

- A country's balance of payments accounts are a summary of all of the country's transactions with other countries.
- There are two important accounts within the balance of payments: the *current account* and the *financial account* (formerly known as the *capital account*). The current account records a country's exports and imports of goods and services, net investment income, and net transfers. The financial account records the difference between a country's sale of assets to foreigners and its purchase of assets from foreigners.
- The current account includes the country's trade balance (net exports).
- The financial account measures capital inflows in the form of foreign savings that finance domestic investment and government borrowing.
- The current account and the financial account must sum to zero.
- Capital flows between countries occur when the loanable funds markets in the two countries establish different equilibrium real interest rates. Financial capital will flow into the country where the real interest rate is higher.
- Trade barriers such as tariffs and quotas limit the gains from trade. These barriers generally protect domestic sellers at the expense of domestic buyers.
- To trade, nations must exchange currencies.
- An exchange rate is the price of one currency in terms of another. Foreign exchange markets use supply and demand to set exchange rates.
- Appreciation is an increase in the value of a nation's currency in foreign exchange markets. Appreciation of a nation's currency decreases exports and increases imports.
- Depreciation is a decrease in the value of a nation's currency in foreign exchange markets. Depreciation of a nation's currency increases exports and decreases imports.
- Monetary and fiscal policies can affect exchange rates, the international balance of trade, and the balance of payments.
- Domestic economic policies affect international trade, and international trade affects the domestic economy. The international sector influences unemployment, inflation, and economic growth.

Barriers to Trade

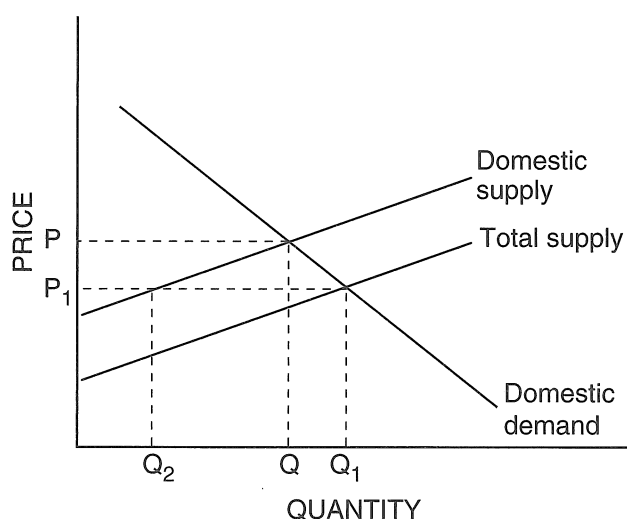
There are gains from trade. Total output is greater when countries specialize according to their comparative advantage and trade rather than trying to be self-sufficient. The theory of comparative advantage explains the mutual benefits countries receive from free trade. Policies to promote free trade attempt to achieve the efficiency benefits from free trade. For example, groups of countries create free trade areas to promote international trade. Examples of these efforts include the North American Free Trade Agreement (NAFTA), the World Trade Organization (WTO), the European Union (EU), and the Asia-Pacific Economic Cooperation (APEC) Forum.

However, other policies interfere with free trade and prevent countries from receiving the efficiency benefits of free trade. For example, countries sometimes impose trade barriers to protect domestic industries. Trade barriers include tariffs and quotas. A *quota* is a limit on the quantity of imports allowed into a country. A *tariff* is a tax on imports.

In Figure 7-2.1, the demand curve represents the demand by the domestic economy for a commodity that is produced domestically and also imported. The domestic supply curve indicates what the domestic suppliers are willing and able to produce at alternative prices. The total supply includes the domestic supply and the supply of imports. If there were no international trade or a complete ban on imports, the domestic demand and supply would determine the equilibrium price of P and the equilibrium quantity of Q . The total output would be produced by domestic firms.



Figure 7-2.1
International Trade



If there is free international trade, the total supply curve represents the production by domestic and foreign producers. Domestic consumers would pay P_1 and consume Q_1 . They consume more of the commodity at a lower price. Also, at P_1 , domestic firms are producing Q_2 and foreign producers are producing $(Q_1 - Q_2)$. Thus, domestic firms are producing less under free trade than they would if the nation did not import the commodity.

Tariffs

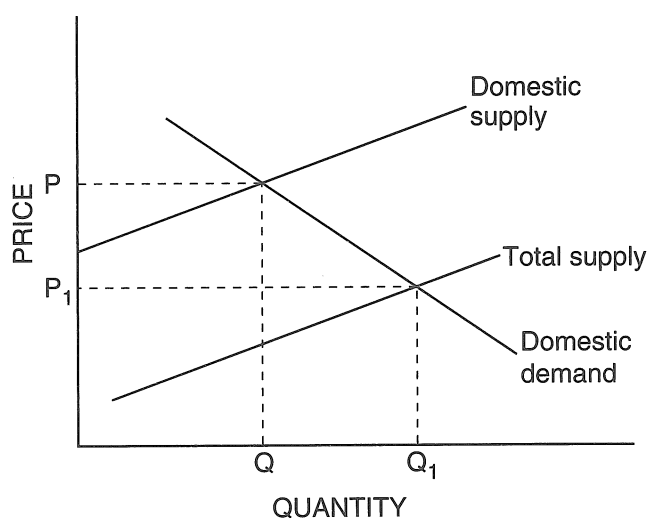
A tariff is a tax on imports. The imposition of a tax increases the cost of each unit, which is represented by a decrease in supply. This would result in an increase in equilibrium price and a decrease in equilibrium quantity.

1. Use Figure 7-2.2 to show the effect of an import tariff of \$T per unit. Graph the “Total Supply with Tariff” curve, and indicate the amount of the tariff on the graph. Label the equilibrium price and quantity after the tariff as P_T and Q_T on the graph.



Figure 7-2.2

Effect of Import Tariff



2. What is the effect of the tariff on the equilibrium price and quantity for domestic consumers compared with the free trade levels?
3. Identify the arguments frequently used to impose some type of trade barrier. Discuss the pros and cons of three arguments.

The Foreign Exchange Market

Within an economy prices are stated in the domestic currency. For example, in the United States, prices are stated in dollars and in Europe prices are stated in euros. Buyers use the domestic currency to purchase domestic goods. However, when goods are purchased from another country, they must be paid for in that country's domestic currency. Exporters are paid in the domestic currencies so they can spend it domestically. As a result, international trade requires that currencies also be traded. Currencies are traded in *foreign exchange markets*. The equilibrium price at which currencies are traded is called the *exchange rate*. An exchange rate is the rate at which the currency of one country is exchanged for the currency of another.

Table 7-3.1 shows the exchange rates for selected countries for May and August of the same year.



Table 7-3.1
Exchange Rates

	Cost of foreign currency in U.S. dollars (U.S. dollars/foreign currency)		Cost of U.S. dollar in foreign currency (foreign currency/U.S. dollars)	
	May	August	May	August
British pound	1.4	1.8	0.71	0.56
Canadian dollar	0.64	0.63	1.5625	1.5873
European euro	0.87	0.91	1.149	1.099
Swedish krona	0.094	0.093	10.638	10.753
Japanese yen	0.0083	0.0090	120.482	111.111
Mexican peso	0.1101	0.1502	9.083	6.6558

Use the data in the table to calculate the cost of the following products in U.S. dollars. To solve, divide the cost of the product in the foreign currency by the cost of the U.S. dollar in the foreign currency. Indicate whether the dollar has appreciated or depreciated between May and August.

	May	August	Appreciated or Depreciated
1. A dinner for two that costs 500 Mexican pesos			
2. A hotel room that costs 30,000 Japanese yen			
3. A BMW that costs 85,000 euros in Germany			
4. A pound of Swedish meatballs that costs 30 kronor			
5. A pair of pants that costs 72 pounds in London			
6. A leather jacket that costs 1,800 Canadian dollars			

When Americans buy foreign goods, U.S. dollars are supplied in the foreign exchange market and the foreign currency is demanded. When foreigners buy U.S. goods, the foreign currency is supplied in foreign exchange markets and the U.S. dollar is demanded. A foreign exchange market determines the equilibrium exchange rate (price) and quantity of currency exchanged using the supply and demand curves for a currency.

An increase in the exchange rate for a currency (which can be caused by an increase in demand or a decrease in supply) is called *appreciation* of that currency. When a currency appreciates, it is said to have strengthened. For example, if the exchange rate increases in the market for dollars, it means that it takes more of the foreign currency to purchase a dollar. This means that a dollar can buy more of the foreign currency. A decrease in the exchange rate for a currency (which can be caused by a decrease in demand or an increase in supply) is called *depreciation* of that currency. When a currency depreciates, it is said to have weakened. For example, if the exchange rate decreases in the market for dollars, it means that it takes less of the foreign currency to purchase a dollar. This means it takes more dollars to buy the foreign currency.

Appreciation or depreciation of a currency changes the price of imports and exports. When a country's currency appreciates, it is more expensive for foreigners to buy the country's exports and it is cheaper for the country to buy imports. When a country's currency depreciates, it is cheaper for foreigners to buy the country's exports and it is more expensive for the country to buy imports. Appreciation and depreciation of a currency will affect the economy because they affect net exports.

Consider the following situations. In each case, an underlying event causes a change in foreign exchange markets. Graph the effect on the equilibrium exchange rate and currency exchanged in the foreign exchange markets as shown in the example.

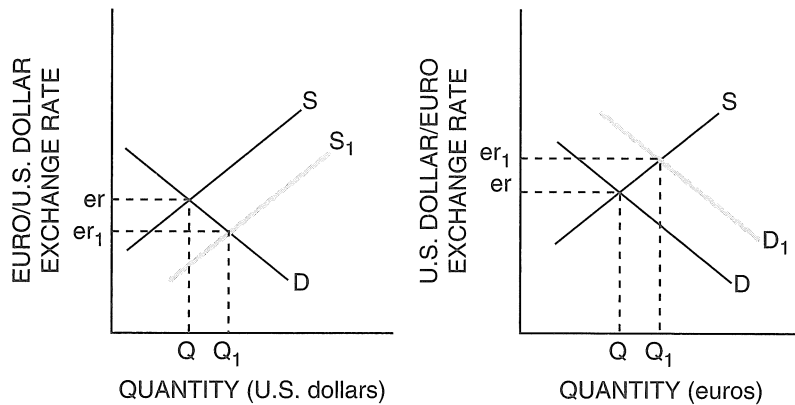
 **Student Alert:** Pay close attention to correct labeling on foreign exchange market graphs!

EXAMPLE: The prices of U.S. goods rise relative to the prices of German goods.



Figure 7-3.1

Prices of U.S. Goods Increase



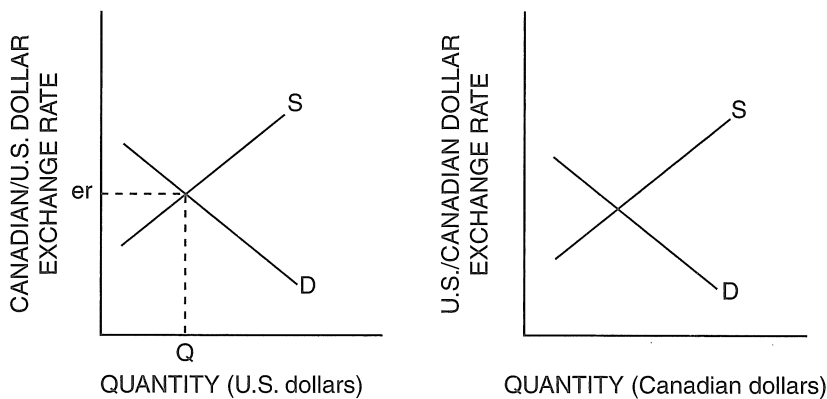
Rationale: Americans will demand the less expensive German goods. To purchase the German goods, they need euros, so the demand for euros increases (shifts to the right). To buy euros, the Americans will supply U.S. dollars to the foreign exchange market, so the supply of U.S. dollars shifts to the right. The U.S. dollar depreciates (the exchange rate decreases). The euro appreciates (the exchange rate increases).

7. Real interest rates in the United States rise faster than real interest rates in Canada.



Figure 7-3.2

Real Interest Rates in the United States Increase



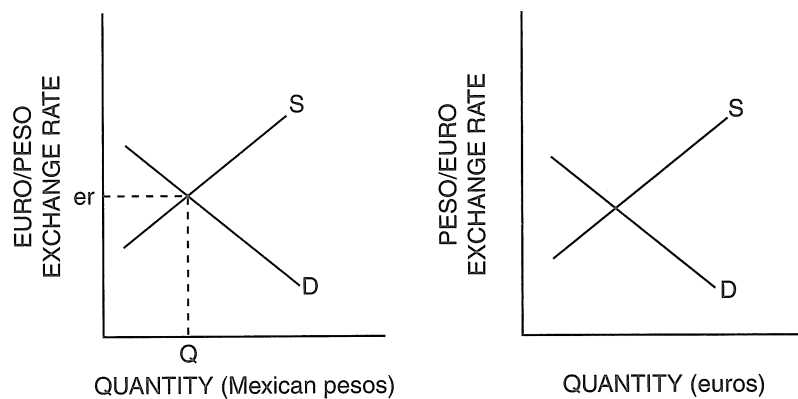
Rationale:

8. French tourists flock to Mexico's beaches.



Figure 7-3.3

French Tourists Visit Mexico



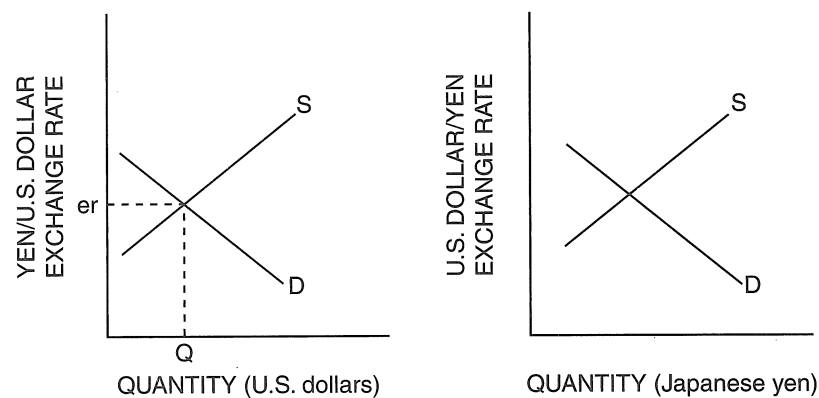
Rationale:

9. Japanese video games become popular with U.S. children.



Figure 7-3.4

U.S. Children Want Videos Produced in Japan



Rationale:

How Monetary and Fiscal Policies Affect Exchange Rates

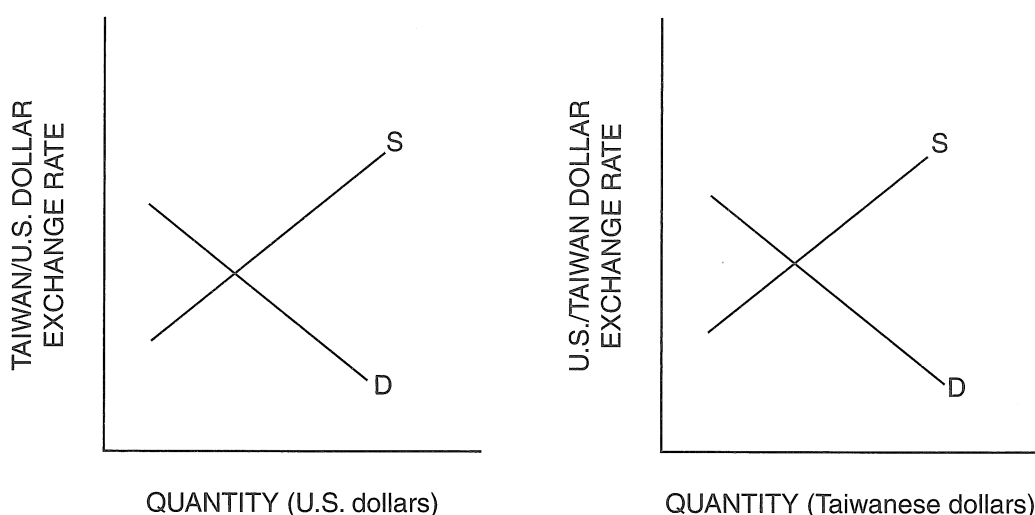
Changes in a nation's monetary and fiscal policies affect its exchange rates and its balance of trade through the real interest rate, income, and the price level. Changes in the value of a country's currency affect the balance of trade, which affects aggregate demand. Changes in aggregate demand affect real output and the price level. In other words, domestic policies influence currency values, and currency values influence domestic policies. Policy makers cannot ignore the international effects of changes in monetary and fiscal policies.

For each scenario, show the effect on equilibrium interest rate and quantity of currency in the foreign exchange market graphs in Figures 7-4.1 through 7-4.5. Use the graphs to show the starting equilibrium exchange rate and quantity, the shift that occurs, and the new equilibrium exchange rate and quantity. Following each set of graphs, indicate the short-run effect of the change in the foreign exchange market on net exports, aggregate demand, and the price level in the United States.



Figure 7-4.1

Effect on Taiwan If U.S. Government Decreases Taxes



1. Effect on Taiwan if U.S. government decreases taxes:

(A) U.S. imports (*increase / decrease*). Explain.

(B) U.S. exports (*increase / decrease*). Explain.

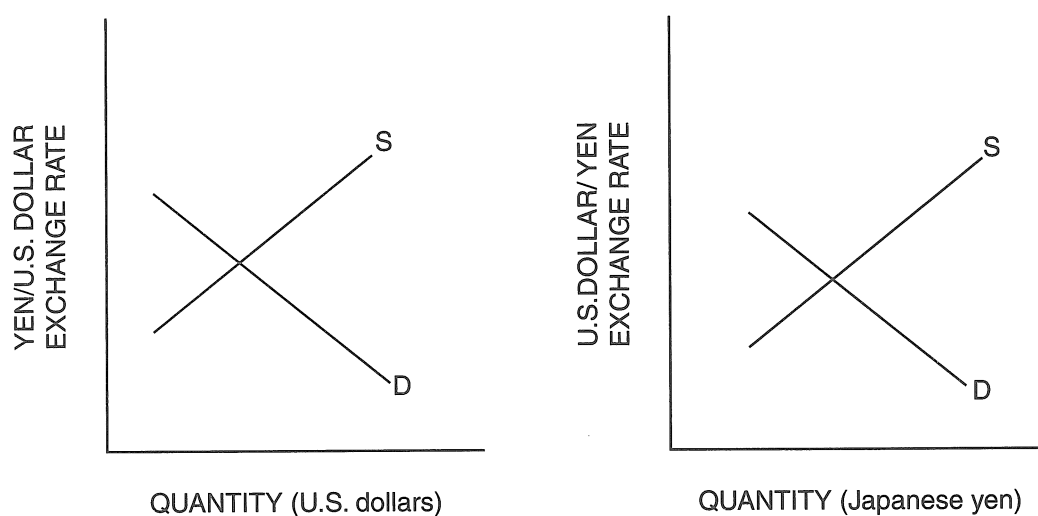
(C) U.S. aggregate demand (*increases / decreases*). Explain.

(D) The price level in the United States (*increases / decreases*). Explain.



Figure 7-4.2

Japan's Real GDP Increases



2. Effect if Japan's real gross domestic product (GDP) increases:

(A) U.S. imports (*increase / decrease*). Explain.

(B) U.S. exports (*increase / decrease*). Explain.

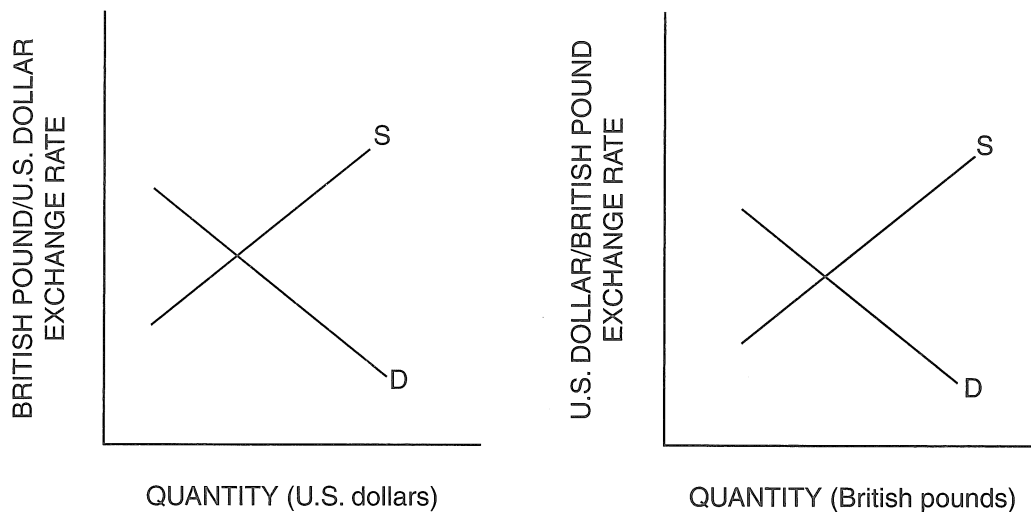
(C) U.S. aggregate demand (*increases / decreases*). Explain.

(D) The price level in the United States (*increases / decreases*). Explain.



Figure 7-4.3

Real Interest Rates in the United States Increase Relative to Great Britain



3. Effect if real interest rates in the United States increase relative to Great Britain:

(A) U.S. imports (*increase / decrease*). Explain.

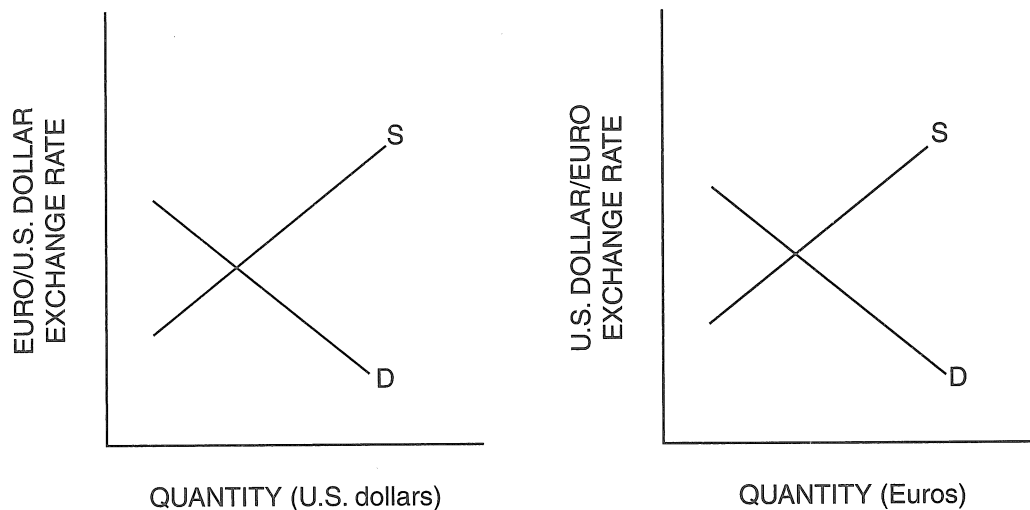
(B) U.S. exports (*increase / decrease*). Explain.

(C) U.S. aggregate demand (*increases / decreases*). Explain.

(D) The price level in the United States (*increases / decreases*). Explain.



Figure 7-4.4

Europe Experiences a Recession

4. Effect if Europe experiences a recession:

(A) U.S. imports (*increase / decrease*). Explain.

(B) U.S. exports (*increase / decrease*). Explain.

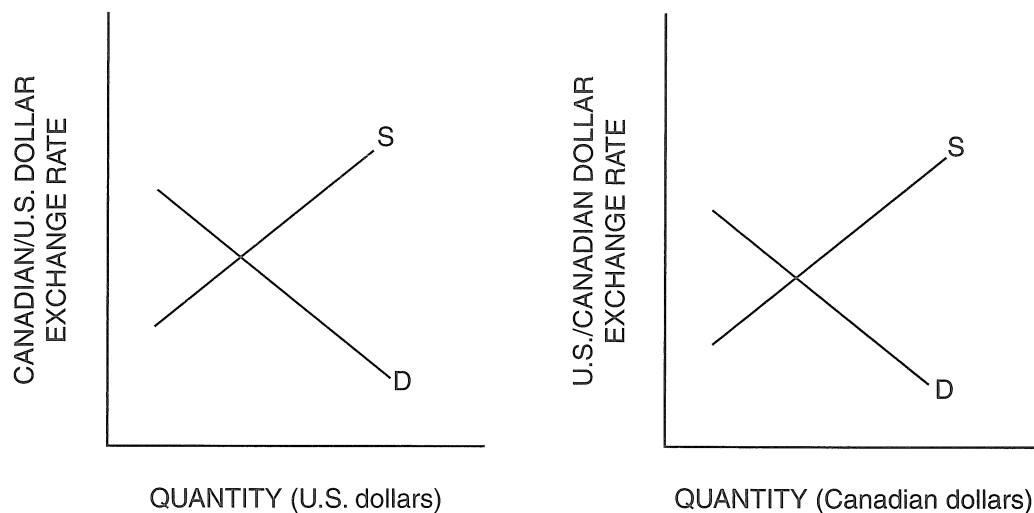
(C) U.S. aggregate demand (*increases / decreases*). Explain.

(D) The price level in the United States (*increases / decreases*). Explain.



Figure 7-4.5

The Price Level in Canada Increases Relative to the United States



5. Effect if the price level in Canada increases relative to the United States:

(A) U.S. imports (*increase / decrease*). Explain.

(B) U.S. exports (*increase / decrease*). Explain.

(C) U.S. aggregate demand (*increases / decreases*). Explain.

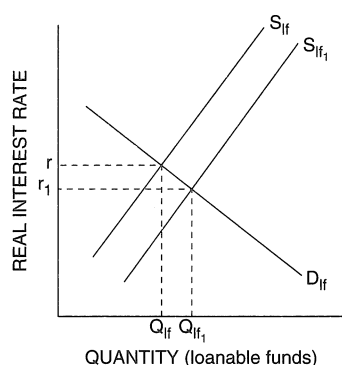
(D) The price level in the United States (*increases / decreases*). Explain.

Net Exports and Capital Flows: Linking Financial and Goods Markets

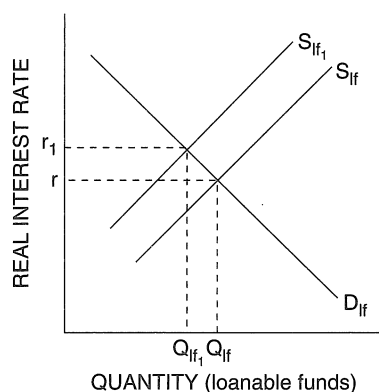
The term *capital flow* refers to the movement of financial capital (money) between economies. *Capital inflows* consist of foreign funds moving into an economy from another country; *capital outflows*, or capital flight, is the opposite—domestic funds moving out of an economy to another country. For example, from the perspective of the U.S. economy, the construction of a new plant by a Japanese automobile manufacturer within the United States is an example of capital inflow. Likewise, when an American manufacturer finances the construction of a plant outside of the United States, it is an example of capital outflow.

The loanable funds market is used to analyze capital flows in an economy. Because financial capital affects the amount of money available for borrowers, changes in capital flows shift the supply curve for loanable funds.

Capital inflows increase the supply of loanable funds, resulting in the decrease in domestic real interest rates shown in the following graph:

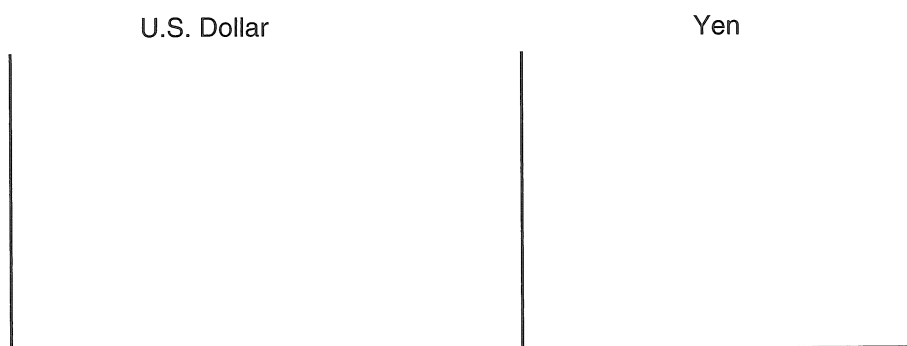


Capital outflows deplete a nation's supply of loanable funds, causing domestic interest rates to increase, as shown in the following graph:

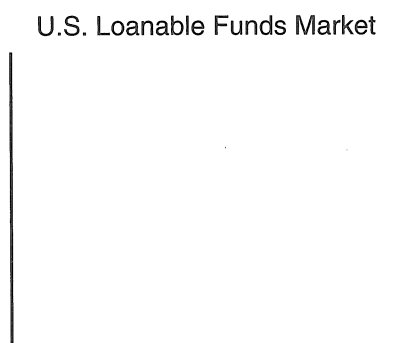


Capital Flows Resulting from a Change in Net Exports

1. Japanese firms have recently increased their imports of American made semiconductors. As a result, the U.S. current account moves toward (*surplus / deficit*) and U.S. net exports will (*increase / decrease*).
2. Illustrate on the graphs provided how the relative exchange rates of the U.S. dollar and Japanese yen will change as a result of the increase in Japanese purchases of U.S. semiconductors. Be sure to label your graphs correctly (e.g., the price of dollars should be stated in terms of yen per dollar, and vice versa).



3. Illustrate on a correctly labeled graph of the loanable funds market in the United States the changes that result from the Japanese importation of U.S. semiconductors. *Hint:* Current account deficits are offset by financial account surpluses (capital inflow) while current account surpluses are offset by financial account deficits (capital outflow).



4. Assume that inflation in the United States begins to rise while prices throughout the European Union remain relatively stable. The U.S. current account moves toward (*surplus / deficit*) and U.S. net exports (*increase / decrease*).
5. Illustrate on the graphs provided how the relative exchange rates of the U.S. dollar and euro will change as a result of this change in relative inflation rates. Be sure to label your graphs correctly (e.g., the price of dollars should be stated in terms of euro per dollar, and vice versa).

U.S. Dollar



Euro



6. Illustrate on a graph of the loanable funds market in the United States the changes that result when the relative inflation rates change. *Hint:* Current account deficits are offset by financial account surpluses (capital inflow) while current account surpluses are offset by financial account deficits (capital outflow).

U.S. Loanable Funds Market



Capital Flows Resulting from a Change in Policy

7. Due to a recent recession, expansionary fiscal policies in the United States have led to historically large federal budget deficits. On a correctly labeled graph of the loanable funds market in the United States, illustrate the effects of massive government borrowing.

U.S. Loanable Funds Market



8. The recession causes real interest rates to (*increase / decrease*) and foreign investors will (*increase / decrease*) their purchases of bonds in the United States. Illustrate this change on your loanable funds graph above.
9. Assume that the central bank enacts an expansionary policy of purchasing government securities on the open market. This monetary policy will (*increase / decrease*) real interest rates in the United States. As a result of the change in real interest rates, foreign investors will (*increase / decrease*) their purchases of bonds in the United States.

Illustrate this change on a correctly labeled graph of the loanable funds market.

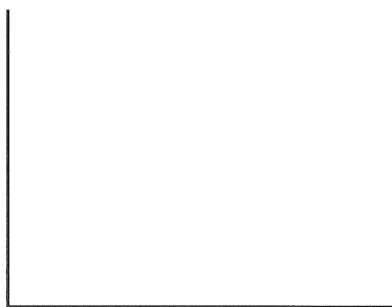
U.S. Loanable Funds Market



Capital Flows Resulting from a Change in Foreign Direct Investment

10. Foreign direct investment (FDI) into the United States rose sharply during the second half of the 1990s due to the perceived strength and stability of the U.S. economy relative to unstable economies worldwide. On a correctly labeled graph of the loanable funds market in the United States, illustrate the effect of this influx of FDI.

U.S. Loanable Funds Market



11. Great Britain was a leading investor in American firms at this time. Use correctly labeled graphs of the markets for dollars and pounds to illustrate the relative change in value of these two currencies on the foreign exchange market as a result of British investment in American companies. Be sure to label your graphs correctly (e.g., the price of dollars should be stated in terms of pounds per dollar, and vice versa).

U.S. Dollar



British Pound



12. The changes above will cause U.S. net exports to (*increase / decrease*).

13. The U.S. economy slowed in the early 2000s while American firms discovered less costly production possibilities in foreign countries. On a correctly labeled graph of the loanable funds market in the United States, illustrate the effects of this capital flight.

U.S. Loanable Funds Market

