attractive investment opportunities in the United States, the effect will be to cause the dollar to ____________________ relative to foreign currencies; hence foreign goods will become relatively ________________ for Americans, and foreigners will find American goods relatively ________________.

5. The debt service that is associated with a country’s international debt is defined as the percentage of ________________ that is accounted for by ________________ payments on the debt.
Discussion Questions

1. a. Why is the demand curve for Mexican pesos downward sloping?

   b. Why is the supply curve of dollars priced in pesos upward sloping?

2. Describe the circumstances that led to the rise of the U.S. current account deficit during the 1980s.

3. Why is borrowing to finance an unfavorable balance on current account so dangerous for a less-developed country? Explain the nature of the long-run adjustment that will correct a current account deficit. Is this adjustment process painless for the less-developed country? Explain.

4. Under what circumstances would a country face a shortfall in its foreign exchange reserves? Discuss the role the International Monetary Fund plays in stabilizing a country’s currency in times of crisis.
Problems

1. Graph the supply and demand for the foreign exchange market, expressed in terms of pesos per dollar. Show the equilibrium price at 5 pesos per dollar. Suppose the demand for dollars increases so that the new exchange rate is 7 pesos per dollar. Has the peso appreciated or depreciated? Which currency has strengthened? Is this good or bad for the United States? For Mexico?

2. Suppose the following data represent Mexico’s international transactions measured in pesos.

<table>
<thead>
<tr>
<th>Merchandise exports</th>
<th>15</th>
<th>Merchandise imports</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in foreign assets in Mexico</td>
<td>12</td>
<td>Change in assets abroad</td>
<td>8</td>
</tr>
<tr>
<td>Exports of services</td>
<td>7</td>
<td>Imports of services</td>
<td>5</td>
</tr>
<tr>
<td>Income receipts on investment</td>
<td>5</td>
<td>Income payments on investment</td>
<td>10</td>
</tr>
<tr>
<td>Unilateral transfers</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. What is Mexico’s balance of trade?

b. What is its balance on current account?

c. What is its balance on capital account?

Everyday Applications

An appreciation or depreciation in a country’s currency can dramatically affect the finances of the country’s citizens who are studying at universities and colleges in other countries. For instance, a decline in the value of the yen relative to the dollar can make it much more costly for Japanese students to study and live in the United States. Do you know any foreign students (perhaps you are one!) who have been affected by recent exchange
rate changes? If their (or your) parents are assisting by sending money from home, do they have to spend more or less of their domestic currency to maintain the same level of assistance?

**Economics Online**

The IMF has a Web site ([http://www.imf.org/](http://www.imf.org/)). Visit the site to find out more about the structure of the IMF and its activities.

**Answers to Questions**

**Key Terms Quiz**

a. 7  f.  1  k.  15  p.  6  
b. 13  g. 5  l.  4  q.  19  
c. 2  h. 10  m. 11  r.  12  
d. 8  i. 14  n. 3  s.  9  
e. 16  j. 18  o. 17  

**True-False Questions**

1. False. The foreign exchange market is a market for foreign currencies, not goods and services. 
2. True  
3. True  
4. False. The currency depreciates if more of it is required to purchase one unit of another currency. 
5. True  
6. True  
7. True  
8. True  
9. True  
10. False. The balance of payments is an account of a country’s entire international transactions. 
11. True  
12. False. Low productivity contributes to an unfavorable balance of trade because domestic goods are relatively more expensive than goods from other countries. 
13. True  
14. False. The capital account itemizes changes in foreign asset holdings in a nation and a nation’s asset holdings abroad. 
15. True  

**Multiple-Choice Questions**

1. b  6. a  11. a  16. a  21. a  
2. a  7. d  12. b  17. c  22. b  
3. e  8. e  13. d  18. a  23. c  
4. a  9. d  14. c  19. b  24. c  
5. d  10. b  15. d  20. b  

**Fill in the Blanks**

1. cheaper; increase  
2. demand; supply
3. devaluation; import controls; exchange controls; borrowing foreign currencies
4. appreciate; expensive; cheaper
5. merchandise exports; interest

Discussion Questions

1. a. Suppose a Mexican hat sells in Mexico for 1 peso and the exchange rate is $5 per peso. If you buy that hat, you think of it as a $5 hat. If the exchange rate falls to $2 per peso, that same hat becomes a $2 hat. At that price, you may choose to buy more hats. As the exchange rate falls — U.S. dollars per peso — the Mexican good becomes cheaper, and therefore, the quantity demanded of pesos increases.

b. Think of Mexicans buying U.S. goods. At $5 per peso, Javier Herrera can buy a VCR tape priced in the United States at $5 for only a peso. Suppose Javier buys 4 tapes. If the exchange rate falls to $2 per peso, then the $5 tape now costs him 2½ pesos. That’s more expensive so he buys fewer tapes. As a result, the quantity supplied of pesos decreases as the exchange rate falls.

2. The strength and stability of the U.S. economy compared to other economies were an important factor contributing to the current account deficit. Foreigners perceived that the United States was a good place to invest, given the investment security and reasonable rates of return. Demand for U.S. dollars increased. Another factor was the relatively high interest rates in the United States. That, too, shifted the demand curve for U.S. dollars to the right, driving up the exchange rate for the dollar. A stronger dollar made foreign goods and services relatively cheaper for U.S. consumers.

3. Borrowing to finance an unfavorable balance on current account becomes problematic when the debt service rises to levels that are difficult to sustain. Exports must earn enough foreign exchange to pay the interest on the debt. A country cannot continually borrow if the debt service keeps rising because it simply won’t be able to meet the interest obligations. Potential lenders will be unwilling to lend or will do so only at very high interest rates. However, there is an automatic correction mechanism that will reduce the unfavorable balance on current account. As a country imports more than it exports, its exchange rate will fall (currency depreciates) relative to others, making imports more expensive. At the same time, the country’s exports become more attractive, so the trade gap will tend to shrink. This adjustment process may be very painful for a less-developed country, particularly if it depends on imports of food. As the exchange rate falls, food imports become more expensive, and living standards decline.

4. Suppose the U.S. government fixes the exchange rate at 3 euros per dollar, and following this, the demand for European goods and, therefore, euros increases to create an excess demand of 20 million euros at the fixed 3 euro per dollar rate. The government is forced to use 20 million of the euros it held in reserve to buy $6.67 million on the foreign exchange market to maintain the fixed rate at 3 euros per dollar. But how deep are the government’s pockets? How many euros does it need to have in reserve to continue to use them to buy U.S. dollars to support the fixed rate of exchange? What if it runs out of euros? Wouldn’t the excess demand for euros undermine the fixed rate? If the government runs out of euros and still wants to maintain the fixed rate, it can appeal to the IMF for a loan of reserves, buying euros for dollars with the promise of later repurchasing its dollars with euros.
Problems

1. The peso has depreciated because it requires more pesos to buy one dollar. A depreciation of the peso means that the dollar has strengthened relative to the peso. One dollar buys more pesos — 7 rather than 5. Whether this is good or bad depends entirely on who you are. If you are a Mexican exporter to the United States, this is good because the prices of your exports have fallen in dollars. If you are a consumer in the United States, this is good because Mexican goods are cheaper. However, it is bad for Mexican importers of U.S. goods who must pay more in pesos for a given amount of American goods.

2. a. Mexico’s balance of trade is equal to merchandise exports minus merchandise imports = 15 - 10 = 5. Mexico has a positive or favorable balance of trade.

b. Mexico’s balance on current account is equal to merchandise exports + exports of services + income from investments - (merchandise imports + imports of services + income payments on investments + unilateral transfers) = 15 + 7 + 5 - (10 + 5 + 10 + 6) = 27 - 31 = -4. Mexico has a negative or unfavorable balance on current account.

c. Mexico’s balance on capital account is the difference between changes in foreign assets in Mexico and changes in Mexican assets in foreign countries = 12 - 8 = 4. This positive or favorable balance on capital account offsets the negative balance on current account.
Homework Questions

True-False Questions — If a statement is false, explain why.

1. To an American, the exchange rate between the British pound and the dollar is the number of dollars that can be purchased with one pound. (T/F)

2. If the dollar depreciates relative to the Japanese yen, then more dollars are required to purchase a yen. (T/F)

3. A surplus on the current account means that there is an equivalent deficit on the capital account. (T/F)

4. An increase in the United States interest rate will reduce the demand for dollars, thus weakening the dollar, ceteris paribus. (T/F)

5. As the dollar depreciates relative to foreign currencies, imports cost less and the current account deficit increases. (T/F)

Multiple-Choice Questions

1. A persistently unfavorable balance on current account indicates a balance of payments problem if
   a. it is the result of declining productivity in the economy and an inability to compete in international markets
   b. it is the result of large imports of basic goods such as oil
   c. a strengthening of the nation’s currency increases the price of its exports to foreign buyers
   d. reserves of foreign currencies increases
   e. the government pursues a surplus budget

2. The demand for U.S. dollars on the foreign exchange market will increase when
   a. U.S. incomes increase
   b. foreign incomes decrease
   c. interest rates in the rest of the world rise dramatically while U.S. rates remain unchanged
   d. U.S. interest rates rise dramatically while those in the rest of the world remain unchanged
   e. U.S. exports increase

3. Suppose the United States fixes its exchange rate for the euro ($s per euro) below the market exchange rate such that a chronic excess demand for euros exists. This exchange rate can be maintained only as long as
   a. the dollar depreciates relative to the euro
   b. the United States keeps its interest rates lower than the European rate
   c. the United States can continue to sell euros in currency markets in order to satisfy the excess demand
   d. the euro appreciates relative to the dollar
   e. the IMF prevents the United States from borrowing euros
4. Subtracting changes in foreign asset holdings in a country (capital inflows) from changes in assets owned by that country abroad (capital outflows) gives the
   a. external debt
   b. balance on current account
   c. balance of trade
   d. foreign exchange balance
   e. balance on capital account

5. As the dollar weakens relative to the euro, United States exporters _______________ and those who import European goods are _______________, ceteris paribus.
   a. benefit; harmed'
   b. ship less; expanding
   c. suffer losses; enjoying profits
   d. trade dollars for euros; trading euros for dollars'
   e. borrow euros; borrowing dollars

**Discussion Questions/Problems**

1. Discuss the problems associated with floating and fixed exchange rates.

2. Is international debt always a problem for a less-developed country? Explain.