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Part VI



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Finance in the Global Economy

CHAPTER

21 International Finance

It is abundantly clear that in today's world, financial management decisions cannot be made without considering their effects in international markets. London, Paris, and Tokyo are but a phone call away. E-mails connect business partners in New Zealand and New York in seconds. Huge potential for development exists in China, Russia, and South America. Many companies not only have international sales, but also international divisions and subsidiaries (many Japanese cars are manufactured in the United States, for example). In short, the U.S. economy is connected to the rest of the world more closely than ever before. Chapter 21 examines the issues in international finance in detail. Beginning with multinational corporations and how they work, the chapter proceeds through currency exchange rates, exchange rate theories, and the management of international risk, including political and cultural risks. The chapter concludes with a survey of the major international trade agreements governing how multinational firms do business.

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21

International Finance

“A man’s feet must be planted in his country, but his eyes should survey the world.”

—George Santayana

Cheering for a Weak Dollar—Is It Un-American?

Caterpillar is a United States-based corporation that sells heavy construction equipment. Its main competition comes from a Japan-based corporation named Komatsu. Building big machines that move tons of dirt around a construction site is something many people around the world would expect from an American company such as Caterpillar that has a long history in this business.

Many of the executives at Caterpillar are veterans of military service. This is a big, strong, American company that builds big, rugged equipment. As such, it is a foregone conclusion that executives at Caterpillar would be in favor of a strong dollar in the world currency markets. Isn’t it?

Actually, no it isn’t. Caterpillar likes to see the dollar weaken against the yen, euro, and other major world currencies. When the dollar weakens, people from those countries whose currencies are strengthening against the dollar can buy more dollars with a given amount of their currency. Products sold by U.S.-based companies such as Caterpillar become less expensive for these customers outside the United States. Products from competitors such as Japan’s Komatsu become relatively more expensive when the yen strengthens in world currency markets.

In this chapter we examine the role of currency exchange rates in global business and a variety of other international business issues.

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Chapter Overview

This chapter addresses the financial issues that companies face when they maintain operations in, or sell goods and services to, other countries. These issues include differences in currency, language, politics, and culture. We also explore the potential benefits and risks of doing business in other countries. We closely examine the risk of transacting business in either a domestic or foreign currency and how to manage that risk. Finally, we look at international trade agreements and their effect on business.

Multinational Corporations

A **multinational corporation (MNC)** is a corporation that has operations in more than one country. Most large corporations conduct at least some of their business in countries other than the one they call home. In fact, it is getting difficult to accurately describe whether companies are U.S., German, or Japanese, in spite of what their names might suggest.¹ What percent of their sales do you believe Nokia generates in its home country of Finland, for example?

Financial Advantages of Foreign Operations

You may have read stories about McDonald's fast-food restaurants expanding into Russia and Japan, or Kentucky Fried Chicken opening a branch in the People's Republic of China. Coca-Cola and Pepsi-Cola executives count on the

¹A few years ago, the Volkswagen Rabbit, made by a German-based company, was the only car sold in the United States that was made in the United States, by U.S. workers, with all U.S.-made parts.

Learning Objectives

After reading this chapter, you should be able to:

1. Define a multinational corporation and explain its importance.
2. Demonstrate how the law of comparative advantage leads to international trade.
3. Describe exchange rates and their effects on firms.
4. Show how firms manage the risks of fluctuating exchange rates.
5. Discuss exchange rate theories.
6. Describe the political and cultural risks that affect MNCs.
7. Explain how international trade agreements affect international business.

billion-dollar growth potential of their popular products in overseas markets. Boeing, once a leading supplier for U.S. firms, is now primarily an exporter. Companies are always looking for growth opportunities, and many of these opportunities are in other countries.

In addition to the potential demand for products and services, operating abroad can decrease production costs. Labor may be less costly in other countries. For instance, much of the production of clothing by companies based in the United States is done in other countries where lower wages are paid to workers.

Companies can often obtain political advantages by shifting some operations away from home. For example, Toyota, Honda, and Nissan of Japan, and the German company BMW all produce some of their cars in the United States. This lessens the risk of the U.S. Congress passing laws that would restrict imports of, or increase the tax on, sales of these cars. Firms based in the United States often have the same import and tax reasons to open production plants in other countries.

Ethical Issues Facing Multinational Corporations

Using foreign labor may pose difficult ethical questions for U.S. companies. Are very poor people from other countries being exploited because they can be employed at lower wages than would be paid to U.S. workers? Are overseas plants as safe as U.S. plants, where OSHA inspectors check up on employers?² Does a corporation have the moral responsibility to meet the same health and safety standards for its workers in other countries as it applies to its U.S. workers, even if not legally required to do so? Calvin Klein, Liz Claiborne, The Gap, and other garment industry companies that manufacture clothing outside of the United States to control labor costs must balance the moral issues of human rights against their obligations to stockholders.

Another ethical issue arises when operations are moved to countries where environmental laws are less strict than the laws of the company's home country. Firms may lower costs by disposing of waste products or emitting pollutants in a potentially dangerous manner. Even though the laws of the other country may not have pollution control or disposal guidelines, should a business harm the environment or create a danger that could harm future generations to lower current costs? How should managers weigh the morality of business procedures against their fiduciary duty to the owners of the company's common stock to maximize value?

Unfortunately, there are no clear-cut answers to many of these questions. Certainly, few people would condone worker exploitation and the destruction of the environment. But what if working conditions are only slightly less safe, or the environmental practices in that other country only slightly more offensive by the home country's standards? What if these slightly offensive environmental practices are commonplace and accepted in that other country? Where should we draw the line? Facing these questions, even when the answers are difficult to agree on, is an important first step in making ethical decisions.

Comparative Advantage

International trade creates significant financial benefits because not all countries can produce goods and services with the same degree of efficiency. The law of comparative advantage says that each country should concentrate on that which it does well.

²OSHA stands for Occupational Safety and Health Administration, a federal agency responsible for enforcing national laws intended to protect workers employed by U.S. companies.

For example, coffee does not grow well in the United States. If coffee drinkers in the United States had to depend on locally grown coffee for their entire supply, coffee would be scarce, of relatively poor quality, and extremely expensive. Coffee grows very well in Brazil, however. Brazilians can grow much more than they can consume themselves, and at a relatively low cost. It makes sense, then, that U.S. coffee drinkers should buy Brazilian coffee.

Brazil, in contrast, does not make major motion pictures that are in great demand elsewhere in the world. If Brazilians could only watch movies made in Brazil, consumer demand would not be met. Filmmakers in the United States make many movies, most with sophisticated technology. Film companies can (and do) export films easily and cheaply to foreign countries like Brazil. It makes sense, then, for Brazilians to stick to growing coffee and to watch U.S. movies. Brazil has a comparative advantage over the United States with respect to coffee growing, whereas the United States has a comparative advantage over Brazil with respect to movie making. International trade makes it possible for U.S. citizens to enjoy high-quality, affordable coffee and for Brazilians to enjoy numerous, technologically advanced U.S. movies.³

Exchange Rates and Their Effects

Given that countries can benefit from trading with each other, how do they overcome the problem of having different currencies? An **exchange rate** is an expression of the value of one country's currency in terms of another country's currency. It specifies how many units of one country's currency can be exchanged for one unit of the other country's currency. For example, the exchange rate between the U.S. dollar and the Mexican peso might be 10 Mexican pesos per one U.S. dollar. The exchange rate between the U.S. dollar and the Japanese yen might be 100 Japanese yen per one U.S. dollar.

Exchange rates can be expressed as the number of units of the foreign currency per one unit of domestic currency, as in the previous paragraph, or as the number of units of the domestic currency per one unit of the foreign currency. For example, if 10 Mexican pesos can be exchanged for one U.S. dollar, then one Mexican peso is worth one-tenth of a U.S. dollar, or \$0.10. The exchange rate can be expressed as 10 pesos per dollar or as one-tenth of a dollar per peso. The one exchange rate is the reciprocal of the other.

A sampling of actual exchange rates as of July 7, 2006, is shown in Table 21-1. We see from Table 21-1 that the exchange rate is expressed as how many U.S. dollars (the number of units of the domestic currency) per one unit of the foreign currency. That is, one British pound was worth almost \$1.85 U.S. dollars on July 7, 2006.

Fluctuating Exchange Rates

Exchange rates fluctuate every day due to changing world conditions. Currency traders take advantage of these fluctuations by “buying” and “selling” currencies. This means they exchange a certain amount of one currency for a certain amount of another. The currency market is one of the largest financial markets in the world. Currency traders buy and sell the equivalent of over \$1 trillion in an average trading day. The “price” of buying or selling a currency is its exchange rate. So, if a trader had wanted to sell U.S. dollars in exchange for British pounds on July 7, 2006, the trader would have paid about 1.85 dollars for each pound.

³The quality of U.S.-produced movies is a subjective judgment, but it is clear from film company revenues that the world seems to enjoy watching them.

Table 21-1 Exchange Rates Relative to the U.S. Dollar

Currency	Rate in U.S. \$ July 7, 2006
British Pound	1.84679
Canadian Dollar	0.89915
Mexican Peso	0.09085
Swiss Franc	0.8176
Japanese Yen	0.00874
Euro	1.27989

Sources:
<http://finance.yahoo.com/currency?u>
<http://www.oanda.com/convert/classic>
<http://www.bloomberg.com/markets/currencies/fxc.html>

If the value of one currency decreases relative to the value of another currency, the currency with the falling value is said to be weakening. For example, if the exchange rate between the U.S. dollar and the Mexican peso changes from 10 Mexican pesos per U.S. dollar to eight Mexican pesos per U.S. dollar, then the U.S. dollar weakened relative to the Mexican peso, and it now takes more dollars to buy a given number of Mexican pesos. At the same time, of course, the Mexican peso is said to have strengthened relative to the U.S. dollar because the exchange rate would have changed from \$0.10 dollar per peso to \$0.125 dollar per peso. A given number of Mexican pesos now buys more U.S. dollars.

When a country's currency weakens relative to the currencies of other countries, imported goods become more expensive for citizens of the country with the weakened currency. Say that one pound of Mexican limes costs 10 pesos. If the exchange rate between Mexican pesos and U.S. dollars is 10 pesos per dollar, then one dollar (10 pesos) will buy a pound of Mexican limes. However, if the exchange rate changes from 10 pesos per dollar to eight per dollar, then the importer could no longer buy the pound of limes with one dollar: The limes cost 10 pesos and the dollar is equivalent to eight pesos. Each peso is now worth \$0.125, so the importer would now need \$1.25 ($\0.125×10) to buy a pound of limes instead of the \$1.00 that would have made this purchase earlier.

When the U.S. dollar weakens against the Mexican peso, U.S. importers of Mexican goods will require more dollars to purchase Mexican goods that are sold in pesos. Similarly, people in the United States will find that Mexican goods and services are now more expensive in general. U.S. vacationers in Mexico learn this lesson quickly.

Conversely, a weakened dollar relative to the Mexican peso means that U.S. goods and services are less expensive for Mexican citizens to buy. This is why Mexican tourists tend to come to the United States in greater numbers when the dollar is weakening against the Mexican peso, and why business improves for U.S. companies exporting goods to Mexico. Generally, these same effects occur when the U.S. dollar weakens compared to any other given country's currency.

What happens when the U.S. dollar strengthens against the currency of another country? Using our Mexican peso example, if the dollar strengthens against the peso, more U.S. consumers would buy Mexican limes and other goods and vacation in greater numbers in Mexico. At the same time, Mexican people would buy fewer U.S. goods and take fewer U.S. vacations.⁴

These changes in spending patterns usually occur whenever the exchange rate fluctuates. The relative attractiveness of one country's goods and services abroad fluctuates with the relative value of the currency changes.

Cross Rates

If we know the exchange rate between the currencies of Country A and Country B, and also between the currencies of Country A and Country C, then we can determine the exchange rate between the currencies of Country B and Country C. For example, if we know that one U.S. dollar is worth 10 Mexican pesos and that one U.S. dollar is worth 100 Japanese yen, we can determine how many Japanese yen a person would receive in exchange for each Mexican peso. An exchange rate of two currencies found by using a common third currency is known as a currency **cross rate**.

To calculate a currency cross rate, multiply the ratio of Currency A to Currency B exchange rate by the ratio of Currency B to Currency C exchange rate as shown in Equation 21-1.

Calculation of a Currency Cross Rate

$$\frac{\text{Currency A}}{\text{Currency B}} \text{ ¥ } \frac{\text{Currency B}}{\text{Currency C}} = \frac{\text{Currency A}}{\text{Currency C}} \quad (21-1)$$

The calculation of the Japanese yen to the Mexican peso cross rate using the cross rate formula in Equation 21-1 is shown next.

$$\frac{\text{Japanese Yen}}{\text{U.S. Dollar}} \text{ ¥ } \frac{\text{U.S. Dollar}}{\text{Mexican Peso}} = \frac{\text{Japanese Yen}}{\text{Mexican Peso}}$$

Suppose 100 Japanese yen are worth one dollar, as we said earlier. Then suppose one U.S. dollar is worth 10 Mexican pesos. Substituting these values into Equation 21-1 produces the following cross rate:

$$\frac{100 \text{ Japanese Yen}}{1 \text{ U.S. Dollar}} \text{ ¥ } \frac{1 \text{ U.S. Dollar}}{10 \text{ Mexican Pesos}} = \frac{100 \text{ Japanese Yen}}{10 \text{ Mexican Pesos}} = \frac{10 \text{ Japanese Yen}}{1 \text{ Mexican Peso}}$$

We find that the U.S. dollar in the first term of the equation cancels out the U.S. dollar in the second term, leaving the yen-per-peso exchange rate, which in this case is 100 to 10, reduced to 10 to 1.

A sampling of currency cross rates is shown in Table 21-2.

Cross rates are a useful tool. Financial publications of many countries offer exchange rates relative to the domestic currency only. So, if you were on a business trip in Europe but were managing a project for a U.S. firm that had a Japanese supplier, you might want to know the exchange rate between the dollar and yen but would only have information about the euro. The cross rate formula allows you to quickly calculate the dollar-to-euro exchange rate.

⁴In our running example, we assume that the domestic prices in the two countries stay the same.

Table 21-2 Currency Cross Rates on July 7, 2006

	U.S. Dollar	British Pound	Canadian Dollar	Japanese Yen	Euro
U.S. Dollar	—	0.54148	1.11216	114.36414	0.78132
British Pound	1.84679	—	2.05392	211.20616	1.44293
Canadian Dollar	0.89915	0.48687	—	102.83052	0.70252
Japanese Yen	0.00874	0.00473	0.00972	—	0.00683
Euro	1.27989	0.69303	1.42344	146.37313	—

Sources:
<http://finance.yahoo.com/currency?u>
<http://www.oanda.com/convert/classic>
<http://www.bloomberg.com/markets/currencies/fxc.html>

Exchange Rate Effects on MNCS

Fluctuating exchange rates present special risks and opportunities for multinational corporations. As the home currency of an MNC strengthens or weakens against currencies of other countries where the MNC has operations, the firm will feel a financial impact.

Suppose, for example, that McDonald's Corporation, a U.S.-based MNC, realized profits of 500 million euros from its operations in Germany during 2006. At some point, McDonald's Corporation is likely to convert its euro profits to U.S. dollars and bring the dollars to the United States. Converting foreign currency profits into domestic currency to send to the home country of the business is known as repatriating the profits. Why repatriate profits? McDonald's stockholders expect U.S. dollar dividends, not euro dividends.

To demonstrate how to report repatriated profits to shareholders, let's revisit the McDonald's example. Suppose the exchange rate is 1.25 U.S. dollars per euro at the start of the year. Also assume the exchange rate holds steady throughout the year. When McDonald's repatriates its profits at year's end, it will report on the income statement 500 million times $1.25 = 625$ million in U.S. dollar profits from its German operations.

Now suppose that the exchange rate does not hold steady during the year. Suppose instead that the dollar per euro exchange rate falls from 1.25 dollars per euro to 1.00 dollar per euro by year's end. It now takes fewer dollars to buy a euro than it did at the start of the year, 1.00 instead of 1.25. The dollar has strengthened against the euro. The euro has weakened against the dollar. Now when the McDonalds profits are repatriated to the U.S., they are worth $500 \text{ million} \times 1.00 = 500$ million U.S. dollars. Clearly, the strengthening of the U.S. dollar during the year hurt McDonald's Corporation. Its U.S. dollar profits were 125 million U.S. dollars lower ($\$625 \text{ million} - \500 million) than they would have been had the dollar not strengthened.

A strengthening U.S. dollar has a negative effect on an MNC that repatriates its profits from the country whose currency is weakening. However, if the U.S. dollar weakens relative to the foreign currency, U.S. based company profits rise. Going back to our McDonald's example, suppose that the U.S. dollar had weakened relative to the euro during the year. McDonald's U.S. dollar profits would have been greater after converting the euros to dollars and repatriating the profits back to the United States.

Exchange Rate Effects on Foreign Stock and Bond Investments

A corporation does not have to have actual business operations in another country to be affected by exchange rate fluctuations. If a company holds stocks or bonds denominated in the currencies of other countries, the fluctuations in the value of these currencies will affect the dollar value of the stocks and bonds. This applies to individual investors' holdings as well.

If Betsy Ross, a U.S. investor, held 100 shares of Lufthansa common stock valued at 20 euros per share, a weakening of the euro (strengthening of the U.S. dollar) would hurt Ross just as it hurt McDonald's in our earlier example. If the exchange rate were, say, 1.25 dollars per euro, then Ross's investment would be worth $20 \times 1.25 = 25$ U.S. dollars per share.

However, if the exchange rate went from 1.25 to 1.00 dollars per euro, the U.S. dollar value of Ross's stock would decrease from \$25 per share to \$20 (20 euros \times \$1.00 per euro = \$20). Ross experienced a loss of $\$5/\$25 = .20$, or 20 percent, even though the stock's price on the German stock exchange did not change at all. Of course, if the dollar had weakened, there would have been a positive financial impact on Betsy. A strengthening dollar is one of the risks a U.S. citizen takes when investing in a country that uses a different currency.

Managing Risk

International operations provide not only special challenges and opportunities but also special risks. Exchange rate risk can be hedged. Investors and MNCs often find diversification benefits when foreign investments are added to an all-domestic portfolio. Risk of foreign securities held by U.S. citizens, caused by fluctuating exchange rates, can be managed by purchasing foreign claims on foreign securities denominated in U.S. dollars.

Hedging

The risk that a multinational corporation faces due to fluctuating exchange rates is one that can be managed. *Forward contracts*, *futures contracts*, and *currency swaps* are all available to help an MNC hedge currency risk. A **hedge** is a financial agreement used to offset or guard against risk. A company may choose to hedge against adverse changes in interest rates, commodity prices, or currency exchange rates.

Forward contracts are contracts in which one party agrees to buy, and the other party agrees to sell, a certain amount of an asset (a currency for example) at a specified price (exchange rate) at a specified future time. *Futures contracts* are similar except they are standardized contracts and can be traded on organized exchanges. *Swaps* are directly negotiated contracts, like forward contracts, in which each party agrees to swap payments at specified points in time according to a predetermined formula. For instance, one party could pay U.S. dollars and the other Japanese yen, each according to the amounts called for in the swap contract. By agreeing to a forward, futures, or swap contract, an MNC can protect against a loss that will occur if the feared change in exchange rate occurs. The firm using these hedging instruments insulates itself from this risk.

Diversification Benefits of Foreign Investments

There are often significant diversification benefits to investing in a variety of countries, both for MNCs and for individual investors. Instead of putting all your money in one country, spreading your investment around several countries will often prove beneficial. If the economy or market is weak in one country, it may be stronger in another. If your money is spread around in several countries, the good news in one country will often cancel out the bad news from another.

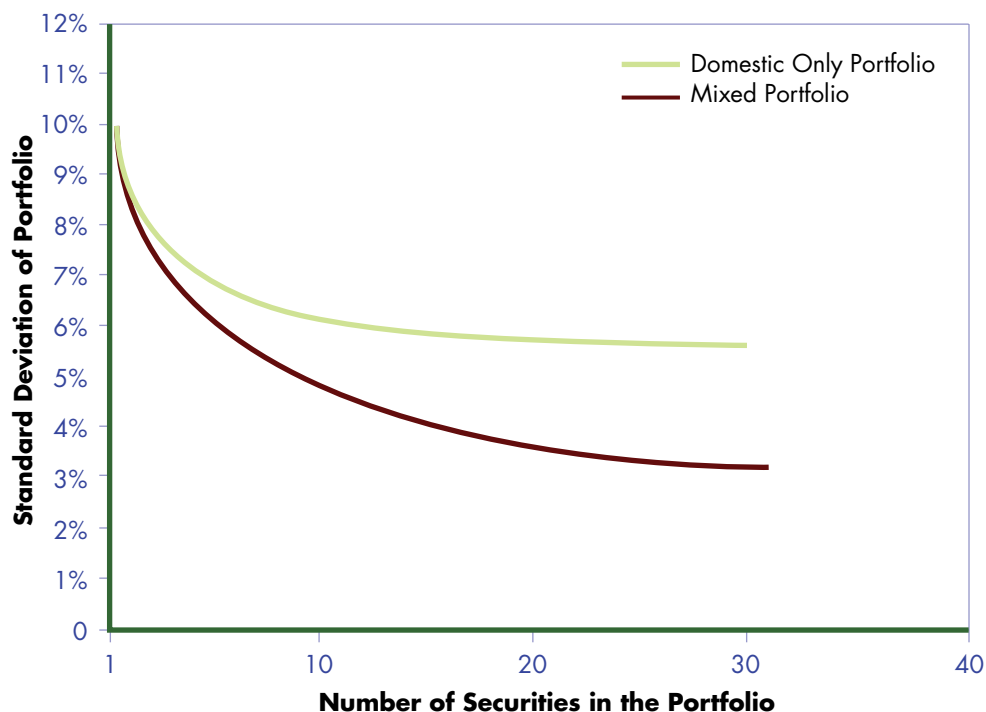
The returns earned from investments in other countries often have low correlations with the returns earned from investments in the home country. Chapter 7 showed the risk-reducing potential of creating portfolios in which the individual assets have returns with low correlations relative to each other. Figure 21-1 shows how diversification benefits are greater with a portfolio that contains both domestic and foreign securities (average correlation of .4 in our example), rather than domestic securities alone (average correlation of .8 in our example).

If you review Chapter 7, you will see specifically how the correlation between the returns of assets affects the risk of a portfolio. Because the correlation of returns between a U.S. stock and a foreign stock tends to be lower than between two U.S. stocks, international diversification is often an important risk-management tool.

Figure 21-1 shows how the diversification effects differ for a portfolio with U.S. stock only compared to one with U.S. and foreign stock. The sample domestic portfolio has an average correlation coefficient of returns of .8. The sample portfolio containing both domestic and foreign securities has an average correlation coefficient of returns of .4. The mixed portfolio has a lower correlation coefficient, so the risk of that portfolio is lower than that of the domestic-only portfolio.

Figure 21-1 Portfolio Risk as Diversification Changes

Figure 21-1 shows the diversification effects for a sample domestic-only portfolio and a mixed (domestic and foreign) portfolio. The upper curve represents a domestic-security-only portfolio. The lower curve represents a portfolio containing both domestic and foreign securities.



American Depository Receipts

The common stock of many major foreign companies is traded in the United States in a form that is denominated in U.S. dollars. Some examples include Nokia (Finland), Deutsche Telecom (Germany), Sony Corporation (Japan), and Unilever (United Kingdom).⁵ Special trusts are created, and foreign stock is purchased and placed in these trusts. These trusts then issue their own securities, called **American depository receipts (ADRs)**. Many ADRs are traded on the New York Stock Exchange and the Nasdaq over-the-counter market.

In this section, we examined exchange-rate risk management tools, the diversification benefits of foreign investments, and American depository receipts. We turn to exchange rate theories next.

Exchange Rate Theories

To aid business decision makers, financial theorists try to explain exchange rate levels and fluctuations. Why is the current exchange rate between two currencies at the level it is? What causes that exchange rate to change? Among the most popular exchange rate theories are the purchasing power parity theory, the international Fisher effect, and the interest rate parity theory.

Purchasing Power Parity Theory

Economists have studied the question of how the financial market prices one country's currency in terms of another country's currency. One explanation, the *purchasing power parity (PPP) theory*, says that it is the relative prices in two countries that determine the exchange rate of their currencies. There are two versions of the PPP theory: the *absolute PPP* and the *relative PPP*.

The **absolute purchasing power parity theory** posits that exchange rates are determined by the differences in the prices of a given market basket of traded goods and services when there are no trade barriers. For instance, if a given basket of traded goods and services available in Japan and in the United States costs 120,000 yen in Japan and 1,000 dollars in the United States, then the exchange rate should be 120 yen per dollar. The calculation follows:

$$\frac{\text{¥}120,000}{\$1,000} = 120 \text{ yen per dollar}$$

Another version of the theory is more realistically applicable in an economic world with transportation costs, tariffs, quotas, and other trade barriers. The **relative purchasing power parity theory** focuses on the *changes over time* in the relative prices of traded baskets of similar goods and services in the two countries. At any given time, the exchange rate between the two currencies is related to the rate of change in the prices of the similar market baskets. According to the relative PPP theory, as prices change in one country relative to those prices in another country for a traded basket of similar goods and services, the exchange rate will tend to change proportionately but in the opposite direction.

⁵www.nyse.com

The rationale for this theory is that if one country experiences rising prices while its international trading partners do not, its exports will become less competitive. Similarly, imports will become more attractive because of their relatively lower prices. The exchange rate will change as citizens buy the currency of the country with falling prices and sell the currency of the country with rising prices.

International Fisher Effect

Another theory used to explain currency exchange rates is the international Fisher effect, named for economist Irving Fisher. The *domestic Fisher effect* says simply that the nominal rate of interest equals the real rate plus the expected inflation rate. When this concept is used in an international setting, however, the **international Fisher effect** states that changes in the nominal interest rates for two countries will be offset by equal changes, in the opposite direction, in the exchange rate. The difference in nominal interest rates across countries reflects the difference in expected rates of inflation in those countries. According to Irving Fisher, the exchange rate would change by the same amount, but in the opposite direction, as the difference between the nominal interest rates of the two countries.

Changes in nominal interest rates are determined by changes in expected inflation, and exchange rates change for the same reason. The rationale is that investors must be compensated, or will offer compensation, to accommodate the expected change in the exchange rate.

Interest Rate Parity Theory

The **interest rate parity theory** says that the percentage difference between the exchange rate specified for future delivery (the **forward rate**) and for current delivery (the **spot rate**) equals the difference in the interest rates for equal maturity securities in the two countries.

If the difference between the spot and forward rates for two countries' currencies did not equal the difference between the interest rates on equal maturity securities in those countries, an *arbitrage* opportunity would exist. **Arbitrage** is the process whereby equivalent assets are bought in one place and simultaneously sold in another, making a risk-free profit. Arbitragers would buy in the spot market and sell in the forward market, or vice versa, depending on which was undervalued and which overvalued, until interest rate parity was achieved.

Other Factors Affecting Exchange Rates

Currency exchange rates fluctuate daily. Traders often buy and sell the dollar equivalent of \$1 trillion per day, continually reevaluating how many units of one country's currency should be exchanged for a given number of units of another country's currency.

The purchasing power parity theory, the international Fisher effect, and interest rate parity theory focus on rational economic explanations for exchange rates. But, like any market, the foreign exchange market is affected by both real economic factors and psychological factors.

If a country is experiencing political trouble, for example, currency traders may fear that this will spill over to that country's economy. If investments in the foreign country are expected to suffer in the future because of the political turmoil, traders will dump that country's currency in the foreign exchange market. To liquidate investments in the troubled country, a firm must sell not only the investment but also the foreign currency

it receives through the sale of the security. Currencies from other countries where the political climate is better will be preferred. These other currencies can then be invested in countries where the political climate is more hospitable.

When the Soviet Union broke up in 1992, the German mark dropped precipitously in the foreign exchange market (there was no euro in 1992) against other major currencies, particularly against the dollar. The reason given by most experts is that refugees from many of the states that had been part of the Soviet Union were fleeing their home countries and moving to Germany. (The German constitution established an open door policy for foreign refugees.) This influx of poor people into Germany was expected to strain the German economy as government money was spent to take care of them. The German mark went down accordingly, in anticipation of this drain.

The U.S. dollar often increases in value against other currencies on the foreign exchange market when there is a significant threatening world event. For instance, when Iraq invaded Kuwait in 1990, which subsequently led to the first Persian Gulf war (Desert Storm), the dollar soared against most other currencies in value. The same was true in 1998 when there were fears that the Asian economic crises would spread to other parts of the world. The U.S. dollar has become something of a “safe haven” for investors during difficult times.

The rationale seems to be that U.S. investments are safer because the United States has considerable military and economic power and secure location compared to countries with limited means to protect themselves from unfriendly neighbors. South Korea, for example, has a powerful economy that could crumble overnight if North Korea invaded. Similarly, Taiwan has a powerful economy that would be threatened if the People’s Republic of China invaded. This flight to the dollar is not as reliable as it once was, however. After the terrorist attacks against New York and Washington D.C. the U.S. dollar held relatively steady in foreign exchange markets. The euro of the European Monetary Union is also seen around the world as a safe haven in times of crisis. When the next crisis comes it will have to be seen to which currency traders flock for protection.

Government Intervention in Foreign Exchange Markets

Sometimes the central banks of various countries will enter the foreign exchange market in an attempt to influence exchange rates. If the Fed (the central bank of the U.S.), for example, were unhappy with market conditions in which the U.S. dollar was weakening against other currencies, it could buy U.S. dollars, using its holdings of other currencies such as euros or British pounds, in an attempt to bid up (strengthen) the value of the dollar. Central banks of other countries can also buy or sell currencies in the foreign exchange market to further their own policy goals. Although the central banks of major countries have great market power, it is difficult to move a trillion-dollar-plus market when it doesn’t want to be moved.

Sometimes central banks will act in concert with each other to pursue a common policy objective. The major economic powers of the world, known as the Group of Eight (G-8), have sometimes pursued a common effort to alter exchange rates. The Group of Eight countries are the United States, the United Kingdom, Germany, Japan, Canada, France, Russia, and Italy.

Psychological and political factors surely affect exchange rates. Like any other market, the foreign exchange market is influenced by logical and illogical factors alike, some of which are unidentifiable. The end result, however, is felt by multinational corporations and by individual consumers alike.

In this section we explored exchange rate theories that help decision makers understand exchange rate risks and fluctuations. In the next section, we address the main political and cultural risks that multinational corporations may confront.

Political and Cultural Risks Facing MNCs

MNCs must deal with political and cultural factors when engaging in international business. Awareness and sensitivity to these factors are crucial to successful international business activities.

Political Risk

Political risk is the risk that a country's government may take some action that would harm a foreign-owned company doing business in that country. For example, a foreign government might expropriate (take) the assets of the company for its own reasons. Expropriation of assets is an extreme example of political risk. Sometimes funds are blocked by the host country, making it impossible for an MNC to repatriate profits earned in the foreign country. For instance, the U.S. government froze the bank accounts of Iranian companies when tension developed after U.S. citizens were taken hostage by Iranian nationals in 1979.

Another political risk is the chance that a foreign government may impose a minimum number or minimum percentage of domestic workers that must be employed by foreign companies operating in that country. These workers may or may not have the same level of training and ability as the workers of the home country. In Bermuda, for instance, companies are not allowed to hire foreign workers unless they can demonstrate that they cannot obtain Bermudians for the job positions. If a Bermudian wants a job, then, he or she gets it even though there may be many more qualified foreigners willing to move to Bermuda to work.

Foreign governments may also impose a requirement for the use of a certain amount of raw materials or parts manufactured in the country where the foreign operation is located. Again, these materials and parts may or may not meet the standards of the home country.

These political risks must be weighed, along with other risks unique to international operations, against the special opportunities these international operations present.

Cultural Risk

When a company operates in another country, cultural issues often affect business. These differences include language barriers as well as differences in attitudes, values, and business protocol. Cultural risk is the risk that foreigners doing business in another country will fail to adapt to cultural differences, and this failure will affect the firm's success.

To offset cultural risk, companies that operate abroad often train their employees in cultural differences. A lack of awareness about differences in business practices could cause an unintentional insult or jeopardize a negotiation about a major project. For example, some hand gestures that have innocent connotations in one country are considered offensive or obscene in another country. What is called a bribe in one country may be considered a routine gratuity in another country.

The risks of doing business in a foreign country include exchange rate fluctuations and political and cultural risk. Yet the return potential is high. Recognizing the risk and potential return, governments have forged trade agreements to promote and regulate international business. We look at trade agreements next.

International Trade Agreements

Groups of countries sometimes form alliances and agreements that both regulate and foster international trade. NAFTA, EU, and GATT are the major international agreements we discuss in this section. Read on to learn the details of this alphabet soup.

NAFTA

Canada, Mexico, and the United States signed an agreement in 1994 called the *North American Free Trade Agreement (NAFTA)*. NAFTA breaks down some of the barriers to trade between these countries, such as tariffs and quotas.

Tariffs are taxes assessed by Country A on the goods of Country B that are sold in Country A. Mexico, for example, might impose a tariff on Canadian goods sold in Mexico. **Quotas** are quantity restrictions imposed by Country A on certain goods imported from Country B. Both are barriers to international trade. When Country A imposes tariffs and quotas on the goods of Country B, Country B is likely to impose tariffs and quotas on goods from Country A. This can lead to a trade war wherein each country increases the barriers imposed on the goods of the other. Trade wars can lead to economic decline of both countries.

NAFTA is, in effect, a pact to end such wars. It should increase business for all three countries as tariffs, quotas, and other trade barriers are eliminated. NAFTA is politically controversial, however, because its opponents believe that U.S. jobs will be lost as U.S.-based companies shift some operations to Mexico, where labor costs tend to be lower. Proponents claim that jobs in exporting industries are likely to increase and create ripple-effect benefits for the economies of all three countries.

GATT

The *General Agreement on Tariffs and Trade (GATT)* is a treaty that provides for ongoing discussions among participating nations to find ways to minimize international trade barriers. The Uruguay round of GATT talks established the World Trade Organization (WTO) on April 15, 1994. When one WTO country has a trade complaint against another, the WTO court can hear the complaint and impose economic sanctions if the accused country is found guilty. In 1999, the United States accused Japan of unfairly placing barriers to the sale of U.S. agricultural products in Japan. Japan claimed that no such barriers existed. These are the types of disputes that the WTO adjudicates.

European Union

The *European Union (EU)* created a different type of association among the participating nations. The alliance was formed in late 1993 after the framework was negotiated by nations who signed the Maastricht Treaty, so named because Maastricht is the city (in the Netherlands) where the EU leaders signed the treaty creating the integrated economic plan. The original country members of the EU are Belgium, Denmark, France, Germany, Greece, Britain, Ireland, Italy, Luxembourg, Netherlands, Portugal, and Spain. Most of the barriers to trade among these countries have been minimized. Austria, Finland, and Sweden have since joined the EU.

The EU encourages joint business ventures and coordinated economic policies. All EU members now have a common passport. Furthermore, each country recognizes professional and educational degrees of other member countries so that doctors, lawyers, and other licensed professionals can practice in any country within the EU.

Perhaps the most ambitious goal of the EU was to replace domestic currencies in use (francs, marks, pounds, and so on) with a common currency, the **euro**, for all business transactions between EU members. On January 1, 1999, 11 European countries fixed their exchange rates against each other and against the euro. The euro began trading against other currencies on January 4, 1999. These European Monetary Union (EMU) countries are Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. The EMU is more commonly referred to as the euro zone. Greece joined the euro zone in 2001. The ancient Greek drachma is over 2,650 years old. The euro now serves as the currency of Greece. European Union members Denmark, Sweden, and Britain chose not to join the monetary union.

The euro has been used for electronic transactions in the euro zone countries since January 1999. This includes stock and government bond markets. The new euro notes and coins went into circulation on January 1, 2002. The European Central Bank (ECB) began operating June 1, 1998. It sets monetary policy for EMU countries. Together, the ECB and the national central banks of the euro zone countries are known as the Eurosystem.



Interactive Module

Go to Downloadable Companion Material, chapter 21. Follow the instructions there. What countries are participating in the use of the euro? What are some of the European countries that are not?

Free Trade versus Fair Trade

“Free trade” and “fair trade” differ. Free trade suggests an unconditional lowering of trade barriers. *Fair trade* suggests lowering trade barriers only if the other country lowers its barriers, and perhaps only if the other country meets additional conditions. Examples of other conditions include meeting minimum wage, worker safety, human rights, or environmental standards.

NAFTA, GATT, EMU, EU, and ECB are signs of an ever-increasing global economy. As the world moves into the twenty-first century, international business will become more significant for all countries. An understanding of the financial risks, potential returns, and basic rules of international business will hopefully lead to greater financial success.

Summary

1. Define a multinational corporation (MNC) and explain its importance.

A multinational corporation is a corporation that operates in more than one country. It is becoming increasingly difficult to accurately classify some corporations as U.S., Swedish, Canadian, and so forth because many large corporations operate worldwide. International concerns are a vital concern for many U.S. businesses because of the potential market for products in countries throughout the world.

2. Demonstrate how the law of comparative advantage leads to international trade that benefits individuals and firms.

The law of comparative advantage says that countries (and individuals) should do that which they do best. Countries can export goods and services they produce well and import those goods and services that others develop better. By trading, both countries should see quality, quantity, or price benefits, or a combination of all three.

3. Describe exchange rates and their effects on businesses.

An exchange rate is an expression of the value of one country's currency relative to another country's currency. Fluctuating currency exchange rates affect the prices U.S. citizens pay for goods and services of other countries, and the prices that citizens of other countries pay for U.S. goods and services. When a country's currency weakens relative to the currencies of other countries, goods and services imported into that country become more expensive. That country's exported goods and services become cheaper to those countries that import them.

MNCs are also affected when their profits are earned in one country, then converted to the currency of the home country. Converting foreign currency profits into domestic currency to send to the home country of the business is known as repatriating the profits. If the U.S. dollar weakens relative to the foreign currency, the U.S. company's profits increase due to the change in exchange rates. However, if the dollar strengthens, profits decrease.

4. Show how firms manage the risks of fluctuating exchange rates.

Diversifying investments across several countries often reduces risk. Foreign securities can be bought in the United States by purchasing American depository receipts, which are U.S. dollar securities issued by a trust holding foreign-currency-denominated securities.

Firms can also manage risk through hedging—entering into a financial agreement that offsets or guards against risk. Three common types of hedging instruments are forward contracts, futures contracts, and swaps. Forward contracts are contracts in which one party agrees to buy, and the other party agrees to sell, a certain amount of a currency at a specified exchange rate at a specified future time. Futures contracts are similar except they can be traded on organized exchanges. Swaps are negotiated contracts, like forward contracts, in which each party agrees to swap payments at specified points in time according to a predetermined formula.

5. Discuss exchange rate theories.

Currency exchange rates fluctuate for a variety of reasons. Among the most popular theories seeking to explain these changes are those that focus on relative prices in the two countries (purchasing power parity), relative interest rates (international Fisher effect), and the difference between spot and forward rates relative to the exchange rate (interest rate parity).

6. Describe the political and cultural risks that affect MNCs.

MNCs run the political risk of government trade restrictions, confiscation of assets by foreign governments, and even wars. Cultural risks include the risk of jeopardizing a deal or business due to insensitivity to differences in language, values, and attitudes. Training employees to recognize and respect cultural differences can reduce cultural risk.

7. Explain how major international trade agreements affect international business.

International agreements such as NAFTA, GATT, and the Maastricht Treaty that created the EU can bring down trade barriers and potentially create wide-ranging benefits. Opponents of these agreements claim, however, that they can result in job loss or harm a country's identity and economy.



**The "It's Only Another Beer"
Black and Tan**

8 oz. pilsner lager
8 oz. stout lager
1 frosty mug
1 icy road
1 pick-up truck
1 10-hour day
1 tired worker
A few rounds with the guys

Mix ingredients.
Add 1 totalled vehicle.

**Never underestimate 'just a few.'
Buzzed driving is drunk driving.**

Equations Introduced in This Chapter

Equation 21-1. Calculation of a Currency Cross Rate:

$$\frac{\text{Currency A}}{\text{Currency B}} \text{ ¥ } \frac{\text{Currency B}}{\text{Currency C}} = \frac{\text{Currency A}}{\text{Currency C}}$$

Self-Test

- | | |
|---|---|
| <p>ST-1. What is the law of comparative advantage?</p> <p>ST-2. What is the rationale given for trade agreements such as the North American Free Trade Agreement (NAFTA)?</p> | <p>ST-3. If you can get 1.25 Canadian dollars for one U.S. dollar and one U.S. dollar gets you 113 Japanese yen, how many Japanese yen do you get for one Canadian dollar?</p> <p>ST-4. What are American depository receipts (ADRs)?</p> |
|---|---|

Review Questions

- | | |
|--|---|
| <p>1. What does it mean when the U.S. dollar weakens in the foreign exchange market?</p> <p>2. What kinds of U.S. companies would benefit most from a stronger dollar in the foreign exchange market? Explain.</p> <p>3. Under what circumstance would the U.S. dollar and the Canadian dollar be said to have achieved purchasing power parity?</p> | <p>4. What are some of the primary advantages when a corporation has operations in countries other than its home country? What are some of the risks?</p> <p>5. What is GATT, and what is its goal?</p> |
|--|---|

Build Your Communication Skills

- | | |
|--|--|
| <p>CS-1. Form two groups to debate the issue of free trade versus fair trade. Some questions to address in the discussion include: (1) Should a country allow other countries to sell goods to its citizens with few or no restrictions (free trade)? (2) Should opening markets to companies from other countries be conditional on those other countries showing reciprocating openness (fair trade)? (3) Who decides which countries are engaging in fair trading practices?</p> | <p>CS-2. Write a short report on the current state of exchange rates. Which currencies are strengthening in foreign exchange markets and which are weakening? Why? Incorporate what you learned in this chapter in your analysis. What are the implications for international trade that can be drawn from the direction of the change in exchange rate values you observe?</p> |
|--|--|



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Problems

- 21-1.** Assume the foreign exchange selling rates shown below for a few selected currencies:

 **Calculating Exchange Rates**

Country/(Currency)	U.S. \$ Equivalent
Australia (dollar)	.7514
Britain (pound)	1.8508
Canada (dollar)	.8977
Jordan (dinar)	.4112
Hong Kong (dollar)	.1287
India (rupee)	.02122
Chile (peso)	.001855
Japan (yen)	.008800
Mexico (peso)	.0900
Israel (shekel)	.2315
Singapore (dollar)	.6321
Thailand (baht)	.0314
(Euro)	1.2810

Calculate the number of the following foreign currencies that can be bought with 1 million U.S. dollars.

- a. British pounds
 - b. Indian rupees
 - c. Japanese yen
 - d. Australian dollars
 - e. Mexican pesos
 - f. Israeli shekels
- 21-2.** Using the information given in problem 21-1, calculate the number of the following foreign currencies that can be bought with 1 million U.S. dollars.
- a. Chilean pesos
 - b. Hong Kong dollars
 - c. Singaporean dollars
 - d. Euros
 - e. Indian rupees
 - f. Mexican pesos
 - g. Thai bahts

 **Calculating Exchange Rates**

Calculating Exchange Rates

- 21-3.** Using the information given in problem 21-1, calculate the number of U.S. dollars required to buy
- 2 million Australian dollars
 - 1.6 million Singaporean dollars
 - 5 million euros
 - 2.6 million Mexican pesos
 - 2 million Japanese yen
 - 5 million Thai bahts

Calculating Exchange Rates

- 21-4.** The following is a list of currency exchange rates for selected countries:

Country	U.S. \$ Equivalent
Britain (pound)	1.8508
Mexico (peso)	0.0900
Canada (dollar)	0.8977
Japan (yen)	0.0088
Euro	1.2810

- How many dollars would it take to buy one euro?
- Calculate the amount of each of the following currencies you could have bought with \$100,000 U.S. dollars.
 - Japan (yen)
 - Britain (pound)
 - Canada (dollar)
 - Mexico (peso)

Cross Rates

- 21-5.** Using the data from problem 21-4, find the cross rates for each of the following:
- Yen per peso
 - Pesos per pound
 - Euros per Canadian dollars
 - Yen per Canadian dollar

Cross Rates

- 21-6.** If the Canadian dollar is selling at U.S. \$ 0.6471 and the Israeli shekel at U.S. \$0.2003, how many shekels are equal to one Canadian dollar?

Cross Rates

- 21-7.** If 58 rupees or 9.67 Hong Kong dollars could be purchased with one euro, how many rupees are equal to one Hong Kong dollar?

Cross Rates

- 21-8.** If one British pound is equivalent to 16.9 Mexican pesos or 2.8 Singapore dollars, how many Singapore dollars can one purchase with 10 million Mexican pesos?

Cross Rates

- 21-9.** If one British pound is equivalent to 1.5 euros and one euro can purchase 60 baht, how many baht can one purchase with 1 million British pounds?

Cross Rates

- 21-10.** If one British pound is equivalent to 1.5 euros, one euro can purchase .8 dinars, and one dinar is worth 160 yen, how many yen can one purchase with 1 million British pounds?

- 21-11.** Mrs. Pittner owns 100 shares of stock in Nokia valued at 16.5 euros per share. What is the value (in U.S. dollars) of Mrs. Pittner's shares of stock when the exchange rate is
- 9188 € = / \$
 - 70 € = / \$
 - 1.212 € = / \$
- 21-12.** John is planning on purchasing his dream car directly from the manufacturer in Germany. In order to do so, he must first convert his dollars to euros. His dream car has a price tag of 55,150 euros. How much does he need in U.S. dollars to purchase this car if the exchange rate is .9800 euros to the dollar?
- 21-13.** Sony sells its 50-inch projection screen TVs in Japan for ¥230,000. In the United States, this same television sells for \$2,000. What should the exchange rate be in order for purchasing power parity to exist?
- 21-14.** Assume that you invested \$100,000 in a Japanese security a year back when the exchange rate was 119 yen per one U.S. dollar. However, the U.S. dollar depreciated against the yen throughout the year, and the current exchange rate is 100 yen per U.S. dollar. Calculate your percentage return on the investment due to this depreciation of the dollar.
- 21-15.** A year ago an Indian investor bought 1,000 shares of General Motors at \$37 per share when the exchange rate was 42 rupees per one U.S. dollar. A year later, the U.S. dollar had appreciated against the rupee and the present exchange rate is 44 rupees per one U.S. dollar. Calculate the annual rate of return on investment for the Indian investor assuming the stock price remained the same.

 **Exchange Rate**

 **Exchange Rate**

 **Purchasing Power Parity**

 **Exchange Rate Effects**

 **Challenge Problem**

Answers to Self-Test

ST-1. The law of comparative advantage says that all will prosper when each party (or nation) does that at which it excels and then trades with others who do that at which they excel.

ST-2. NAFTA is a trade agreement between the United States, Canada, and Mexico that eliminated major barriers so the countries could freely trade goods and services to the benefit of the citizens of all three countries. Whether this has occurred is a matter of interpretation.

ST-3.

$$\frac{113 \text{ ¥}}{\$1.00 \text{ U.S.}} \cdot \frac{\$1.00 \text{ U.S.}}{1.25 \text{ CD}} = 90.4 \text{ ¥ per 1.00 CD}$$

ST-4. American depository receipts (ADRs) are dollar-denominated securities traded in the United States that represent a claim on a special trust that is created to hold foreign stock.

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