

SOLUTIONS TO TEXT PROBLEMS:

Quick Quizzes

1. Net exports are the value of a nation's exports minus the value of its imports, also called the trade balance. Net capital outflow is the purchase of foreign assets by domestic residents minus the purchase of domestic assets by foreigners. Net exports equal net capital outflow.
2. The nominal exchange rate is the rate at which a person can trade the currency of one country for the currency of another. The real exchange rate is the rate at which a person can trade the goods and services of one country for the goods and services of another. They are related through the expression: real exchange rate equals nominal exchange rate times domestic price divided by foreign price.

If the nominal exchange rate goes from 100 to 120 yen per dollar, the dollar has appreciated because a dollar now buys more yen.
3. Since Spain has had high inflation and Japan has had low inflation, the number of Spanish pesetas a person can buy with Japanese yen has increased.

Questions for Review

1. The net exports of a country are the value of its exports minus the value of its imports. Net capital outflow refers to the purchase of foreign assets by domestic residents minus the purchase of domestic assets by foreigners. Net exports are equal to net capital outflow by an accounting identity, since exports from one country to another are matched by payments of some asset from the second country to the first.
2. Saving equals domestic investment plus net capital outflow, since any dollar saved can be used to finance accumulation of domestic capital or it can be used to finance the purchase of capital abroad.
3. If a dollar can buy 100 yen, the nominal exchange rate is 100 yen per dollar. The real exchange rate equals the nominal exchange rate times the domestic price divided by the foreign price, which equals 100 yen per dollar times \$10,000 per American car divided by 500,000 yen per Japanese car, which equals 2 Japanese cars per American car.
4. The economic logic behind the theory of purchasing-power parity is that a good must sell for the same price in all locations. Otherwise, people would profit by engaging in arbitrage.
5. If the Fed started printing large quantities of U.S. dollars, the U.S. price level would increase, and a dollar would buy fewer Japanese yen.

Problems and Applications

1. a. When an American art professor spends the summer touring museums in Europe, he spends money buying foreign goods and services, so U.S. exports are unchanged, imports increase, and net exports decrease.

- b. When students in Paris flock to see the latest Arnold Schwarzenegger movie, foreigners are buying a U.S. good, so U.S. exports rise, imports are unchanged, and net exports increase.
 - c. When your uncle buys a new Volvo, an American is buying a foreign good, so U.S. exports are unchanged, imports rise, and net exports decline.
 - d. When the student bookstore at Oxford University sells a pair of Levi's 501 jeans, foreigners are buying U.S. goods, so U.S. exports increase, imports are unchanged, and net exports increase.
 - e. When a Canadian shops in northern Vermont to avoid Canadian sales taxes, a foreigner is buying U.S. goods, so U.S. exports increase, imports are unchanged, and net exports increase.
- 2.
- a. Wheat is traded more internationally than in the past because shipping costs have declined, as have trade restrictions.
 - b. Banking services are traded more internationally than in the past because communications costs have declined, as have trade restrictions.
 - c. Computer software is traded more internationally than in the past because the computer industry has grown and the software is easier to transport (since it can now be downloaded electronically).
 - d. Automobiles are traded more internationally than in the past because transportation costs have declined, as have tariffs and quotas.
3. Foreign direct investment requires actively managing an investment, for example, by opening a retail store in a foreign country. Foreign portfolio investment is passive, for example, buying corporate stock in a retail chain in a foreign country. As a result, a corporation is more likely to engage in foreign direct investment, while an individual investor is more likely to engage in foreign portfolio investment.
- 4.
- a. When an American cellular phone company establishes an office in the Czech Republic, U.S. net capital outflow increases, because the U.S. company makes a direct investment in capital in the foreign country.
 - b. When Harrod's of London sells stock to the General Electric pension fund, U.S. net capital outflow increases, because the U.S. company makes a portfolio investment in the foreign country.
 - c. When Honda expands its factory in Marysville, Ohio, U.S. net capital outflow declines, because the foreign company makes a direct investment in capital in the United States.
 - d. When a Fidelity mutual fund sells its Volkswagen stock to a French investor, U.S. net capital outflow declines (if the French investor pays in U.S. dollars), because the U.S. company is reducing its portfolio investment in a foreign country.
5. If national saving is constant and net capital outflow increases, domestic investment must decrease, since national saving equals domestic investment plus net capital outflow. If domestic investment declines, the country's accumulation of domestic capital declines.

6.
 - a. The newspaper shows nominal exchange rates, since it shows the number of units of one currency that can be exchanged for another currency.
 - b. Many answers are possible.
 - c. If U.S. inflation exceeds Japanese inflation over the next year, you would expect the dollar to depreciate relative to the Japanese yen because a dollar would decline in value (in terms of the goods and services it can buy) more than the yen would.
7.
 - a. Dutch pension funds holding U.S. government bonds would be happy if the U.S. dollar appreciated. They would then get more Dutch guilders for each dollar they earned on their U.S. investment. In general, if you have an investment in a foreign country, you are better off if that country's currency appreciates.
 - b. U.S. manufacturing industries would be unhappy if the U.S. dollar appreciated because their prices would be higher in terms of foreign currencies, which will reduce their sales.
 - c. Australian tourists planning a trip to the United States would be unhappy if the U.S. dollar appreciated because they would get fewer U.S. dollars for each Australian dollar, so their vacation will be more expensive.
 - d. An American firm trying to purchase property overseas would be happy if the U.S. dollar appreciated because it would get more units of the foreign currency and could thus buy more property.
8. All the parts of this question can be answered by keeping in mind the definition of the real exchange rate. The real exchange rate equals the nominal exchange rate times the domestic price level divided by the foreign price level.
 - a. If the U.S. nominal exchange rate is unchanged, but prices rise faster in the United States than abroad, the real exchange rate rises.
 - b. If the U.S. nominal exchange rate is unchanged, but prices rise faster abroad than in the United States, the real exchange rate declines.
 - c. If the U.S. nominal exchange rate declines, and prices are unchanged in the United States and abroad, the real exchange rate declines.
 - d. If the U.S. nominal exchange rate declines, and prices rise faster abroad than in the United States, the real exchange rate declines.
9. Three goods for which the law of one price is likely to hold are farm goods like wheat, which are nearly identical no matter where they are produced, technological goods like computer software, which have low shipping costs because they are light, and clothing, which also has low shipping costs. Three goods for which the law of one price is not likely to hold are real estate, because you can't move land or buildings from one country to another; goods that are mainly consumed in one country and so are not traded, like frog legs in France; and services like haircuts, which cannot be arbitrated even if the price is very different in different countries.
10. If purchasing-power parity holds, then 12 pesos per soda divided by \$0.75 per soda equals the exchange rate of 16 pesos per dollar. If prices in Mexico doubled, the exchange rate will double to 32 pesos per dollar.

11. a. To make a profit, you would want to buy rice where it is cheap and sell it where it is expensive. Since American rice costs 100 dollars per bushel, and the exchange rate is 80 yen per dollar, American rice costs 100×80 equals 8,000 yen per bushel. So American rice at 8,000 yen per bushel is cheaper than Japanese rice at 16,000 yen per bushel. So you could take 8,000 yen, exchange them for 100 dollars, buy a bushel of American rice, then sell it in Japan for 16,000 yen, making a profit of 8,000 yen. As people did this, the demand for American rice would rise, increasing the price in America, and the supply of Japanese rice would rise, reducing the price in Japan. The process would continue until the prices in the two countries were the same.
- b. If rice were the only commodity in the world, the real exchange rate between the United States and Japan would start out too low, then rise as people bought rice in America and sold it in Japan, until the real exchange became one in long-run equilibrium.
12. If you take X units of foreign currency per Big Mac divided by 2.49 dollars per Big Mac, you get $X/2.49$ units of the foreign currency per dollar; that's the predicted exchange rate.
- a. Indonesia: $16,000/2.49 = 6,426$ rupiah/\$
Hungary: $459/2.49 = 184$ forint/\$
Czech Republic: $56.28/2.49 = 22.6$ koruna/\$
Israel: $12/2.49 = 4.82$ shekel/\$
Canada: $3.33/2.49 = 1.34$ C\$/ \$
- b. Under purchasing-power parity, the exchange rate of the Israeli shekel to the Canadian dollar is 12 shekels per Big Mac divided by 3.33 Canadian dollars per Big Mac equals 3.6 shekels per Canadian dollar. The actual exchange rate is 4.79 shekels per dollar divided by 1.34 Canadian dollars per dollar equals 3.57 shekels per Canadian dollar. That is pretty close!