Chapter Eleven

Multinational Accounting: Foreign Currency Transactions and Financial Instruments

MICROSOFT'S MULTINATIONAL BUSINESS

Microsoft was founded in 1975 by Bill Gates (a Harvard dropout) and Paul Allen (a Washington State University dropout). In 1980, Microsoft teamed up with IBM and in 1981, the company released the first version of MS DOS for IBM PCs. The year 1983 was another big year for Microsoft with the release of Multi-Tool Word (later Microsoft Word). The first version of Microsoft Windows (Windows 1.0) was released two years later in 1985. When Microsoft went public in 1986, its shares began trading at $21.00 and closed that first day at $28.00. Interestingly, each of those original shares issued in 1986 would be worth approximately $8,900 today. At its peak, Microsoft was worth approximately $600 billion and Bill Gates was personally worth close to $90 billion.

Microsoft continued to update Windows and had a major breakthrough in 1995 with the release of Windows 95. Microsoft continued to improve the Windows operating system and Microsoft Office throughout the 1990s and into the first part of the 2000s. However, in 2001, Microsoft attempted to break into the gaming console market with the introduction of the Xbox. Finally, in 2006, the company introduced the Zune to compete with Apple's iPod. From its humble beginnings, Microsoft forged an empire that made its founder, Bill Gates, one of the wealthiest individuals in the world and made Microsoft Windows and Microsoft Office the standard operating system and day-to-day tools for most businesses as well as individuals around the world.

Right from the start, Microsoft saw the international market as an important part of its expansion. In fact, the company opened its first international office in Tokyo in 1978 and by 2012 more than 47 percent of Microsoft's total revenues came from international sales and services. Because such a large portion of Microsoft's business comes from foreign markets, the company necessarily engages in hedging activities to protect itself from the risks associated with fluctuations in foreign currency exchange rates. Microsoft's 2012 10-K report indicates that the principal currencies hedged include the euro, Japanese yen, British pound, and Canadian dollar. As of June 30, 2012, and June 30, 2011, the total notional amounts (face values) of these foreign exchange contracts were $6.7 billion and $10.6 billion, respectively. Thus, it is clear that managing foreign currency exchange risks is an integral part of Microsoft's business. This chapter explores

the accounting for foreign currencies and introduces the tools that companies such as Microsoft use to alleviate the risks associated with constantly changing foreign currency exchange rates.

LEARNING OBJECTIVES

When you finish studying this chapter, you should be able to:

LO 11-1 Understand how to make calculations using foreign currency exchange rates.

LO 11-2 Understand the accounting implications of and be able to make calculations related to foreign currency transactions.

LO 11-3 Understand how to hedge international currency risk using foreign currency forward exchange financial instruments.

LO 11-4 Know how to measure hedge effectiveness, make interperiod tax allocations for foreign currency transactions, and hedge net investments in a foreign entity.

DOING BUSINESS IN A GLOBAL MARKET

LO 11-1

Understand how to make calculations using foreign currency exchange rates.

Many companies, large and small, depend on international markets for acquiring goods and for selling their products and services. Every day, the business press carries stories about the effects of export and import activity on the U.S. economy and the large flows of capital among the world's major countries. These reports often mention changes in the exchange rates of the major currencies of the world, such as, "The dollar weakened today against the yen." This chapter and Chapter 12 discuss the accounting issues affecting companies with international operations.

A company operating in international markets is subject to normal business risks such as lack of demand for its products in the foreign marketplace, labor strikes, and transportation delays in getting its products to the foreign customer. In addition, the U.S. entity could incur foreign currency risks whenever it conducts transactions in other currencies. For example, if a U.S. company acquires a machine on credit from an Italian manufacturer, the Italian company could require payment in euros. This means the U.S. company must eventually use a foreign currency broker or a bank to exchange U.S. dollars for euros to pay for the machine. In the process, the U.S. company may experience foreign currency gains or losses from fluctuations in the value of the U.S. dollar relative to the euro.

Foreign exchange markets are among the most important and often misunderstood subjects in international business. Multinational enterprises (MNEs) entering into international transactions must agree with customers and suppliers on the currencies in which these transactions will be executed. Factors that affect this decision include familiarity with the foreign currency, the potential for gains and losses from changes in exchange rates, nationalistic pride, and practicality.

STOP & THINK

How big is the foreign currency exchange market? It has grown into one of the largest financial markets in the world. The average daily volume in global foreign exchange transactions is estimated at $3.98 trillion in 2012, a growth of approximately 20 percent over the $3.21 trillion daily volume in April 2007. This has exposed companies to abundant risk and opportunity and will become a larger part of the global economy in the future.

MNEs transact in a variety of currencies as a result of their export and import activities. There are approximately 150 different currencies around the world, but most international trade has been settled in six major currencies that have shown stability and general acceptance over time: the U.S. dollar, the British pound, the Canadian dollar, the Japanese yen, the Swiss franc, and the European euro.

The European euro (symbol €) is a relatively new currency introduced in 1999 to members of the European Union (EU) that wished to participate in a common currency. By 2002, euro notes and coins were introduced to be used in everyday trade. The EU is an organization of democratic member states from the

European continent. The Union has grown over time and as of 2012 comprises 27 member countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom. In addition, Croatia, Macedonia, and Turkey have applied for accession. The EU is a dominant economic force, rivaling the United States, and the euro is now as familiar to companies doing international business as the U.S. dollar. Currently, 17 of the 27 members of the EU use the euro.

The EU is one of several regional groupings, and these groupings are becoming increasingly important. The North American Free Trade Agreement (NAFTA) was approved by the U.S. Congress in 1993 and created a free-trade area of Canada, Mexico, and the United States, a market that exceeds 420 million people. Over time, the agreement will result in the elimination of tariffs (taxes) on goods shipped between these three countries. The agreement on the South Asian Free Trade Area, or SAFTA, was created on January 1, 2006, and will be operational following ratification of the agreement by seven governments. SAFTA creates a framework for the creation of a free-trade zone covering 1.4 billion people in Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka. The Association of Southeast Asian Nations (ASEAN) created the ASEAN Free Trade Area (AFTA), which is a trade bloc agreement. The goal of AFTA is to increase ASEAN's competitive edge as a production base in the world market through the elimination, within ASEAN, of tariffs and nontariff barriers. AFTA currently is composed of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. In January 2005, the Greater Arab Free Trade Area (also referred to as GAFTA) came into existence. It is a pact made by the Arab League to achieve a complete Arab economic bloc that can compete internationally. GAFTA is relatively similar to ASEAN.

Currency names and symbols often reflect a country's nationalistic pride and history. For example, the U.S. dollar receives its name from a variation of the German word *Taler,* the name of a silver piece that was first minted in 1518 and became the chief coin of Europe and the New World. Some historians suggest that the dollar symbol ($) is derived from a capital letter *U* superimposed over a capital letter *S.* The "greenback" as we know it today was first printed in 1862 during the Civil War, and now is issued by the 12 Federal Reserve banks scattered across the United States. The U.S. dollar can be identified in virtually every corner of the world because it has become one of the most widely traded currencies.

THE ACCOUNTING ISSUES

Accountants must be able to record and report transactions involving exchanges of U.S. dollars and foreign currencies. ***Foreign currency transactions*** of a U.S. company include sales, purchases, and other transactions giving rise to a transfer of foreign currency or the recording of receivables or payables that are *denominated*—that is, numerically specified to be settled—in a foreign currency. Because financial statements of virtually all U.S. companies are prepared using the U.S. dollar as the reporting currency, transactions denominated in other currencies must be restated to their U.S. dollar equivalents before they can be recorded in the U.S. company's books and included in its financial statements. This process of restating foreign currency transactions to their U.S. dollar–equivalent values is termed *translation.*

In addition, many large U.S. corporations have multinational operations such as foreign-based subsidiaries or branches. For example, a U.S. auto manufacturer may have manufacturing subsidiaries in Canada, Mexico, Spain, and Great Britain. The foreign subsidiaries prepare their financial statements in their home currencies. For example, the Mexican subsidiary reports its operations in pesos. The foreign currency amounts in the financial statements of these subsidiaries have to be translated, that is, restated, into their U.S. dollar equivalents before they can be consolidated with the financial statements of the U.S. parent company that uses the U.S. dollar as its reporting currency unit.

This chapter presents the accounting procedures for recording and reporting foreign transactions. Chapter 12 presents the procedures for combining or consolidating a foreign entity with a U.S. parent company. **ASC 830** serves as the primary guide for accounting for accounts receivable and accounts payable foreign currency–denominated transactions that require payment or receipt of foreign currency. **ASC 815** guides the accounting for financial instruments specified as derivatives for the purpose of hedging certain items.

FOREIGN CURRENCY EXCHANGE RATES

Before 1972, most major currencies were valued on the basis of a gold standard whereby their international values were fixed per ounce of gold. However, in 1972, most countries signed an agreement to permit the values of their currencies to "float" based on the supply and demand for them. The resulting ***foreign currency exchange rates*** between currencies are established daily by foreign exchange brokers serve as agents for individuals or countries wishing to deal in foreign currencies. Some countries, such as China, maintain an official fixed rate of currency exchange and have established fixed exchange rates for dividends remitted outside the country. These official rates may be changed at any time, and companies doing business abroad should contact the foreign country's government to ensure that the companies are in compliance with any currency exchange restrictions.

The Determination of Exchange Rates

A country's currency is much like any other commodity, and exchange rates change because of a number of economic factors affecting the supply of and demand for a nation's currency. For example, if a nation is experiencing high levels of inflation, the purchasing power of its currency decreases. This reduction in the value of a currency is reflected by a decrease in the positioning of that country's currency relative to other nations' currencies. Other factors causing exchange rate fluctuations are a nation's balance of payments, changes in a country's interest rate and investment levels, and the stability and process of governance. For example, if the United States had a higher average interest rate than that in Great Britain, the international investment community might seek to invest in the United States, thus increasing the demand for U.S. dollars relative to British pounds. The dollar would increase in value relative to the pound because of the increased demand. Exchange rates are determined daily and published in several sources, including *The Wall Street Journal,* most business publications, many metropolitan newspapers, and websites such as Yahoo! Finance. Figure 11–1 presents an example of a typical daily business press report for selected foreign exchange rates as of August 2012.

Direct versus Indirect Exchange Rates

As indicated in Figure 11–1, the relative value of one currency to another may be expressed in two different ways: either *directly* or *indirectly.*

Direct Exchange Rate

The direct exchange rate (DER) is the number of ***local currency units (LCUs)*** needed to acquire one ***foreign currency unit (FCU).*** From the viewpoint of a U.S. entity, the direct exchange rate can be viewed as the U.S. dollar cost of one foreign currency unit. The direct exchange rate ratio is expressed as follows, with the LCU, the U.S. dollar, in the numerator:

$$\text{DER} = \frac{\text{U.S. dollar} - \text{equivalent value}}{1\,\text{FCU}}$$

The direct exchange rate is used most often in accounting for foreign operations and transactions because the foreign currency–denominated accounts must be translated to

FIGURE 11–1 Foreign Exchange Rates for Selected Major Currencies as of April 2010

Country	Currency	Direct Exchange Rate (U.S. dollar equivalent)	Indirect Exchange Rate (currency per U.S. dollar)
Argentina	peso	0.2167	4.6138
Australia	dollar	1.0422	0.9595
Bahrain	dinar	2.6539	0.3768
Brazil	real	0.4963	2.0150
Canada	dollar	1.0110	0.9891
Chile	peso	0.0021	484.300
China	yuan renminbi	0.1579	6.3332
Colombia	peso	0.0006	1818.00
Czech Republic	koruna	0.0494	20.2305
Denmark	krone	0.1656	6.0378
Egypt	pound	0.1676	5.9663
Hong Kong	dollar	0.1289	7.7564
India	rupee	0.0180	55.4900
Indonesia	rupiah	0.0001	9485.00
Israel	new shekel	0.2488	4.0201
Japan	yen	0.0126	79.5500
1-month forward		0.01260	79.45972
3-month forward		0.01261	79.51923
6-month forward		0.01263	79.60866
Malaysia	ringgit	0.3193	3.1320
Mexico	peso	0.0763	13.1155
Philippines	peso	0.0236	42.3400
Russia	ruble	0.0313	31.9946
South Korea	won	0.0009	1134.60
Sweden	krona	0.1499	6.6720
Switzerland	franc	1.0272	0.9735
Taiwan	dollar	0.0333	29.9910
Thailand	baht	0.0320	31.2294
United Kingdom	pound	1.5701	0.6369
1-month forward		1.57174	0.63703
3-month forward		1.57277	0.63771
6-month forward		1.57433	0.63874
Venezuela	bolivar fuerte	0.2331	4.2892
Euro		1.2337	0.8105
1-month forward		1.23520	0.81001
3-month forward		1.23601	0.81109
6-month forward		1.23723	0.81209
SDR		1.50703	0.66356

their U.S. dollar–equivalent values. For example, if $1.20 can acquire €1 (1 European euro), the direct exchange rate of the dollar versus the European euro is $1.20, as follows:

$$\frac{\$1.20}{€1} = \$1.20$$

Indirect Exchange Rate

The indirect exchange rate (IER) is the reciprocal of the direct exchange rate. From the viewpoint of a U.S. entity, the indirect exchange rate is

$$\text{IER} = \frac{1 \text{ FCU}}{\text{U.S. dollar} - \text{equivalent value}}$$

For the European euro example, the indirect exchange rate is

$$\frac{€1}{\$1.20} = €0.8333$$

Another way to express this is

$$\text{IER} = \frac{\text{Number of foreign currency units}}{\$1}$$

$$= \frac{€0.8333}{\$1}$$

Thus, the indirect exchange rate of €0.8333 = $1 shows the number of foreign currency units that may be obtained for 1 U.S. dollar. People who travel outside the United States often use the indirect exchange rate.

Note that the direct and indirect rates are inversely related and that both state the same economic relationships between two currencies. For example, if the indirect exchange rate is given, the direct exchange rate may be computed by simply inverting the indirect exchange rate. If the indirect exchange rate is €0.8333 (€0.8333/$1), the direct exchange rate can be computed as ($1/€0.8333) = $1.20. If the direct exchange rate is $1.20, the indirect exchange rate can be computed as (€1/$1.20) = €0.8333. Again, the currency in the numerator identifies the direction of the exchange rate. In practice, a slight difference might exist in the inverse relationship because of brokers' commissions or small differences in demand for the two currencies.

Some persons identify the direct exchange rate as *American terms* to indicate that it is U.S. dollar–based and represents an exchange rate quote from the perspective of a person in the United States. The indirect exchange rate is sometimes identified as *European terms* to indicate the direct exchange rate from the perspective of a person in Europe, which means the exchange rate shows the number of units of the European's local currency units per one U.S. dollar. A guide to help remember the difference in exchange rates is to note that the U.S. dollar is the numerator for the direct rate or American terms (the foreign currency unit is in the denominator), and the foreign currency unit is in the numerator for the indirect rate or European terms (with the U.S. dollar in the denominator). The *terms currency* is the numerator and the *base currency* is the denominator in the exchange rate ratio. The numerator is the key to the identification of the rate.

Changes in Exchange Rates[1]

A change in an exchange rate is referred to as a *strengthening* or *weakening* of one currency against another. During the first decade of the new century, the relationship between the dollar and the euro was often volatile. For example, the exchange rate of the U.S. dollar versus the euro changed as follows during 2011 and 2012:

	January 2011	July 2011	January 2012	July 2012
Direct exchange rate (U.S. dollar equivalent of 1 euro)	$1.33	$1.45	$1.29	$1.26
Indirect exchange rate (euro per 1 U.S. dollar)	€0.75	€0.69	€0.78	€0.79

Weakening of the U.S. Dollar—Direct Exchange Rate Increases

Between January 1, 2011, and July 1, 2011, the direct exchange rate increased from $1.33 = €1 to $1.45 = €1, indicating that it took more U.S. currency ($) to acquire 1 European euro (€). In other words, the cost of 1 euro was $1.33 on January 1 but increased to $1.45 on July 1. This means that the value of the U.S. currency declined relative to the euro. This is termed a *weakening* of the dollar versus the euro. Alternatively, looking at the indirect exchange rate, 1 U.S. dollar could acquire 0.75 European euro on

[1] To view a video explanation of this topic, visit advancedstudyguide.com.

January 1, but it could acquire fewer euros, 0.69, on July 1. Thus, the relative value of the dollar versus the euro was lower on July 1 than on January 1.

Think of the weakening of the U.S. dollar as

- Taking more U.S. currency to acquire one foreign currency unit.
- One U.S. dollar acquiring fewer foreign currency units.

Imports from Europe were more expensive for U.S. consumers on July 1 than on January 1 because of the weakening of the dollar. For example, assume that a European manufacturer is selling a German-made automobile for €25,000. To determine the U.S. dollar–equivalent value of the €25,000 on January 1, the following equation is used:

U.S. dollar – equivalent value	=	**Foreign currency units**	×	**Direct exchange rate**
$33,250	=	€25,000	×	$1.33

Between January 1 and July 1, the direct exchange rate increased as the dollar weakened relative to the euro. On July 1, the U.S. dollar–equivalent value of the €25,000 is

U.S. dollar – equivalent value	=	**Foreign currency units**	×	**Direct exchange rate**
$36,250	=	€25,000	×	$1.45

Although a weakening of the dollar is unfavorable for U.S. companies purchasing goods from another country, it favorably affects U.S. companies selling products in that country. Following a weakening of the dollar, U.S. exports to Europe are less expensive for European customers. For example, assume a U.S. manufacturer is selling a U.S.-made machine for $10,000. To determine the foreign currency (euro) equivalent value of the $10,000 on January 1, the following equation is used:

Foreign currency equivalent value	=	**U.S. dollar units**	×	**Indirect exchange rate**
€7,500	=	$10,000	×	€0.75

On July 1, after a weakening of the dollar, the machine would cost the European customer €6,900, as follows:

Foreign currency equivalent value	=	**U.S. dollar units**	×	**Indirect exchange rate**
€6,900	=	$10,000	×	€0.69

This substantial decrease in cost could lead the European customer to decide to acquire the machine from the U.S. company. Thus, a U.S. company's international sales can be significantly affected by changes in foreign currency exchange rates.

Strengthening of the U.S. Dollar—Direct Exchange Rate Decreases

Between July 1, 2011, and July 1, 2012, the direct exchange rate decreased from $1.45 = €1 to $1.26 = €1, indicating that it took less U.S. currency to acquire 1 euro. On July 1, 2011, a euro cost $1.45, but on July 1, 2012, the relative cost for 1 euro decreased to $1.26. This means that the value of the U.S. currency increased relative to the euro, termed a *strengthening* of the dollar against the euro. Another way to view this change is to note that the indirect exchange rate increased, indicating that on July 1, 2012, 1 dollar acquired more euros than it did on July 1, 2011. On July 1, 2011, 1 U.S. dollar could acquire 0.69 euro, but on July 1, 2012, 1 U.S. dollar could acquire more euros, 0.79, indicating that the relative value of the dollar increased between July 1, 2011, and July 1, 2012.

Think of the strengthening of the U.S. dollar as

- Taking less U.S. currency to acquire one foreign currency unit.
- One U.S. dollar acquiring more foreign currency units.

FIGURE 11–2
Relationships between Currencies and Exchange Rates

	January 2011	July 2011	July 2012
Direct exchange rate ($/€)	$1.33	$1.45	$1.26
Indirect exchange rate (€/$)	€0.75	€0.69	€0.79
Between January 1, 2011, and July 1, 2011—weakening of the U.S. dollar:			
Direct rate increases			
Dollar weakens (takes more U.S. currency to acquire 1 euro)			
Indirect rate decreases			
Euro strengthens (takes fewer euros to acquire 1 U.S. dollar)			
Imports into United States normally decrease in quantity			
Foreign goods imported into United States more expensive in dollars			
Exports from United States normally increase in quantity			
U.S.-made exports less expensive in euros			
Between July 1, 2011, and July 1, 2012—strengthening of the U.S. dollar:			
Direct rate decreases			
Dollar strengthens (takes less U.S. currency to acquire 1 euro)			
Indirect rate increases			
Euro weakens (takes more euros to acquire 1 U.S. dollar)			
Imports into United States normally increase in quantity			
Foreign goods imported into United States less expensive in dollars ($1 can acquire more)			
Exports from United States normally decrease in quantity			
U.S.-made exports more expensive (takes more euros to acquire goods)			

Figure 11–2 summarizes the relationships between currencies, imports, and exports.

During the latter part of the 1970s, the dollar consistently weakened against other major currencies because of several factors, including the high inflation the United States experienced. This weakening did help the U.S. balance of trade because it reduced the quantity of then more expensive imports while causing U.S.-made goods to be less expensive in other countries. In the first half of the 1980s, the dollar consistently strengthened relative to other currencies. Not only was the U.S. economy strong and producing goods more efficiently but also high interest rates attracted large foreign investment in the U.S. capital markets. A stronger dollar added to the foreign trade deficit by making imports less expensive and U.S.-made goods more expensive on the world market. Beginning in 1986 and continuing through the early 1990s, the dollar again weakened relative to the major international currencies. In the latter 1990s, the dollar generally strengthened because of the robustness of the U.S. economy, but in the early 2000s, the dollar again weakened because of the high trade deficit and the sluggish U.S. economy.

These changes in the international value of the dollar affect any consumer acquiring imported goods. A weakening dollar means that imports become more expensive whereas a strengthening dollar means that imports become less expensive. One reason the U.S. government may let the dollar weaken is to reduce the trade deficits. U.S. exporters can sell their goods more easily overseas, thus boosting their profitability. Imports should decrease because of the higher relative prices of the foreign-made goods, thus enhancing the demand for domestic-made goods within the United States. If the dollar weakens too far, overseas investors reduce their demand for dollar-dominated U.S. assets such as U.S. stocks and bonds. The reduced investment demand may require an increase in bond interest rates to offset overseas investors' reduction in bond returns caused by the weakening dollar. An increase in interest rates may reduce economic investment within the United States. Finally, a weakening dollar means that foreign travel becomes more expensive because of the reduction in the dollar's purchasing power. Thus, the U.S. government's management of the value of the dollar is a balancing act to achieve the needs of both U.S. businesses and U.S. consumers.

Spot Rates versus Current Rates

ASC 830 refers to the use of both spot rates and current rates for measuring the currency used in international transactions. The ***spot rate*** is the exchange rate for immediate delivery of currencies. The ***current rate*** is defined simply as the spot rate on the entity's balance sheet date.

Forward Exchange Rates

A third exchange rate is the rate on future, or forward, exchanges of currencies. Figure 11–1 shows these exchange rates for the major international currencies for one month, three months, and six months forward. Active dealer markets in ***forward exchange contracts*** are maintained for companies wishing to either receive or deliver major international currencies. The forward rate on a given date is not the same as the spot rate on the same date. Expectations about the relative value of currencies are built into the forward rate. The difference between the forward rate and the spot rate on a given date is called the ***spread.*** The spread gives information about the perceived strengths or weaknesses of currencies. For instance, assume the spot rate for the Swiss franc is $1.1574 and the 30-day forward rate is $1.0576. The spread is the difference between these two numbers, or $0.0998. Because the forward rate is less than the spot rate, the expectation is that the dollar will strengthen against the franc in the next 30 days. The actual spot rate when the contract is due in 30 days may be higher or lower than the forward rate. By entering into the forward contract, the U.S. company gives up the chance of receiving a better exchange rate but also avoids the possibility of an exchange rate loss. This reduces the risk for the U.S. company.

For example, a U.S. company may have a liability in British pounds due in 30 days. Rather than wait 30 days to buy the pounds and risk having the dollar weaken in value relative to the pound, the company can go to a foreign exchange dealer and enter into a one-month forward exchange contract at the forward exchange rate in effect on the contract date. The United States has approximately 2,000 foreign exchange dealer institutions, of which about 200 are market-making, large banks such as Citibank, JP Morgan Chase, and Bank of America, which do the highest volume of foreign exchange activity. The contract enables the buyer to receive British pounds from an exchange broker 30 days from the contract date at a price fixed now by the contract.

The next section of the chapter presents the accounting for import and export transactions and for forward exchange contracts.

FOREIGN CURRENCY TRANSACTIONS

LO 11-2

Understand the accounting implications of and be able to make calculations related to foreign currency transactions.

As defined earlier, *foreign currency transactions* are economic activities denominated in a currency other than the entity's recording currency. These transactions include the following:

1. Purchases or sales of goods or services (imports or exports), the prices of which are stated in a foreign currency.
2. Loans payable or receivable in a foreign currency.
3. Purchase or sale of foreign currency forward exchange contracts.
4. Purchase or sale of foreign currency units.

One party in a foreign exchange transaction must exchange its own currency for another country's currency. Some persons use a shorthand to refer to foreign exchange transactions by using just the letters FX. This book uses the longer, more generally used description, which is *foreign exchange.*

For financial statement purposes, transactions denominated in a foreign currency must be translated into the currency the reporting company uses. Additionally, at each balance sheet date—interim as well as annual—account balances denominated in a currency other than the entity's reporting currency must be adjusted to reflect changes in exchange rates during the period since the last balance sheet date or since the foreign currency transaction date if it occurred during the period. This adjustment restates the foreign currency–denominated accounts to their U.S. dollar–equivalent values as of the balance sheet date. The adjustment in equivalent U.S. dollar values is a ***foreign currency transaction gain or loss*** for the entity when exchange rates have changed. For example, assume that a U.S. company acquires €5,000 from its bank on January 1, 20X1, for use in future purchases from German companies. The direct

exchange rate is $1.20 = €1; thus the company pays the bank $6,000 for €5,000, as follows:

U.S. dollar – Equivalent value	=	**Foreign currency units**	×	**Direct exchange rate**
$6,000	=	€5,000	×	$1.20

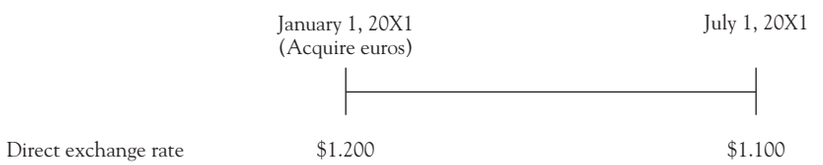
The following entry records this exchange of currencies:

January 1, 20X1

(1)			
	Foreign Currency Units (€)	6,000	
	Cash		6,000

The parenthetical notation (€) is used here after the debit account to indicate that the asset is European euros, but for accounting purposes, it is recorded and reported at its U.S. dollar–equivalent value. This translation to the U.S. equivalent value is required in order to add the value of the foreign currency units to all of the company's other accounts that are reported in dollars.

On July 1, 20X1, the exchange rate is $1.100 = €1 as represented in the following time line:



The direct exchange rate has decreased, reflecting that the U.S. dollar has strengthened. On July 1, it takes less U.S. currency to acquire 1 euro than it did on January 1. If the dollar has strengthened, the euro has weakened. By holding the euros during a weakening of the euro relative to the dollar, the company experiences a foreign currency transaction loss, as follows:

Equivalent dollar value of € 5,000 on January 1:	
€ 5,000 × $1.200	$6,000
Equivalent dollar value of € 5,000 on July 1:	
€ 5,000 × $1.100	5,500
Foreign currency transaction loss	$ 500

If the U.S. company prepares financial statements on July 1, the following adjusting entry is required:

July 1, 20X1

(2)			
	Foreign Currency Transaction Loss	500	
	Foreign Currency Units (€)		500

The foreign currency transaction loss is the result of a foreign currency transaction and is included in this period's income statement, usually as a separate item under "Other Income or Loss." Some accountants use the account title Exchange Loss instead of the longer title Foreign Currency Transaction Loss. In this book, the longer, more descriptive account title is used to communicate fully the source of the loss. The Foreign Currency Units account is reported on the balance sheet at a value of $5,500, its equivalent U.S. dollar value on that date.

In the previous examples, the U.S. company used the U.S. dollar as its primary currency for performing its major financial and operating functions, that is, as its ***functional currency.*** Also, the U.S. company prepared its financial statements in U.S. dollars, its ***reporting currency.*** Any transactions denominated in currencies other than the U.S. dollar require translation to their equivalent U.S. dollar values. Generally, the majority of a business's cash transactions

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Losses on foreign currency transactions can be substantial. For example, Nike reported a $14 million loss on its fiscal 2012 fourth quarter financial statements related to foreign currency transactions.

take place in the ***local currency*** of the country in which the entity operates. The U.S. dollar is the functional currency for virtually all companies based in the United States. A company operating in Germany would probably use the euro as its functional currency. *In this chapter, the local currency is assumed to be the entity's functional and reporting currency.* The few exceptions to this general case are discussed in Chapter 12.

Illustrations of various types of foreign currency transactions are given in the sections that follow. Note that different exchange rates are used to value selected foreign currency transactions, depending on a number of factors such as management's reason for entering the foreign currency transaction, the nature of the transaction, and the timing of the transaction.

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Foreign Currency Import and Export Transactions

Payables and receivables that arise from transactions with foreign-based entities and that are denominated in a foreign currency must be measured and recorded by the U.S. entity in the currency used for its accounting records—the U.S. dollar. The relevant exchange rate for settlement of a transaction denominated in a foreign currency is the spot exchange rate on the date of settlement. At the time the transaction is settled, payables or receivables denominated in foreign currency units must be adjusted to their current U.S. dollar–equivalent value. If financial statements are prepared before the foreign currency payables or receivables are settled, their account balances must be adjusted to their U.S. dollar–equivalent values as of the balance sheet date, using the current rate on the balance sheet date.

An overview of the required accounting for an import or export transaction denominated in a foreign currency, assuming the company does *not* use forward contracts, is as follows:

1. *Transaction date.* Record the purchase or sale transaction at the U.S. dollar–equivalent value using the spot direct exchange rate on this date.
2. *Balance sheet date.* Adjust the payable or receivable to its U.S. dollar–equivalent, end-of-period value using the current direct exchange rate. Recognize any exchange gain or loss for the change in rates between the transaction and balance sheet dates.
3. *Settlement date.* First adjust the foreign currency payable or receivable for any changes in the exchange rate between the balance sheet date (or transaction date if transaction occurs after the balance sheet date) and the settlement date, recording any exchange gain or loss as required. Then record the settlement of the foreign currency payable or receivable.

This adjustment process is required because the FASB adopted what is called the *two-transaction approach,* which views the purchase or sale of an item as a separate transaction from the foreign currency commitment. By adopting the two-transaction approach to foreign currency transactions, the FASB established the general rule that foreign currency exchange gains or losses resulting from the revaluation of assets or liabilities denominated in a foreign currency must be recognized currently in the income statement of the period in which the exchange rate changes. A few exceptions to this general rule are allowed and are discussed later in this chapter.

Illustration of Foreign Purchase Transaction

Figure 11–3 illustrates the journal entries used to measure and record a purchase of goods from a foreign supplier denominated either in the entity's local currency or in a foreign currency. On the left side of Figure 11–3, the transaction is denominated in U.S. dollars, the recording and reporting currency of the U.S. company; on the right side, the transaction is denominated in Japanese yen (¥). The U.S. company is subject to a foreign currency transaction gain or loss only if the transaction is denominated in the foreign currency. If the foreign transaction is denominated in U.S. dollars, no special accounting problems exist and no currency rate adjustments are necessary.

The following information describes the case:

1. On October 1, 20X1, Peerless Products, a U.S. company, acquired goods on account from Tokyo Industries, a Japanese company, for $14,000, or 2,000,000 yen.
2. Peerless Products prepared financial statements at its year-end of December 31, 20X1.
3. Settlement of the payable was made on April 1, 20X2.

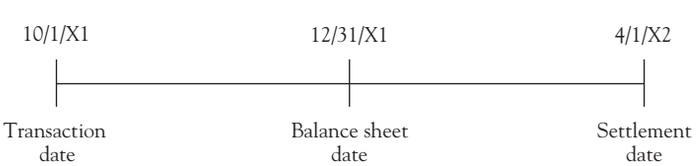
FIGURE 11–3 Comparative U.S. Company Journal Entries for Foreign Purchase Transaction Denominated in Dollars versus Foreign Currency Units

If Denominated in U.S. Dollars			If Denominated in Japanese Yen		
October 1, 20X1 (Date of Purchase)					
Inventory	14,000		Inventory	14,000	
Accounts Payable		14,000	Accounts Payable (¥)		14,000
			$14,000 = ¥2,000,000 × $0.0070 spot rate		
December 31, 20X1 (Balance Sheet Date)					
No entry			Foreign Currency Transaction Loss	2,000	
			Accounts Payable (¥)		2,000
			Adjust payable denominated in foreign currency to current U.S. dollar equivalent and recognize exchange loss:		
			$ 16,000 = ¥2,000,000 × $0.0080 Dec. 31 spot rate		
			−14,000 = ¥2,000,000 × $0.0070 Oct. 1 spot rate		
			$ 2,000 = ¥2,000,000 × ($0.0080 − $0.0070).		
April 1, 20X2 (Settlement Date)					
			Accounts Payable (¥)	800	
			Foreign Currency Transaction Gain		800
			Adjust payable denominated in foreign currency to current U.S. dollar equivalent and recognize exchange gain:		
			$ 15,200 = ¥2,000,000 × $0.0076 Apr. 1 spot rate		
			−16,000 = ¥2,000,000 × $0.0080 Dec. 31 spot rate		
			$ 800 = ¥2,000,000 × ($0.0076 − $0.0080).		
			Foreign Currency Units (¥)	15,200	
			Cash		15,200
			Acquire FCU to settle debt:		
			$15,200 = ¥2,000,000 × $0.0076 April 1 spot rate.		
Accounts Payable	14,000		Accounts Payable (¥)	15,200	
Cash		14,000	Foreign Currency Units (¥)		15,200

The direct spot exchange rates of the U.S. dollar–equivalent value of 1 yen were as follows:

Date	Direct Exchange Rate
October 1, 20X1 (transaction date)	$0.0070
December 31, 20X1 (balance sheet date)	0.0080
April 1, 20X2 (settlement date)	0.0076

The following timeline may help to clarify the relationships between the dates and the economic events:



Accounts relating to transactions denominated in yen are noted by the parenthetical symbol for the yen (¥) after the account title. As you proceed through the example, you should especially note the assets and liabilities denominated in the foreign currency and the adjustment needed to reflect their current values by use of the U.S. dollar–equivalent rate of exchange.

Key Observations from Illustration

If the purchase contract is denominated in dollars, the foreign entity (Tokyo Industries) bears the foreign currency exchange risk. If the transaction is denominated in yen, the U.S. company (Peerless Products Corporation) is exposed to exchange rate gains and losses. The accounts relating to liabilities denominated in foreign currency units must be valued at the spot rate with any foreign currency transaction gain or loss recognized in the period's income. The purchase contract includes specification of the denominated currency as the two parties agreed.

On October 1, 20X1, the purchase is recorded on the books of Peerless Products. The U.S. dollar–equivalent value of 2,000,000 yen on this date is $14,000 (¥2,000,000 × $0.0070).

On December 31, 20X1, the balance sheet date, the payable denominated in foreign currency units must be adjusted to its current U.S. dollar–equivalent value. The direct exchange rate has increased since the date of purchase, indicating that the U.S. dollar has weakened relative to the yen. Therefore, on December 31, 20X1, $16,000 is required to acquire 2,000,000 yen (¥2,000,000 × $0.0080), whereas, on October 1, 20X1, only $14,000 was required to obtain 2,000,000 yen (¥2,000,000 × $0.0070). This increase in the exchange rate requires the recognition of a $2,000 foreign currency transaction loss if the transaction is denominated in yen, the foreign currency unit. No entry is made if the transaction is denominated in U.S. dollars because Peerless has a liability for $14,000 regardless of the changes in exchange rates.

The payable is settled on April 1, 20X2. If the payable is denominated in U.S. dollars, no adjustment is necessary and the liability is extinguished by payment of $14,000. However, assets and liabilities denominated in foreign currency units must again be adjusted to their present U.S. dollar–equivalent values. The dollar has strengthened between December 31, 20X1, and April 1, 20X2, as shown by the decrease in the direct exchange rate. In other words, fewer dollars are needed to acquire 2,000,000 yen on April 1, 20X2, than on December 31, 20X1. Accounts Payable is adjusted to its current dollar value, and an $800 foreign currency transaction gain [¥2,000,000 × ($0.0076 − $0.0080)] is recognized for the change in rates since the balance sheet date. Peerless acquires 2,000,000 yen, paying an exchange broker the spot exchange rate of $15,200 (¥2,000,000 × $0.0076). Finally, Peerless extinguishes its liability denominated in yen by paying Tokyo Industries the ¥2,000,000.

Understanding the revaluations may be easier by viewing the process within the perspective of a T-account. The following T-account posts the entries in Figure 11–3:

Accounts Payable (¥)

		20X1	
		Oct. 1	14,000 (¥2,000,000 × $0.0070)
		Dec. 31	2,000 [¥2,000,000 × ($0.0080 − $0.0070)]
		Dec. 31	16,000 Balance (¥2,000,000 × $0.0080)
20X2			
Apr. 1			
[¥2,000,000 × ($0.0076 − $0.0080)]	800		
Apr. 1 settlement			
(¥2,000,000 × $0.0076)	15,200		
		Apr. 2	0 Balance

Some accountants combine the revaluation and settlement entries into one entry. Under this alternative approach, the following entries would be made on April 1, 20X2, the settlement date, instead of the entries presented for that date in Figure 11–3:

April 1, 20X2

(3)	Foreign Currency Units (¥)	15,200	
	Cash		15,200
	Acquire foreign currency.		

(4)	Accounts Payable (¥)	16,000	
	Foreign Currency Transaction Gain		800
	Foreign Currency Units (¥)		15,200
	Settle foreign currency payable and recognize gain from change in exchange rates since December 31, 20X1.		

The final account balances resulting from the preceding one-entry approach and the two-entry approach used in Figure 11–3 are the same.

In summary, if the transaction is denominated in U.S. dollars, Peerless Products has no foreign currency exchange exposure; Tokyo Industries bears the risk of foreign currency exposure. If the transaction is denominated in yen, however, Peerless has a foreign currency exchange risk. The assets and liabilities denominated in foreign currency units must be valued at their U.S. dollar–equivalent values, and a foreign currency transaction gain or loss must be recognized on that period's income statement.

MANAGING INTERNATIONAL CURRENCY RISK WITH FOREIGN CURRENCY FORWARD EXCHANGE FINANCIAL INSTRUMENTS

LO 11-3

Understand how to hedge international currency risk using foreign currency forward exchange financial instruments.

Companies need to manage business risks. Derivative instruments are important tools in managing risk. Companies operating internationally are subject not only to normal business risks but also to additional risks from changes in currency exchange rates. Therefore, multinational enterprises (MNEs) often use derivative instruments, including foreign currency–denominated forward exchange contracts, foreign currency options, and foreign currency futures, to manage risk associated with foreign currency transactions.

The accounting for derivatives and hedging activities is guided by **ASC 815.** A ***financial instrument*** is cash, evidence of ownership, or a contract that both (1) imposes on one entity a contractual obligation to deliver cash or another instrument and (2) conveys to the second entity that contractual right to receive cash or another financial instrument. Examples include cash, stock, notes payable and receivable, and many financial contracts.

A ***derivative*** is a financial instrument or other contract whose value is "derived from" some other item that has a variable value over time. An example of a derivative is a foreign currency forward exchange contract whose value is derived from changes in the foreign currency exchange rate over the contract's term. Note that not all financial instruments are derivatives.

The specific definition of a *derivative* is a financial instrument or contract possessing all of the following characteristics:

1. The financial instrument must contain one or more underlyings and one or more notional amounts, which specify the terms of the financial instrument.
   a. An ***underlying*** is any financial or physical variable that has observable or objectively verifiable changes. Currency exchange rates, commodity prices, index of prices or rates, days of winter warming, or other variables including the occurrence or nonoccurrence of a specified event such as the scheduled payment under a contract are examples of an underlying.

b. A ***notional amount*** is the number of currency units, shares, bushels, pounds, or other units specified in the financial instrument. The notional amount is usually expressed in U.S. dollars.

2. The financial instrument or other contract requires no initial net investment or an initial net investment that is smaller than required for other types of contracts expected to have a similar response to changes in market factors. Many derivative instruments require no initial net investment or only a small investment for the time value of the contract (as discussed later in this chapter).
3. The contract terms: (*a*) require or permit net settlement, (*b*) provide for the delivery of an asset that puts the recipient in an economic position not substantially different from net settlement, or (*c*) allow for the contract to be readily settled net by a market or other mechanism outside the contract. For example, a forward contract requires the delivery of a specified number of shares of stock, but there is an option market mechanism that offers a ready opportunity to sell the contract or to enter into an offsetting contract.

Occasionally, a financial instrument may have an embedded derivative that must be separated, or bifurcated, from its host contract. An example of an embedded derivative is a company's issuing debt that includes regular interest as well as a potential premium payment based on the future price of a commodity such as crude oil. In this case, the contingent payment feature is a derivative. Another example is the debt agreement that specifies a principal, but whose interest rate is based on the U.S. LIBOR (London Interbank Offered Rate), which is a variable rate. In this case, the interest is the embedded derivative because its value, which is derived from the market, is variable.

Derivatives Designated as Hedges

Derivatives may be designated to hedge or reduce risks. Some companies obtain derivatives that are not designated as hedges but as speculative financial instruments. For example, a company may enter into a forward exchange contract that does not have any offsetting intent. In this case, the gain or loss on the derivative is recorded in periodic earnings.

ASC 815 provides specific requirements for classifying a derivative as a hedge. Hedge accounting offsets the gain (loss) on the hedged item with the loss (gain) on the hedging instrument. Hedges are applicable to (1) foreign currency exchange risk in which currency exchange rates change over time; (2) interest-rate risks, particularly for companies owing variable-rate debt instruments; and (3) commodity risks whose future commodity prices may be quite different from spot prices.

For a derivative instrument to qualify as a hedging instrument, it must meet the following two criteria:

1. Sufficient documentation must be provided at the beginning of the hedge term to identify the objective and strategy of the hedge, the hedging instrument and the hedged item, and how the hedge's effectiveness will be assessed on an ongoing basis.
2. The hedge must be highly effective throughout its term. Effectiveness is measured by evaluating the hedging instrument's ability to generate changes in fair value that offset the changes in value of the hedged item. This effectiveness must be tested at the time the hedge is entered into, every three months thereafter, and each time financial statements are prepared. Effectiveness is viewed as the derivative instrument's ability to offset changes in the fair value or cash flows of the hedged item within the range between 80 and 125 percent of the change in value of the hedged item.

Derivatives that meet the requirements for a hedge and are designated as such by the company's management are accounted for in accordance with **ASC 815** and as follows:

1. ***Fair value hedges*** are designated to hedge the exposure to potential changes in the fair value of (*a*) a recognized asset or liability such as available-for-sale investments or

(*b*) an unrecognized firm commitment for which a binding agreement exists, such as to buy or sell inventory. The net gains and losses on the hedged asset or liability and the hedging instrument are recognized in current earnings on the income statement. An example of a fair value hedge is presented in Appendix 11B using an option contract to hedge available-for-sale securities.

2. ***Cash flow hedges*** are designated to hedge the exposure to potential changes in the anticipated cash flows, either into or out of the company, for (*a*) a recognized asset or liability such as future interest payments on variable-interest debt or (*b*) a forecasted cash transaction such as a forecasted purchase or sale. A *forecasted cash transaction* is a transaction that is expected to occur but for which there is not yet a firm commitment. Thus, a forecasted transaction has no present rights to future benefits or a present liability for future obligations. **ASC 815** specifies that a derivative must be valued at its current fair market value. For cash flow hedges, changes in the fair market value of a derivative are separated into an effective portion and an ineffective portion. The net gain or loss on the effective portion of the hedging instrument should be reported in other comprehensive income. The gain or loss on the ineffective portion is reported in current earnings on the income statement.

   The *effective portion* is defined as the part of the gain (or loss) on the hedging instrument that offsets a loss (or gain) on the hedged item. This portion of the change in the derivative's fair market value is related to the intrinsic value from changes in the underlying. Any remaining gain (or loss) on the hedging instrument is defined as the *ineffective portion*. This portion of the change in the derivative's fair market value is related to the time value of the derivative and reduces to zero at the derivative's expiration date. An example of determining the effective versus the ineffective portion of a change in value of a derivative is presented in Appendix 11B with regard to a cash flow hedge using an option to hedge an anticipated purchase of inventory.

3. ***Foreign currency hedges*** are hedges in which the hedged item is denominated in a foreign currency. Note that the incremental risk being hedged in a foreign currency hedge is the change in fair value or the change in cash flows attributable to the changes in the foreign currency exchange rates. The following types of hedges of foreign currency risk may be designated by the entity:

   a. A *fair value hedge* of a firm commitment to enter into a foreign currency transaction, such as a binding agreement to purchase equipment from a foreign manufacturer with the payable due in the foreign currency or a recognized foreign currency–denominated asset or liability (including an available-for-sale security). Just as with hedge accounting for firm commitments not involving foreign currency commitments in item (1) above, the gain or loss on the foreign currency hedging derivative and the offsetting loss or gain on the foreign currency–hedged item are recognized currently in earnings on the income statement.

   b. A *cash flow hedge* of a forecasted foreign currency transaction, such as a probable future foreign currency sale, the forecasted functional currency–equivalent cash flows associated with a recognized asset or liability, or a forecasted intercompany transaction. Just as with accounting for hedges of forecasted transactions not involving foreign currency commitments in item (2) above, the effective portion of the gain or loss on the foreign currency hedging derivative instrument is recognized as a component of other comprehensive income. The ineffective portion of the gain or loss is recognized currently in earnings.

   Cash flow hedges are used when all variability in the hedged item's functional currency–equivalent cash flows are eliminated by the effect of the hedge. Cash flow hedges with a derivative based only on changes in the exchange rates cannot be designated, for example, for a variable-rate foreign currency–denominated asset or liability because some of the cash flow variability is not covered with that specific hedge. However, foreign currency–denominated forward contracts can be used

as cash flow hedges of foreign currency–denominated assets or liabilities that are fixed in terms of the number of foreign currency units.

c. A hedge of a net investment in a foreign operation. A derivative designated as hedging this type of foreign currency exposure has its gain or loss reported in Other Comprehensive Income as part of the cumulative translation adjustment, as will be discussed in Chapter 12.

Forward Exchange Contracts

For the reporting year ended October 2009, the Foreign Exchange Committee of the New York Federal Reserve Board reported that the average daily volume in foreign exchange instruments totaled $675 billion, and the average daily volume in over-the-counter foreign exchange options totaled $25 billion.[2] The Chicago Mercantile Exchange (CME) is the world's largest and most diverse regulated foreign exchange trading market. The CME is an international marketplace that brings together buyers and sellers on its CME Globex electronic trading platform and on its trading floors. With $3.2 trillion traded daily, FX markets represent the largest class of assets in the world. In March 2010, CME foreign exchange products averaged a record 907,000 contracts per day, up 66 percent from the same period in 2009.[3]

Companies operating internationally often enter into forward exchange contracts with foreign currency brokers for the exchange of different currencies at specified future dates at specified rates. Forward exchange contracts are acquired from foreign currency brokers. Typically, these contracts are written for one of the major international currencies. They are available for virtually any time period up to 12 months forward, but most are for relatively shorter time periods, usually between 30 and 180 days. Forward exchange contracts can be entered into to receive foreign currency or to deliver foreign currency at a specified date in the future (the expiration date). The forward exchange rate differs from the spot rate because of the different economic factors involved in determining a future versus spot rate of exchange. For hedging transactions, if the forward rate is more than the spot rate, the difference between the forward and spot rate is termed *premium on the forward exchange contract;* that is, the foreign currency is selling at a premium in the forward market. If the forward rate is less than the spot rate, the difference is a *discount on the forward exchange contract;* that is, the foreign currency is selling at a discount in the forward market.

ASC 815 establishes a basic rule of fair value for accounting for forward exchange contracts. Changes in the fair value are recognized in the accounts, but the specific accounting for the change depends on the purpose of the hedge. For forward exchange contracts, the basic rule is to use the forward exchange rate to value the forward contract.

Multinational entities often use foreign currency forward contract derivatives. These contracts may be designated as hedging instruments or may not fulfill all the requirements for a hedge and would thus not be hedging instruments. The cases discussed in the next sections of this chapter illustrate the following:

Case 1: This case presents the most common use of foreign currency forward contracts, which is to manage a part of the foreign currency exposure from accounts payable or accounts receivable denominated in a foreign currency. Note that the company has entered into a foreign currency forward contract but that the contract does not qualify for or the company does not designate the forward contract as a hedging instrument. Thus, the forward contract is not a designated hedge but can offset most, if not all, foreign currency risks. The forward contract is valued using the forward rate, and changes in the market value of the forward contract are recognized

[2] Foreign Exchange Committee, FX Volume Survey, http://www.newyorkfed.org/FXC/volumesurvey/ (accessed May 17, 2010).

[3] CME Group, Quarterly FX Update, http://www.cmegroup.com/trading/fx/files/FX-260-Q4_FX_Quarterly_Update.pdf (accessed May 17, 2010).

currently in earnings on the income statement. The foreign currency account payable or account receivable is revalued using the spot rate in accordance with **ASC 830.**

Case 2: This case presents the accounting for an unrecognized firm commitment to enter into a foreign currency transaction, which is accounted for as a fair value hedge. A firm commitment exists because of a binding agreement for the future transaction that meets all requirements for a firm commitment. The hedge is against the possible changes in fair value of the firm commitment (e.g., the inventory to be purchased or the equipment to be acquired) from changes in the foreign currency exchange rates.

Case 3: This case presents the accounting for a forecasted foreign currency–denominated transaction, which is accounted for as a cash flow hedge of the possible changes in future cash flows. The forecasted transaction is *probable* but not a *firm* commitment. Thus, the transaction has not yet occurred nor is it assured; the company is *anticipating* a *possible* future foreign currency transaction. Because the foreign currency hedge is against the impact of changes in the foreign currency exchange rates used to predict the possible future foreign currency–denominated cash flows, it is accounted for as a cash flow hedge. **ASC 815** allows for the continuation of a cash flow hedge after the purchase or sale transaction occurs until settlement of the foreign currency–denominated account payable or receivable arising from the transaction. Alternatively, at the time the company enters into a binding agreement for the transaction that had been forecasted, the hedge can be changed to a fair value hedge, but any other comprehensive income recognized on the cash flow hedge to that date is not reclassified to the income statement until the earnings process is completed.

Case 4: This case presents the accounting for foreign currency forward contracts used to speculate in foreign currency markets. These transactions are not hedging transactions. The foreign currency forward contract is revalued periodically to its fair value using the forward exchange rate for the remainder of the contract term. The gain or loss on the revaluation is recognized currently in earnings on the income statement.

A time line of the possible points at which a company uses foreign currency contracts follows. Note that a company may use just one foreign currency forward contract during the time between each event and the final settlement of the foreign currency payable or receivable or may use more than one foreign currency forward contract during the time span presented. For example, a company could use one forward contract between the time of the forecast of the future transaction and the time it signs a binding agreement, or it could just continue with one forward contract the entire time between the date of the forecast and the final settlement.

Thus, the accounting for the hedge is based on the purpose for which the hedge, in this case a foreign currency forward contract, is entered into.

The following four cases illustrate the accounting for the major uses of forward exchange contracts.

Forecast expected future transaction. Enter into designated foreign currency forward contract.	Sign binding agreement for transaction. Enter into designated foreign currency forward contract.	Receive goods or services from transaction. Enter into undesignated foreign currency forward contract.	Settlement of foreign currency denominated payable or receivable.
Cash flow hedge of possible future foreign currency cash flow.	Fair value hedge of changes in value of goods or services due to possible changes in exchange rates.	Manage exposed position by entering into foreign currency forward contract.	Settle foreign currency payable or receivable.
(Case 3)	(Case 2)	(Case 1)	

Case 1: Managing an Exposed Foreign Currency Net Asset or Liability Position: Not a Designated Hedging Instrument

A company that has more trade receivables or other assets denominated in a foreign currency than liabilities denominated in that currency incurs a foreign currency risk from its *exposed net asset position.* Alternatively, the company has an *exposed net liability position* if liabilities denominated in a foreign currency exceed receivables denominated in that currency.

The most common use of forward exchange contracts is for ***managing an exposed foreign currency position, either a net asset or a net liability position.*** Entering into a foreign currency forward contract balances a foreign exchange payable with a receivable in the same foreign currency, thus offsetting the risk of foreign exchange fluctuations. For example, a U.S. company acquiring goods from a Swiss company may be required to make payment in Swiss francs. If the transaction is denominated in Swiss francs, the U.S. company is exposed to the effects of changes in exchange rates between the dollar and the Swiss franc. To protect itself from fluctuations in the value of the Swiss franc, the U.S. company can enter into a forward exchange contract to receive francs at the future settlement date. The U.S. company then uses these francs to settle its foreign currency commitment arising from the foreign purchase transaction.

Alternatively, a U.S. company could have a receivable denominated in a foreign currency that it also could manage with a forward exchange contract. In this case, the U.S. company contracts to *deliver* foreign currency units to the forward exchange broker at a future date in exchange for U.S. dollars.

ASC 815 specifies the general rule that the relevant exchange rate for measuring the fair value of a forward exchange contract is the *forward exchange rate* at each valuation date. Note that **ASC 830** specifies that the foreign currency–denominated account receivable or account payable from the exchange transaction is valued by using the *spot rate* at the valuation date. Forward contracts must be adjusted for changes in the fair value of the forward contract. Because of the two different currency exchange rates used—the spot and the forward—a difference normally exists between the amount of gain and loss. This difference should not be large but does create some volatility in the income stream.

Time Value of Future Cash Flows from Forward Contracts

One other item of note is that **ASC 815** requires the recognition of an interest factor if interest is significant. Thus, when interest is significant, companies should use the *present value* of the expected future net cash flows to value the forward contract. By using the present value, the company explicitly recognizes the time value of money. For the examples that follow and to focus on the main points of accounting for the hedges, interest was not considered to be significant. A comprehensive example using the time value of money to value a forward contract is presented in Appendix 11A.

Illustration of Managing an Exposed Net Liability Position

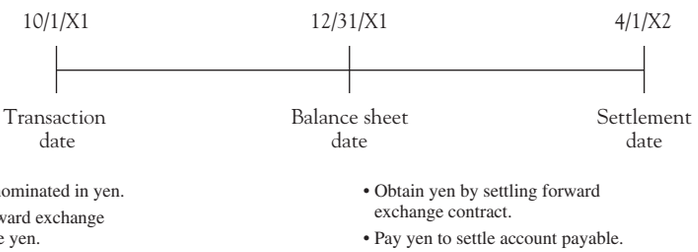
The following example shows the accounting for the management of an exposed foreign currency position with a forward exchange contract. For purposes of this example, assume the following:

1. On October 1, 20X1, Peerless Products purchases goods on account from Tokyo Industries in the amount of 2,000,000 yen.
2. This transaction is denominated in yen, and Peerless Products offsets its exposed foreign currency liability with a forward exchange contract for the receipt of 2,000,000 yen from a foreign exchange broker.
3. The term of the forward exchange contract equals the six-month credit period extended by Tokyo Industries.
4. December 31 is the year-end of Peerless Products, and the payable is settled on April 1, 20X2.

The relevant direct exchange rates are as follows:

	U.S. Dollar–Equivalent Value of 1 Yen	
Date	**Spot Rate**	**Forward Exchange Rate**
October 1, 20X1 (transaction date)	$0.0070	$0.0075 (180 days)
December 31, 20X1 (balance sheet date)	0.0080	0.0077 (90 days)
April 1, 20X2 (settlement date)	0.0076	

The following timeline summarizes these transactions:



The following entries record the events for this illustration.

October 1, 20X1

(5)

Inventory	14,000	
Accounts Payable (¥)		14,000

Purchase inventory on account:
$14,000 = ¥2,000,000 × $0.0070 Oct. 1 spot rate.

(6)

Foreign Currency Receivable from Exchange Broker (¥)	15,000	
Dollars Payable to Exchange Broker ($)		15,000

Purchase forward contract to receive 2,000,000 yen:
$15,000 = ¥2,000,000 × $0.0075 forward rate.

These entries record the purchase of inventory on credit, which is denominated in yen, and the signing of a six-month forward exchange contract to receive 2,000,000 yen in exchange for $15,000 (¥2,000,000 × $0.0075 forward rate). The amount payable to the exchange broker is denominated in U.S. dollars whereas the receivable from the broker is denominated in yen. The entries for the transaction, the adjusting journal entries for the balance sheet date valuations, and the settlements of the forward contract and the accounts payable are posted to T-accounts in Figure 11–4.

The required adjusting entries on December 31, 20X1, Peerless' fiscal year-end, are

(7)

Foreign Currency Receivable from Exchange Broker (¥)	400	
Foreign Currency Transaction Gain		400

Adjust receivable denominated in yen to current U.S. dollar–equivalent value using the forward rate:
$ 15,400 = ¥2,000,000 × $0.0077 Dec. 31 90-day forward rate
−15,000 = ¥2,000,000 × $0.0075 Oct. 1 180-day forward rate
$ 400 = ¥2,000,000 × ($0.0077 − $0.0075).

(8)

Foreign Currency Transaction Loss	2,000	
Accounts Payable (¥)		2,000

Adjust payable denominated in yen to current U.S. dollar–equivalent value using the spot rate:
$ 16,000 = ¥2,000,000 × $0.0080 Dec. 31, spot rate
−14,000 = ¥2,000,000 × $0.0070 Oct. 1, spot rate
$ 2,000 = ¥2,000,000 × ($0.0080 − $0.0070).

FIGURE 11–4
T-Accounts for the Illustration of the Management of an Exposed Net Liability

Foreign Currency Receivable from Broker (¥)

(6)	15,000		
(7)	400		
Bal. 12/31	15,400		
		(9)	200
		(12)	15,200
Bal. 4/1	0		

Accounts Payable (¥)

		(5)	14,000
		(8)	2,000
		Bal. 12/31	16,000
(10)	800		
(13)	15,200		
		Bal. 4/1	0

Foreign Currency Units (¥)

(12)	15,200	(13)	15,200
Bal. 4/1	0		

Dollars Payable to Exchange Broker ($)

		(6)	15,000
		Bal. 12/31	15,000
(11)	15,000		
		Bal 4/1	0

Note that the foreign currency–denominated account payable is valued by using the spot rate. This is the valuation requirement specified in **ASC 830.** The forward exchange contract is valued using the forward exchange rate for the remainder of the forward contract. This valuation basis is required by **ASC 815.** The direct exchange spot rate has increased between October 1, 20X1, the date of the foreign currency transaction, and December 31, 20X1, the balance sheet date. As previously illustrated, this means that the U.S. dollar has weakened relative to the yen because it takes more U.S. currency to acquire 1 yen at year-end (¥1 = $0.0080) than at the initial date of the purchase transaction (¥1 = $0.0070), and a U.S. company with a liability in yen experiences an exchange loss. The U.S. dollar–equivalent values of the foreign currency–denominated accounts at October 1, 20X1, and December 31, 20X1, follow:

	U.S. Dollar–Equivalent Values of Foreign Currency–Denominated Accounts		Foreign Currency Transaction Gain (Loss)
Accounts	**October 1, 20X1 (transaction date)**	**December 31, 20X1 (balance sheet date)**	
Foreign Currency Receivable from Exchange Broker (¥)	$15,000 (*a*)	$15,400 (*b*)	$ 400
Accounts Payable (¥)	14,000 (c)	16,000 (*d*)	(2,000)

(*a*) ¥2,000,000 × $0.0075 October 1, 180-day forward rate
(*b*) ¥2,000,000 × $0.0077 December 31, 90-day forward rate
(*c*) ¥2,000,000 × $0.0070 October 1, spot rate
(*d*) ¥2,000,000 × $0.0080 December 31, spot rate

On October 1, the U.S. dollar–equivalent value of the foreign currency receivable from the broker is $15,000. Because of the increase in the forward exchange rate of the yen relative to the dollar (i.e., the weakening of the dollar versus the yen), the U.S. dollar–equivalent value of the foreign currency receivable on December 31, 20X1, increases to $15,400, resulting in a foreign currency transaction gain of $400. For the U.S. company, the U.S. dollar–equivalent value of the liability has increased to $16,000, resulting in a $2,000 foreign currency transaction loss. Because of the differing valuation requirements of the forward contract and the exposed liability, the exchange gain of the accounts payable (¥) is not necessarily an exact offset of the exchange loss on the foreign currency receivable (¥).

The required entries on April 1, 20X2, the settlement date, are

(9)

Foreign Currency Transaction Loss	200	
Foreign Currency Receivable from Exchange Broker (¥)		200

Adjust receivable to spot rate on settlement date:
$ 15,200 = ¥2,000,000 × $0.0076 Apr. 1, 20X2, spot rate
−15,400 = ¥2,000,000 × $0.0077 Dec. 31, 20X1, 90-day forward rate
$ 200 = ¥2,000,000 × ($0.0076 − $0.0077).

(10)

Accounts Payable (¥)	800	
Foreign Currency Transaction Gain		800

Adjust payable denominated in yen to spot rate on settlement date:
¥2,000,000 × ($0.0076 − $0.0080).

(11)

Dollars Payable to Exchange Broker ($)	15,000	
Cash		15,000

Deliver U.S. dollars to currency broker as specified in forward contract.

(12)

Foreign Currency Units (¥)	15,200	
Foreign Currency Receivable from Exchange Broker (¥)		15,200

Receive ¥2,000,000 from exchange broker; valued at Apr. 1, 20X2, spot rate:
$15,200 = ¥2,000,000 × $0.0076.

(13)

Accounts Payable (¥)	15,200	
Foreign Currency Units (¥)		15,200

Pay 2,000,000 yen to Tokyo Industries, Inc., in settlement of liability denominated in yen.

The direct exchange spot rate has decreased from the $0.0080 rate on the balance sheet date to $0.0076 on April 1, 20X2, the settlement date, indicating that the U.S. dollar has strengthened relative to the yen. Fewer dollars are needed to acquire the same number of yen on the settlement date than were needed on the balance sheet date. The forward exchange contract becomes due on April 1, 20X2, and is now valued at the current spot rate. The difference between the 90-day forward rate on December 31, 20X1, and the spot rate at the date of the completion of the forward rate results in the loss of $200. The U.S. dollar–equivalent values of the foreign currency–denominated accounts on December 31, 20X1, and April 1, 20X2, follow:

	U.S. Dollar–Equivalent Values of Foreign Currency–Denominated Accounts		Foreign Currency Transaction Gain (Loss)
Accounts	**December 31, 20X1 (balance sheet date)**	**April 1, 20X2 (settlement date)**	
Foreign Currency Receivable from Exchange Broker (¥)	$15,400 (*a*)	$15,200 (*b*)	$(200)
Accounts Payable (¥)	16,000 (c)	15,200 (*d*)	800

(*a*) ¥2,000,000 × $0.0077 December 31, 90-day forward rate
(*b*) ¥2,000,000 × $0.0076 April 1, 20X2, spot rate
(*c*) ¥2,000,000 × $0.0080 December 31, spot rate
(*d*) ¥2,000,000 × $0.0076 April 1, 20X2 spot rate

On December 31, 20X1, the U.S. dollar–equivalent value of the foreign currency receivable from the broker is $15,400. Because the yen weakened relative to the dollar, the foreign currency receivable on April 1, 20X2, is lower in U.S. dollar–equivalent value, and an exchange loss of $200 is recognized. The U.S. dollar–equivalent value of the foreign currency account payable is $16,000 on December 31, 20X1, but because the

yen weakened (i.e., the dollar strengthened) during the period from December 31, 20X1, to April 1, 20X2, the U.S. dollar–equivalent value of the payable decreases to $15,200 on April 1, 20X2. This results in an $800 foreign currency transaction gain during this period.

Note that the total net foreign exchange transaction loss for the two years combined is $1,000 [20X1: $(2,000) plus $400; 20X2: $800 less $(200)]. This is the effect of the forward contract premium on October 1, 20X1, being taken into the earnings stream. Note the premium was for the difference between the forward rate ($0.0075) and the spot rate ($0.0070) at the date the forward contract was signed. At the April 1, 20X2, completion date, both of the foreign currency–denominated accounts are valued at the spot rate. Thus, the ¥2,000,000 × ($0.0070 − $0.0075) premium is the net effect on earnings over the term of the forward contract. The two accounts denominated in foreign currency start at different valuations but end using the same spot rate at the end of the term of the forward contract.

The forward exchange contract offsets the foreign currency liability position. On April 1, 20X2, Peerless pays the $15,000 forward contract price to the exchange broker and receives the 2,000,000 yen, which it then uses to extinguish its account payable to Tokyo Industries. Note that after settlement, all account balances in Figure 11–4 are reduced to zero.

If Peerless Products had a foreign currency receivable, it also could manage its exposed net asset position by acquiring a forward exchange contract to deliver foreign currency to the exchange broker. In this case, the forward currency payable to the exchange broker is denominated in the foreign currency. The forward exchange contract is settled when Peerless gives the broker the foreign currency units it has received from its customer. The foreign currency is then exchanged for U.S. dollars at the agreed-upon contractual rate from the forward exchange contract. The assets and liabilities denominated in foreign currency units must be revalued to their U.S. dollar–equivalent values in the same manner as for the import illustration. Recall that, for valuation purposes, **ASC 815** requires the use of the forward exchange rate for forward contracts and **ASC 830** requires the use of spot rates for exposed net asset or liability accounts arising from foreign currency transactions.

Formal Balance Sheets Reporting Net Amounts for Forward Exchange Contracts

ASC 815 requires the recognition of all derivatives in the statement of financial position (the balance sheet) at net fair value. This means that the balance sheet presents the net of the forward contract receivable from the exchange broker against the dollars payable to the exchange broker. Some companies account for the forward exchange contract with only memorandum entries, using the philosophy that the contract is simply for the exchange of one currency for another. The underlying exposed accounts receivable or accounts payable denominated in foreign currency units are still presented. For example, a formal balance sheet prepared on October 1, 20X1, after the transactions recorded in entries (5) and (6) reports the following net amounts:

Assets		Liabilities	
Inventory	$14,000	Accounts Payable (¥)	$14,000

Under the net method of reporting the forward exchange contract, the gain or loss on the change in the value of the forward exchange contract must be recorded and reported in the balance sheet. The balance sheet prepared on December 31, 20X1, after posting entries (7) and (8) includes the following:

Assets		Liabilities and Equity	
Forward Exchange Contract (¥) (at net fair value)	$400	Accounts Payable (¥)	$16,000
		Retained Earnings (for net exchange loss)	(1,600)

Note that under the net approach to reporting, the forward exchange contract is valued at net fair value. The $2,000 foreign currency transaction loss on the account payable denominated in yen is partially offset with the $400 foreign currency transaction gain for the forward contract receivable in yen.

The net balance sheet presented on April 1, 20X2, immediately after entry (10) but before the settlement of the forward exchange contract and the accounts payable is

Assets		Liabilities and Equity	
Forward Exchange Contract (¥) (at net fair value)	$200	Accounts Payable (¥)	$15,200
		Retained Earnings (for amount of the premium)	(1,000)

The forward exchange contract is then settled by paying the exchange broker the $15,000 in U.S. dollars as initially contracted for in the forward exchange contract, receiving the 2,000,000 yen now valued at $15,200, and closing the net forward exchange contract for the difference of the $200.

The net approach is required for reporting derivative forward exchange contracts on the balance sheet. Nevertheless, we believe that recording both sides of the forward exchange contracts in the account maintains a full record of each side of the transaction.

Case 2: Hedging an Unrecognized Foreign Currency Firm Commitment: A Foreign Currency Fair Value Hedge

A company may expose itself to foreign currency risk *before* a purchase or sale transaction occurs. For example, a company may sign a noncancelable order to purchase goods from a foreign entity in the future to be paid for in the foreign currency. By agreeing to a purchase price in the present for a future purchase, the company has accepted an *identifiable foreign currency commitment* although the purchase has not yet occurred; that is, the purchase contract is still executory (unrecognized). The company will not have a liability obligation until after delivery of the goods, but it is exposed to changes in currency exchange rates before the transaction date (the date of delivery of the goods).

ASC 815 specified the accounting requirements for the use of forward exchange contracts ***hedging unrecognized foreign currency firm commitments*.** The company can separate the commitment into its financial instrument (the obligation to pay yen) and nonfinancial asset (the right to receive inventory) aspects. The forward contract taken out is then a hedge of the changes in the fair value of the firm commitment for the foreign currency risk being hedged. A hedge of a firm commitment comes under the accounting for fair value hedges, and the forward contract is to be valued at its fair value.

It is interesting to note the different accounting treatment of a hedge of a forecasted transaction (cash flow hedge) versus that for a hedge of an unrecognized foreign currency firm commitment (fair value hedge). A *forecasted* transaction is *anticipated* but not *guaranteed.* The forecasted transaction may actually occur as anticipated, but a hedge of a forecasted transaction is accounted for as a cash flow hedge with the effective portion of the change in the hedge's fair value recognized in Other Comprehensive Income. On the other hand, a firm commitment is an agreement with an unrelated party that is binding and usually legally enforceable. The agreement has the following characteristics:

1. The agreement specifies all significant terms such as the quantity, the fixed price, and the timing of the transaction. The price may be denominated in either the entity's functional currency or in a foreign currency.
2. The agreement must contain a penalty provision sufficiently large to make performance of the agreement probable.

A forecasted transaction may become a firm commitment if an agreement having these listed characteristics is made between the parties. Any cash flow hedge of the forecasted

transaction may be changed to a fair value hedge when the firm commitment agreement is made. However, any amounts recorded in Other Comprehensive Income under the cash flow hedge are not reclassified into earnings until the initially forecasted transaction impacts earnings.

ASC 815 provides for management of an enterprise to select the basis by which the effectiveness of the hedge will be measured. Management may select the forward exchange rate, the spot rate, or the intrinsic value for measuring effectiveness. The examples used in this chapter use the forward rate, which is consistent with the general rule of valuing forward exchange contracts as specified in **ASC 815.** The measure of the change in fair value of the forward contract uses the forward exchange rate for the remainder of the term and then, if interest is significant, the change in the forward rates is discounted to reflect the time value of money. The entries for a hedge of an identifiable foreign currency commitment are presented in the following illustration.

Illustration of Hedging an Unrecognized Foreign Currency Firm Commitment

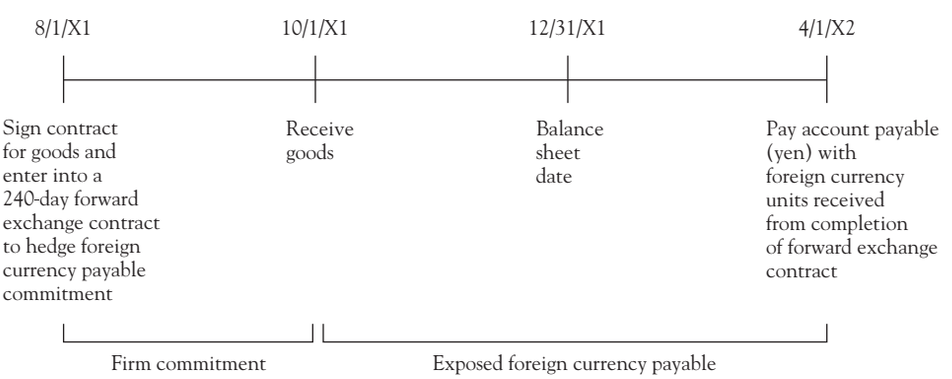
For illustration purposes, the import transaction between Peerless Products and Tokyo Industries used throughout this chapter is extended with the following information:

1. On August 1, 20X1, Peerless contracts to purchase special-order goods from Tokyo Industries. Their manufacture and delivery will take place in 60 days (on October 1, 20X1). The contract price is 2,000,000 yen, to be paid by April 1, 20X2, which is 180 days after delivery.
2. On August 1, Peerless hedges its foreign currency payable commitment with a forward exchange contract to receive 2,000,000 yen in 240 days (the 60 days until delivery plus 180 days of credit period). The future rate for a 240-day forward contract is $0.0073 to 1 yen. The purpose of this 240-day forward exchange contract is twofold. First, for the 60 days from August 1, 20X1, until October 1, 20X1, the forward exchange contract is a hedge of an identifiable foreign currency commitment. For the 180-day period from October 1, 20X1, until April 1, 20X2, the forward exchange contract is a hedge of a foreign currency exposed net liability position.

The relevant exchange rates for this example are as follows:

	U.S. Dollar–Equivalent Value of 1 Yen	
Date	**Spot Rate**	**Forward Exchange Rate**
August 1, 20X1	$0.0065	$0.0073 (240 days)
October 1, 20X1	0.0070	0.0075 (180 days)

A time line for the transactions follows:



On August 1, 20X1, the company determines the value of its commitment to pay yen for the future accounts payable using the forward exchange rate. However, the payable is not recorded on August 1 because the exchange transaction has not yet occurred; the

payable is maintained in memorandum form only. The forward exchange contract must be valued at its fair value. At the time the company enters into the forward exchange contract, the contract has no net fair value because the $14,600 foreign currency receivable equals the $14,600 dollars payable under the contract. The subsequent changes in the fair value of the forward contract are measured using the forward rate and then, if interest is significant, discounted to reflect the time value of money. For purposes of this illustration, we assume that interest is not significant and that hedge effectiveness is measured with reference to the change in the forward exchange rates.

August 1, 20X1

(14)

Foreign Currency Receivable from Exchange Broker (¥)	14,600	
Dollars Payable to Exchange Broker ($)		14,600

Sign forward exchange contract for receipt of 2,000,000 yen in 240 days:
$14,600 = ¥2,000,000 × $0.0073 Aug. 1, 240-day forward rate.

On October 1, 20X1, the forward exchange contract is revalued to its fair value. The accounts payable in yen are recorded at the time the inventory is received.

October 1, 20X1

(15)

Foreign Currency Receivable from Exchange Broker (¥)	400	
Foreign Currency Transaction Gain		400

Adjust forward contract to fair value, using the forward rate at this date, and recognize gain:
$ 15,000 = ¥2,000,000 × $0.0075 Oct. 1, 180-day forward rate
−14,600 = ¥2,000,000 × $0.0073 Aug. 1, 240-day forward rate
$ 400 = ¥2,000,000 × ($0.0075 − $0.0073).

(16)

Foreign Currency Transaction Loss	400	
Firm Commitment		400

To record the loss on the financial instrument aspect of the firm commitment:
$ 15,000 = ¥2,000,000 × $0.0075 Oct. 1, 180-day forward rate
−14,600 = ¥2,000,000 × $0.0073 Aug. 1, 240-day forward rate
$ 400 = ¥2,000,000 × ($0.0075 − $0.0073).

The Firm Commitment account is a temporary account for the term of the unrecognized firm commitment. If it has a debit balance, it is shown in the assets section of the balance sheet; when it has a credit balance, as in this example, it is shown in the liability section of the balance sheet:

Assets		**Liabilities and Equity**	
Forward Exchange Contract (¥) (at net fair value)	$400	Firm Commitment	$400

Note that the $400 foreign currency transaction gain is offset against the $400 foreign currency transaction loss, resulting in no net effect on earnings.

The next entry records the receipt of the inventory and the recognition of the accounts payable in yen. Note that the temporary account, Firm Commitment, is closed against the purchase price of the inventory. The accounts payable are valued at the spot exchange rate at the purchase date **(ASC 830).**

(17)

Inventory	13,600	
Firm Commitment	400	
Accounts Payable (¥)		14,000

Record accounts payable at spot rate and record inventory purchase:
$14,000 = ¥2,000,000 × $0.0070 Oct. 1, spot rate.

FIGURE 11–5 Comparison of Journal Entries: Hedge of an Unrecognized Firm Commitment

	Forward Exchange Contract (Use forward exchange rate)			Hedge of an Unrecognized Firm Commitment (Use forward exchange rate)		
August 1, 20X1. Recognize forward exchange contract valued at forward rate.						
(14)	Foreign Currency Receivable (¥)	14,600				
	Dollars Payable to Exchange Broker		14,600			
October 1, 20X1. Revalue foreign currency receivable and firm commitment hedge using forward rate.						
(15)	Foreign Currency Receivable (¥)	400		(16)	Foreign Currency Transaction Loss	400	
	Foreign Currency Transaction Gain		400		Firm Commitment		400
				Economic Management of an Exposed Foreign Currency Payable (Use spot exchange rate)			
October 1, 20X1. Receive inventory, close firm commitment, and recognize foreign currency accounts payable.						
				(17)	Inventory	13,600	
					Firm Commitment	400	
					Accounts Payable (¥)		14,000
December 31, 20X1. Revalue forward contract using forward rate, and accounts payable in yen using spot rate.						
(7)	Foreign Currency Receivable (¥)	400		(8)	Foreign Currency Transaction Loss	2,000	
	Foreign Currency Transaction Gain		400		Accounts Payable (¥)		2,000
April 1, 20X2. Revalue forward contract at its termination to spot rate, and accounts payable in yen to spot rate.						
(9)	Foreign Currency Transaction Loss	200		(10)	Accounts Payable (¥)	800	
	Foreign Currency Receivable (¥)		200		Foreign Currency Transaction Gain		800
April 1, 20X2. Deliver $14,600 in U.S. dollars to exchange broker, receiving yen. Use yen to settle accounts payable.						
(11)	Dollars Payable to Exchange Broker	14,600				
	Cash		14,600			
(12)	Foreign Currency Units (¥)	15,200		(13)	Accounts Payable (¥)	15,200	
	Foreign Currency Receivable (¥)		15,200		Foreign Currency Units (¥)		15,200

Key Observations from Illustration

The August 1, 20X1, entry records the signing of the forward exchange contract that is used to hedge the identifiable foreign currency commitment arising from the noncancelable purchase agreement. In entries (15) and (16), the forward contract and the underlying hedged foreign currency payable commitment are both revalued to their current value, and the $400 gain on the forward contract offsets the $400 loss on the foreign currency payable commitment. Entry (17) records the accounts payable in yen at the current spot rate and records the $400 inventory net that resulted from the recognition of the $400 loss on the financial instrument aspect of the firm commitment in entry (16).

At this point, the company has an exposed net liability position, which is hedged with a forward exchange contract, and the subsequent accounting follows the accounting for an exposed foreign currency liability position as presented previously in Case 1. Figure 11–5 presents a side-by-side comparison of the journal entries for the forward contract and the unrecognized firm commitment, which are valued at the forward exchange rates. The exposed foreign currency–denominated account payable is recognized at the time the company receives the inventory and is valued using the spot exchange rate at the purchase date.

Case 3: Hedging a Forecasted Foreign Currency Transaction: A Foreign Currency Cash Flow Hedge

It is interesting to note the different accounting treatment of a hedge of a forecasted transaction as a cash flow hedge versus that of an identifiable foreign currency commitment as a fair value hedge. A forecasted transaction is anticipated but not guaranteed. The forecasted

transaction may actually occur as anticipated, but a hedge of a forecasted transaction is accounted for as a cash flow hedge with the effective portion of the change in fair value of the hedging instrument recognized in Other Comprehensive Income. This type of hedge is against the changes in possible future cash flow that may result from changes in the foreign currency exchange rate. A forecasted transaction may become a firm commitment if the parties make a binding agreement. Prior to **ASC 815,** an entity could designate a forward foreign currency contract as a cash flow hedge if the contract's purpose was offsetting forecasted cash flows, including transactions such as forecasted purchases or sales. Changes in the fair value of the cash flow hedge would be recognized as part of other comprehensive income. When the forecasted transaction became a firm commitment, the forward contract would be redesignated as a fair value hedge, and changes in the fair value contract's would then be recognized in earnings. Any amount recorded in Other Comprehensive Income under the cash flow hedge would not be reclassified into earnings until the initially forecasted transaction impacted earnings. If the forecasted foreign currency transaction did not occur and was not expected to occur in the future, the amount recorded in Other Comprehensive Income would be reclassified into earnings. The forward rate was used to value the forward contract, and the spot rate was used to value the account receivable or payable resulting from the transaction.

ASC 815 allows management the additional option of designating the forward contract as a cash flow hedge from the time the contract is initially made until the final settlement of the payable or receivable rather than requiring that the contract be redesignated as a fair value hedge when the forecasted transaction becomes a firm commitment. Changes in the value of the forward contract are measured using the forward exchange rate whereas changes in the account payable or receivable are measured using the spot exchange rate. However, **ASC 815** requires that other comprehensive income from the forward contract revaluation be offset for any foreign exchange gain or loss on the account receivable or payable. Any remaining component of other comprehensive income is taken into the earnings stream only on final completion of the earnings process. Note that the forward contract must meet the requirements of a hedging instrument under the provisions of **ASC 815,** including the designation and tests of effectiveness.

ASC 815 allows management to (1) designate the forward contract as a cash flow hedge while it is a forecasted transaction and then redesignate it as a fair value hedge for the remainder of the contract or (2) designate the forward contract as a cash flow hedge for the entire period of time from the initial forecasting of the transaction through the eventual settlement of the receivable or payable. However, most companies regularly hedge their foreign currency receivables and payables and are likely to declare the forward contract as a continuing cash flow hedge in order to fully offset any gains or losses on changes in the fair value of the forward contract.

The following example is based on the data in Case 2 but adds the following assumption: The purchase of inventory is forecasted in August, but there is not a binding agreement for this purchase. Peerless Products Corporation enters into the 240-day forward exchange contract as a designated hedge against the future cash flows from the forecasted transaction, including the foreign currency–denominated accounts payable that would result from the purchase. Figure 11–6 presents the entries for this case, assuming that the hedge is designated as a cash flow hedge when the transaction is forecasted and then redesignated as a fair value hedge when the transaction occurs and the inventory is purchased. Figure 11–6 presents the entries for this case by bringing into the illustration Case 1 entries that would not change and noting the entries that would change with a *C* after the entry number. Note that the entry on October 1 records the effect of the change in value of the forward contract as a component of Other Comprehensive Income.

Figure 11–7 presents the entries for this case assuming the hedge is designated as a cash flow hedge and remains as such between inception in August and final settlement in April. Figure 11–7 presents the entries for this case by bringing into the illustration Case 1 entries that would not change and noting the entries that would change with a letter *C* after the entry number. Note the major differences in accounting for the forward contract as a cash flow hedge here versus as a fair value hedge in Case 2 are

FIGURE 11–6 Journal Entries for Cash Flow Hedge Redesignated as Fair Value Hedge When a Forecasted Transaction Becomes a Transaction

Entries for Forward Contract (Use forward exchange rate)			Entries for Foreign Currency Account Payable (Use spot rate)		
August 1, 20X1. Acquire forward exchange contract valued at forward rate.					
(14) Foreign Currency Receivable (¥)	14,600				
Dollars Payable to Exchange Broker		14,600			
October 1, 20X1. Receive inventory that was a forecasted transaction and recognize the foreign currency accounts payable at the spot rate. Change designation from a cash flow hedge to a fair value hedge; bring the forward contract to fair value as of this date.					
(15C) Foreign Currency Receivable (¥)	400		(17C) Inventory	14,000	
Other Comprehensive Income		400	Accounts Payable (¥)		14,000
¥2,000,000 × ($0.0075 − $0.0073).					
December 31, 20X1. Revalue the forward contract to year-end fair values using the change in the forward rate since October 1 and recognize gain or loss in net income. Revalue accounts payable in yen using the spot rate.					
(7) Foreign Currency Receivable (¥)	400		(8) Foreign Currency Transaction Loss	2,000	
Foreign Currency Transaction Gain		400	Accounts Payable (¥)		2,000
¥2,000,000 × ($0.0077 − $0.0075).					
April 1, 20X2. Revalue the forward contract using the spot rate at the termination of the contract and accounts payable in yen using the spot rate. Offset transaction gain on payable against other comprehensive income.					
(9) Foreign Currency Transaction Loss	200		(10) Accounts Payable (¥)	800	
Foreign Currency Receivable (¥)		200	Foreign Currency Transaction Gain		800
¥2,000,000 × ($0.0076 − $0.0077).					
April 1, 20X2. Deliver $14,600 in U.S. dollars to the exchange broker and receive yen. Use yen to settle accounts payable.					
(11) Dollars Payable to Exchange Broker	14,600				
Cash		14,600			
(12) Foreign Currency Units (¥)	15,200		(13) Accounts Payable (¥)	15,200	
Foreign Currency Receivable (¥)		15,200	Foreign Currency Units (¥)		15,200
Assumed sale of inventory and culmination of earnings process of other comprehensive income from forward contract.					
Other Comprehensive Income	400		Cost of Goods Sold	14,000	
Cost of Goods Sold		400	Inventory		14,000

(1) the effective portion of the revaluation of the forward exchange contract is recorded in Other Comprehensive Income, (2) no firm commitment account exists under a forecasted transaction, (3) no revaluation of the forward contract receivable is required on October 1 and the inventory is recorded at its equivalent U.S. dollar cost determined at the spot rate, (4) there is an offset against Other Comprehensive Income to fully match the foreign currency transaction gain or loss recognized on the exposed foreign currency account payable, and (5) the $600 remaining balance in Other Comprehensive Income after the foreign currency payable is paid on April 1, 20X2, is finally reclassified into cost of goods sold at the time the inventory is sold, which is the culmination of the earnings process related to the cash flow hedge.

Case 4: Speculation in Foreign Currency Markets

An entity also may decide to speculate in foreign currency as with any other commodity. For example, a U.S. company expects that the dollar will strengthen against the Swiss franc, that is, that the direct exchange rate will decrease. In this case, the U.S. company

FIGURE 11–7 Journal Entries for Cash Flow Hedge of a Forecasted Transaction

	Entries for Forward Contract (Use forward exchange rate)			Entries for Foreign Currency Account Payable (Use spot rate)		
August 1, 20X1. Acquire forward exchange contract valued at forward rate.						
(14)	Foreign Currency Receivable (¥)	14,600				
	Dollars Payable to Exchange Broker		14,600			
October 1, 20X1. Receive inventory that was a forecasted transaction and recognize the foreign currency accounts payable at the spot rate.						
(No revaluation of foreign currency receivable required at this date)				(17C)	Inventory	14,000
					Accounts Payable (¥)	14,000
December 31, 20X1. Revalue the forward contract to year-end fair value using the change in the forward rate since August 1 and recognize the effective portion of the change in value as other comprehensive income. Revalue accounts payable in yen using the spot rate. Then, in accordance with **ASC 815,** reclassify a portion of the other comprehensive income to equally offset the foreign currency transaction loss recognized on the foreign currency payable that was remeasured using the spot exchange rate in accordance with **ASC 830.**						
(7C)	Foreign Currency Receivable (¥)	800		(8)	Foreign Currency Transaction Loss	2,000
	Other Comprehensive Income		800		Accounts Payable (¥)	2,000
	[¥2,000,000 × ($0.0077 − $0.0073)]					
(C)	Other Comprehensive Income	2,000				
	Foreign Currency Transaction Gain		2,000			
	To offset loss on account payable.					
April 1, 20X2. Revalue the forward contract at its termination using the spot rate and accounts payable in yen using the spot rate. Offset transaction gain on payable against other comprehensive income.						
(9C)	Other Comprehensive Income	200		(10)	Accounts Payable (¥)	800
	Foreign Currency Receivable (¥)		200		Foreign Currency Transaction Gain	800
(C)	Foreign Currency Transaction Loss	800				
	Other Comprehensive Income		800			
	To offset gain on account payable.					
April 1, 20X2. Deliver $14,600 in U.S. dollars to the exchange broker and receive yen. Use yen to settle accounts payable.						
(11)	Dollars Payable to Exchange Broker	14,600				
	Cash		14,600			
(12)	Foreign Currency Units (¥)	15,200		(13)	Accounts Payable (¥)	15,200
	Foreign Currency Receivable (¥)		15,200		Foreign Currency Units (¥)	15,200
Assumed sale of inventory and culmination of earnings process of other comprehensive income from forward contract.						
	Cost of Goods Sold	600			Cost of Goods Sold	14,000
	Other Comprehensive Income		600		Inventory	14,000

might ***speculate with a forward exchange contract*** to sell francs for future delivery, expecting to be able to purchase them at a lower price at the time of delivery.

The economic substance of this foreign currency speculation is to expose the investor to foreign exchange risk for which the investor expects to earn a profit. The exchange rate for valuing accounts related to speculative foreign exchange contracts is the forward rate for the remaining term of the forward contract. The gain or loss on a speculative forward contract is computed by determining the difference between the forward exchange rate on the contract date of (or on the date of a previous valuation) and the forward exchange rate available for the remaining term of the contract. The forward exchange rate is used to value the forward contract.

Illustration of Speculation with Forward Contract

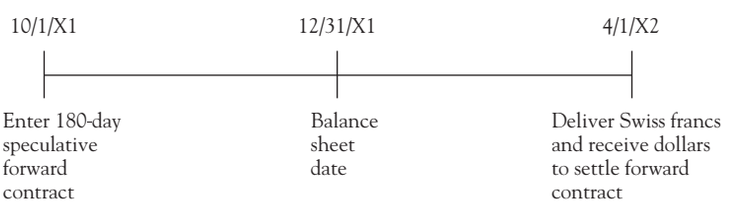
The following example illustrates the accounting for a U.S. company entering into a speculative forward exchange contract in Swiss francs (SFr), a currency in which the company has no receivables, payables, or commitments.

1. On October 1, 20X1, when the spot rate was \$0.73 = SFr 1, Peerless Products entered into a 180-day forward exchange contract to deliver SFr 4,000 at a forward rate of \$0.74 = SFr 1. Thus, the forward contract was to deliver SFr 4,000 and receive \$2,960 (SFr 4,000 × \$0.74).
2. On December 31, 20X1, the balance sheet date, the forward rate for a 90-day forward contract was \$0.78 = SFr 1, and the spot rate for francs was \$0.75 = SFr 1.
3. On April 1, 20X2, the company acquired SFr 4,000 in the open market and delivered the francs to the broker, receiving the agreed-upon forward contract price of \$2,960. At this date, the spot rate was \$0.77 = SFr 1.

A summary of the direct exchange rates for this illustration follows.

	U.S. Dollar–Equivalent of 1 Franc	
Date	**Spot Rate**	**Forward Rate**
October 1, 20X1	\$0.73	\$0.74 (180 days)
December 31, 20X1	0.75	0.78 (90 days)
April 1, 20X2	0.77	

A time line of the economic events is as follows:



The entries for these transactions are as follows:

October 1, 20X1

(18)

Dollars Receivable from Exchange Broker (\$)	2,960	
Foreign Currency Payable to Exchange Broker (SFr)		2,960

Enter into speculative forward exchange contract:
\$2,960 = SFr 4,000 × \$0.74, the 180-day forward rate.

December 31, 20X1

(19)

Foreign Currency Transaction Loss	160	
Foreign Currency Payable to Exchange Broker (SFr)		160

Recognize speculation loss on forward contract for difference between initial 180-day forward rate and forward rate for remaining term to maturity of contract of 90 days:
\$160 = SFr 4,000 × (\$0.78 − \$0.74).

April 1, 20X2

(20)

Foreign Currency Payable to Exchange Broker (SFr)	40	
Foreign Currency Transaction Gain		40

Revalue foreign currency payable to spot rate at end of term of forward contract:
\$40 = SFr 4,000 × (\$0.78 − \$0.77).

(21)

Foreign Currency Units (SFr)	3,080	
Cash		3,080

Acquire foreign currency units (SFr) in open market when spot rate is \$0.77 = SFr1:
\$3,080 = SFr 4,000 × \$0.77 spot rate.

(22)	Foreign Currency Payable to Exchange Broker (SFr)	3,080	
	Foreign Currency Units (SFr)		3,080

Deliver foreign currency units to exchange broker in settlement of forward contract:
$3,080 = SFr 4,000 × $0.77 spot rate.

(23)	Cash	2,960	
	Dollars Receivable from Exchange Broker ($)		2,960

Receive U.S. dollars from exchange broker as contracted.

Key Observations from Illustration

The October 1 entry records the forward contract payable of 4,000 Swiss francs to the exchange broker. The payables are denominated in a foreign currency but must be translated into U.S. dollars (because dollars are Peerless Products' reporting currency.). For speculative contracts, the forward exchange contract accounts are valued to fair value by using the forward exchange rate for the remaining contract term.

The December 31 entry adjusts the payable denominated in foreign currency to its appropriate balance at the balance sheet date. The payable, Foreign Currency Payable to Exchange Broker, is adjusted for the increase in the forward exchange rate from October 1, 20X1. The foreign currency transaction loss is reported on the income statement, usually under Other Income (Loss).

Entry (20), the first April 1 entry, revalues the foreign currency payable to its current U.S. dollar–equivalent value using the spot rate of exchange and recognizes the speculation gain. Entry (21) shows the acquisition of the 4,000 francs in the open market at the spot rate of $0.77 = SFr 1. These francs will be used to settle the foreign currency payable to the exchange broker. The next two entries on this date, (22) and (23), recognize the settlement of the forward contract with the delivery of the 4,000 francs to the exchange broker and the receipt of the $2,960 agreed to when the contract was signed on October 1, 20X1. The $40 foreign currency transaction gain is the difference between the value of the foreign currency contract on December 31 using the forward rate and the value of the foreign currency units on April 1 using the spot rate.

Note that the company has speculated and lost because the dollar actually weakened against the Swiss franc. The net loss on the speculative forward contract was $120, which is the difference between the $160 loss recognized in 20X1 and the $40 gain recognized in 20X2.

Although this example shows a delivery of foreign currency units with a forward exchange contract, a company also may arrange a future contract for the receipt of foreign currency units. In this case, the October 1 entry is as follows:

October 1, 20X1

(24)	Foreign Currency Receivable from Exchange Broker (SFr)	2,960	
	Dollars Payable to Exchange Broker ($)		2,960

Sign forward exchange contract for future receipt of foreign currency units:
$2,960 = SFr 4,000 × $0.74.

The remainder of the accounting is similar to that of a delivery contract except that the company records an exchange gain on December 31 because it has a receivable denominated in a foreign currency that has now strengthened relative to the dollar.

Foreign Exchange Matrix

The relationships between changes in exchange rates and the resulting exchange gains and losses are summarized in Figure 11–8. For example, if a company has an account receivable denominated in a foreign currency, the exposed net monetary asset position results in the recognition of an exchange gain if the direct exchange rate increases but an exchange loss if the exchange rate decreases. If a company offsets an asset denominated in a foreign currency with a liability also denominated in that currency, the company has protected itself from any changes in the exchange rate because any gain is offset by an equal exchange loss.

FIGURE 11–8 Foreign Exchange Matrix

Transactions or Accounts Denominated in Foreign Currency Units	Direct Exchange Rate Changes: Exchange Rate Increases (dollar has weakened)	Direct Exchange Rate Changes: Exchange Rate Decreases (dollar has strengthened)
Net monetary asset position, for example: (1) Foreign Currency Units (2) Accounts Receivable (3) Foreign Currency Receivable from Exchange Broker	EXCHANGE GAIN	EXCHANGE LOSS
Net monetary liability position, for example: (1) Accounts Payable (2) Bonds Payable (3) Foreign Currency Payable to Exchange Broker	EXCHANGE LOSS	EXCHANGE GAIN

ADDITIONAL CONSIDERATIONS

LO 11-4

Know how to measure hedge effectiveness, make interperiod tax allocations for foreign currency transactions, and hedge net investments in a foreign entity.

A Note on Measuring Hedge Effectiveness

ASC 815 states that, at the beginning of each hedging transaction, a company must define the method it will use to measure the effectiveness of the hedge. *Effectiveness* means that there will be an approximate offset, within the range of 80 to 125 percent, of the changes in the fair value of the cash flows or changes in fair value to the risk being hedged. Effectiveness must be assessed at least every three months and when the company reports financial statements or earnings. A company may elect to choose from several different measures for assessing hedge effectiveness. The examples to this point in the chapter use the change in forward rates, but a company may use the change in spot prices or change in intrinsic value. The ***intrinsic value of a derivative*** is the value related to the changes in value of the underlying item. The ***time value of a derivative*** is related to the value assigned to the opportunity to hold the derivative open for a period of time. The time value expires over the term of the derivative and is zero at the derivative's maturity date. If the company uses spot prices for measuring hedge effectiveness, any difference between the spot price and the forward price is excluded from the assessment of hedge effectiveness and is included currently in earnings.

Interperiod Tax Allocation for Foreign Currency Gains (Losses)

Temporary differences in the recognition of foreign currency gains or losses between tax accounting and GAAP accounting require interperiod tax allocation. Generally, the accrual method of recognizing the effects of changes in exchange rates in the period of change differs from the general election for recognizing exchange gains for tax purposes in the period of actual conversion of the foreign currency–denominated item. The temporary difference is recognized in accordance with **ASC 740** as a deferred tax asset or liability.

Hedges of a Net Investment in a Foreign Entity

In the earlier discussions of the use of forward exchange contracts as a hedging instrument, the exchange risks from transactions denominated in a foreign currency could be offset. This same concept is applied by U.S. companies that view a net investment in a foreign entity as a long-term commitment that exposes them to foreign currency risk. A number of balance sheet management tools are available for a U.S. company to hedge its net investment in a foreign affiliate. Management may use forward exchange contracts, other foreign currency commitments, or certain intercompany financing arrangements, including intercompany transactions. For example, a U.S. parent company could borrow

10,000 British pounds to hedge against an equivalent net asset position of its British subsidiary. Any effects of exchange rate fluctuations between the pound and the dollar would be offset by the investment in the British subsidiary and the loan payable.

ASC 815 specifies that for derivative financial instruments designated as a hedge of the foreign currency exposure of a net investment in a foreign operation, the portion of the change in fair value equivalent to a foreign currency transaction gain or loss should be reported in Other Comprehensive Income. That part of other comprehensive income resulting from a hedge of a net investment in a foreign operation then becomes part of the cumulative translation adjustment in accumulated other comprehensive income. Chapter 12 presents both the translation adjustment portion of other comprehensive income and accumulated other comprehensive income.

Summary of Key Concepts

Virtually all companies have foreign transactions. The general rule is that accounts resulting from transactions denominated in foreign currency units must be valued and reported at their equivalent U.S. dollar values. Forward exchange contracts typically use the forward rate for determining current fair value. These accounts must be adjusted to recognize the effects of changes in the exchange rates. For fair value hedges, the gain or loss is taken into current earnings. For cash flow hedges, the gain or loss is taken into other comprehensive income for the period.

Key Terms

cash flow hedges, *557*
current rate, *549*
derivative, *555*
fair value hedges, *556*
financial instrument, *555*
foreign currency exchange rate, *545*
foreign currency hedges, *557*
foreign currency transaction gain or loss, *550*
foreign currency transactions, *544*
foreign currency unit (FCU), *545*
forward exchange contract, *550*
functional currency, *551*
hedging unrecognized foreign currency firm commitments, *565*
intrinsic value of a derivative, *574*
local currency, *552*
local currency unit (LCU), *545*
managing an exposed foreign currency position, either a net asset or a net liability position, *560*
notional amount, *556*
reporting currency, *551*
speculate with a forward exchange contract, *571*
spot rate, *549*
spread, *550*
time value of a derivative, *574*
underlying, *555*

Appendix 11A Illustration of Valuing Forward Exchange Contracts with Recognition for the Time Value of Money

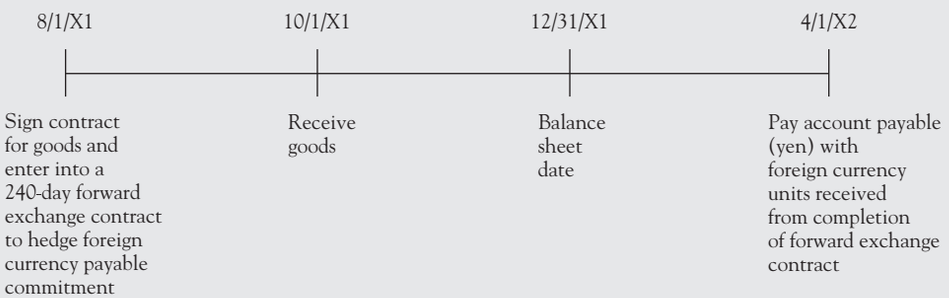
This illustration uses the example of a hedge of an identifiable, unrecognized foreign currency commitment from the chapter (Case 2) to illustrate the present value of the forward exchange contract and hedge.

1. On August 1, 20X1, Peerless Products Corporation contracts to purchase special-order goods from Tokyo Industries. The manufacture and delivery of the goods will take place in 60 days (on October 1, 20X1). The contract price is ¥2,000,000 to be paid by April 1, 20X2, which is 180 days after delivery.
2. On August 1, 20X1, Peerless Products hedges its foreign currency payable commitment with a forward exchange contract to receive ¥2,000,000 in 240 days (the 60 days until delivery plus 180 days of credit period). The future rate for a 240-day forward contract is $0.0073 to ¥1. The purpose of this 240-day forward exchange contract is twofold. First, for the 60 days from August 1, 20X1, until October 1, 20X1, the forward exchange contract is a hedge of an identifiable foreign currency commitment. For the 180-day period from October 1, 20X1, until April 1, 20X2, the forward exchange contract is a hedge of a foreign currency–exposed net liability position.
3. Peerless uses a discount interest rate of 10 percent to present value of the expected future cash flows from forward exchange contracts.
4. Peerless measures the effectiveness of hedges of identifiable, unrecognized firm commitments based on changes in the forward exchange rate.

The relevant exchange rates for this example are as follows:

U.S. Dollar–Equivalent Value of 1 Yen		
Date	**Spot Rate**	**Forward Exchange Rate**
August 1, 20X1	$0.0065	$0.0073 (240 days)
October 1, 20X1	0.0070	0.0075 (180 days)
December 31, 20X1 (balance sheet date)	0.0080	0.0077 (90 days)
April 1, 20X2 (settlement date)	0.0076	

The following timeline summarizes these transactions.



The computation of hedge effectiveness is performed using the changes in the forward exchange rate in accordance with the general requirements of **ASC 815** and the company's specific policies regarding measurement of effectiveness of the hedge by using the forward exchange rates.

	Change in the Fair Value of		
	Forward Contract Based on Changes in Forward Rate Gain (Loss)	**Firm Commitment Based on Changes in Forward Rate Gain (Loss)**	**Effectiveness Ratio for the Period**
October 1, 20X1	$380 (*a*)	$(380)	1.00
December 31, 20X1	400 (*b*)	No longer applicable because firm commitment was completed on October 1, 20X1.	
April 1, 20X2	(180) (*c*)		

(a) $380 = [($0.0075 − $0.0073) × ¥2,000,000] for the $400 cumulative, undiscounted gain from the change in the forward rates and then discounted at a 10 percent annual rate for the six-month period from October 1, 20X1, to April 1, 20X2, the completion date of the forward contract: NPV(0.05, 400) = $380.95, rounded.
(*b*) $400 = [($0.0077 − $0.0073) × ¥2,000,000] for the $800 cumulative, undiscounted gain from the change in the forward rates since entering the forward contract and then (1) discounted at a 10 percent annual rate for the three-month period from December 31, 20X1, to April 1, 20X2, NPV(0.025, 800) = $780.49, rounded; and then (2) subtract prior recognition of $380 reported for October 1, 20X1, in (a).
(*c*) $(180) = [($0.0076 − $0.0073) × ¥2,000,000] for the $600 cumulative gain from the change in the forward rate since entering the forward contract on August 1, 20X1, to the spot rate on April 1, 20X2, the completion of the forward contract; then subtract the prior recognition of $780 gain recognized previously in (a) and (b). This results in a loss of $(180) in the current period.

The amounts in the following entry on August 1, 20X1, are not present valued because the entry is a memorandum-type entry and because the interest factor will be taken into earnings through the changes in the fair value of the forward contract. Note that at the date of signing the forward contract, the net fair value of the forward contract is zero because the receivable and payable are equal to each other.

August 1, 20X1

(25)	Foreign Currency Receivable from Exchange Broker (¥)	14,600	
	Dollars Payable to Exchange Broker ($)		14,600

Sign forward exchange contract for receipt of 2,000,000 yen in 240 days:
$14,600 = ¥2,000,000 × $0.0073 Aug. 1, 240-day forward rate.

On October 1, 20X1, the forward exchange contract will be revalued to its net fair value, recognizing the time value of money by using the present value of the expected future net cash flow from the forward contract. The temporary liability account, Firm Commitment, is also recorded at this time. Net present values can easily be computed using an electronic spreadsheet such as Excel and the net present value (NPV) function.

October 1, 20X1

(26)	Foreign Currency Receivable from Exchange Broker (¥)	380	
	Foreign Currency Transaction Gain		380

Adjust forward contract to net fair value, using the present value of the change in the forward rates. [Item (*a*) in the hedge effectiveness illustration.]

(27)	Foreign Currency Transaction Loss	380	
	Firm Commitment		380

To record the loss on the financial instrument aspect of the firm commitment using the present value of the change in the forward exchange rates. [Same amount as item (*a*) for this example because the effectiveness of the hedge on the firm commitment is assessed using the change in the forward exchange rates.]

On October 1, 20X1, the discounted net fair value of the forward contract is $380.

The next entry is to record the receipt of the inventory and the recognition of the accounts payable in yen. Note that the temporary account, Firm Commitment, is closed against the purchase price of the inventory.

(28)	Inventory	13,620	
	Firm Commitment	380	
	Accounts Payable (¥)		14,000

Record accounts payable at spot rate and the inventory purchase, closing the temporary liability account:
$14,000 = ¥2,000,000 × $0.0070 Oct. 1 spot rate.

The required adjusting entries on December 31, 20X1, Peerless' fiscal year-end, are

(29)	Foreign Currency Receivable from Exchange Broker (¥)	400	
	Foreign Currency Transaction Gain		400

Adjust forward contract to net fair value, using the present value of the change in the forward rates. [Item (*b*) in the hedge effectiveness illustration.]

(30)	Foreign Currency Transaction Loss	2,000	
	Accounts Payable (¥)		2,000

Adjust payable denominated in yen to current U.S. dollar–equivalent value: $2,000 = ¥2,000,000 × ($0.0080 − $0.0070). No interest factor is used for this revaluation; thus, no present value computation is made.

On December 31, 20X1, the discounted net fair value of the forward contract is $780.

The first required entry on April 1, 20X2, the settlement date, is

(31)	Foreign Currency Transaction Loss	180	
	Foreign Currency Receivable from Exchange Broker (¥)		180

Adjust forward contract for the change in the forward rate to the spot rate on settlement date: [Item (*c*) in the hedge effectiveness illustration.]

$0.0076 spot rate on 4/1/X2, the end of the forward contract
−0.0073 forward rate on 8/1/X1, the beginning of the forward contract
$0.0003 × ¥2,000,000 = $ 600 cumulative change from 8/1/X1
−780 gains previously recognized
$(180) reduction (loss) this period.

Note that at this point, the net foreign currency transaction gain on just the forward contract is $600. This is the difference between the time value of the forward contract (the $1,600 premium on the forward contract—$0.0073 forward rate less $0.0065 spot rate—when the forward contract was signed on August 1, 20X1, which is taken into earnings over the term of the forward contract) and the intrinsic value of the forward contract (the $2,200 difference between the spot rate of $0.0065 on August 1, 20X1, and the spot rate of $0.0076 on the forward contract completion date of April 1, 20X2). Another way to compute the net gain over the term of the forward contract is to compare the forward rate at the date the contract is signed ($0.0073) and the spot rate at the date the contract is completed ($0.0076). The net gain is $600 [¥2,000,000 × ($0.0073 − $0.0076)].

The following April 1, 20X2, entries complete the forward contract and the payment of the accounts payable that was denominated as ¥2,000,000.

(32)

Accounts Payable (¥)	800	
Foreign Currency Transaction Gain		800

Adjust payable denominated in yen to spot rate on settlement date. No interest factor for this item.
$800 = ¥2,000,000 × ($0.0076 − $0.0080).

(33)

Dollars Payable to Exchange Broker ($)	14,600	
Cash		14,600

Deliver U.S. dollars to currency broker as specified in forward contract.

(34)

Foreign Currency Units (¥)	15,200	
Foreign Currency Receivable from Exchange Broker (¥)		15,200

Receive ¥2,000,000 from exchange broker; valued at Apr. 1, 20X2, spot rate:
$15,200 = ¥2,000,000 × $0.0076.

(35)

Accounts Payable (¥)	15,200	
Foreign Currency Units (¥)		15,200

Pay 2,000,000 yen to Tokyo Industries, Inc., in settlement of liability denominated in yen.

Appendix **11B** Use of Other Financial Instruments by Multinational Companies

This chapter details the accounting for forward exchange contracts that are used to hedge exposed asset or liability positions or to hedge foreign currency commitments, or that are entered into for speculative purposes. Many multinational enterprises (MNEs) typically use financial instruments other than forward contracts to manage the risks associated with international transactions. A general definition of a *financial instrument* is that it is cash, stock, or a contract that imposes a contractual obligation to deliver or receive cash or another financial instrument to/from another entity. Examples of financial instruments are receivables/payables, bonds, shares of stock, foreign currency forward contracts, futures contracts, options, and financial swaps. A derivative financial instrument is the value of a financial instrument derived from some other item such as a contract valued on an index of stock values or futures contracts in which the value is determined by contemporary and predicted economic events. The other derivative financial instruments most often used by MNEs are futures, options, and swaps.

This appendix supplements the chapter by presenting a brief overview of futures, options, and swaps. It first gives brief definitions and descriptions. Next, it presents several examples of accounting for a hedge with a futures contract, a hedge with an option contract, and an interest-rate swap. Finally, describes the disclosure requirements that currently apply. A discussion of the detailed mechanics and risk ramifications of transactions that utilize these instruments is beyond the coverage of an advanced financial accounting textbook.

DEFINITIONS AND DESCRIPTIONS

A *derivative financial instrument* is an instrument whose value is based on or "derived from" the value of something else (an underlying). That underlying can be the value of another financial instrument, a commodity, an index, an asset, or a debt instrument. Because the derivative financial instrument has a value that is linked to the underlying, it makes the derivative a useful hedging instrument to offset the change in value of the hedged item. Examples of derivative financial instruments include futures, forward, swap, and option contracts.

Forward and Futures Contracts

A forward contract is an agreement between a buyer and a seller that requires the delivery of some commodity at a specified future date at a price agreed to today (the exercise price). As presented in the chapter, foreign currency forward contracts are typically made with dealers of foreign exchange, and the contract is fulfilled at the end of the contract term by the exchanges of the currencies between the company and the dealer. Changes in the underlying market value of the foreign currency are recognized by the company holding the forward contract. The net fair value of a forward contract when it is written is zero because neither party pays anything and neither party receives anything. The contract is executory at this point. During the term of the forward contract, the net fair value changes based on the difference between a newly written forward contract for the remaining term and the original forward contract. At expiration, the forward contract's net fair value is the difference between the spot price and the original forward rate.

Futures are very similar to forward contracts except futures have standardized contract terms, they are traded on organized exchanges, and traders must realize any losses or gains on each and every trading day. Futures are contracts between two parties—a buyer and a seller—to buy or sell something at a specified future date, which is termed the *expiration date.* The contract trades on a futures exchange such as the Chicago Board of Trade (CBOT) or the Chicago Mercantile Exchange (CME). Futures contracts are actively traded in a number of commodities including grains and oilseeds, livestock and meat, food and fiber, and metals and energy. It is even possible to enter into futures contracts on foreign currencies. Companies trading in futures contracts are normally required to place cash in their margin accounts held by the brokerage exchange or a *clearing house,* and the gain (loss) on the futures contract is then added (subtracted) from the company's margin account. This margin account is settled daily for the changes in contract value. Margin accounts are maintained at some percentage (typically 2 to 5 percent) of the contract amount. Most investors do not expect to actually exchange the futures contract for the optioned item—the futures contract is simply an investment vehicle to ride the value curve of the optioned item—and they use a *closing transaction* to settle the futures contract. If a company is the purchaser of a futures contract, it is said to "go long" in a position. If a company contracts to sell with a futures contract, it is said to "go short." Futures contracts are sometimes referred to as *liquid forward contracts* because futures trade separately. The accounting for futures contracts is quite similar to accounting for foreign currency forward contracts.

Both futures and forward contracts are obligations to deliver a specified amount at a specified point in time. There is a potential for a gain under favorable circumstances and a potential for a loss under unfavorable circumstances. As presented in this Chapter, not only the losses but also the gains are minimized by using foreign currency forward contracts. Forward contracts are commonly used for hedging foreign currency transactions because the forward contracts can be customized as to duration and amounts. Futures contracts are standardized as to duration and amount but are more readily accessible because of their wide acceptance in a futures exchange arena.

Option Contracts

An option contract between two parties—the buyer and the seller—gives the buyer (option holder) the right, but not the obligation, to purchase from or sell something to the option seller (option writer) at a date in the future at a price agreed to at the time the option contract is exchanged. Options can be written on a large variety of commodities such as grains, food and fibers, petroleum, livestock, metals, interest rates, and various foreign currencies. The option buyer pays the seller some amount of money, typically termed the "premium," for this right. An option to buy something is referred to as a "call"; an option to sell something is called a "put." Options trade on organized markets similar to the stock market. Exchanges on which options trade are the Chicago Board Options Exchange (CBOE), the Philadelphia Stock Exchange (PHLX), the American Stock Exchange (AMEX), and the Pacific Stock Exchange (PSE).

An option contract can give the buyer future control over a large number of shares or other items at the nominal cost of the option. This ability of the option for future control is the *time value*

of the option. Over the option's term, the time value decreases to zero at the option's expiration date. Changes in the time value of the option are always taken to current earnings. The party selling the right is the writer; the party buying the right is the holder. The option holder has the right to exercise or not exercise the option. The holder of the option would not exercise the right embedded in the option if by doing so it would result in a loss. The option writer, however, is subject to risk because the option holder could exercise the option, forcing the writer to deliver under terms that are not favorable to the writer. An option's *intrinsic value* is directly related to the change in value of the underlying. If the option is designated as a hedge, the change in intrinsic value of a fair value hedge is taken to current earnings. The change in the effective portion of intrinsic value of a cash flow hedge is taken to other comprehensive income. An example of an option used as a hedge is presented later in this appendix.

The option is sold with a *strike price,* the price at which the holder has the option to buy or sell the item. If an investor holds a call option to purchase one share of Peerless Products stock for $5 a share from the writer, the holder may exercise that option when the market share price exceeds the strike price. If the market price is $6 a share, the holder will save $1 by exercising the option and purchasing the stock for $5. If the holder wishes to turn the savings into a cash profit, the investor would sell the share of stock, purchased for $5, on the market for $6. Alternatively, the holder of the option could directly sell the option for $1, its intrinsic value. When the market price is more than the strike price, the option to buy is "in the money." When the market price is less than the strike price, the option to buy is "out of the money."

If an investor is the holder of a put option to sell one share of Peerless Products for $5 a share to the writer, the holder will exercise that option when the share price is below the strike price. If the market price is $4 a share, the holder will make $1 by exercising the sell option at $5 per share rather than selling the share on the open market at $4 per share. When the market price is less than the option price, the option to sell is "in the money."

For the Peerless Products stock example, a summary of the relationship between the option type and the term used to describe the difference between the current market price of the underlying and the option's strike price is as follows:

Option	Current Market Price Equals the Option's Strike Price ($5 = $5)	Current Market Price Is More than the Option's Strike Price ($6 > $5)	Current Market Price Is Less than the Option's Strike Price ($4 < $5)
Call (buy)	At the money	In the money	Out of the money
Put (sell)	At the money	Out of the money	In the money

Options are typically purchased for a fee that is usually a small percentage of the optioned item's current value (e.g., 1 to 7 percent). The option's terms stipulate whether the option can be exercised at any time during the option period or only at the end of the exercise period. The minimum value of an option is zero because an option need not be exercised. Therefore, an option can never have a negative value (a liability), and the maximum loss of the holder of an option can incur is the premium initially paid for the option.

Figure 11–9 presents an overview of the major features of forwards, futures, and options.

Swaps

A *swap* is an arrangement by which two parties exchange cash flows over a period of time. Swaps can be designed to swap currencies, interest rates, or commodities. The two most common types of financial swaps used by companies are (1) currency swaps and (2) interest-rate swaps. An example of a currency swap is Peerless Products Corporation's sale of products in Great Britain for which it receives pounds sterling. Another company located in London, England, sells products in the United States for which it receives U.S. dollars. A currency swap would occur, for example, if Peerless (a U.S. company) agrees that the periodic currency flows in pounds sterling from its Great Britain operations will be forwarded to its counterparty in Great Britain, and the dollar sales in the United States by the London company will be forwarded to Peerless, the U.S. company. At the end of each period, the two companies agree to settle up for any differences in the notional amount of the swap at the end of the period. Thus, both parties to this currency swap avoid dealing in other than their local currencies and avoid foreign currency exchange costs.

Another example of a swap is an interest-rate swap in which two parties agree to exchange the interest payments on a stated amount of principal (also called the "notional amount"). Typically, the

FIGURE 11–9
Features of Forwards, Futures, and Options

Type of Derivative	Features
Forwards	• Contracted through a dealer, usually a bank • Possibly customized to meet contracting company's terms and needs • Typically no margin deposit required • Must be completed either with the underlying's future delivery or net cash settlement
Futures	• Traded on an exchange and acquired through an exchange broker • Cannot be customized; for a specific amount at a specific date • Often company required to open a margin account with a small deposit so daily changes in futures value can be posted to the account • Usually settled with a net cash amount prior to maturity date; not expected to be completed by the underlying's future delivery
Options	• Traded on a variety of exchanges • Acquired on a large variety of commodities and major foreign currencies • Issued in two types: put (sell) and call (buy) • Option premium (fee) paid by the option holder to the writer (counterparty) for that right • Taker's or holder's loss limited to a maximum of the premium paid but virtually unlimited potential profit if underlying market moves in the option holder's desired direction • Grantor (counterparty or writer) offered potential to earn a maximum of the option premium and to lose a virtually unlimited amount if underlying market moves in the opposite direction than desired

swap is an exchange of a variable (floating) rate interest and a fixed-rate interest. For example, Peerless may issue variable-rate debt but wish to fix its interest rates because it believes the variable rate may increase. Peerless may enter into a contract with a counterparty that has a fixed-rate bond but is looking for a variable-rate interest because that company assumes the interest rates may decrease. Often the contract includes a financial intermediary to which net settlement payments are made and that charges a nominal fee for its services. Sometimes the counterparty is a dealer—a bank or an investment banking firm—that makes a market in swaps and other interest-rate derivatives. The notional amount (principal) is specified as the same for both parties, and Peerless fixes the interest rate on its notional amount whereas the counterparty obtains the variable rate it was seeking. Note that the debt is not being extinguished and any fees paid to arrange the swap should be treated as debt issuance costs that are amortized over the term of the debt. Each company is still responsible for its actual interest payment to its creditor. The swap is merely an agreement for the net periodic settlement of the difference between the two interest rates and is done solely between the two companies that contracted for the interest swap. The simple swap of fixed- versus variable-interest rates is sometimes referred to as a *plain vanilla swap* or a *generic swap*. An interest-rate swap is presented later in this appendix.

An overview of the accounting for the three major types of hedges is presented in Figure 11–10. Review this figure before proceeding to the examples.

EXAMPLE OF THE USE OF AN OPTION TO HEDGE AN ANTICIPATED PURCHASE OF INVENTORY: A CASH FLOW HEDGE

Assume that Peerless Products plans in 90 days to purchase 30,000 bushels of wheat that currently have a value of $75,000 (30,000 bushels × $2.50 spot price per bushel). Also assume that Peerless wants to lock in the value of the anticipated future purchase.

Peerless purchases a call option on wheat futures to hedge against a price change in the anticipated purchase of the inventory. If the price of wheat increases, the profit on the purchased call option will offset the higher price that Peerless would have to pay for the wheat. If the price of wheat decreases, Peerless loses the premium it paid for the call option but can then buy the wheat at a lower price.

FIGURE 11–10 Overview of Three Types of Hedges

Type of Hedge	Basic Criteria	Recognition and Measurement
Fair value hedge	A hedge of the derivative instrument's exposure to changes in the fair value of an asset or liability, or of an unrecognized firm commitment.	Gain or loss on the hedging instrument, as well as the related loss or gain on the hedged item, should be recognized currently in earnings.
Cash flow hedge	Hedge the derivative instrument's exposure to variability in expected future cash flows of a recognized asset or liability, or of a forecasted transaction, that is attributable to a particular risk.	Gain or loss on the effective portion of hedge (e.g., the intrinsic value) is deferred and reported as a component of other comprehensive income. Any gain or loss on the derivative that is not offset by cash flow losses and gains on the hedged forecasted transaction (i.e., ineffective, including the time value of the option) is recognized currently in earnings.
Foreign currency hedge	A hedge of the foreign currency exposure of 1. An unrecognized firm commitment. 2. An available-for-sale security. 3. A forecasted transaction. 4. A net investment in a foreign operation.	The recognition and measurement differ by type of hedge: 1. This is a foreign currency fair value hedge. 2. This is a foreign currency cash flow hedge. 3. The gain or loss on the effective portion of the hedging derivative on a net investment in a foreign operative shall be reported as part of the translation adjustment component of other comprehensive income.

On November 1, 20X1, Peerless purchases call options for a February 1, 20X2, call (90 days in the future) at a call price of $2.50. Peerless pays a premium of $0.05 per bushel, for a total cost of $1,500 (30,000 bushels × $0.05). The call options are for a notional amount of 30,000 bushels of wheat. Peerless specifies that the derivative qualifies for cash flow hedge accounting. It is a cash flow hedge because the option is hedging a forecasted, or planned, future transaction involving cash flows. Note that this example shows the entire $1,500 as the time value of the option; in other words, it sets a futures price equal to the current market price. This type of contract is sometimes termed "at the money," meaning it specifies the futures price of the underlying at the current market price. Thus, the value of the contract when it is signed is only with regard to the *time value* of the expectation that the actual future price of the commodity will differ from the current market price.

An overview of this hedge follows:

Hedging instrument	Call option on wheat futures
Hedged item	Forecasted purchase of wheat
Type of hedge	Cash flow hedge
Underlying	Price of a bushel of wheat
Notional amount	30,000 bushels of wheat
Time value at origin of hedge	$1,500, at the money
Valuation of call option	Fair value
If underlying increases in value	Call option increases in value
If underlying decreases in value	Call option decreases in value

Gain or loss on hedge:

Effective portion	To other comprehensive income; related to change in intrinsic value of hedge
Ineffective portion	To current earnings; related to change in time value of hedge

The entry to record the purchase of the call options is as follows:

November 1, 20X1

(36)			
	Purchased Call Options	1,500	
	Cash		1,500

To record the purchase of call options for 30,000 bushels of wheat at $2.50 per bushel in 90 days. The options are at the money; therefore, the $1,500 is all time value.

The fair market information for this example follows:

Fair Value Computations

	November 1, 20X1	December 31, 20X1	February 1, 20X2
Bushel of wheat	$ 2.50	$ 2.60	$ 2.58
Total: 30,000 bushels			
Call Option:			
Option market value (from market information)	$1,500	$3,700	$2,400
Less: Intrinsic value: [Number of bushels × (Market price − Strike price)]			
[30,000 bushels × ($2.50 − $2.50)]	0		
[30,000 bushels × ($2.60 − $2.50)]		(3,000)	
[30,000 bushels × ($2.58 − $2.50)]			(2,400)
Time value remaining	$1,500	$ 700	$ 0

Note that for a cash flow hedge, the change in the intrinsic value (effective portion) is recognized in Other Comprehensive Income, and the change in the time value (ineffective portion) is recognized in current earnings.

At December 31, 20X1, the price of wheat increases to $2.60 per bushel. The *intrinsic value* is the change in value of the options due to the change in market value of the underlying. For cash flow hedges, the change in a derivative's intrinsic value is recorded in other comprehensive income. On December 31, the intrinsic value of the options is $3,000 (30,000 bushels × $0.10 increase).

ASC 815 requires that hedging instruments be revalued to fair value at each balance sheet date. The change in value of the options is due to two factors: the change in the intrinsic value and the reduction of the time value. An option's time value decreases over its term and is zero when the options expire. At December 31, 20X1, the fair market value of the options is $3,700, meaning that the options' remaining time value is valued by the market at $700 ($3,700 fair value less $3,000 intrinsic value). **ASC 815** specifies that the $800 ($1,500 initial amount − $700 remaining) reduction in the time value portion of a derivative is recognized as part of current earnings. Entry (37) records the change in the value of the options to value them at their fair value at the balance sheet date.

December 31, 20X1

(37)			
	Purchased Call Options	2,200	
	Loss on Hedge Activity	800	
	Other Comprehensive Income		3,000

To revalue the options to their fair market value, recognizing the reduction in time value and the increase in intrinsic value:

$2,200 = $3,700 current fair value of options less $1,500 balance on November 1

$800 = ($1,500 − $700 remaining) reduction in time value of options

$3,000 = 30,000 bushels × $0.10 increase in intrinsic value.

Note that the increase in intrinsic value is recorded in Other Comprehensive Income pending the completion of the forecasted inventory transaction. The Other Comprehensive Income account is used to "store" the intrinsic value gains or losses on cash flow hedges until they are reclassified into earnings when the hedged transaction affects earnings.

At February 1, 20X2, the end of the 90 days, the price of wheat is $2.58 per bushel. The decrease in the intrinsic value of the call options is recorded as follows:

February 1, 20X2

(38)			
	Other Comprehensive Income	600	
	Purchased Call Options		600

To record the other comprehensive income, deferring the earning recognition of the loss on the purchased call options:
$600 = 30,000 bushels × ($2.58 − $2.60).

The next entry (39) recognizes the expiration of the remaining amount ($700) of the time value of the purchased call option because the option has now expired. The change in the time value portion of a derivative is recognized in current earnings.

February 1, 20X2

(39)			
	Loss on Hedge Activity	700	
	Purchased Call Options		700

To recognize the loss of the $700 remaining time value of the purchased call options that have now expired.

Peerless now decides to sell the contracts for their intrinsic value of $2,400 [30,000 bushels × ($2.58 − $2.50 call price)]. In addition, Peerless acquires the 30,000 bushels of wheat at the current market price of $2.58 per bushel. The next entry records the sale of the purchased call options at their current market price.

February 1, 20X2

(40)			
	Cash	2,400	
	Purchased Call Options		2,400

To record the sale of the call options.

Peerless now purchases the 30,000 bushels of wheat at the current market price of $2.58 per bushel.

February 1, 20X2

(41)			
	Wheat Inventory	77,400	
	Cash		77,400

Finally, Peerless later sells the wheat at a price of $100,000 and records the sale as well as the reclassification of the other comprehensive income resulting from the purchased call options. Note that the other comprehensive income is taken into income only when the underlying item enters the income stream.

(42)			
	Cash	100,000	
	Sale		100,000

To record the sale of the 30,000 bushels of wheat.

(43)			
	Cost of Goods Sold	77,400	
	Wheat Inventory		77,400

To recognize the cost of the wheat sold.

(44)			
	Other Comprehensive Income—Reclassification	2,400	
	Cost of Goods Sold		2,400

To reclassify into earnings the other comprehensive income from the cash flow hedge.

The reduction of the cost of goods sold increases net income for the period. The earning process for the other comprehensive income was the sale of the wheat. The hedge was successful. Peerless has a gain of $2,400 less the $1,500 it paid for the time value of the call options.

EXAMPLE OF AN OPTION CONTRACT TO HEDGE AVAILABLE-FOR-SALE SECURITIES: A FAIR VALUE HEDGE

Assume that on January 1, 20X1, Peerless purchases 100 shares of Special Foods stock at a cost of $25 per share. The company classifies these as available-for-sale securities because it does not intend to sell them in the near term. To protect itself from a decrease in the value of the investment, on

December 31, 20X1, the company purchases, for a $300 premium, an at-the-money put option (i.e., option price is current market price), which gives it the right but not the obligation to sell 100 shares of Special Foods at $30 per share. The option expires on December 31, 20X3. The fair values of the investment and the option follow:

Fair Value Computations

	December 31		
	20X1	**20X2**	**20X3**
Special Foods shares:			
Per share	$ 30	$ 29	$ 26
Total (100 shares)	3,000	2,900	2,600
Put option:			
Market value (*a*)	$ 300	$ 340	$ 400
Less: Intrinsic value (*b*)	(0)	(100)	(400)
Time value (*c*)	$ 300	$ 240	$ 0

(*a*) Market value is obtained from the current market price. There is a variety of option pricing models, such as the Black-Scholes model, to estimate the value of these options.
(*b*) Intrinsic value is the difference between the current market price and the option price times the number of shares. It is easy to compute at any point in the life of the option. For example, the intrinsic value on December 31, 20X2, is ($30 option price − $29 current market price) × 100 shares.
(*c*) The time value of the option reflects the effect of discounting the expected future cash flows and a portion for the expected volatility in the price of the underlying asset. A simple way to compute the value is by calculating the difference between the option's market value and its intrinsic value.

Note that the time value at December 31, 20X1, is for the entire option price because the option was purchased for the current market price. The time value decreases to zero at the end of the option because no time element remains at that expiration point and the market value of the option is then based solely on its intrinsic value. Peerless exercises the option just before its expiration on December 31, 20X3, and delivers the Special Foods shares to the option writer.

Peerless determines the hedge effectiveness based on the changes in the option's intrinsic value. This is an acceptable method for determining effectiveness using options because of the ultimate value of the option being based on the price of the underlying asset in this example, the stock of Special Foods.

Hedge Effectiveness Analysis

Date	**Change in Option's Intrinsic Value (Gain) Loss**	**Change in Value of Special Foods Shares (Gain) Loss**	**Effectiveness Ratio for Period**
December 31, 20X2	$(100)	$100	1.00
December 31, 20X3	$(300)	$300	1.00

An overview of this hedge is

Hedging instrument	Put option on Special Foods stock
Hedged item	100 shares of Special Foods stock
Type of hedge	Fair value hedge
Underlying	Price of a share of Special Foods stock
Notional amount	100 shares of Special Foods stock
Time value at origin of hedge	$300, at the money
Valuation of put option	Fair value
If underlying increases in value	Put option decreases in value
If underlying decreases in value	Put option increases in value

A gain or loss on this hedge is:

Effective portion	To current earnings; related to change in intrinsic value of hedge
Ineffective portion	To current earnings; related to change in time value of hedge

The entries for this example follow:

January 1, 20X1

(45)	Available-for-Sale Securities	2,500	
	Cash		2,500

Acquire 100 shares of Special Foods stock at a price of $25 per share.

December 31, 20X1

(46)	Available-for-Sale Securities	500	
	Other Comprehensive Income		500

Marked-to-market value of $30 the Special Foods stock and recognize the other comprehensive income in accordance with **ASC 320:** $500 = ($30 − $25) × 100 shares.

(47)	Put Option	300	
	Cash		300

Purchase put option, at the money, to sell 100 shares of Special Foods at $30. This $300 is the time value of the option.

Note that **ASC 815** amends **ASC 320** and requires the gain or loss on an available-for-sale security designated as a hedged item to be recognized in current earnings during the period. In entry (46), the marked-to-market value for the available-for-sale securities was recognized in other comprehensive income, in accordance with **ASC 320.** As can be seen in entry (48), once available-for-sale securities are hedged in a fair value hedge, the gain or loss on marking to market must be taken to earnings for the period.

December 31, 20X2

(48)	Loss on Hedge Activity	100	
	Available-for-Sale Securities		100

Record decrease in fair value for the Special Foods stock in accordance with **ASC 815:** $100 = ($30 − $29) × 100 shares.

ASC 815 specifies that the change in intrinsic value of fair value hedges be recognized currently in net earnings of the period. This is different from cash flow hedges in which the changes in intrinsic value were taken to other comprehensive income. Therefore, entry (49) recognizes the increase in the intrinsic value of this fair value hedge as a gain that will be closed to Retained Earnings.

December 31, 20X2

(49)	Put Option	100	
	Gain on Hedge Activity		100

Record increase in the intrinsic value of the put option.

(50)	Loss on Hedge Activity	60	
	Put Option		60

To record in earnings the ineffective portion of the change in the fair value of the put options (i.e., the change in the time value). $60 = $300 initial time value − $240 remaining time value.

The entries for December 31, 20X3, continue the valuation process.

December 31, 20X3

(51)	Loss on Hedge Activity	300	
	Available-for-Sale Securities		300

Marked-to-market value of $26 the Special Foods stock and recognize the loss in earnings: $300 = ($26 − $29) × 100 shares.

(52)	Put Option	300	
	Gain on Hedge Activity		300

Record the increase in the intrinsic value of the put option.

(53)	Loss on Hedge Activity	240	
	Put Option		240

Record in earnings the ineffective portion of the change in fair value of the put option (i.e., the change in the time value).

Entry (53) eliminates the remainder of the option's time value, which was initially $300. Entry (50) took $60 of the time value of the option against earnings of 20X2. Entry (53) takes the remainder into earnings of 20X3 because at the end of the option period, no time value remains. The only value of the put option at its term date is its intrinsic value.

(54)	Cash	3,000	
	Put Option		400
	Available-for-Sale Securities		2,600

Exercise the put option and delivery of the securities at a price of $30 per share.

(55)	Other Comprehensive Income	500	
	Realized Gain on Sale of Securities		500

Reclassify the other comprehensive income on Special Foods' stock that was recorded on Dec. 31, 20X1, to earnings because the securities have now been sold.
$100 = ($30 − $29) × 100 shares.

It is also important to note that **ASC 815** does not permit hedge accounting for hedges of trading securities. **ASC 320** requires that trading securities be marked to market with the gain or loss reported in net earnings for the period. Therefore, any gains or losses on financial instruments that are planned to hedge the risks of holding trading securities are always taken to net earnings for the period. See Figure 11–11 for an overview of the journal entries made for the hedged available-for-sale securities and for the hedging put option.

FIGURE 11–11 Journal Entries for a Fair Value Hedge of Available-for-Sale Securities

Entries for Available-for-Sale Securities (hedged item)			**Entries for Put Option Contract** (hedging instrument)		
January 1, 20X1. Acquire 100 shares of Special Foods stock as available-for-sale security.					
(45) Available-for-Sale Securities	2,500				
Cash		2,500			
December 31, 20X1. Revalue available-for-sale securities to market value in accordance with **ASC 320** and purchase put option for current market price of underlying.					
(46) Available-for-Sale Securities	500		(47) Put Option	300	
Other Comprehensive Income		500	Cash		300
December 31, 20X2. Revalue available-for-sale securities in accordance with **ASC 815** and adjust put option to current market value for increases in $100 intrinsic value and $60 reduction in time value of option.					
(48) Loss on Hedge Activity	100		(49) Put Option	100	
Available-for-Sale Securities		100	Gain on Hedge Activity		100
			(50) Loss on Hedge Activity	60	
			Put Option		60
December 31, 20X3. Revalue available-for-sale securities and adjust put option to current market value for the $300 increase in intrinsic value and the $240 reduction in time value of the option.					
(51) Loss on Hedge Activity	300		(52) Put Option	300	
Available-for-Sale Securities		300	Gain on Hedge Activity		300
			(53) Loss on Hedge Activity	240	
			Put Option		240
December 31, 20X3. Exercise put option and deliver 100 shares of stock at a $30 per share price. Reclassify other comprehensive income recognized in (46) on available-for-sale securities now sold.					
(54) Cash	3,000				
Put Option		400			
Available-for-Sale Securities		2,600			
(55) Other Comprehensive Income	500				
Realized Gain on Sale of Securities		500			

EXAMPLE OF AN INTEREST-RATE SWAP TO HEDGE VARIABLE-RATE DEBT: A CASH FLOW HEDGE

Assume that on June 30, 20X1, Peerless borrows $5,000,000 of three-year, variable-rate debt with interest payments equal to the six-month US$ LIBOR (London Interbank Offered Rate) for the prior six months. The debt is not prepayable. The company then enters into a three-year interest-rate swap with First Bank to convert the debt's variable rate to a fixed rate. The swap agreement specifies that Peerless will pay interest at a fixed rate of 7.5 percent and receive interest at a variable rate equal to the six-month US$ LIBOR rate based on the notional amount of $5,000,000. Both the debt and the swap require interest to be paid semiannually on June 30 and December 31. Peerless specifies the swap as a cash flow hedge. Refer to Figure 11–12 for a schematic of the swap relationships.

The six-month US$ LIBOR rate and the market value of the swap agreement, as determined by a swap broker, follow for the first year of the swap agreement:

Date	Six-Month US$ LIBOR Rate	Swap Agreement Fair Value Asset (Liability)
June 30, 20X1	6.0%	$ 0
December 31, 20X1	7.0	165,000
June 30, 20X2	5.5	(70,000)

Note that Peerless must still pay the variable interest to the holders of the $5,000,000 debt. The interest-rate swap is just between Peerless and First Bank. The estimate of the fair value of the swap agreement was obtained from a broker-dealer of interest-rate swap agreements. Note that the value of the swap agreement to Peerless is positive if it believes that the variable rate will rise to higher than the fixed rate, but the swap agreement's value to Peerless is negative if it believes that the variable rate will remain lower than the fixed rate. Peerless' payments on the variable-rate debt and the net payments to First Bank on the interest-rate swap agreement are presented for the initial two semiannual periods:

	Interest Payments	
	December 31, 20X1	June 30, 20X2
Variable-rate interest payment	$150,000 (*a*)	$175,000 (*b*)
Interest-rate swap net payment	37,500 (*c*)	12,500
Total cash payment	$187,500 (*d*)	$187,500

(*a*) $150,000 = 5,000,000 × 0.06 × 6/12 months
(*b*) $175,000 = 5,000,000 × 0.07 × 6/12 months
(*c*) $37,500 = net payment required to First Bank for difference between variable and fixed interest rates
(*d*) $187,500 = 5,000,000 × 0.075 fixed rate × 6/12 months

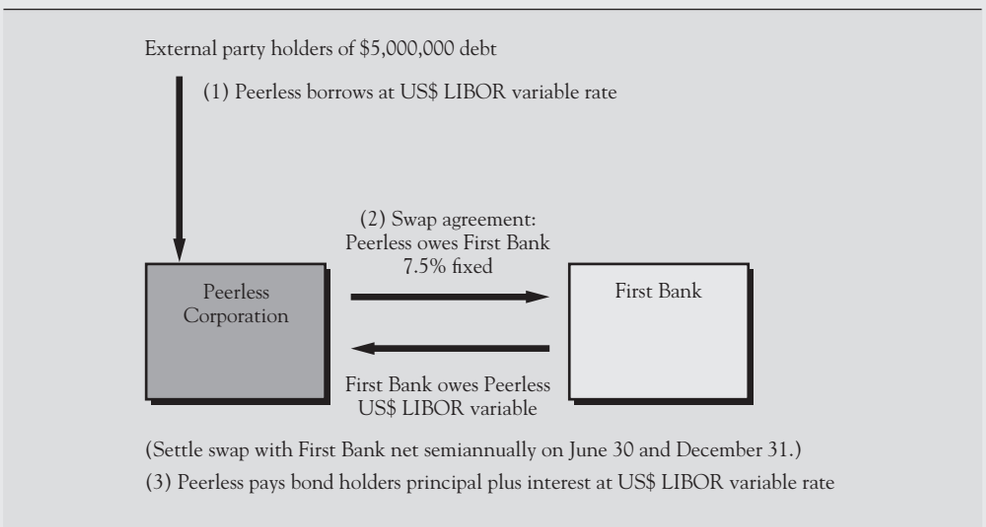


FIGURE 11–12
Fixed for Variable Interest-Rate Swap on $5,000,000 Notional Amount

Peerless recognizes interest expense based on the two factors of the variable rate plus the net payment or receipt from the swap agreement. In essence, Peerless has an interest expense equal to 7.5 percent of the notional amount of $5,000,000.

The entries to account for the first year of the interest-rate swap follow:

June 30, 20X1

(56)

Cash	5,000,000	
Debt Payable		5,000,000

Issue variable-rate debt.

December 31, 20X1

(57)

Interest Expense	150,000	
Cash		150,000

Pay debt holder's semiannual interest at a variable rate of 6.0 percent [from (*a*) in preceding table].

(58)

Interest Expense	37,500	
Cash		37,500

Payment to First Bank for semiannual net settlement of swap agreement [from (*c*) in preceding table].

(59)

Swap Agreement	165,000	
Other Comprehensive Income		165,000

Recognize change in fair value of swap agreement to Other Comprehensive Income because the swap is a cash flow hedge.

June 30, 20X2

(60)

Interest Expense	175,000	
Cash		175,000

Pay debt holder's semiannual interest at a variable rate of 7.0 percent [from (*b*) in preceding table].

(61)

Interest Expense	12,500	
Cash		12,500

Payment to First Bank for semiannual net settlement of swap agreement.

(62)

Other Comprehensive Income	235,000	
Swap Agreement		235,000

Recognize decrease in fair value of swap agreement from $165,000 asset to $(70,000) liability to Other Comprehensive Income because the swap is a cash flow hedge.

The swap agreement is reported on the balance sheet at its fair value. The amounts accumulated in Other Comprehensive Income are indirectly recognized in Peerless' earnings as periodic settlements of the payments required under the swap agreement are made, and the fair value of the swap agreement reaches zero at the end of the term of the agreement.

REPORTING AND DISCLOSURE REQUIREMENTS: DISCLOSURES ABOUT FAIR VALUE OF FINANCIAL INSTRUMENTS

ASC 825, requires disclosure of information pertaining to all financial instruments. This standard is the first to require information with respect to the current fair value of the financial instruments. Estimating fair value is of great practical difficulty because many financial instruments do not have a readily traded market from which to determine their value. Estimation methods are permitted, but if no estimation can be made, the reasons for the impracticality must be disclosed.

ASC 825 does not permit the fair values of derivatives to be netted or aggregated with nonderivative financial instruments. The required disclosures are as follows:

1. The fair value based on quoted market prices. If fair value is not quoted, a practical estimation is allowed.
2. Information relevant to the fair value such as carrying value, effective interest rate, maturity, and reasons why it is not practical to estimate, if such is the case.
3. Distinction between instruments held for trading or nontrading purposes.

ASC 815 adds a number of disclosures regarding derivatives and financial instruments. The company holding or issuing derivatives must disclose both its objectives for holding or issuing the instruments and the face or contract amount of the derivatives. The company also must distinguish between derivatives designated as fair value hedges, as cash flow hedges, as hedges of the foreign currency exposure of a net investment in a foreign operation, and all other derivatives. Specific disclosures are required for each type of hedge, but generally the company must disclose the purpose of the activity, the amount of any gains or losses recognized during the period (either in earnings or in other comprehensive income), and where those gains or losses and related assets and liabilities are reported in the income statement and statement of financial position.

Companies operating internationally have increased risks when transacting in more than one currency. For that reason, a number of financial instruments are used in order to manage the increased risk. This chapter has presented the most commonly used financial instrument, the foreign currency forward exchange contract. This appendix briefly discussed several of the other major financial instruments used by multinational companies. It is certain that increased sophistication of the types of risk management tools will continue to occur in the business arena, and accountants must continue their efforts to understand and account for these instruments.

Questions

LO 11-1 **Q11-1** Explain the difference between indirect and direct exchange rates.

LO 11-1 **Q11-2** What is the direct exchange rate if a U.S. company receives $1.3623 in Canadian currency in exchange for $1.00 in U.S. currency?

LO 11-1 **Q11-3** The U.S. dollar strengthened against the European euro. Will imports from Europe into the United States be more expensive or less expensive in U.S. dollars? Explain.

LO 11-1 **Q11-4** Differentiate between a foreign transaction and a foreign currency transaction. Give an example of each.

LO 11-1 **Q11-5** What types of economic factors affect currency exchange rates? Give an example of a change in an economic factor that results in a weakening of the local currency unit versus a foreign currency unit.

LO 11-2 **Q11-6** How are assets and liabilities denominated in a foreign currency measured on the transaction date? On the balance sheet date?

LO 11-2 **Q11-7** When are foreign currency transaction gains or losses recognized in the financial statements? Where are these gains or losses reported in the financial statements?

LO 11-2 **Q11-8** Sun Company, a U.S. corporation, has an account payable of $200,000 denominated in Canadian dollars. If the direct exchange rate increases, will Sun experience a foreign currency transaction gain or loss on this payable?

LO 11-3 **Q11-9** What are some ways a U.S. company can manage the risk of changes in the exchange rates for foreign currencies?

LO 11-3 **Q11-10** Distinguish between an exposed net asset position and an exposed net liability position.

LO 11-1 **Q11-11** Explain why a difference usually exists between a currency's spot rate and forward rate. Give two reasons this difference is usually positive when a company enters into a contract to receive foreign currency at a future date.

LO 11-3 **Q11-12** A forward exchange contract may be used (*a*) to manage an exposed foreign currency position, (*b*) to hedge an identifiable foreign currency commitment, (*c*) to hedge a forecasted foreign currency transaction, or (*d*) to speculate in foreign currency markets. What are the main differences in accounting for these four uses?

Cases

LO 11-1, 11-2 **C11-1 Effects of Changing Exchange Rates**

Analysis

Since the early 1970s, the U.S. dollar has both increased and decreased in value against other currencies such as the Japanese yen, the Swiss franc, and the British pound. The value of the U.S. dollar, as well as the value of currencies of other countries, is determined by the balance between the demand for and the supply of the currency on the foreign exchange markets. A drop in the value of the U.S. dollar has a widespread impact not only on consumers and businesses that deal with their counterparts overseas but also on consumers and businesses that operate solely within the United States.

Required

a. Identify the factors that influence the demand for and supply of the U.S. dollar on the foreign exchange markets.

b. Explain the effect a drop in value of the U.S. dollar in relation to other currencies on the foreign exchange markets has on

(1) The sales of a U.S. business firm that exports part of its output to foreign countries.

(2) The costs of a U.S. business firm that imports from foreign countries part of the inputs used in the manufacture of its products.

c. Explain why and how consumers and business firms are affected by the drop in value of the U.S. dollar in relation to other currencies on the foreign exchange markets.

LO 11-2 **C11-2 Reporting a Foreign Currency Transaction on the Financial Statements [AICPA Adapted]**

Judgment

On November 30, 20X5, Bow Company received goods with a cost denominated in pounds. During December 20X5, the dollar's value declined relative to the pound. Bow believes that the original exchange rate will be restored by the time payment is due in 20X6.

Required

a. State how Bow should report the impact, if any, of the changes in the exchange rate of the dollar and the pound on its 20X5 financial statements.

b. Explain why the reporting is appropriate.

LO 11-1 **C11-3 Changing Exchange Rates**

Research

Search online to obtain and or prepare charts of the monthly average direct exchange rates for the past two years for the U.S. dollar versus (1) the Japanese yen, (2) the European euro, (3) the British pound, and (4) the Mexican peso. Your four charts should each have time on the horizontal axis and the direct exchange rate on the horizontal axis.

Questions for Discussion

a. Has the dollar strengthened or weakened during this time against each of the currencies?

b. What major economic or political factors could have caused the changes in the four foreign currencies' exchange rates versus the U.S. dollar?

c. Select one major factor from part (*b*) for each currency and present an argument showing how a change in that factor could cause the change in the exchange rate.

LO 11-2 **C11-4 Accounting for Foreign Currency–Denominated Accounts Payable**

Research

Mardi Gras Corporation operates a group of specialty shops throughout the southeastern United States. The shops have traditionally stocked and sold kitchen and bath products manufactured in the United States. This year, Mardi Gras established a business relationship with a manufacturing company in Lucerne, Switzerland, to purchase a line of luxury bath products to sell in its shops. As part of the business arrangement, payments by Mardi Gras are due 30 days after receipt of the merchandise, whose cost is quoted and payable in Swiss francs.

Mardi Gras records the purchases in inventory when it receives the merchandise and records a liability to the Swiss company, using the exchange rate for Swiss francs on the date the inventory purchase is recorded. When payment is made, Mardi Gras debits or credits to inventory any difference between the liability previously recorded and the dollar amount required to settle the liability in Swiss francs. Mardi Gras uses a perpetual inventory system and the FIFO method of inventory costing and can easily trace these adjustments to the specific inventory purchased.

Required

Obtain the most current accounting standards on accounting for foreign currency transactions. You can obtain access to accounting standards through the FASB codification. As a staff accountant with the public accounting firm that audits Mardi Gras's annual financial statements, write a memo to Marie Lamont, the manager in charge of the audit, discussing the client's accounting for its transactions with the Swiss company. Support any recommendations with citations and quotations from the authoritative financial reporting standards.

LO 11-3

C11-5 Accounting for Foreign Currency Forward Contracts

Research

Avanti Corporation is a small Midwestern company that manufactures wooden furniture. Tim Martin, Avanti's president, has decided to expand operations significantly and has entered into a contract with a German company to purchase specialty equipment for the expansion in manufacturing capacity. The contract fixes the price of the equipment at 4.5 million euros, and the equipment will be delivered in five months with payment due 30 days after delivery.

Tim is concerned that the value of the euro versus the U.S. dollar could increase during the six months between the date of the contract and the date of payment, thus increasing the effective price of the equipment to Avanti. Lindsay Williams, Avanti's treasurer, has suggested that the company enter into a forward contract to purchase 4.5 million euros in six months, thereby locking in an exchange rate for euros. Tim likes the idea of eliminating the uncertainty over the exchange rate for euros but is concerned about the effects of the forward contract on Avanti's financial statements. Because Avanti has not had previous experience with foreign currency transactions, Lindsay is unsure of what the financial statement effects are.

Required

Obtain the most current accounting standards on accounting for foreign currency forward contracts. You can obtain access to accounting standards through the FASB codification. Lindsay has asked you, as her assistant, to research the accounting for a foreign currency forward contract. Write a memo to her reporting on the results of your research. Support your recommendations with citations and quotations from the authoritative financial reporting standards.

LO 11-3

C11-6 Accounting for Hedges of Available-for-Sale Securities

Research

Rainy Day Insurance Company maintains an extensive portfolio of bond investments classified as available-for-sale securities under **ASC 320.** The bond investments have a variety of fixed interest rates and have maturity dates ranging from 1 to 15 years. Rainy Day acquired the bonds with the expectation that it could hold them until maturity or sell them any time that funds are required for unusually high insurance claims.

Because of the large dollar amount invested, Rainy Day is concerned about fluctuations in interest rates that affect the fair value of its bond portfolio. One of Rainy Day's investment professionals has proposed that the company invest in an interest rate futures contract to hedge its exposure to interest rate changes. Changes in the fair value of the futures contract would offset changes in the bond portfolio's fair value. If Rainy Day applies hedge accounting under **ASC 815,** the income statement effect of changes in the fair value of the derivative would be offset by recording in earnings the changes in the fair value of the bond portfolio attributable to the hedged (interest rate) risk.

Required

Obtain the most current accounting standards on accounting for hedges of available-for-sale securities. You can obtain access to accounting standards through the FASB codification. Rainy Day's CFO, Mark Becker, has asked you, as an accountant in Rainy Day's investment division, to determine whether hedge accounting can be used in the scenario proposed. Write a memo to Mark, reporting on the results of your research. Support your recommendations with citations and quotations from the authoritative financial reporting standards.

Exercises

LO 11-1

E11-1 Exchange Rates

Suppose the direct foreign exchange rates in U.S. dollars are

1 British pound = $1.60

1 Canadian dollar = $0.74

Required

a. What are the indirect exchange rates for the British pound and the Canadian dollar?

b. How many pounds must a British company pay to purchase goods costing $8,000 from a U.S. company?

c. How many U.S. dollars must be paid for a purchase costing 4,000 Canadian dollars?

LO 11-1

E11-2 Changes in Exchange Rates

Upon arrival at the international airport in the country of Canteberry, Charles Alt exchanged $200 of U.S. currency into 1,000 florins, the local currency unit. Upon departure from Canteberry's international airport on completion of his business, he exchanged his remaining 100 florins into $15 of U.S. currency.

Required

a. Determine the currency exchange rates for each of the cells in the following matrix for Charles Alt's business trip to Canteberry.

b. Discuss and illustrate whether the U.S. dollar strengthened or weakened relative to the florin during Charles's stay in Canteberry.

c. Did Charles experience a foreign currency transaction gain or a loss on the 100 florins he held during his visit to Canteberry and converted to U.S. dollars at the departure date? Explain your answer.

	Arrival Date	Departure Date
Direct exchange rate		
Indirect exchange rate		

LO 11-2

E11-3 Basic Understanding of Foreign Exposure

The Hi-Stakes Company has a number of importing and exporting transactions. Importing activities result in payables and exporting activities result in receivables. (LCU represents the local currency unit of the foreign entity.)

Required

a. If the direct exchange rate increases, does the dollar weaken or strengthen relative to the other currency? If the indirect exchange rate increases, does the dollar weaken or strengthen relative to the other currency?

b. Indicate in the following table whether Hi-Stakes will have a foreign currency transaction gain (G), loss (L), or not be affected (NA) by changes in the direct or indirect exchange rates for each of the four situations presented.

		Direct Exchange Rate		Indirect Exchange Rate	
Transaction	Settlement Currency	Increases	Decreases	Increases	Decreases
Importing	Dollar	_____	_____	_____	_____
Importing	LCU	_____	_____	_____	_____
Exporting	Dollar	_____	_____	_____	_____
Exporting	LCU	_____	_____	_____	_____

LO 11-2

E11-4 Account Balances

Merchant Company had the following foreign currency transactions:

1. On November 1, 20X6, Merchant sold goods to a company located in Munich, Germany. The receivable was to be settled in European euros on February 1, 20X7, with the receipt of €250,000 by Merchant Company.
2. On November 1, 20X6, Merchant purchased machine parts from a company located in Berlin, Germany. Merchant is to pay €125,000 on February 1, 20X7.

The direct exchange rates are as follows:

November 1, 20X6	€1 = $0.60
December 31, 20X6	€1 = $0.62
February 1, 20X7	€1 = $0.58

Required

a. Prepare T-accounts for the following five accounts related to these transactions: Foreign Currency Units (€), Accounts Receivable (€), Accounts Payable (€), Foreign Currency Transaction Loss, and Foreign Currency Transaction Gain.

b. Within the T-accounts you have prepared, appropriately record the following items:

1. The November 1, 20X6, export transaction (sale).
2. The November 1, 20X6, import transaction (purchase).
3. The December 31, 20X6, year-end adjustment required of the foreign currency–denominated receivable of €250,000.
4. The December 31, 20X6, year-end adjustment required of the foreign currency–denominated payable of €125,000.
5. The February 1, 20X7, adjusting entry to determine the U.S. dollar–equivalent value of the foreign currency receivable on that date.
6. The February 1, 20X7, adjusting entry to determine the U.S. dollar–equivalent value of the foreign currency payable on that date.
7. The February 1, 20X7, settlement of the foreign currency receivable.
8. The February 1, 20X7, settlement of the foreign currency payable.

LO 11-2

E11-5 Determining Year-End Account Balances for Import and Export Transactions

Delaney Inc. has several transactions with foreign entities. Each transaction is denominated in the local currency unit of the country in which the foreign entity is located. For each of the following independent cases, determine the December 31, 20X2, year-end balance in the appropriate accounts for the case. Write "NA" for "not applicable" in the space provided in the following chart if that account is not relevant to the specific case.

Case 1. On November 12, 20X2, Delaney purchased goods from a foreign company at a price of LCU 40,000 when the direct exchange rate was 1 LCU = $0.45. The account has not been settled as of December 31, 20X2, when the exchange rate has decreased to 1 LCU = $0.40.

Case 2. On November 28, 20X2, Delaney sold goods to a foreign entity at a price of LCU 20,000 when the direct exchange rate was 1 LCU = $1.80. The account has not been settled as of December 31, 20X2, when the exchange rate has increased to 1 LCU = $1.90.

Case 3. On December 2, 20X2, Delaney purchased goods from a foreign company at a price of LCU 30,000 when the direct exchange rate was 1 LCU = $0.80. The account has not been settled as of December 31, 20X2, when the exchange rate has increased to 1 LCU = $0.90.

Case 4. On December 12, 20X2, Delaney sold goods to a foreign entity at a price of LCU 2,500,000 when the direct exchange rate was 1 LCU = $0.003. The account has not been settled as of December 31, 20X2, when the exchange rate has decreased to 1 LCU = $0.0025.

Required

Provide the December 31, 20X2, year-end balances on Delaney's records for each of the following applicable items:

	Accounts Receivable	Accounts Payable	Foreign Currency Transaction Exchange Loss	Foreign Currency Transaction Exchange Gain
Case 1	_____	_____	_____	_____
Case 2	_____	_____	_____	_____
Case 3	_____	_____	_____	_____
Case 4	_____	_____	_____	_____

LO 11-2

E11-6 Transactions with Foreign Companies

Harris Inc. had the following transactions:

1. On May 1, Harris purchased parts from a Japanese company for a U.S. dollar equivalent value of $8,400 to be paid on June 20. The exchange rates were

May 1	1 yen = $0.0070
June 20	1 yen = 0.0075

2. On July 1, Harris sold products to a Brazilian customer for a U.S. dollar equivalent of $10,000, to be received on August 10. Brazil's local currency unit is the real. The exchange rates were

July 1	1 real = $0.20
August 10	1 real = 0.22

Required

a. Assume that the two transactions are denominated in U.S. dollars. Prepare the entries required for the dates of the transactions and their settlement in U.S. dollars.

b. Assume that the two transactions are denominated in the applicable LCUs of the foreign entities. Prepare the entries required for the dates of the transactions and their settlement in the LCUs of the Japanese company (yen) and the Brazilian customer (real).

LO 11-2

E11-7 Foreign Purchase Transaction

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On December 1, 20X1, Rone Imports, a U.S. company, purchased clocks from Switzerland for 15,000 francs (SFr) to be paid on January 15, 20X2. Rone's fiscal year ends on December 31, and its reporting currency is the U.S. dollar. The exchange rates are

December 1, 20X1	1 SFr = $0.70
December 31, 20X1	1 SFr = 0.66
January 15, 20X2	1 SFr = 0.68

Required

a. In which currency is the transaction denominated?

b. Prepare journal entries for Rone to record the purchase, the adjustment on December 31, and the settlement.

LO 11-2

E11-8 Adjusting Entries for Foreign Currency Balances

Chocolate De-lites imports and exports chocolate delicacies. Some transactions are denominated in U.S. dollars and others in foreign currencies. A summary of accounts receivable and

accounts payable on December 31, 20X6, before adjustments for the effects of changes in exchange rates during 20X6, follows:

Accounts receivable:	
In U.S. dollars	$164,000
In 475,000 Egyptian pounds (E£)	$ 73,600
Accounts payable:	
In U.S. dollars	$ 86,000
In 21,000,000 yen (¥)	$175,300

The spot rates on December 31, 20X6, were

E£1=$0.176

¥1=$0.0081

The average exchange rates during the collection and payment period in 20X7 are

E£1=$0.18

¥1=$0.0078

Required

a. Prepare the adjusting entries on December 31, 20X6.

b. Record the collection of the accounts receivable in 20X7.

c. Record the payment of the accounts payable in 20X7.

d. What was the foreign currency gain or loss on the accounts receivable transaction denominated in E£ for the year ended December 31, 20X6? For the year ended December 31, 20X7? Overall for this transaction?

e. What was the foreign currency gain or loss on the accounts receivable transaction denominated in ¥? For the year ended December 31, 20X6? For the year ended December 31, 20X7? Overall for this transaction?

f. What was the combined foreign currency gain or loss for both transactions? What could Chocolate De-lites have done to reduce the risk associated with the transactions denominated in foreign currencies?

LO 11-3

E11-9 Purchase with Forward Exchange Contract

Merit & Family purchased engines from Canada for 30,000 Canadian dollars on March 10 with payment due on June 8. Also, on March 10, Merit acquired a 90-day forward contract to purchase 30,000 Canadian dollars at C$1 = $0.58. The forward contract was acquired to manage Merit & Family's exposed net liability position in Canadian dollars, but it was not designated as a hedge. The spot rates were

March 10	C$1 = $0.57
June 8	C$1 = $0.60

Required

Prepare journal entries for Merit & Family to record the purchase of the engines, entries associated with the forward contract, and entries for the payment of the foreign currency payable.

LO 11-3

E11-10 Purchase with Forward Exchange Contract and Intervening Fiscal Year-End

Pumped Up Company purchased equipment from Switzerland for 140,000 francs on December 16, 20X7, with payment due on February 14, 20X8. On December 16, 20X7, Pumped Up also acquired a 60-day forward contract to purchase francs at a forward rate of SFr 1 = $0.67. On December 31, 20X7, the forward rate for an exchange on February 14, 20X8, is SFr 1 = $0.695. The spot rates were

December 16, 20X7	1 SFr = $0.68
December 31, 20X7	1 SFr = 0.70
February 14, 20X8	1 SFr = 0.69

Part I

Assume that the forward contract is not designated as a hedge but is entered into to manage the company's foreign currency–exposed accounts payable.

a. Prepare journal entries for Pumped Up to record the purchase of equipment; all entries associated with the forward contract; the adjusting entries on December 31, 20X7; and entries to record the revaluations and payment on February 14, 20X8.

b. What was the effect of the foreign currency transactions on the income statement, including both the accounts payable and the forward contract, for the year ended December 31, 20X7?

c. What was the overall effect of these transactions on the income statement from December 16, 20X7, to February 14, 20X8?

Part II

Now assume the forward contract is designated as a cash flow hedge of the variability of the future cash flows from the foreign currency account payable. The company uses the forward exchange rate to assess effectiveness.

Required

Prepare journal entries for Pumped Up to record the purchase of equipment; all entries associated with the forward contract; the adjusting and reclassification entries on December 31, 20X7; and entries to record the revaluations and payment on February 14, 20X8.

LO 11-2

E11-11 Foreign Currency Transactions [AICPA Adapted]

Select the correct answer for each of the following questions.

1. Dale Inc., a U.S. company, bought machine parts from a German company on March 1, 20X1, for €30,000, when the spot rate for euros was $0.4895. Dale's year-end was March 31, when the spot rate was $0.4845. On April 20, 20X1, Dale paid the liability with €30,000 acquired at a rate of $0.4945. Dale's income statements should report a foreign exchange gain or loss for the years ended March 31, 20X1 and 20X2 of

	20X1	20X2
a.	$0	$0
b.	$0	$150 loss
c.	$150 loss	$0
d.	$150 gain	$300 loss

2. Marvin Company's receivable from a foreign customer is denominated in the customer's local currency. This receivable of 900,000 LCUs has been translated into $315,000 on Marvin's December 31, 20X5, balance sheet. On January 15, 20X6, the receivable was collected in full when the exchange rate was 3 LCU to $1. The journal entry Marvin should make to record the collection of this receivable is

		Debit	Credit
a.	Foreign Currency Units	300,000	
	Accounts Receivable		300,000
b.	Foreign Currency Units	300,000	
	Exchange Loss	15,000	
	Accounts Receivable		315,000
c.	Foreign Currency Units	300,000	
	Deferred Exchange Loss	15,000	
	Accounts Receivable		315,000
d.	Foreign Currency Units	315,000	
	Accounts Receivable		315,000

3. On July 1, 20X1, Black Company lent $120,000 to a foreign supplier, evidenced by an interest-bearing note due on July 1, 20X2. The note is denominated in the borrower's currency and was equivalent to 840,000 LCUs on the loan date. The note principal was appropriately included at

$140,000 in the receivables section of Black's December 31, 20X1, balance sheet. The note principal was repaid to Black on the July 1, 20X2, due date when the exchange rate was 8 LCUs to $1. In its income statement for the year ended December 31, 20X2, what amount should Black include as a foreign currency transaction gain or loss on the note principal?

a. $0.
b. $15,000 loss.
c. $15,000 gain.
d. $35,000 loss.

4. If 1 Canadian dollar can be exchanged for 90 cents of U.S. currency, what fraction should be used to compute the indirect quotation of the exchange rate expressed in Canadian dollars?

a. 1.10/1.
b. 1/1.10.
c. 1/.90.
d. 0.90/1.

5. On July 1, 20X4, Bay Company borrowed 1,680,000 local currency units (LCUs) from a foreign lender evidenced by an interest-bearing note due on July 1, 20X5, which is denominated in the currency of the lender. The U.S. dollar equivalent of the note principal was as follows:

Date	Amount
7/1/X4 (date borrowed)	$210,000
12/31/X4 (Bay's year-end)	240,000
7/1/X5 (date repaid)	280,000

In its income statement for 20X5, what amount should Bay include as a foreign exchange gain or loss on the note principal?

a. $70,000 gain.
b. $70,000 loss.
c. $40,000 gain.
d. $40,000 loss.

6. An entity denominated a sale of goods in a currency other than its functional currency. The sale resulted in a receivable fixed in terms of the amount of foreign currency to be received. The exchange rate between the functional currency and the currency in which the transaction was denominated changed. The effect of the change should be included as a

a. Separate component of stockholders' equity whether the change results in a gain or a loss.
b. Separate component of stockholders' equity if the change results in a gain and as a component of income if the change results in a loss.
c. Component of income if the change results in a gain and as a separate component of stockholders' equity if the change results in a loss.
d. Component of income whether the change results in a gain or a loss.

7. An entity denominated a December 15, 20X6, purchase of goods in a currency other than its functional currency. The transaction resulted in a payable fixed in terms of the amount of foreign currency and was paid on the settlement date, January 20, 20X7. The exchange rates between the functional currency and the currency in which the transaction was denominated changed at December 31, 20X6, resulting in a loss that should

a. Not be reported until January 20, 20X7, the settlement date.
b. Be included as a separate component of stockholders' equity at December 31, 20X6.
c. Be included as a deferred charge at December 31, 20X6.
d. Be included as a component of income from continuing operations for 20X6.

LO 11-2

E11-12 Sale in Foreign Currency

Marko Company sold spray paint equipment to Spain for 5,000,000 pesetas (P) on October 1, with payment due in six months. The exchange rates were

October 1, 20X6	1 peseta = $0.0068
December 31, 20X6	1 peseta = 0.0078
April 1, 20X7	1 peseta = 0.0076

Required

a. Did the dollar strengthen or weaken relative to the peseta during the period from October 1 to December 31? Did it strengthen or weaken between January 1 and April 1 of the next year?

b. Prepare all required journal entries for Marko as a result of the sale and settlement of the foreign transaction, assuming that its fiscal year ends on December 31.

c. Did Marko have an overall net gain or net loss from its foreign currency exposure?

LO 11-3

E11-13 Sale with Forward Exchange Contract

Alman Company sold pharmaceuticals to a Swedish company for 200,000 kronor (SKr) on April 20, with settlement to be in 60 days. On the same date, Alman entered into a 60-day forward contract to sell 200,000 SKr at a forward rate of 1 SKr = $0.167 in order to manage its exposed foreign currency receivable. The forward contract is not designated as a hedge. The spot rates were

April 20	SKr 1 = $0.170
June 19	SKr 1 = 0.165

Required

a. Record all necessary entries related to the foreign transaction and the forward contract.

b. Compare the effects on net income of Alman's use of the forward exchange contract versus the effects if Alman had not used a forward exchange contract.

LO 11-2

E11-14 Foreign Currency Transactions [AICPA Adapted]

Choose the correct answer for each of the following questions.

1. On November 15, 20X3, Chow Inc., a U.S. company, ordered merchandise FOB shipping point from a German company for €200,000. The merchandise was shipped and invoiced on December 10, 20X3. Chow paid the invoice on January 10, 20X4. The spot rates for euros on the respective dates were

November 15, 20X3	$0.4955
December 10, 20X3	0.4875
December 31, 20X3	0.4675
January 10, 20X4	0.4475

In Chow's December 31, 20X3, income statement, the foreign exchange gain is

a. $9,600.
b. $8,000.
c. $4,000.
d. $1,600.

2. Stees Corporation had the following foreign currency transactions during 20X2. First, it purchased merchandise from a foreign supplier on January 20, 20X2, for the U.S. dollar equivalent of $90,000. The invoice was paid on March 20, 20X2, at the U.S. dollar equivalent of $96,000. Second, on July 1, 20X2, Stees borrowed the U.S. dollar equivalent of $500,000 evidenced by a note that was payable in the lender's local currency on July 1, 20X4. On December 31, 20X2, the U.S. dollar equivalents of the principal amount and accrued interest were $520,000 and $26,000, respectively. Interest on the note is 10 percent per annum. In Stees's 20X2 income statement, what amount should be included as a foreign exchange loss?

a. $0.
b. $6,000.
c. $21,000.
d. $27,000.

3. On September 1, 20X1, Cott Corporation received an order for equipment from a foreign customer for 300,000 LCUs when the U.S. dollar equivalent was $96,000. Cott shipped the equipment on October 15, 20X1, and billed the customer for 300,000 LCUs when the U.S. dollar equivalent was $100,000. Cott received the customer's remittance in full on November 16,

20X1, and sold the 300,000 LCUs for $105,000. In its income statement for the year ended December 31, 20X1, Cott should report a foreign exchange gain of

a. $0.
b. $4,000.
c. $5,000.
d. $9,000.

4. On April 8, 20X3, Trul Corporation purchased merchandise from an unaffiliated foreign company for 10,000 units of the foreign company's local currency. Trul paid the bill in full on March 1, 20X4, when the spot rate was $0.45. The spot rate was $0.60 on April 8, 20X3, and was $0.55 on December 31, 20X3. For the year ended December 31, 20X4, Trul should report a transaction gain of

   a. $1,500.
   b. $1,000.
   c. $500.
   d. $0.

5. On October 1, 20X5, Stevens Company, a U.S. company, contracted to purchase foreign goods requiring payment in pesos one month after their receipt in Stevens's factory. Title to the goods passed on December 15, 20X5. The goods were still in transit on December 31, 20X5. Exchange rates were 1 dollar to 22 pesos, 20 pesos, and 21 pesos on October 1, December 15, and December 31, 20X5, respectively. Stevens should account for the exchange rate fluctuations in 20X5 as

   a. A loss included in net income before extraordinary items.
   b. A gain included in net income before extraordinary items.
   c. An extraordinary gain.
   d. An extraordinary loss.

6. On October 2, 20X5, Louis Co., a U.S. company, purchased machinery from Stroup, a German company, with payment due on April 1, 20X6. If Louis's 20X5 operating income included no foreign exchange gain or loss, the transaction could have

   a. Resulted in an extraordinary gain.
   b. Been denominated in U.S. dollars.
   c. Caused a foreign currency gain to be reported as a contra account against machinery.
   d. Caused a foreign currency translation gain to be reported as a separate component of stockholders' equity.

7. Cobb Co. purchased merchandise for 300,000 pounds from a vendor in London on November 30, 20X5. Payment in British pounds (£) was due on January 30, 20X6. The exchange rates to purchase 1 pound were as follows:

	November 30, 20X5	December 31, 20X5
Spot rate	$1.65	$1.62
30-day rate	1.64	1.59
60-day rate	1.63	1.56

   In its December 31, 20X5, income statement, what amount should Cobb report as a foreign exchange gain?

   a. $12,000.
   b. $9,000.
   c. $6,000.
   d. $0.

LO 11-3

E11-15 Sale with Forward Contract and Fiscal Year-End

Jerber Electronics Inc. sold electrical equipment to a Dutch company for 50,000 guilders (G) on May 14, with collection due in 60 days. On the same day, Jerber entered into a 60-day forward contract to sell 50,000 guilders at a forward rate of G1 = $0.541. The forward contract is not designated

as a hedge. Jerber's fiscal year ends on June 30. The forward rate on June 30 for an exchange on July 13 is G1 = $0.530. The spot rates follow:

May 14	G1 = $0.530
June 30	G1 = 0.534
July 13	G1 = 0.525

Required

a. Prepare journal entries for Jerber to record (1) the sale of equipment, (2) the forward contract, (3) the adjusting entries on June 30, (4) the July 13 collection of the receivable, and (5) the July settlement of the forward contract.

b. What was the effect on the income statement in the fiscal year ending June 30?

c. What was the overall effect of this transaction on the income statement?

d. What would have been the overall effect on income if the forward contract had not been acquired?

LO 11-3

E11-16A Hedge of a Purchase (Commitment without and with Time Value of Money Considerations)

On November 1, 20X6, Smith Imports Inc. contracted to purchase teacups from England for £30,000. The teacups were to be delivered on January 30, 20X7, with payment due on March 1, 20X7. On November 1, 20X6, Smith entered into a 120-day forward contract to receive 30,000 pounds at a forward rate of £1 = $1.59. The forward contract was acquired to hedge the financial component of the foreign currency commitment.

Additional Information for the Exchange Rate

1. Assume the company uses the forward rate in measuring the forward exchange contract and for measuring hedge effectiveness.
2. Spot and exchange rates follow:

Date	Spot Rate	Forward Rate for March 1, 20X7
November 1, 20X6	£1 = $1.61	£1 = $1.59
December 31, 20X6	£1 = 1.65	£1 = 1.62
January 30, 20X7	£1 = 1.59	£1 = 1.60
March 1, 20X7	£1 = 1.585	

Required

a. What is Smith's net exposure to changes in the exchange rate of pounds for dollars between November 1, 20X6, and March 1, 20X7?

b. Prepare all journal entries from November 1, 20X6, through March 1, 20X7, for the purchase of the subassemblies, the forward exchange contract, and the foreign currency transaction. Assume Smith's fiscal year ends on December 31, 20X6.

Note: Requirement (*c*) requires information from Appendix 11A.

c. Assume that interest is significant and the time value of money is considered in valuing the forward contract and hedged commitment. Use a 12 percent annual interest rate. Prepare all journal entries from November 1, 20X6, through March 1, 20X7, for the purchase of the subassemblies, the forward exchange contract, and the foreign currency transaction. Assume Smith's fiscal year ends on December 31, 20X7.

LO 11-3

E11-17 Gain or Loss on Speculative Forward Exchange Contract

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On December 1, 20X1, Sycamore Company acquired a 90-day speculative forward contract to sell €120,000 at a forward rate of €1 = $0.58. The rates are as follows:

Date	SpotRate	Forward Rate for March 1
December 1, 20X1	€1 = $0.60	€1 = $0.58
December 31, 20X1	€1 = 0.59	€1 = 0.56
March 1, 20X2	€1 = 0.57	

"A" indicates that the item relates to Appendix 11A.

Required

a. Prepare a schedule showing the effects of this speculation on 20X1 income before income taxes.

b. Prepare a schedule showing the effects of this speculation on 20X2 income before income taxes.

LO 11-3

E11-18 Speculation in a Foreign Currency

Nick Andros of Streamline Company suggested that the company speculate in foreign currency as a partial hedge against its operations in the cattle market, which fluctuates like a commodity market. On October 1, 20X1, Streamline bought a 180-day forward contract to purchase 50,000,000 yen (¥) at a forward rate of ¥1 = $0.0075 when the spot rate was $0.0070. Other exchange rates were as follows:

Date	Spot Rate	Forward Rate for March 31, 20X2
December 31, 20X1	$0.0073	$0.0076
March 31, 20X2	0.0072	

Required

a. Prepare all journal entries related to Streamline Company's foreign currency speculation from October 1, 20X1, through March 31, 20X2, assuming the fiscal year ends on December 31, 20X1.

b. Did Streamline Company gain or lose on its purchase of the forward contract? Explain.

LO 11-2, 11-3

E11-19 Forward Exchange Transactions [AICPA Adapted]

Select the correct answer for each of the following questions.

1. The following information applies to Denton Inc.'s sale of 10,000 foreign currency units under a forward contract dated November 1, 20X5, for delivery on January 31, 20X6:

	11/1/X5	12/31/X5
Spot rates	$0.80	$0.83
30-day forward rate	0.79	0.82
90-day forward rate	0.78	0.81

Denton entered into the forward contract to speculate in the foreign currency. In its income statement for the year ended December 31, 20X5, what amount of loss should Denton report from this forward contract?

a. $400.
b. $300.
c. $200.
d. $0.

2. On September 1, 20X5, Johnson Inc. entered into a foreign exchange contract for speculative purposes by purchasing €50,000 for delivery in 60 days. The rates to exchange U.S. dollars for euros follow:

	9/1/X5	9/30/X5
Spot rate	$0.75	$0.70
30-day forward rate	0.73	0.72
60-day forward rate	0.74	0.73

In its September 30, 20X5, income statement, what amount should Johnson report as foreign exchange loss?

a. $2,500.
b. $1,500.
c. $1,000.
d. $500.

Note: Items 3 through 5 are based on the following:

On December 12, 20X5, Dahl Company entered into three forward exchange contracts, each to purchase 100,000 francs in 90 days. The relevant exchange rates are as follows:

	Spot Rate	Forward Rate for March 12, 20X6
December 12, 20X5	$0.88	$0.90
December 31, 20X5	0.98	0.93

3. Dahl entered into the first forward contract to manage the foreign currency risk from a purchase of inventory in November 20X5, payable in March 20X6. The forward contract is not designated as a hedge. At December 31, 20X5, what amount of foreign currency transaction gain should Dahl include in income from this forward contract?

   a. $0.
   b. $3,000.
   c. $5,000.
   d. $10,000.

4. Dahl entered into the second forward contract to hedge a commitment to purchase equipment being manufactured to Dahl's specifications. At December 31, 20X5, what amount of foreign currency transaction gain should Dahl include in income from this forward contract?

   a. $0.
   b. $3,000.
   c. $5,000.
   d. $10,000.

5. Dahl entered into the third forward contract for speculation. At December 31, 20X5, what amount of foreign currency transaction gain should Dahl include in income from this forward contract?

   a. $0.
   b. $3,000.
   c. $5,000.
   d. $10,000.

Problems

LO 11-2, 11-3 **P11-20 Multiple-Choice Questions on Foreign Currency Transactions**

Jon-Jan Restaurants purchased green rice, a special variety of rice, from China for 100,000 renminbi on November 1, 20X8. Payment is due on January 30, 20X9. On November 1, 20X8, the company also entered into a 90-day forward contract to purchase 100,000 renminbi. The forward contract is not designated as a hedge. The rates were as follows:

Date	Spot Rate	Forward Rate
November 1, 20X8	$0.120	$0.126 (90 days)
December 31, 20X8	0.124	0.129 (30 days)
January 30, 20X9	0.127	

Required

Select the correct answer for each of the following questions.

1. The entry on November 1, 20X8, to record the forward contract includes a

   a. Debit to Foreign Currency Receivable from Exchange Broker, 100,000 renminbi.
   b. Debit to Foreign Currency Receivable from Exchange Broker, $12,600.
   c. Credit to Premium on Forward Contract, $600.
   d. Credit to Dollars Payable to Exchange Broker, $12,600.

2. The entries on December 31, 20X8, include a
   a. Debit to Financial Expense, $300.
   b. Credit to Foreign Currency Payable to Exchange Broker, $300.
   c. Debit to Foreign Currency Receivable from Exchange Broker, $300.
   d. Debit to Foreign Currency Receivable from Exchange Broker, $12,600.
3. The entries on January 30, 20X9, include a
   a. Debit to Dollars Payable to Exchange Broker, $12,000.
   b. Credit to Cash, $12,600.
   c. Credit to Premium on Forward Contract, $600.
   d. Credit to Foreign Currency Receivable from Exchange Broker, $12,600.
4. The entries on January 30, 20X9, include a
   a. Debit to Financial Expense, $400.
   b. Debit to Dollars Payable to Exchange Broker, $12,600.
   c. Credit to Foreign Currency Units (renminbi), $12,600.
   d. Debit to Foreign Currency Payable to Exchange Broker, $12,700.
5. The entries on January 30, 20X9, include a
   a. Debit to Foreign Currency Units (renminbi), $12,700.
   b. Debit to Dollars Payable to Exchange Broker, $12,700.
   c. Credit to Foreign Currency Transaction Gain, $100.
   d. Credit to Foreign Currency Receivable from Exchange Broker, $12,600.

LO 11-2, 11-3 **P11-21 Foreign Sales**

Tex Hardware sells many of its products overseas. The following are some selected transactions.

1. Tex sold electronic subassemblies to a firm in Denmark for 120,000 Danish kroner (Dkr) on June 6, when the exchange rate was Dkr 1 = $0.1750. Collection was made on July 3 when the rate was Dkr 1 = $0.1753.
2. On July 22, Tex sold copper fittings to a company in London for £30,000 with payment due on September 20. Also, on July 22, Tex entered into a 60-day forward contract to sell £30,000 at a forward rate of £1 = $1.630. The spot rates follow:

July 10	£1 = $1.580
September 20	£1 = $1.612

3. Tex sold storage devices to a Canadian firm for C$70,000 (Canadian dollars) on October 11, with payment due on November 10. On October 11, Tex entered into a 30-day forward contract to sell Canadian dollars at a forward rate of C$1 = $0.730. The forward contract is not designated as a hedge. The spot rates were as follows:

October 11	C$1 = $0.7350
November 10	C$1 = $0.7320

Required

Prepare journal entries to record Tex's foreign sales of its products, use of forward contracts, and settlements of the receivables.

LO 11-2, 11-3 **P11-22 Foreign Currency Transactions**

Globe Shipping, a U.S. company, is an importer and exporter. The following are some transactions with foreign companies.

1. Globe sold blue jeans to a South Korean importer on January 15 for $7,400, when the exchange rate was South Korean won (KRW)1 = $0.185. Collection, in dollars, was made on March 15, when the exchange rate was $0.180.
2. On March 8, Globe purchased woolen goods from Ireland for €7,000. The exchange rate was €1 = $0.622 on March 8, but the rate was $0.610 when payment was made on May 1.

3. On May 12, Globe signed a contract to purchase toys made in Taiwan for 80,000 Taiwan dollars (NT$). The toys were to be delivered 80 days later on August 1, and payment was due on September 9, which was 40 days after delivery. On May 12, Globe also entered into a 120-day undesignated forward contract to buy NT$80,000 at a forward rate of NT$1 = $0.0376. On August 1, the forward rate for a September 9 exchange is NT$1 = $0.0378. The spot rates were as follows:

May 12	NT$1 = $0.0370
August 1	NT$1 = 0.0375
September 9	NT$1 = 0.0372

4. Globe sold microcomputers to a German enterprise on June 6 for €150,000. Payment was due in 90 days on September 4. On July 6, Globe entered into a 60-day undesignated forward contract to sell €150,000 at a forward rate of €1 = $0.580. The spot rates follow:

June 6	€1 = $0.600
July 6	€1 = 0.590
September 4	€1 = 0.585

Required

Prepare all necessary journal entries for Globe to account for the foreign transactions, including the sales and purchases of inventory, forward contracts, and settlements.

LO 11-3

P11-23A Comprehensive Problem: Four Uses of Forward Exchange Contracts without and with Time Value of Money Considerations

On December 1, 20X1, Micro World, Inc., entered into a 120-day forward contract to purchase 100,000 Australian dollars (A$). Micro World's fiscal year ends on December 31. The direct exchange rates follow:

Date	Spot Rate	Forward Rate for March 31, 20X2
December 1, 20X1	$0.600	$0.609
December 31, 20X1	0.610	0.612
January 30, 20X2	0.608	0.605
March 31, 20X2	0.602	

Required

Prepare all journal entries for Micro World, Inc., for the following *independent* situations:

a. The forward contract was to manage the foreign currency risks from the purchase of furniture for A$100,000 on December 1, 20X1, with payment due on March 31, 20X2. The forward contract is not designated as a hedge.

b. The forward contract was to hedge a firm commitment agreement made on December 1, 20X1, to purchase furniture on January 30, with payment due on March 31, 20X2. The derivative is designated as a fair value hedge.

c. The forward contract was to hedge an anticipated purchase of furniture on January 30. The purchase took place on January 30 with payment due on March 31, 20X2. The derivative is designated as a cash flow hedge. The company uses the forward exchange rate to measure hedge effectiveness.

d. The forward contract was for speculative purposes only.

Note: Requirement (e) uses the material in Appendix 11A.

e. Assume that interest is significant and the time value of money is considered in valuing the forward contract. Use a 12 percent annual interest rate. Prepare all journal entries required if, as in requirement (*a*), the forward contract was to manage the foreign currency–denominated payable from the purchase of furniture for 100,000 Australian dollars on December 1, 20X1, with payment due on March 31, 20X2.

LO 11-2, 11-3 **P11-24 Foreign Purchases and Sales Transactions and Hedging**

Part I

Maple Company had the following export and import transactions during 20X5:

1. On March 1, Maple sold goods to a Canadian company for C$30,000, receivable on May 30. The spot rates for marks were C$1 = $0.65 on March 1 and C$1 = $0.68 on May 30.
2. On July 1, Maple signed a contract to purchase equipment from a Japanese company for ¥500,000. The equipment was manufactured in Japan during August and was delivered to Maple on August 30 with payment due in 60 days on October 29. The spot rates for yen were ¥1 = $0.102 on July 1, ¥1 = $0.104 on August 30, and ¥1 = $0.106 on October 29. The 60-day forward exchange rate on August 30, 20X5, was ¥1 = $0.1055.
3. On November 16, Maple purchased inventory from a London company for £10,000, payable on January 15, 20X6. The spot rates for pounds were £1 = $1.65 on November 16, £1 = $1.63 on December 31, and £1 = $1.64 on January 15, 20X6. The forward rate on December 31, 20X5, for a January 15, 20X6, exchange was £1 = $1.645.

Required

a. Prepare journal entries to record Maple's import and export transactions during 20X5 and 20X6.

b. What amount of foreign currency transaction gain or loss would Maple report on its income statement for 20X5?

Part II

Assume that Maple used forward contracts to manage the foreign currency risks of all of its export and import transactions during 20X5.

1. On March 1, 20X5, Maple, anticipating a weaker Canadian dollar on the May 30, 20X5, settlement date, entered into a 90-day forward contract to sell C$30,000 at a forward exchange rate of C$1 = $0.64. The forward contract was not designated as a hedge.
2. On July 1, 20X5, Maple, anticipating a strengthening of the yen on the October 29, 20X5, settlement date, entered into a 120-day forward contract to purchase 500,000 at a forward exchange rate of ¥1 = $0.105. The forward contract was designated as a fair value hedge of a firm commitment.
3. On November 16, 20X5, Maple, anticipating a strengthening of the pound on the January 15, 20X6, settlement date, entered into a 60-day undesignated forward exchange contract to purchase £10,000 at a forward exchange rate of £1 = $1.67.

Required

a. Prepare journal entries to record Maple's foreign currency activities during 20X5 and 20X6.

b. What amount of foreign currency transaction gain or loss would Maple report on its income statement for 20X5 if Parts I and II of this problem were combined?

c. What amount of foreign currency transaction gain or loss would Maple report on its income statement for 20X6 if Parts I and II of this problem were combined?

LO 11-1, 11-2 **P11-25 Understanding Foreign Currency Transactions**

Dexter Inc. had the following items in its unadjusted and adjusted trial balances at December 31, 20X5:

	Trial Balances	
	Unadjusted	**Adjusted**
Accounts Receivable (denominated in Australian dollars)	$42,000	$41,700
Dollars Receivable from Exchange Broker	40,600	?
Foreign Currency Receivable from Exchange Broker	82,000	81,000
Accounts Payable (denominated in South Korean won)	80,000	?
Dollars Payable to Exchange Broker	?	?
Foreign Currency Payable to Exchange Broker	40,600	?

Additional Information

1. On December 1, 20X5, Dexter sold goods to a company in Australia for A$70,000. Payment in Australian dollars is due on January 30, 20X6. On the transaction date, Dexter entered into a 60-day forward contract to sell 70,000 Australian dollars on January 30, 20X6. The 30-day forward rate on December 31, 20X5, was A$1 = $0.57.
2. On October 2, 20X5, Dexter purchased equipment from a South Korean company for KRW400,000, payable on January 30, 20X6. On the transaction date, Dexter entered into a 120-day forward contract to purchase KRW400,000 on January 30, 20X6. On December 31, 20X5, the spot rate was KRW1 = $0.2020.

Required

Using the information contained in the trial balances, answer each of the following questions:

a. What was the indirect exchange rate for Australian dollars on December 1, 20X5? What was the indirect exchange rate on December 31, 20X5?

b. What is the balance in the account Foreign Currency Payable to Exchange Broker in the adjusted trial balance?

c. When Dexter entered into the 60-day forward contract to sell A$70,000, what was the direct exchange rate for the 60-day forward contract?

d. What is the amount of Dollars Receivable from Exchange Broker in the adjusted trial balance?

e. What was the indirect exchange rate for South Korean won on October 2, 20X5? What was the indirect exchange rate on December 31, 20X5?

f. What is the balance in the account Dollars Payable to Exchange Broker in both the unadjusted and the adjusted trial balance columns?

g. When Dexter entered into the 120-day forward contract to purchase KRW400,000, what was the direct exchange rate for the 120-day forward contract?

h. What was the Accounts Payable balance at December 31, 20X5?

LO 11-1, 11-2, 11-3

P11-26 Matching Key Terms

Match the items in the left-hand column with the descriptions/explanations in the right-hand column.

Items	Descriptions/Explanations
1. Direct exchange rate	A. Exchange rate for immediate delivery of currencies.
2. Indirect exchange rate	B. Imports and exports whose prices are stated in a foreign currency.
3. Managing an exposed net asset position	C. The primary currency used by a company for performing its major financial and operating functions.
4. Spot rates	D. U.S. companies prepare their financial statements in U.S. dollars.
5. Current rates	E. 1 European euro equals $0.65.
6. Foreign currency transaction gain	F. A forward contract is entered into when receivables denominated in European euros exceed payables denominated in that currency.
7. Foreign currency transaction loss	G. Accounts that are fixed in terms of foreign currency units.
8. Foreign currency transactions	H. 1 U.S. dollar equals 99 Japanese yen.
9. Hedging a firm commitment	I. Spot rate on the entity's balance sheet date.
10. Functional currency	J. In an export or import transaction, the date that foreign currency units are received or paid, respectively.
11. Speculating in a foreign currency	K. A forward contract is entered into when payables denominated in British pounds exceed receivables denominated in that currency.
12. Managing an exposed net liability position	L. Reported when receivables are denominated in European euros and the euro strengthens compared to the U.S. dollar.
13. Settlement date	M. A forward contract is entered into on May 1 that hedges an import transaction to occur on July 1.
14. Denominated	N. Forward contract in which no hedging is intended.
15. Reporting currency	O. Reported when payables are denominated in Swiss francs and the franc strengthens compared to the U.S. dollar.

LO 11-3

P11-27B Multiple-Choice Questions on Derivatives and Hedging Activities

Select the correct answer for each of the following questions.

1. According to **ASC 815,** which of the following is *not* an underlying?
   a. A security price.
   b. A monthly average temperature.
   c. The price of a barrel of oil.
   d. The number of foreign currency units.
2. The intrinsic value of a cash flow hedge has increased since the last balance sheet date. Which of the following accounting treatments is appropriate for this increase in value?
   a. Do not record the increase in the value because it has not been realized in an exchange transaction.
   b. Record the increase in value to current earnings.
   c. Record the increase to Other Comprehensive Income.
   d. Record the increase in a deferred income account.
3. The requirements for a derivative instrument include all but which of the following?
   a. Has one or more underlyings.
   b. Has one or more notional amounts.
   c. Requires an initial net investment equal to that required for other types of contracts that would be expected to have a similar response to changes in market factors.
   d. Requires or permits net settlement.
4. A decrease in the intrinsic value of a fair value hedge is accounted for as
   a. A decrease of current earnings.
   b. Not recorded because the exchange transaction has not yet occurred.
   c. A decrease of Other Comprehensive Income.
   d. A liability to be offset with subsequent increases in the fair value of the hedge.
5. Changes in the fair value of the effective portion of a hedging financial instrument are recognized as a part of current earnings of the period for which of the following?

	Cash Flow Hedge	Fair Value Hedge
a.	Yes	Yes
b.	No	Yes
c.	Yes	No
d.	No	No

6. According to **ASC 815,** for which of the following is hedge accounting not allowed?
   a. A forecasted purchase or sale.
   b. Available-for-sale securities.
   c. Trading securities.
   d. An unrecognized firm commitment.

LO 11-3

P11-28B A Cash Flow Hedge: Use of an Option to Hedge an Anticipated Purchase

Mega Company believes the price of oil will increase in the coming months. Therefore, it decides to purchase call options on oil as a price-risk-hedging device to hedge the expected increase in prices on an anticipated purchase of oil.

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"B" indicates that the item relates to Appendix 11B.

On November 30, 20X1, Mega purchases call options for 10,000 barrels of oil at $30 per barrel at a premium of $2 per barrel with a March 1, 20X2, call date. The following is the pricing information for the term of the call:

Date	Spot Price	Futures Price (for March 1, 20X2, delivery)
November 30, 20X1	$30	$31
December 31, 20X1	31	32
March 1, 20X2	33	

The information for the change in the fair value of the options follows:

Date	Time Value	Intrinsic Value	Total Value
November 30, 20X1	$20,000	$ 0	$20,000
December 31, 20X1	6,000	10,000	16,000
March 1, 20X2		30,000	30,000

On March 1, 20X2, Mega sells the options at their value on that date and acquires 10,000 barrels of oil at the spot price. On June 1, 20X2, Mega sells the oil for $34 per barrel.

Required

a. Prepare the journal entry required on November 30, 20X1, to record the purchase of the call options.

b. Prepare the adjusting journal entry required on December 31, 20X1, to record the change in time and intrinsic value of the options.

c. Prepare the entries required on March 1, 20X2, to record the expiration of the time value of the options, the sale of the options, and the purchase of the 10,000 barrels of oil.

d. Prepare the entries required on June 1, 20X2, to record the sale of the oil and any other entries required as a result of the option.

LO 11-3

P11-29B A Fair Value Hedge: Use of an Option to Hedge Available-for-Sale Securities

On November 3, 20X2, PRD Corporation acquired 100 shares of JRS Company at a cost of $12 per share. PRD classifies them as available-for-sale securities. On this same date, PRD decides to hedge against a possible decline in the value of the securities by purchasing, at a cost of $100, an at-the-money put option to sell the 100 shares at $12 per share. The option expires on March 3, 20X3. The fair values of the investment and the options follow:

	November 3, 20X2	December 31, 20X2	March 3, 20X3
JRS Company shares			
Per share	$ 12	$ 11	$ 10.50
Put option (100 shares)			
Market value	$100	$140	$150
Intrinsic value	0	100	150
Time value	$100	$ 40	$ 0

Required

a. Prepare the entries required on November 3, 20X2, to record the purchase of the JRS stock and the put options.

b. Prepare the entries required on December 31, 20X2, to record the change in intrinsic value and time value of the options, as well as the revaluation of the available-for-sale securities.

c. Prepare the entries required on March 3, 20X3, to record the exercise of the put option and the sale of the securities at that date.

LO 11-3

P11-30B Matching Key Terms—Hedging and Derivatives

Match the items in the left-hand column with the descriptions/explanations in the right-hand column.

Items	Descriptions/Explanations
1. Put option	A. Hedge of the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment.
2. Notional amount	B. Hedge of the exposure to variable cash flows of a forecasted transaction.
3. Intrinsic value	C. Derivative instrument that is part of a host contract.
4. Underlying	D. Specified interest rate, security price, or other variable.
5. Gains or losses on cash flow hedges	E. Number of currency units, shares, bushels, or other units specified in the contract in U.S. dollars.
6. Foreign currency hedge	F. Recognized in current earnings in the period of the change in value.
7. Fair value hedge	G. Recognized in Other Comprehensive Income in the period of the change in value.
8. Call option	H. Measure of the extent to which the derivative offsets the changes in the fair values or cash flows of the hedged item.
9. Effectiveness	I. Hedge of the net investment in foreign operations.
10. Time value	J. Conversion of a company's fixed-rate debt to a variable-rate debt.
11. Gains or losses on fair value hedges	K. Option that provides the right to acquire an underlying at an exercise or strike price.
12. Cash flow hedge	L. Option that provides the right to sell an underlying at an exercise or strike price.
13. Interest rate swap	M. Value of an option due to the spread between the current market price of the hedged item and the option's strike price.
14. Bifurcation	N. Value of an option due to the opportunity to exercise the option over the term of the option period.
15. Embedded derivative	O. Process of separating the value of an embedded derivative from its host contract.

LO 11-2, 11-3

P11-31 Determining Financial Statement Amounts

Kiwi Painting Company engages in a number of foreign currency transactions in euros (€). For each of the following independent transactions, determine the dollar amount to be reported in the December 31, 2004, financial statements for the items presented in the following requirements. The relevant direct exchange rates for the euro follow:

	September 1, 2004	November 30, 2004	December 31, 2004
Spot rate	$0.95	$1.05	$0.98
Forward rate for exchange on February 1, 2005	0.97	1.03	1.01

These are the independent transactions:

1. Kiwi entered into a forward exchange contract on September 1, 2004, to be settled on February 1, 2005, to hedge a firm foreign currency commitment to purchase inventory on November 30, 2004, with payment due on February 1, 2005. The forward contract was for €20,000, the agreed-upon cost of the inventory. The derivative is designated as a fair value hedge of the firm commitment.
2. Kiwi entered into a forward exchange contract on September 1, 2004, to be settled on February 1, 2005, to hedge a forecasted purchase of inventory on November 30, 2004. The inventory was purchased on November 30 with payment due on February 1, 2005. The forward contract was for €20,000, the expected cost of the inventory. The derivative is designated as a cash flow hedge to be continued through to payment of the euro-denominated account payable.

3. Kiwi entered into a forward contract on November 30, 2004, to be settled on February 1, 2005, to manage the financial currency exposure of a euro-denominated accounts payable in the amount of €20,000 from the purchase of inventory on that date. The payable is due on February 1, 2005. The forward contract is not designated as a hedge.
4. Kiwi entered into a forward contract on September 1, 2004, to speculate on the possible changes in exchange rates between the euro and the U.S. dollar between September 1, 2004, and February 1, 2005. The forward contract is for speculation purposes and is not a hedge.

Required

Enter the dollar amount that would be shown for each of the following items as of December 31, 2004. Compute the statement amounts net. For example, if the transaction generated both a foreign currency exchange gain and a loss, specify just the net amount that would be reported in the financial statements. If no amount would be reported for an item, enter NA for Not Applicable in the space.

	Transaction			
	1	**2**	**3**	**4**
Forward contract receivable	_____	_____	_____	_____
Inventory	_____	_____	_____	_____
Accounts payable (€)	_____	_____	_____	_____
Foreign currency exchange gain (loss), net	_____	_____	_____	_____
Other comprehensive income gain (loss), net	_____	_____	_____	_____

Kaplan CPA Review

KAPLAN SCHWESER

Kaplan CPA Review Simulation on Comprehensive Consolidation Procedures

Please visit the text website for the online Kaplan CPA Review task-based simulation: www.mhhe.com/christensen10e

Situation

The Tee Corporation is a golfing equipment manufacturer based in Savannah, Georgia. A foreign subsidiary of the Tee Corporation, Club Corporation, located in South America, also manufactures golf equipment. Consolidated financial statements are being prepared for Year One. Tee Corp. and Club Corp. both have a December 31 year-end.

Topics Covered in the Simulation

a. Translation.
b. Remeasurement.
c. Foreign currency reporting.