



Learning Objectives

In this chapter, you will learn about:

1. Primary tasks in international financial management
2. How firms set up their international capital structure from equity and debt
3. How financial managers raise capital to fund international value-adding activities and investment projects
4. The management of working capital and cash flow for international operations
5. Capital budgeting: decision making on international capital expenditures
6. Currency risk: exposure, forecasting, and management
7. Managing international accounting practices and taxation issues



Financial Management and Accounting in the Global Firm*

➤ How a Small Firm Rides Foreign-Exchange Waves

Markel Corporation is a Pennsylvania-based SME that makes Teflon-like tubing and insulated lead wire for the automotive industry. The family-owned firm began exporting in the mid-1980s to Germany, Spain, and Japan, and generates 40 percent of its roughly \$30 million annual sales from abroad.

Markel faces daily challenges dealing with fluctuating international currencies. Every morning, CEO Kim Reynolds scans the financial news to stay abreast of how exchange rates are affecting his profits. It is a routine born of experience. In the early 2000s, an appreciating dollar made Markel's products more expensive to European and Japanese customers, which cut deeply into Markel's bottom line and forced Mr. Reynolds and other executives to take pay cuts. But the currency game works both ways. By the mid-2000s, the euro had strengthened, increasing the buying power of European customers and boosting Markel's sales revenues.

When the euro was first introduced, its value relative to the U.S. dollar sank like a rock, bottoming out at nearly \$0.82 cents in the fall of 2000. That meant that each euro Markel received in sales was worth far less in U.S. dollars than the company expected. In 2001 and 2002 combined, Markel suffered more than \$625,000 in currency losses, and the company posted overall losses in each year. The crisis forced management to



rethink its strategies and become more efficient. For example, Markel paid \$250,000 to buy a new extruder that generates 25 percent more footage of wire per work shift. Managers cut waste material by 6 percent in the production of high-temperature oxygen-sensor wires. In these and other ways, Markel rode out the bad times as best as it could.

To small companies like Markel, swings in the \$3 trillion-a-day world currency market can make or break the firm. The problem arises because Markel quotes its prices in the customer's currency. Local-currency pricing has helped Markel capture 70 percent of the world market for high-performance, Teflon-coated cable-control tubes and wires. For international sales, Markel uses a three-part strategy:

- Quote prices in the customer's currency, which translates to more consistent prices for the customer and helps Markel gain market share
- Purchase forward contracts to stabilize future dollar-denominated revenues
- Emphasize efficient company operations to make it through the times when exchange rates move in the wrong direction and hurt sales

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A *forward contract* is an agreement to buy or sell currency at an agreed-upon exchange rate for delivery at a specific future date. Firms such as Markel buy forwards from banks in order to hedge exchange-rate exposure. The goal of *hedging* is to balance purchases and sales of foreign currencies to minimize exposure to future currency risk. Suppose that Markel sells merchandise to its Spanish importer for €50,000, payable in 90 days. Because there is a delay in getting paid, Markel is exposed to currency risk: If the euro depreciates during the 90-day period, Markel will receive fewer dollars. To counteract this risk, Markel enters a forward agreement to sell €50,000, 90 days in the future, at an exchange rate agreed upon today, ensuring that it receives a known dollar amount.

When Markel's chief financial officer thinks the dollar is on its way up, he hedges his expected euro revenue stream with a forward contract. But his estimate isn't always correct. For instance, suppose Markel buys a €50,000 contract at \$1.05 per euro, or \$52,500. Next, suppose that when the contract is exercised at the end of the 90-day period, the euro is actually trading at \$1.08. Had Markel estimated correctly, it could have made an extra \$1,500. Like most international firms, Markel is not in the business of trying to make money on foreign exchange trading. Management just wants to minimize its international currency risks. ◀

Source: Phillips, Michael M. (2003). "How a Small Firm Rides Foreign-Exchange Waves," *Wall Street Journal*, February 7, accessed July 7, 2006 at <http://online.wsj.com/article/SB104458055572499453,00.html>

International financial management refers to the acquisition and use of funds for cross-border trade, investment, and other commercial activities. Financial management is a major business function that is more complex for firms engaged in international business. The firm must learn to carry out transactions in a multitude of foreign currencies and operate in diverse environments characterized by restrictions on capital flows, country risk, and varying accounting and tax systems.

Imagine the relatively new challenges for the contemporary firm: increasing globalization, the integration of financial markets, the rise of global e-commerce, and expanding opportunities to profit from financial activities. The firm's ability to minimize risk and seize opportunities depends on its financial management skills. Financial managers access funds from a variety of sources—foreign bond markets, local stock exchanges, foreign banks, venture capital firms, and intracorporate financing—based on wherever in the world capital is cheapest.

Firms engaged in international business need capital to fund such activities as R&D, manufacturing, and marketing, pay for products and services sourced from abroad, and set up and run foreign operations and subsidiaries. Access to funding is critical for smaller firms that receive large product orders from abroad and must finance the production of goods as they wait for payment from foreign customers. These funds often come from investors. Investors acquire stakes in foreign firms by buying corporate bonds from banks and other intermediaries, investing in foreign stock markets, or investing directly in promising international firms. International financial activity also takes the form of speculation in foreign currency and stock markets and buying and selling of foreign exchange contracts.



Primary Tasks in International Financial Management

Consider the managers at a multinational company such as Motorola, which has facilities in nearly 50 countries and raises funds in financial markets worldwide. The firm's managers must therefore be familiar with the laws and regulations that gov-

ern the financial exchanges worldwide. The financial dimensions of Motorola's activities are managed globally, through a network of subsidiaries and strategic business units. The units are a complex web of financial coordination and control processes supplemented by investment analysis, capital structure optimization, risk reduction, and the mobilization of global financial resources.

The international financial manager is involved in the acquisition and allocation of financial resources for the firm's current and future activities and projects, with the primary objective of maximizing the firm's value. These managers need to be competent in carrying out six major financial management tasks critical to firms engaged in international business. Exhibit 19.1 highlights these tasks:

1. *Decide on the capital structure*—determine the ideal long-term mix of debt versus equity financing for the firm's international operations.
2. *Raise funds for the firm*—acquire equity, debt, or intracorporate financing for funding value-adding activities and investment projects.
3. *Working capital and cash flow management*—manage funds passing in and out of the firm's value-adding activities.
4. *Capital budgeting*—assess the financial attractiveness of major investment projects (e.g., foreign market expansion and entry).
5. *Currency risk management*—manage the multiple-currency transactions of the firm and the exposure to risk created by exchange rate fluctuations.
6. *Manage the diversity of international accounting and tax practices*—learn to operate in a global environment with diverse accounting practices and international tax regimes.

You should note that, the greater the scale of international operations for the firm, the greater is the relevance of these international financial management tasks. In other words, an MNE with a large number of subsidiaries and affiliates around the world will need to dedicate considerably more attention to efficient handling of cross-border acquisition and use of funds than a smaller exporter. Yet, it is precisely this scale of global operations that gives the firm the strategic flexibility that we discussed in Chapter 11. Geographic diversification gives the firm the opportunity to tap capital at a lower cost, minimize overall tax obligations, achieve efficient scale of financial operations, and gain greater bargaining power with lenders.

The six international financial management tasks also serve as the basis for organizing the content of this Chapter. Let's delve more deeply into each task.



Exhibit 19.1

International Financial Management Tasks



Task One: Decide on the Capital Structure

Equity financing The issuance of shares of stock to raise capital from investors and the use of retained earnings.

Debt financing The borrowing of money from banks or other financial intermediaries, or selling corporate bonds to individuals or institutions to raise capital.

A *capital structure* is the mix of long-term *equity financing* and *debt financing* firms use to support their international activities. The capital structure affects the profitability and stability of the firm and its international operations. The firm obtains **equity financing** by selling shares of stock to investors or by retaining earnings, which is profit reinvested in the firm rather than paid to investors. Shares of stock provide an investor with an ownership interest—that is, equity—in the firm. In new companies, founders often provide equity financing through personal savings. **Debt financing** comes from either of two sources: loans from banks and other financial intermediaries or money raised from the sale of corporate bonds to individuals or institutions.

Debt service payments—the periodic principal and interest payments to pay off a loan—are a fixed cost. Using debt financing can add value to the firm because some governments allow firms to deduct interest payments from their taxes. To maintain a good credit rating and minimize the possibility of going bankrupt, most MNEs keep the debt proportion of their capital structure below a maximum threshold that they can service even when facing adverse conditions. Too much debt can force companies into financial distress, possibly bankruptcy. This was exemplified by the Asian financial crisis of 1997. Inadequate equity markets in Indonesia, Malaysia, and Thailand forced firms in those countries to rely excessively on debt to finance business growth. Worse, banks in the region borrowed U.S. dollars from Western banks and then loaned the money as local currencies in their home markets. When the value of the Asian currencies fell against the U.S. dollar, thousands of banks and other firms in the region could not service their debt obligations and went bankrupt.¹

In the United Kingdom and the United States, one study found that firms' average debt ratio—debt divided by total assets—is about 0.55.² In other words, the capital structure is composed of roughly equal amounts of debt and equity financing. How much debt a firm should hold partly depends on the nature of its industry and target markets. For instance, a company with relatively stable sales (e.g., an insurance company) that sells mainly to affluent foreign markets can sustain a higher debt ratio in its capital structure than a consumer goods firm that sells to a range of mostly poor countries with highly cyclical sales.

Not all countries view substantial debt as risky. For example, the average debt ratio is 0.62 in Germany, 0.76 in Italy, and occasionally even higher in Japan and some developing countries.³ This view arises for a couple of reasons. First, the country may lack a well-developed stock market or other systems for obtaining capital from equity sources. Hence, firms may have little choice but to borrow money from banks. Second, a nation's firms may have much closer relationships with banks. In Japan, large MNEs are often part of a conglomerate or a holding company that also includes a bank. For instance, Japan's Sony Corporation has its own bank, Sony Bank.



Task Two: Raise Funds for the Firm

Global money market The collective financial markets where firms and governments raise short-term financing.

Global capital market The collective financial markets where firms and governments raise intermediate-term and long-term financing.

There are various ways for firms to raise funds to finance company operations. Lufthansa Airlines recently raised several hundred million euros by issuing stock shares to acquire A380 airplanes, the new double-decker aircraft from Airbus. Grupo Mexico, a giant producer of copper and silver, issued millions of peso-denominated shares to honor debts and other commitments incurred by its foreign subsidiaries. Stanley Works, the U.S. toolmaker, funds part of its Japanese operations by selling shares on the Tokyo Stock Exchange.

Firms can obtain financing in the **global money market**, which are the collective financial markets where firms and governments raise short-term financing, and the **global capital market**, which are the collective financial markets where firms and governments raise intermediate- and long-term financing. Since fund-

ing for most projects comes from instruments whose maturity period is over one year, we refer to all such funding as *capital*. We focus on the global capital market because it is the meeting point of those who want to invest money and those who want to raise funds.

The key advantage of participating in the global capital market is the ability to access funds from a larger pool of sources at a competitive cost. The great advantage for international investors is the ability to access a much wider range of investment opportunities than is available in the domestic capital market. This can result in higher prices for securities in international markets, and hence lower capital costs for MNEs with access to international capital markets. In one study, top managers at MNEs in France suggested that access to capital is one of the main criteria they consider when deciding where to expand internationally.⁴

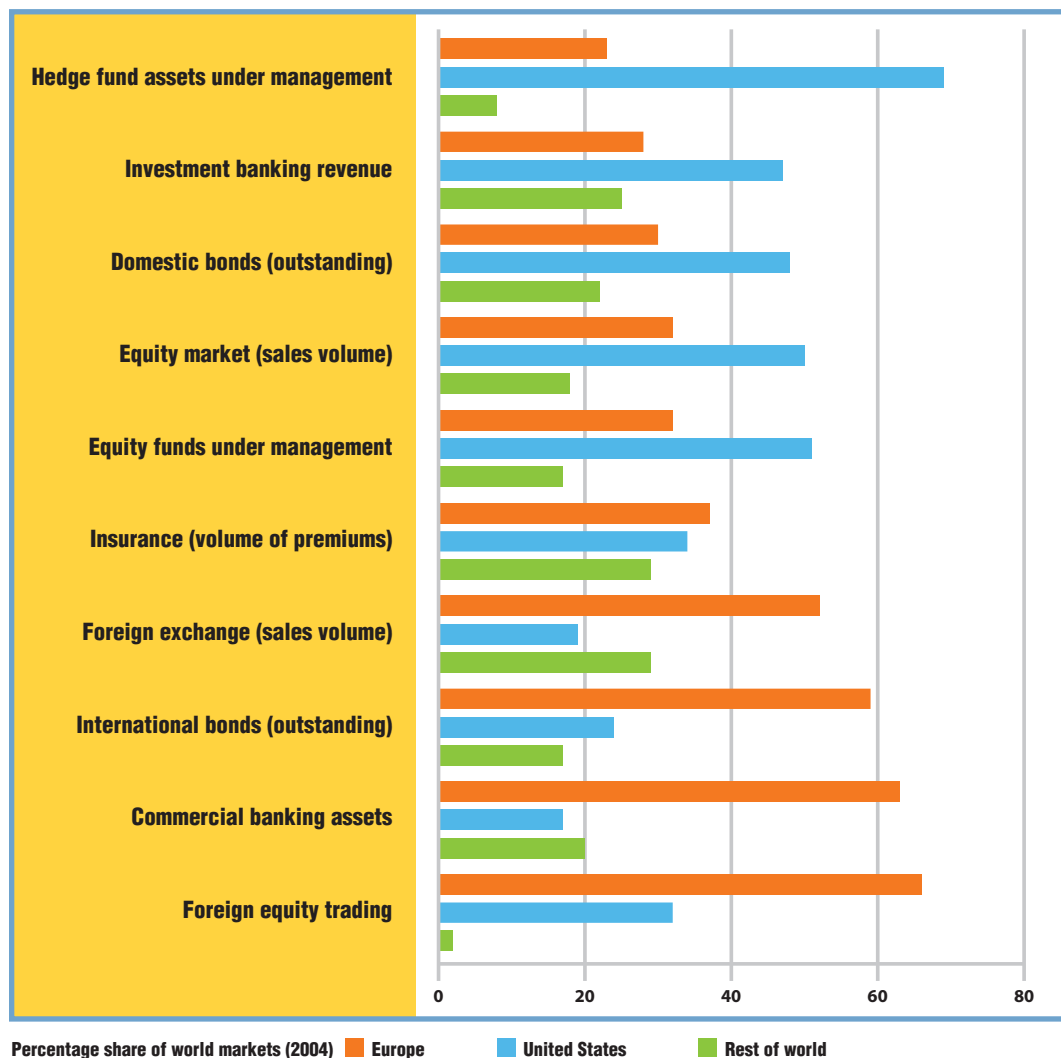
Financial Centers

The global capital market is concentrated in major *financial centers*: New York, London, and Tokyo. Major secondary centers include Frankfurt, Hong Kong, Paris, San Francisco, Singapore, Sydney, and Zurich. At these locations, firms can access the major suppliers of capital—banks, stock exchanges, and venture capitalists. Exhibit 19.2 lists the share of major financial markets held by Europe, the United States, and the rest of the world. For example, Europe is home to the

Exhibit 19.2

Share of Financial Markets in Major World Regions

SOURCE: From *Financial Times*, October 12, 2005. Data from International Financial Services.



largest volume of outstanding international bonds (59 percent of the world total), the United States is home to the largest volume of investment banking revenue (47 percent), and countries outside Europe and the United States have sizeable markets in insurance and foreign exchange (29 percent for both). Europe's global share of financial markets has been rising in recent years, although the United States remains dominant in many markets.

The global capital market is huge and growing rapidly. In 2006:

- International issues of equity in world securities markets amounted to about \$380 billion, up from \$83 billion in 1996 and just \$14 billion in 1986.
- The stock of cross-national bank loans and deposits was \$18,916 billion, up from \$7,205 billion 10 years earlier.
- There were some \$17,574 billion in outstanding international bonds and notes, up from \$3,081 billion in 1996.⁵

What are the causes of the rapid rise in the global capital markets? There are at least four reasons. First, the deregulation of financial markets by national governments has led to easier movement of capital across national borders. Second, innovation in information and communication technologies has accelerated the ease and pace of global financial transactions. Third, the globalization of business activity compels firms to seek new and more cost-effective ways to finance global operations and to be innovative in financial management activities. Fourth is the widespread *securitization* of financial instruments. Securitization is the process of converting an illiquid financial instrument, such as a bank loan, into a tradable security, such as stocks.

The global capital market provides three key advantages for the firm. First, compared to being restricted to financial markets in their home countries, the global market provides a broader base from which the firm can draw its financing needs. Second, the greater breadth of financing sources means that firms can often access funding at substantially reduced cost. Third, the market provides a variety of investment opportunities for MNEs, professional investment firms, and individuals.

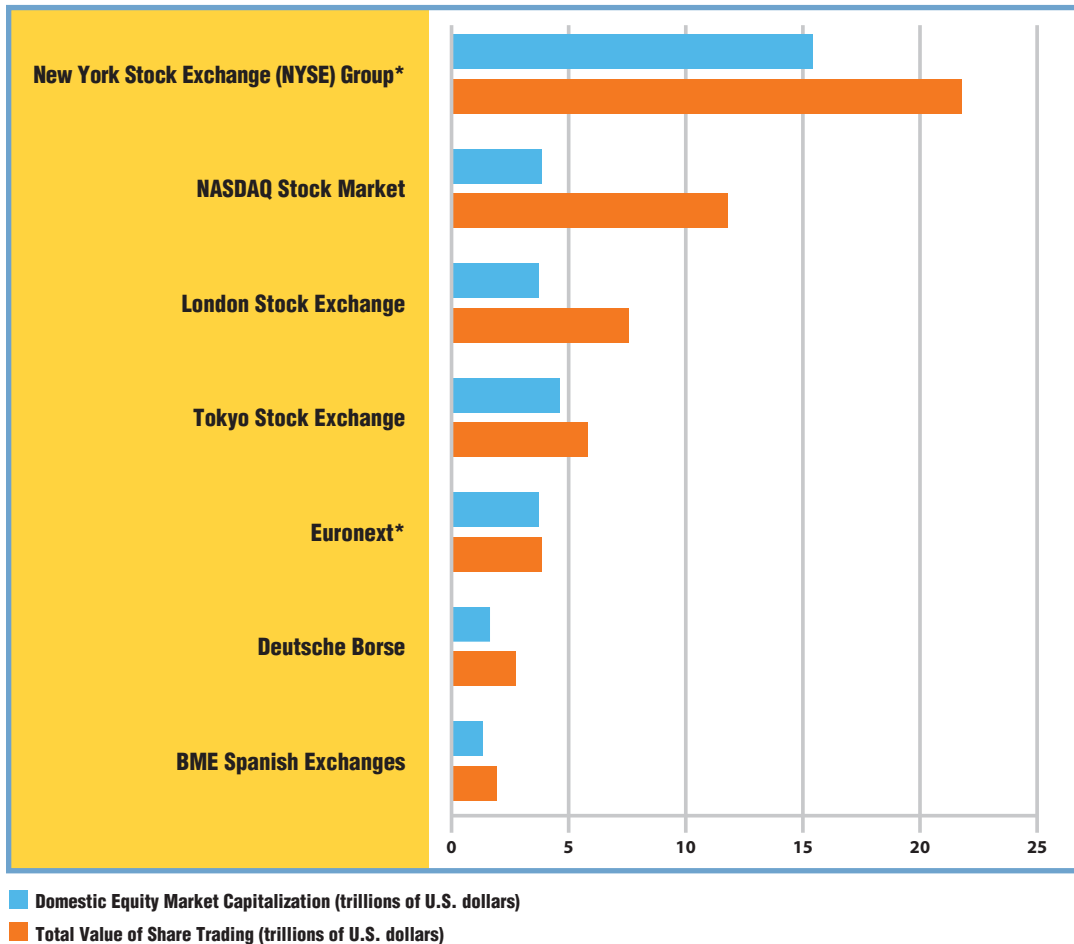
Sources of Funds for International Operations

Let's now consider, in greater detail, the three primary sources of funds for international operations: equity financing, debt financing, and intracorporate financing.

Equity Financing When the firm uses equity financing, it obtains capital by selling shares of stock. In exchange for the money that they provide, the shareholders obtain a percentage of ownership in the firm and, often, a stream of dividend payments. The main advantage of equity financing is that the firm obtains needed capital without incurring debt; that is, without having to repay funds to the providers at any particular time. The main disadvantage is that the firm's ownership is diluted whenever new equity is sold. Management also runs the risk of losing control in the event one or more shareholders acquire a controlling interest in the firm. Internationally, firms obtain equity financing by selling shares in the global equity market.

The **global equity market** is the worldwide market of funds for equity financing—the stock exchanges throughout the world where investors and firms meet to buy and sell shares of stock. Examine Exhibit 19.3 to learn about the largest stock exchanges in the world. Note the dominance, in both the volume of shares traded as well as the market capitalization, of the stock exchanges in the United States, the United Kingdom, Japan, and Germany. The New York Stock Exchange (NYSE) is clearly the largest exchange, both in terms of volume of shares traded (\$21.79 trillion in 2006) and market capitalization (\$15.42 trillion in 2006). Among the roughly 3,600 firms listed, about 450 are foreign-owned firms from Europe, Canada, Asia, and Latin America. Apart from accessing new

Global equity market The worldwide market of funds for equity financing—the stock exchanges throughout the world where investors and firms meet to buy and sell shares of stock.



*Note: NYSE and Euronext completed a merger in April 2007 to form the NYSE Euronext.

Exhibit 19.3 Largest Stock Exchanges in the World by Value of Shares Traded, 2006

SOURCE: From *The Economist* (2006), "Battle of the Bourses," May 27, 2006. Copyright © 2006 The Economist. Used with permission.

investors, firms that cross-list their shares in other exchanges may actually derive higher valuations than those that don't. One study found that firms that cross-listed their shares enjoyed a valuation premium of about 14 percent; for those non-US firms that have listed on a major exchange such as the NYSE, the premium is about 31 percent.⁶

As an investor, you are by no means limited to buying equity in firms listed in the stock exchanges of your home country. In fact, an important trend today is that of investors who buy stocks on foreign exchanges. The trend has greatly accelerated in recent years due to the large-scale activities of institutional investors.⁷ Pension funds—funds that manage the investments of employee savings for retirement—represent the largest portion of this trend. The size of these funds has reached remarkable proportions in the advanced economies. For example, in 2005, the cumulative value of pension funds exceeded the respective GDPs in the Netherlands (125 percent) and Switzerland (117 percent). They amounted to more than 60 percent of the GDPs of the United States, United Kingdom, and Finland.⁸ When combined with invested life insurance assets, the global pension assets exceed \$10 trillion.⁹ The origin of much of these investments is foreign. In 2000, for instance, foreign investment amounted to about 40 percent of the pension sectors in Belgium and France and 60 percent in the Netherlands.¹⁰ At one point, CALPERS, the pension fund of the state of California, accounted for 5 percent of the French stock exchange.¹¹

The marriage of technology and trading has allowed stock exchanges to grow rapidly. The Internet has vastly improved access to information on foreign markets and trading on international exchanges. Investing in foreign markets makes sense for two main reasons: diversification and opportunity. By investing internationally, investors can minimize losses during slumps in the local economy and take advantage of foreign investment opportunities. For example, Britons invest in the several hundred foreign companies listed on the London exchange, including Canon, Fujitsu, and South African Breweries.¹²

Growing mergers and collaborations between exchanges in European countries facilitate international trading. The 2006 merger of the NYSE and the Euronext exchange—a Paris-based pan-European stock exchange with subsidiaries in Belgium, France, the Netherlands, Portugal, and the United Kingdom—contributed to increased transatlantic trading.¹³ Many recent advances are due to the Internet, which facilitates online trading. In contrast to the past, when traders depended on expensive stock brokers, almost anyone can now trade on world stock markets at very low cost. Even a small market like the Cayman Islands Stock Exchange offers full online investing opportunities. Typical of the new breed of small technology-driven virtual exchanges, the Cayman's exchange provides a listing facility for Caribbean offshore mutual funds and specialist debt securities. Read the *Global Trend* feature to learn about the development of stock exchanges in emerging markets.

> GLOBAL TREND

Emerging Markets as International Investment Destinations

Many investors view stocks in emerging markets as a good bet because of the formation in these countries of numerous, fast-growing firms, and their competitive advantages of low-cost labor and superior products. While some of the emerging markets still have political regimes that do not consistently follow the rule of law and shareholder rights, their economies often are geared for global growth.

Nevertheless, emerging market stocks are not without considerable risk. Investors were badly burned by a series of crises and poor returns in the 1990s. In 1994, the “tequila crisis” in Mexico hurt investors when the Mexican government devalued its currency.

The tequila crisis was followed by the Asian financial crisis in 1997, when countries such as Thailand and Malaysia saw their currencies severely devalued as banks in the region could not service their debt obligations. The interconnected nature

of financial markets worldwide, made possible by modern information and communications technologies, also meant that the Asian financial crisis produced global shockwaves and prompted a sell-off in world stock markets.¹⁴

As recently as 1998, the Russian government devalued its currency and defaulted on its debt. Equity markets in Argentina and Turkey also have experienced considerable volatility. Share-price indices on the Shanghai and Shenzhen exchanges have been extremely volatile, and the Chinese government has yet to develop a sound regulatory system and institutions for securities trading.

As opportunities arise in emerging markets to invest in stock markets and undertake FDI, firms and governments in these countries increasingly understand that the cost of capital goes hand in hand with good governance and respect for shareholder rights. Companies that abuse shareholders by not providing

periodic earnings reports find it hard to raise money from the public.

In order to accommodate the growing demand to invest in emerging markets, local stock exchanges are becoming increasingly sophisticated. Stock exchanges in Brazil, China, and South Korea each have several hundred corporate listings, worth hundreds of billions of dollars. In smaller countries, the stock exchange may be a one-room operation with a blackboard and a telephone. Thus, nations such as Bhutan, Oman, and Kazakhstan have established primitive exchanges in the hope of becoming the next Chile or Singapore.

Sources: Burgess, Kate. (2002). “The Wheel Is Spinning, Once Again: Don’t Be Seduced by Siren Calls to Invest in Emerging Markets,” *Financial Times*, March 30, p. 01; *Economist*. (2005). “China’s Stockmarket: A Marginalized Market,” February 26, pp. 71–72; *Forbes*. (2006). “Global Markets,” March 27, p. 150; Gunn, Eileen. (1997). “Emerging Markets,” *Fortune*, August 18, pp. 23–24.

Debt Financing

In debt financing, a firm borrows money from a creditor in exchange for repayment of principal and an agreed-upon interest amount in the future. The primary advantage of debt financing over equity financing is that the firm does not sacrifice any ownership interests to obtain needed capital. As noted earlier, debt financing is obtained from two sources: loans and the sale of bonds.

International Loans. The firm may borrow money from banks in its home market or in foreign markets. It may borrow funds denominated in the home currency or in foreign currencies. However, borrowing internationally is complicated by cross-national differences in banking regulations, inadequate banking infrastructure, shortage of loanable funds, macroeconomic difficulties, and fluctuating currency values.¹⁵ Banks are often reluctant to extend credit to small and medium-sized enterprises (SMEs), so these firms may turn to government agencies such as the Export Import (Ex-IM) Bank, a federal agency in the United States for direct loans, working capital loans, and loan guarantees. Similarly, governments in the developing world often provide loans to promote inward foreign direct investment (FDI) projects such as the construction of dams, power plants, and airports. Finally, many subsidiaries of large MNEs obtain loans from their parent firm or a sister subsidiary.

The Eurocurrency Market. Another key source of loanable funds is money deposited in banks outside its country of origin. Although its role has declined somewhat in favor of the euro, the U.S. dollar accounts for the largest proportion of these funds.¹⁶ **Eurodollars** are U.S. dollars held in banks outside the United States, including foreign branches of U.S. banks. Thus, a U.S. dollar-denominated bank deposit in Barclays Bank in London or Citibank in Tokyo is a Eurodollar deposit. More broadly, any currency deposited in a bank outside its country of origin is called a **Eurocurrency**. Eurodollars account for roughly two-thirds of all Eurocurrencies. Interestingly, more than two-thirds of U.S. banknotes are often held outside the United States as a reserve currency. The firms Matsushita and Hitachi borrowed Eurodollars in Japan to finance much of their worldwide operations. Other Eurocurrencies include euros, yen, and British pounds, as long as they are banked outside their home country.

The Eurocurrency market is attractive to firms because these funds are not subject to the same government regulations as in their home-country banking systems. For instance, U.S. dollars on deposit in French banks and euros on deposit in U.S. banks are not subject to the same reserve requirements of their home countries. Compared to local currencies, banks offer higher interest rates on Eurocurrency deposits and charge lower interest rates for Eurocurrency loans. These differences contributed to the emergence of a huge Eurocurrency market.



Eurodollars are deposited in banks such as Barclays Plc., Britain's third-largest bank. Eurocurrencies, funds banked outside their country of origin, are a key source of loanable funds for international business.

Eurodollars U.S. dollars held in banks outside the United States, including foreign branches of U.S. banks.

Eurocurrency Any currency deposited in a bank outside its country of origin.

Bond A debt instrument that enables the issuer (borrower) to raise capital by promising to repay the principal along with interest on a specified date (maturity).

Global bond market The international marketplace in which bonds are bought and sold, primarily through banks and stockbrokers.

Foreign bond A bond sold outside the issuer's country and denominated in the currency of the country in which it is issued.

Eurobond A bond sold outside the issuer's home country but denominated in its own currency.

Intracorporate financing

Funds provided from sources inside the firm (both the headquarters and subsidiaries) such as equity, loans, and trade credits.

Bonds. A major source of debt financing is bonds. A **bond** is a debt instrument that enables the issuer (borrower) to raise capital by promising to repay the principal along with interest on a specified date (maturity). Along with firms, governments, states, and other institutions also sell bonds. Investors purchase bonds and redeem them at face value in the future. The **global bond market** is the international marketplace in which bonds are bought and sold, primarily through banks and brokers.

Foreign bonds are sold outside the bond issuer's country and denominated in the currency of the country in which they are issued. For example, when Mexican cement giant Cemex sells dollar-denominated bonds in the United States, it is issuing foreign bonds. **Eurobonds** are sold outside the bond issuer's home country but denominated in its own currency. For example, when Toyota sells yen-denominated bonds in the United States, it is issuing Eurobonds. The telecommunications giant AT&T has issued hundreds of millions of dollars in Eurobonds to support its international operations. Pharmaceutical firms Eli Lilly and Merck have funded much of their multinational operations from Eurobonds. Eurobonds are typically issued in denominations of \$5,000 or \$10,000, pay interest annually, and are sold in major financial centers, especially London.

Intracorporate Financing

Funding for international operations can also be obtained from within the firm's network of subsidiaries and affiliates. Where some units at times are cash rich, others are cash poor and need capital. Consequently, members of the MNE family—both headquarters and subsidiaries—can provide financing to one another. **Intracorporate financing** refers to funds provided from sources inside the firm in the form of equity, loans, and trade credits. Trade credit arises when a supplier of goods and services grants the customer the option to pay at a later date.

There are several advantages associated with the practice of MNEs loaning funds to their foreign subsidiaries. First, because interest payments are often tax deductible, the borrowing subsidiary's income tax burden is reduced. Second, an intracorporate loan has little effect on the parent's balance sheet when financial results are consolidated into the parent's financial statements, because the funds are simply transferred from one area of the firm to another. Third, a loan within the MNE may save transaction costs (fees charged by banks to exchange foreign currencies and transfer funds between locations) of borrowing funds from banks. Finally, a loan avoids the ownership-diluting effects of equity financing.

As an example, IBM's global financing division invests in international financing assets and obtains and manages international debt, all aimed at supporting IBM's global operations. The division provides loan financing to internal users for terms generally between two and five years. It provides inventory and accounts receivable financing to IBM's dealers and subsidiaries in various countries.¹⁷



Task Three: Working Capital and Cash Flow Management

Recall that *working capital* refers to the current assets of a company. *Net working capital* is the difference between current assets and current liabilities. As part of working capital management, firms manage all current accounts, such as cash, accounts receivable, inventory, and accounts payable. An important component of working capital management in the MNE is cash flow management, which ensures that cash is available where and when it is needed. Cash flow needs arise from everyday business activities, such as paying for labor and materials

or resources, servicing interest payments on debt, paying taxes, or paying dividends to shareholders. Cash is generated from various sources, including the sale of goods and services, and often needs to be transferred from one part of the MNE to another. International finance managers devise various strategies for transferring funds within the firm's worldwide operations in order to optimize global operations.

The number of sources of intracorporate transfers is a function of the number of subsidiaries, alliances, and business relationships worldwide. For firms with extensive international operations, the network of potential intracorporate fund transfers is both vast and complex. For example, the 2002 bankruptcy of the energy giant Enron resulted, in part, from the enormous amount of debt that management had hidden in the firm's various subsidiaries worldwide. Remarkably, roughly a third of world trade results from the collective trading activities represented within the MNE network, composed of the headquarters and its subsidiaries. In other words, a considerable proportion of world trade is the result of intracorporate transfers.

Methods for Transferring Funds within the MNE

For MNEs with extensive international operations, like Siemens, Johnson & Johnson, and Kyocera Corporation, intracorporate fund transfers are very important. Financial managers must be aware of the different methods of transferring funds within the MNE so that they can move funds most efficiently, minimizing transaction costs and tax liabilities while maximizing the returns that can be earned with those funds.

MNEs employ a variety of systems for cross-national funds movement. This is illustrated in Exhibit 19.4, which depicts a typical firm with subsidiaries in Mexico and Taiwan. Within its network, this firm can transfer funds through trade credit, dividend remittances, royalty payments, fronting loans, transfer pricing, and multilateral netting. Here is how each works:

- Through *trade credit*, a subsidiary can defer payment for goods and services received from the parent company. Credit terms tend to be longer in foreign markets, compared to the United States. Where the 30-day credit is the norm in the United States, 90-day credit is more typical in Europe, with even longer terms elsewhere.
- *Dividend remittances* are a common method for transferring funds from foreign subsidiaries to the parent, but vary for each subsidiary depending on factors such as tax levels and currency risks. For instance, some host governments levy high taxes on dividend payments, which discourages

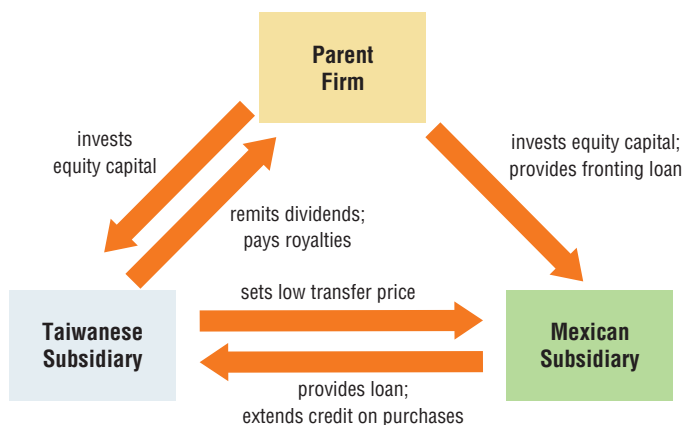


Exhibit 19.4

Typical Methods for Transferring Funds Within the MNE

MNEs from using this approach. Governments can also limit how much MNEs can remit.

- *Royalty payments* are remuneration paid to the owners of intellectual property, as we saw in Chapter 15. Assuming the subsidiary has licensed technology, trademarks, or other assets from the parent or other subsidiaries, royalties can be an efficient way to transfer funds. Also, because they may be viewed as an expense, royalties are tax deductible in many countries. A parent MNE can collect royalties from its own subsidiaries as a way of generating funds.
- A **fronting loan** is a loan between the parent and its subsidiary, channeled through a large bank or other financial intermediary. Using this approach, the parent deposits a large sum in a foreign bank, which then transfers the funds to the subsidiary in the form of a loan. Fronting allows the parent to circumvent restrictions that foreign governments impose on direct intracorporate loans. For one, if the loan is made through a bank in a **tax haven**—a country hospitable to business and inward investment because of its low corporate income taxes—the parent can minimize taxes that might otherwise be due if the loan were made directly. In addition, while some countries restrict the amount of funds that can be transferred abroad within the MNE in order to preserve foreign exchange, such restrictions usually do not apply to the repayment of bank loans.
- *Transfer pricing* (also known as *intracorporate pricing*) refers to prices that subsidiaries and affiliates charge one another as they transfer goods and services within the same MNE. As you will recall from Chapter 17, firms can use transfer pricing to shift profits out of high-tax countries into low-tax countries, minimize foreign exchange risks, for example, by moving funds out of countries where a currency devaluation is forecast, and optimize the management of internal cash flows.¹⁸ Keep in mind the drawbacks of transfer pricing, however, as we discussed in Chapter 17.¹⁹

Multilateral netting, another method of funds transfer within the MNE, requires a more detailed discussion, which we provide next.

Multilateral Netting

In the past, cash usually was held in each foreign subsidiary that was responsible for funding its own short-term needs. However, MNE managers increasingly understand the value of concentrating the firm's financial operations at some central location, known as a *centralized depository*. Using a method known as *pooling*, MNEs bring together surplus funds into either regional or global depositories. They then direct these funds to needful subsidiaries or invest the funds to generate income.

A centralized depository provides several advantages. First, by pooling funds in a central location, managers can reduce the size of highly liquid accounts and use the funds in longer-term investments that can provide higher returns. Second, interest rates on large deposits are normally higher than rates for small investments. Third, if the depository is based in a financial center (for example, London, New York, Sydney, or Toronto), then management can more easily access a variety of financial instruments for short-term investments that pay higher rates of return. Finally, the depository centralizes expertise and financial services, providing more benefits to the firm's subsidiaries than they can provide for themselves.

Large MNEs carry out numerous international transactions within their network of subsidiaries. Each transaction generates transaction costs. For example,

Fronting loan A loan between the parent and its subsidiary, channeled through a large bank or other financial intermediary.

Tax haven A country hospitable to business and inward investment because of its low corporate income taxes.

suppose a firm's Japanese subsidiary owes the Spanish subsidiary \$8 million and, simultaneously, the Spanish subsidiary owes the Japanese subsidiary \$5 million. The firm could handle these outstanding balances in separate transactions, by having the Japanese subsidiary pay \$8 million to the Spanish subsidiary, and the Spanish subsidiary pay \$5 million to the Japanese subsidiary. A more intelligent solution, however, would be to reduce transaction costs by having the Japanese subsidiary make a net payment of \$3 million to the Spanish subsidiary. In this way, the remaining debt is canceled by transferring an amount that is considerably less than either of the two original amounts, with a commensurate reduction in transactions costs such as fees and delays in funds transfers.

Accordingly, **multilateral netting** refers to the strategic reduction of cash transfers within the MNE family through the elimination of offsetting cash flows. It involves three or more subsidiaries that hold accounts payable or accounts receivable with one other subsidiary. MNEs with numerous subsidiaries usually establish a netting center that headquarters supervises. For example, Philips, a leading Dutch consumer electronics firm, has operating units in some 60 countries. Philips has a netting center to which subsidiaries regularly report all intracorporate balances on the same date. The center subsequently advises each subsidiary of the amounts to pay and receive from other subsidiaries on a specified date. Philips avoids considerable transaction costs because of multilateral netting.

Multilateral netting Strategic reduction of cash transfers within the MNE family through the elimination of offsetting cash flows.

Task Four: Capital Budgeting

The major decisions in international business include which foreign markets to enter and what to accomplish in each market. Firms must decide whether to invest in ventures as diverse as launching a major exporting effort, acquiring a distribution center, building a new factory, or refurbishing industrial equipment. Since firms have limited resources, they cannot afford to invest in every project that comes their way. The purpose of *capital budgeting* is to help managers decide which international expansion projects are economically desirable.

The ultimate decision to accept or reject an investment project depends on the project's initial investment requirement, its cost of capital, and the amount of incremental cash flow or other advantages that the proposed project is expected to provide. Internationally, such decisions are complex, because managers must consider many variables, each of which can strongly affect the potential profitability of a venture. For example, when doing the capital budgeting for locating foreign restaurants in the fast food industry, managers consider such variables as the cost of alternative locations and the level of local competition, as well as the effect on projected revenue of the distance to highways, availability of public transportation, and the amount of traffic at each location.²⁰

Net Present Value Analysis of Capital Investment Projects

Managers typically employ net present value (NPV) analysis to evaluate international capital investment projects. NPV is the difference between the present value of a project's incremental cash flows and its initial investment requirement.²¹

Four special considerations complicate international capital budgeting for financial managers

This McDonald's franchise is in Wuhan, China. MNEs such as McDonald's conduct capital budgeting to determine which foreign locations are economically desirable. Managers account for various cost and revenue factors, including land prices, personnel development, marketing costs, and the amount of traffic at each location.



of an MNE. First, project cash flows are in a currency other than the reporting currency of the parent firm. Second, tax rules in the locality of the project and in the parent's country may be significantly different. Third, there may be limitations to the transfer of funds from the foreign project to the parent company. Finally, the project may be exposed to country or political risks above and beyond its regular business risk (which may include high inflation or adverse shifts in exchange rates).

To address these complexities, managers rely on one of two different approaches. One approach in the NPV analysis of a multinational project is to estimate the incremental after-tax operating cash flows in the local currency of the subsidiary and *then* discount them at the project's cost of capital, which is the required rate of return from the project, appropriate for its risk characteristics. If the NPV is positive, then the project is expected to earn its required return in the subsidiary's country and add value to the subsidiary. This approach is called the *project's perspective* in capital budgeting, and managers can use it as a first screen for evaluating the acceptability of an international capital investment project.²²

Another approach, called the *parent's perspective* in capital budgeting, involves estimating the future cash flows from the project that will eventually be repatriated to the parent company. Using this approach requires managers to convert the expected cash flow values to the *functional currency* of the parent—that is, the currency of the primary economic environment in which it operates. Thus, for U.S.-based firms the functional currency is the U.S. dollar; for Japan-based firms the functional currency is the yen. This conversion involves forecasting *spot exchange rates*, or forward rates, and calculating their present value using a discount rate in line with the required return on projects of similar risk. Managers can then compute the NPV in the parent's functional currency by subtracting the initial investment cash flow from the present value of the project cash flows. For a project to be eventually acceptable, it must add value to the parent company, and therefore should have a positive NPV from the parent's perspective. NPV analysis is widely used in evaluating international capital investment projects.

Estimating project cash flows is complex and requires forecasting a range of variables that contribute to anticipated revenues and costs, often several years into the future. For most firms, the largest component of revenue will be from sales. Initial and ongoing costs typically include R&D, development of essential project resources, personnel, factor inputs, and marketing.



Task Five: Currency Risk Management

Recall Markel, the firm featured in the opening vignette. Shifting currency values are among the greatest day-to-day challenges facing firms like Markel. Therefore, a major task facing firms is managing currency risk—the risk of adverse unexpected fluctuations in exchange rates. Exporters and licensors face currency risk because foreign buyers typically pay in their own currency. Foreign direct investors face currency risk because they receive both payments and incur obligations in foreign currencies. Managers of foreign investment portfolios face currency risk as well; for example, a Japanese stock might gain 15 percent in value, but if the yen falls by 15 percent, the stock gain is eliminated. Moreover, currency crises usually affect other local asset prices as well, including debt, equipment, and real estate markets. Even smaller Mexican companies were affected by the collapse of the Mexican peso in the mid-1990s. Firms in Indonesia, Malaysia, and Thailand were hurt by the collapse of local currencies in the Asian financial crisis.²³

Changes in the value of a currency result from a significant increase or decline in demand for the currency relative to its supply, or a significant increase or decline in supply of the currency relative to its demand. Declining demand causes

the value of the currency, and hence its purchasing power, to fall on world markets. When demand for the currency falls, its value depreciates.

Firms face exposure to currency risk when their cash flows and the value of their assets and liabilities change as a result of unexpected changes in foreign exchange rates. If the firm could quote its prices and get paid in its home-country currency, then from its perspective, currency risk would be eliminated. However, the risk would still exist for foreign customers. To accommodate foreign buyers, many firms like Markel quote their prices in the currency of the buyer. To cope with the resulting exposure to currency risk and potential losses, these firms then monitor and attempt to forecast the movement of exchange rates. In other words, in an international transaction, either the buyer or the seller incurs a currency risk.

Three Types of Currency Exposure

Currency fluctuations result in three types of exposure for the firm: transaction exposure, translation exposure, and economic exposure.²⁴ **Transaction exposure** refers to currency risk that firms face when outstanding accounts receivable or payable are denominated in foreign currencies. Suppose that Gateway imports three million Taiwan dollars' worth of computer keyboards and pays in the foreign currency. At the time of the initial purchase, suppose that the exchange rate was US\$1 = T\$30, but that Gateway pays on credit terms of 3 months after the purchase. If during the 3-month period the exchange rate shifts to US\$1 = T\$27, Gateway will have to pay an extra US\$11,111 as a result of the rate change ($[(3,000,000/27) - (3,000,000/30)]$). From Gateway's standpoint, the Taiwan dollar has become more expensive. Such gains or losses are real: they affect the firm's value directly by affecting its cash flows.

Translation exposure is the currency risk that results when an MNE translates financial statements denominated in a foreign currency into the functional currency of the parent firm, as part of consolidating international financial results. It results from exchange rate fluctuations that negatively affect the financial results of a firm with extensive international operations.

MNEs with multicountry operations consolidate financial results in order to generate organization-wide reports. **Consolidation** is the process of combining and integrating the financial results of foreign subsidiaries into the financial records of the parent firm. Accounting practices also require the firm to report consolidated financial results in the functional currency.

Translation exposure occurs because, as exchange rates fluctuate, so do the functional-currency values of exposed assets, liabilities, expenses, and revenues. Translating quarterly or annual foreign financial statements into the parent's functional currency results in gains or losses on the date when foreign financial statements are consolidated into those of the parent. For example, when translated into the dollar, the quarterly net income of the Japanese subsidiary of a U.S. MNE may be affected negatively if the Japanese yen depreciates against the dollar during the quarter. It should be noted that in the case of translations, the gains or losses are "paper" or "virtual"; translation exposure does not affect cash flows directly. In contrast, in the case of transactions, the gains and losses are real.

Economic exposure (also known as *operating exposure*) is the currency risk that results from exchange rate fluctuations affecting the pricing of products, the cost of inputs, and the value of foreign investments. Economic exposure is the risk that exchange rate fluctuations will distort or diminish long-term financial results. When a firm prices its products, exchange rate fluctuations help or hurt sales by making those products relatively more or less expensive from the standpoint of foreign buyers. For example, if the yen appreciates against the euro, then a European firm can expect to sell more goods in Japan because the Japanese have

Transaction exposure The currency risk that firms face when outstanding accounts receivable or payable are denominated in foreign currencies.

Translation exposure The currency risk that results when a firm translates financial statements denominated in a foreign currency into the functional currency of the parent firm, as part of consolidating international financial results.

Consolidation The process of combining and integrating the financial results of foreign subsidiaries into the financial statements of the parent firm.

Economic exposure The currency risk that results from exchange rate fluctuations affecting the pricing of products, the cost of inputs, and the value of foreign investments.

stronger buying power when purchasing euros. But if the yen weakens against the euro, then the European firm's sales will likely drop in Japan unless management lowers its Japanese prices by an amount equivalent to the fall in the yen. Similarly, when sourcing inputs, the firm may be harmed by currency shifts that raise the price of those inputs. The value of foreign investments can also fall, in home currency terms, with exchange rate changes.

Economic exposure is distinct from transaction exposure. Transaction exposure involves the effect of exchange rate fluctuations on ongoing contractual transactions.²⁵ Economic exposure involves the effect of exchange rate fluctuations on long-term profitability resulting from changes in revenues and expenses. These effects appear in the firm's financial statements. For instance, the weakening of the U.S. dollar relative to the euro in the early 2000s gradually reduced the value of U.S. investments in Europe, increased the cost of Euro-denominated input goods, but improved the prospects for U.S. firms to sell their dollar-denominated products in the EU.

The three types of currency exposure we discussed can also produce positive results when the relevant exchange rate fluctuates in the direction favorable to the firm. However, as a manager, you are more concerned with fluctuations that produce undesirable outcomes. The existence of such problems explains why most member countries in the European Union use a single currency, the euro. With a single medium of exchange, currency risk is eliminated. For international firms operating outside the euro zone, however, currency risk is still a significant problem.

Foreign Exchange Trading

Centuries ago, people used only a few precious metals, such as gold and silver, as a medium of exchange as well as reserve currencies. In 2006, two Swedish farmers digging holes on a farm in Gotland—an island off the Swedish coast—discovered a pile of 10th-century silver coins, weighing about seven pounds. The silver coins were minted in Baghdad, Iraq—about 2,100 miles from Sweden—and apparently served as a source of currency for Vikings.²⁶ Today, a relatively limited number of currencies still facilitate cross-border trade and investment. Some two-thirds of foreign reserves are in U.S. dollars, 25 percent in euros, 7 percent in yen and British pounds, and only 2 percent in the world's remaining 150 national currencies.

What is different today is the sheer volume of currencies that are exchanged as well as the speed with which these transactions can be consummated. As of 2007, some \$3 trillion worth of currency is traded every day.²⁷ To put things in perspective, this figure is 10 times the value of daily stock and bond turnover, and a hundred times the value of daily goods and services trade. A third of all currency trading, about \$1 trillion per day, takes place in London.

Also impressive is the computerized nature of foreign exchange trade. Consider the UBS, one of the world's largest investment banks, based in Switzerland, that offers a range of currency-related products. The bank's clients transact nearly all their spot, forward, and currency-swap trades online using UBS's leading-edge computer platforms in dozens of countries. Technology allows customers in remote areas to enjoy the currency trading services that until recently were accessible only in large cities via big banks.²⁸ Citibank leverages its comprehensive customer portal—CitiFX Interactive—to provide clients a wide range of services, including library research, currency trading, and ana-

About \$3 trillion worth of currency is traded every day. Computer technology has spurred the speed of trades. In 2005, Indian finance Minister P. Chidambaram (right) launched the issue of on-line payment of Central Excise and Service Tax through the Internet portals of various banks during a conference with Cherian Varghese, Chairman and Managing Director of the Union Bank of India (left).



lytical tools. Online bill payment is increasingly important to executives and others who frequently travel abroad.²⁹

Large banks are the primary dealers in the currency markets, and they quote the prices at which they will buy or sell currencies. For example, if an importer wishes to buy \$100,000 of euros to finance a purchase from Austria, the currency exchange will typically be handled through the importer's bank. Large banks such as Citibank maintain reserves of major currencies and work with foreign correspondent banks to facilitate currency buying and selling. Currency transactions between banks occur in the *interbank market*.

Currency also can be bought and sold through brokers that specialize in matching up buyers and sellers. Currency traders are especially active in major financial centers such as London, New York, Frankfurt, and Tokyo. Trading is also increasingly conducted through online brokers and dealers at sites such as www.openforex.com and Everbank (www.everbank.com).

The foreign exchange market uses a specialized terminology to describe the functions that currency dealers perform. The **spot rate** is the exchange rate applicable to the trading of foreign currencies in which the current rate of exchange is used and delivery is considered "immediate." It is the exchange rate obtainable for immediate receipt of a currency. The spot rate applies to transactions between banks for delivery within 2 business days, or immediate delivery for over-the-counter transactions involving nonbank customers—for example, when you buy currencies at airport kiosks.

The **forward rate** refers to the exchange rate applicable to the collection or delivery of foreign currencies at some future date. It is the exchange rate quoted for future delivery of a currency. The forward rate is a contractual rate between the currency dealer and the dealer's client. Dealers in the forward exchange market deal in promises to receive or deliver foreign exchange at a specified time in the future, but at a rate determined at the time of the transaction. The primary function of the forward market is to provide protection against currency risk.

Dealers quote currency exchange rates in two ways. The **direct quote** is the number of units of the domestic currency needed to acquire one unit of the foreign currency, also known as the *normal* or *American quote*. For example, on September 21, 2007, it cost \$1.41 to acquire one euro. The **indirect quote** is the number of units of the foreign currency obtained for one unit of the domestic currency (also known as the *reciprocal* or *European/Continental terms*). For example, "for 1 dollar, I can receive 0.71 euros."³⁰

You may have observed at airports, for example, that when foreign-exchange dealers quote prices, they always quote a *bid* (buy) rate and an *offer* (sell) rate at which they will buy or sell any particular currency. The difference between the bid and offer rates—the *spread*—is the margin on which the dealer earns a profit.

Types of Currency Traders

There are three main types of currency traders: hedgers, speculators, and arbitrageurs. **Hedgers** seek to minimize the risk of exchange rate fluctuations, often by buying forwards or similar financial instruments. Hedgers typically include MNEs and other firms whose main business is international trade or investment. They are not necessarily interested in profiting from currency.

Speculators refer to currency traders who seek profits by investing in currencies with the expectation that they will rise in value in the future. Speculators seek to make a profit from currency trading by predicting future shifts in a currency's value. For example, they may buy a currency today whose value they expect to rise at some future time. A speculator might purchase a certificate of deposit denominated in Mexican pesos or a money market account tied to the Chinese

Spot rate The exchange rate applicable to the trading of foreign currencies in which the current rate of exchange is used and delivery is considered immediate.

Forward rate The exchange rate applicable to the collection or delivery of a foreign currency at some future date.

Direct quote The number of units of the domestic currency needed to acquire one unit of the foreign currency (also known as the normal or American quote).

Indirect quote The number of units of the foreign currency obtained for one unit of the domestic currency (also known as the reciprocal or European/Continental terms).

Hedgers Currency traders who seek to minimize the risk of exchange rate fluctuations, often by buying forwards or similar financial instruments.

Speculators Currency traders who seek profits by investing in currencies with the expectation that they will rise in value in the future.



Major foreign currency rates are displayed in a trading room in Tokyo. Successful cross-national operations require skillful currency management.

yuan, believing that the value of these currencies will rise in the future. The speculator can also bet on the downside of a currency; this would be considered short selling. Speculators attempt to profit from forecast changes in prices through time, and take risks in the process because the future spot prices are unknown.

Arbitragers are currency traders who buy and sell the same currency in two or more foreign-exchange markets to take advantage of differences in the currency's exchange rate. They trade in foreign-exchange markets to generate profits. But unlike the speculator who bets on the future price of a currency, the arbitrageur attempts to profit from a current disequilibrium in currency markets based on known prices. For example, if the euro-dollar exchange rate quoted in New York on Monday morning is $\text{€}1 = \$1.25$, but the quoted exchange-rate in London at that moment is $\text{€}1 = \$1.30$, a trader could make a profit by buying $\text{€}1$ million for \$1.25 million in New York, and then simultaneously selling those euros in London for \$1.3 million, yielding a riskless profit of \$50,000 on the sale, before commission and expenses. Don't get too excited, however! When such arbitrage opportunities exist, they quickly disappear as the very actions of the arbitrageurs force the exchange rates to adjust to the equilibrium level. Arbitrage opportunities in today's markets typically involve exotic positions in illiquid contracts, such as

credit derivatives in emerging markets, and are seldom true arbitrage because they involve some risk. Such risky positions are sometimes called risk arbitrage.

Exchange Rate Forecasting

A loss incurred due to fluctuating exchange rates is a common international business occurrence. In the 1980s, for example, the Japanese automotive company Subaru manufactured nearly all of its vehicles in Japan, despite the fact that three-quarters of its sales were in the United States. Subsequently, between 1985 and 1987, the Japanese yen appreciated almost 50 percent against the dollar. This caused the dollar price of Subaru cars to rise substantially, and Subaru's U.S. sales fell off.³¹ Hence, an important objective of managers is to protect against currency risk. The first step managers take is to forecast movements in exchange rates.

Initially, the financial manager needs to be aware of the trends in factors that influence currency fluctuations. He or she also needs to monitor currency trading daily, paying particular attention to the potential for herding behavior and momentum trading. Herding is the tendency of investors to mimic each others' actions. Momentum trading is accomplished via computers that are programmed to conduct massive buying or selling when prices reach certain levels. For example, the massive sell-off of the Mexican peso in 1995 was anticipated by forecasters in 1994, following indications that the Mexican government could no longer support the currency's artificially high value. In most countries, exchange rates respond immediately to economic information, such as the election of a new government, labor disputes, and major supply shocks (for example, as when oil-exporting countries suddenly announce a drop in supply). Accurate forecasting also requires managers to assess the likely actions of foreign-exchange traders.

Arbitragers Currency traders who buy and sell the same currency in two or more foreign-exchange markets to take advantage of differences in the currency's exchange rate.

Firms with extensive international operations develop sophisticated in-house capabilities to forecast exchange rates. These operations combine in-house forecasting with reports provided by major banks and professional forecasters. For example, Citibank provides services to help customers with forecasting and the development of risk-minimization strategies. Banks and firms rely on *technical analysis* to analyze recent movements in exchange rates and *fundamental analysis* to analyze evolving macroeconomic data.

SMEs usually lack the resources to do substantial in-house forecasting. They rely on forecasts provided by banks and from business news sources. For example, each weekly issue of the *Economist* features a table that describes recent historical trends of major exchange rates. Other information sources are available online: the Bank for International Settlements (www.bis.org), the World Bank (www.worldbank.org), and the European Central Bank (www.ecb.int).

Management of Exposure to Currency Risk through Hedging

Suppose you decided to buy a Toyota at a local car dealership. The dealer insists that you pay in Japanese yen. You would hesitate to buy the car, partly because of the need to acquire yen, and partly because alternative dealers let you pay in your own currency. All around the world, customers prefer to deal in their own currency. If firms insist on quoting prices and getting paid in their own currency, then the burden is placed on foreign buyers to monitor and manage foreign exchange. As revealed in the opening vignette case of Markel, to remain competitive, even small exporters must learn to operate in foreign currencies. In so doing, however, they must also learn how to minimize their exposure to currency risk.

The most common method for managing exposure is *hedging*, which refers to efforts to compensate for a possible loss from a bet or investment by making offsetting bets or investments. In international business, **hedging** refers to using financial instruments and other measures to reduce or eliminate exposure to currency risk. Hedging allows the firm to limit potential losses by locking in guaranteed foreign exchange positions. If the hedge is perfect, the firm is protected against the risk of adverse changes in the price of a currency. Banks offer various financial instruments, such as forward contracts, options, and swap agreements to facilitate hedging.

Hedging entails various costs, such as bank fees and interest payments on the amounts borrowed to carry the hedging transactions. The firm must balance these costs against the expected benefits. In addition, the firm can use active or passive hedging strategies. In *passive hedging*, each exposure is hedged as it occurs and the hedge stays in place until maturity. In *active hedging*, total exposure is reviewed frequently and the firm only hedges a subset of its total exposures, usually those that pose the greatest potential harm. Hedges may be withdrawn before they reach maturity. Some active hedgers seek to profit from hedging, even to the point of maintaining active in-house trading desks. Most firms, however, are conservative in their approach. They simply try to cover all exposures—or their most important ones—and the hedges stay in place until maturity. They do not try to generate profits from speculation.

Hedging Instruments Once managers have assessed the level of currency exposure and determined which exposure is critical, they can hedge against potential exchange rate changes. Using various financial instruments, the firm attempts to establish a balanced position in which exposed assets equal exposed liabilities. The four most common hedging instruments are described next.

Forward Contracts. A **forward contract** is a financial instrument to buy or sell a currency at an agreed-upon exchange rate at the initiation of the contract for future delivery and settlement. In the forward market, trades are made for future delivery at an agreed-upon date and an agreed-upon price on the day of the hedging

Hedging Using financial instruments and other measures to reduce or eliminate exposure to currency risk.

Forward contract A financial instrument to buy or sell a currency at an agreed-upon exchange rate at the initiation of the contract for future delivery and settlement.

transaction. Until the delivery date, no money changes hands. Banks quote forward prices in the same way as spot prices—with bid and ask prices at which they will buy or sell currencies. The bank's bid-ask spread is a cost for its customers.

Forward contracts are especially appropriate for hedging transaction exposure. For example, suppose that Dow Chemical sells merchandise to a German importer for €100,000, payable in 90 days. Because of the time interval involved in getting paid, Dow has a transaction exposure to currency risk. That is, if the euro depreciates during the 90-day period, Dow will receive fewer dollars. To hedge against this risk, Dow enters into a forward contract with a bank to sell €100,000, 90 days from now, at an exchange rate agreed upon today, ensuring that it receives a known dollar amount in the future. There will be a gain or loss resulting from a forward contract, but it is known up front when the contract is signed.

Futures contract An agreement to buy or sell a currency in exchange for another at a prespecified price and on a prespecified date.

Futures Contracts. Similar to a forward contract, a **futures contract** represents an agreement to buy or sell a currency in exchange for another at a prespecified price and on a prespecified date. One difference between a forward contract and a futures contract is that the latter is standardized to enable trading in organized exchanges, such as the Chicago Mercantile Exchange (CME). While the terms of forward contracts are negotiated between a bank and its customer, futures contracts come in standardized maturity periods and contract sizes. For example, a CME British pound futures contract has a contract size of £62,500 and matures in the months that are in the March quarterly cycle (March, June, September, and December). Futures contracts are especially useful for hedging transaction exposure.

Currency option A contract that gives the purchaser the right, but not the obligation, to buy a certain amount of foreign currency at a set exchange rate within a specified amount of time.

Currency Options. A **currency option** differs from forwards and futures in that it gives the purchaser the right, but not the obligation, to buy a certain amount of foreign currency at a set exchange rate within a specified amount of time. The seller of the option must sell the currency at the buyer's discretion, at the price originally set. Currency options typically are traded on organized exchanges, such as the Philadelphia Stock Exchange (PHLX). As such, they are available only for the major currencies.

There are two types of options. A *call option* is the right, but not the obligation, to buy a currency at a specified price within a specific period (called an American option) or at a specific date (called a European option).³² A *put option* is the right to sell the currency at a specified price. Each option is for a specific amount of currency. For example, on a recent date, Australian dollar option contracts were offered with a contract size of 50,000 Australian dollars each on the PHLX. Options are useful as an insurance policy or disaster hedge against adverse currency movements.

Currency swap An agreement to exchange one currency for another, according to a specified schedule.

Currency Swaps. A **currency swap** involves the exchange of one currency for another currency according to a specified schedule. The two parties agree to exchange a given amount of one currency for another and, after a specified period of time, to give back the original swapped amounts. Thus, a swap is a simultaneous spot and forward transaction. When the agreement is activated, the parties exchange principals at the current spot rate. Usually each party must pay interest on the principal as well. For instance, if Party A loaned dollars and borrowed euros, Party A pays interest in euros and receives interest in dollars. At a future date, the original principal amounts are returned to the original holders. Consider the following example. An agreement by an MNE to pay 4 percent compounded annually on a euro principal of €1,000,000 and receive 5 percent compounded annually on a U.S. dollar principal of \$1,300,000 every year for 2 years constitutes a currency swap. As a result of this agreement, the MNE will receive €1,000,000 and pay \$1,300,000 today. It will then pay €40,000 annual interest and receive \$65,000 annual interest for 2 years. At the end of the second year, the MNE will receive \$1,300,000 and pay €1,000,000.

Best Practice in Minimizing Currency Exposure

Managing currency risk across many countries is challenging because management must keep abreast of the firm's evolving exposures, as well as shifting laws, regulations, and market conditions. Managers need to pursue a systematic approach in order to minimize currency risk.

Exhibit 19.5 presents guidelines managers can use to minimize currency risk. The last recommendation, one of maintaining strategic flexibility in manufacturing and sourcing, is an ultimate solution. To the extent that the firm operates in a portfolio of markets, each with varying degrees of currency, economic, and political stability, it can then attempt to optimize its operations. For example, in terms of optimizing its sourcing activities, Compaq Computer has secondary suppliers for all its critical input components in multiple countries. When the need arises, management can quickly shift production from one country to another. Similarly, Dell outsources inputs from various countries and can emphasize certain suppliers over others, depending on the favorability of exchange rates and other factors.



Task Six: Manage the Diversity of International Accounting and Tax Practices

In international business, firms have to record the transactions and list the assets and liabilities related to each operation. Developing accounting systems to identify, measure, and communicate this financial information is

1. **Seek expert advice.** Initially, management should get expert help from banks and consultants to establish programs and strategies that minimize risk.
2. **Centralize currency management within the MNE.** While some currency management activities may be delegated to local managers, company headquarters should set basic guidelines for the subsidiaries to follow.
3. **Decide on the level of risk the firm can tolerate.** The level varies depending on the nature of the project, amount of capital at risk, and management's risk tolerance.
4. **Devise a system to measure exchange rate movements and currency risk.** The system should provide ongoing feedback to facilitate the timely development of appropriate risk-minimizing strategies.
5. **Monitor changes in key currencies.** Exchange rates fluctuate constantly. Continuous monitoring of currency rates can avert potentially costly mistakes.
6. **Be wary of unstable currencies or those subject to exchange controls.** The manager should deal in stable, readily convertible currencies. Be wary of government restrictions that affect the ability to exchange currencies that, in turn, affect the value of assets, liabilities, income, and expenses.
7. **Monitor long-term economic and regulatory trends.** Exchange rate shifts usually follow evolving trends such as rising interest rates, inflation, labor unrest, and the coming to power of new governments.
8. **Distinguish economic exposure from transaction and translation exposures.** Managers often focus on reducing transaction and translation exposures. However, the long-run effects of economic exposure on company performance can be more detrimental.
9. **Emphasize flexibility in international operations.** A flexible production and outsourcing strategy means the firm can shift production and outsourcing to various nations. For example, in the long run, management might shift production to countries with currencies that are weak compared to the home-country currency.

Exhibit 19.5

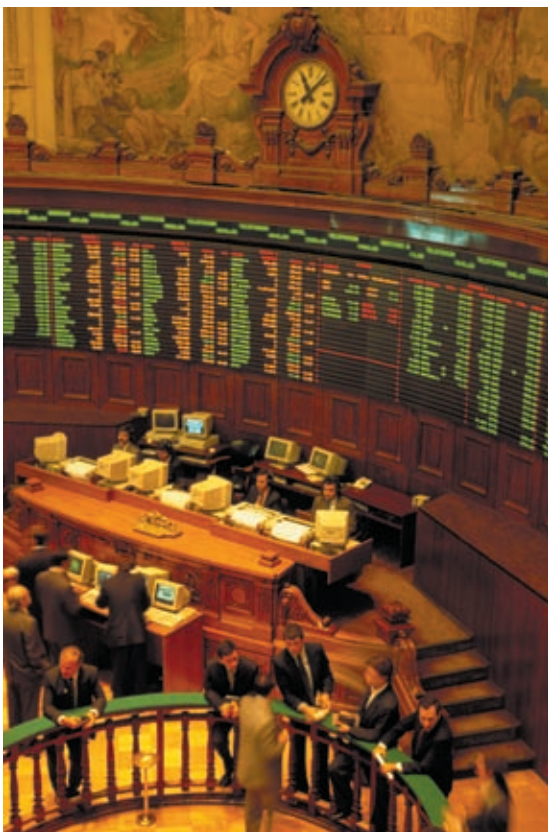
Managerial Guidelines for Minimizing Currency Risk

especially challenging in multicountry operations where substantial variations in accounting systems exist. As an example, there are dozens of approaches for determining the cost of goods sold, return on assets, R&D expenditures, net profits, and other outcomes in different countries.³³ Balance sheets and income statements vary internationally, primarily with regard to language, currency, format, and the underlying accounting principles that are applied or emphasized. Financial statements prepared according to the rules of one country may be difficult to compare with those prepared in another country.

Transparency in Financial Reporting

Transparency The degree to which companies regularly reveal substantial information about their financial condition and accounting practices.

The Sarbanes-Oxley Act of 2002 has increased CEO and CFO responsibility to ensure the accuracy of their annual reports. Pictured here is the stock exchange in Santiago, Chile, one of several countries that have strengthened their accounting regulations.



Local accounting practices determine the degree of transparency in the reporting of financial information. **Transparency** is the degree to which companies regularly reveal substantial information about their financial condition and accounting practices. The more transparent a nation's accounting systems, the more regularly and comprehensively the nation's public firms report their financial results to creditors, stockholders, and the government in a reliable manner. Transparency is important because it improves the ability of investors to accurately evaluate company performance, thereby improving managerial decision making. Chile, Costa Rica, Hungary, and the Czech Republic are examples of the numerous countries that have attracted greater FDI by enhancing their regulatory environments, resulting in reduced uncertainty. In many developing and emerging market economies, the accounting systems have low transparency, financial statements may not become available until many months after the relevant accounting period, and published information may be incomplete or unreliable.

In the United States, The Sarbanes-Oxley Act of 2002 was enacted to rein in accounting and managerial abuses among corporations and investors. The Act emerged in the wake of accounting fraud scandals at large corporations such as Enron, Worldcom, and Tyco. Sarbanes-Oxley makes corporate CEOs and CFOs personally responsible for the accuracy of annual reports and other financial data. Foreign affiliates of U.S. firms and foreign firms with significant U.S. operations are also required to comply with the Sarbanes-Oxley provisions. In addition, government agencies are strengthening their supervision of banks and other financial intermediaries in the wake of the Asian financial crisis, Citibank's problems in Japan, and similar experiences. Banks worldwide are taking steps to increase the stability and transparency of their financial systems. Read the *Recent Grad in IB* feature for Maria Keeley's thoughts on the Sarbanes-Oxley Act.

Accounting reforms in the United States are being extended into Europe and other regions. A major challenge, however, is the cost of compliance to firms, estimated at tens of billions of dollars and millions of work hours to change or install systems for internal accounting controls in large, publicly traded firms. In an effort to avoid rigid financial requirements, some European firms are reducing their business in the United States, and several have de-registered from U.S. stock markets. European legislators, however, are moving to increase the transparency and strictness of their own accounting standards.³⁴

Trends toward Harmonization

The growth of international trade and investment has pressured multinational firms and international organizations such as the International Accounting Standards Board (IASB), the United

> RECENT GRAD IN IB

Maria Keeley



In college, Maria Keeley spent a year in Spain and served as the president of her university's international business club. She majored in Finance, International Business, and Spanish. Following graduation, she took a job as a credit analyst with Motorola (www.motorola.com), a leading manufacturer of cell phones and other wireless handsets. In her first job, Maria used analytical, problem solving, and communication skills that she developed in college to serve Motorola clients and subsidiaries in Central and South America and Mexico.

At Motorola, Maria carried out analyses to assess risk levels of various customers and countries. She performed account maintenance and managed accounts receivables for the Latin America personal communications division. She conducted audits of Motorola subsidiaries for compliance with established controls and procedures. These duties required Maria to travel frequently to Latin America. Within her first year on the job, her responsibilities expanded and she became the primary contact for financial analysis support to northern Latin America, the Caribbean, and Central America. Her new tasks included the analysis, tracking, and reconciliation of Motorola's funds for regional marketing activities.

Eager to gain experience in Europe, Maria volunteered to transfer to Motorola's London operations. In London, she served as a finance manager in the firm's \$160 million mobile phone business for the Middle East, North Africa, and Turkey. She also sought her CIMA Certification—the British equivalent of a certified public accountant. After two years in London, Maria

was transferred to Dubai, the United Arab Emirates, as Financial Controller for Motorola's Middle East, North Africa, and Turkey region. In her new role, Maria coordinated the management of Motorola's financial activities in the Islamic world.

Lessons Learned so Far

Here are some of Maria's comments on her experience so far in the world of international financial management.

"One of the biggest challenges that I face is increased regulations—in particular, the Sarbanes-Oxley legislation, which requires stricter auditing of financial records in the wake of accounting scandals. It's critical to ensure that all of Motorola's legal entities are compliant worldwide. There are also local regulations that must be assimilated and integrated. As a result, the focus and time that I must allocate to compliance activities has greatly increased. Simultaneously, competition in the mobile devices industry is growing exponentially, and the level of support that I must provide to our sales and marketing operations needs to be enhanced as well.

"I am currently based in England. However, I support a big region with multiple time zones and work schedules. The work week in the Middle East varies from Saturday to Thursday, or from Sunday to Friday. Due to time differences, the region starts the day at least 3 hours before the United Kingdom. In order to ensure that business decisions are not held up, I respond to requests quickly and make myself accessible. This means I am often on the phone

Maria's majors: Finance, International Business, and Spanish

Objectives: Obtain a law degree and move into the executive suite at Motorola or other multinational firm

Jobs held since graduating college:

- Credit Analyst, Motorola, U.S.
- Finance Manager, Motorola, U.K.
- Financial Controller, Motorola, United Arab Emirates

with colleagues in the Middle East at 6 A.M. London time.

"In the region that I supervise, the spoken languages are French (North Africa), Arabic (Middle East), and Turkish (Turkey). Although I'm currently studying Arabic, I still am unable to carry a business conversation in Arabic, and only manage to use my Spanish while visiting a particular distributor in Morocco that is partially owned by Telefonica (www.telefonica.com), Spain's telecom provider. Luckily, most of our business partners speak English.

"There is definitely a disadvantage to not speaking the local language. In Turkey, for instance, some of our business partners do not speak English and, as a result, I rely on the sales team to translate conversations. There is definitely a drawback to receiving important information secondhand. Even when colleagues speak fluent English, particularly in North Africa, there is a tendency to revert to their most comfortable language, in this case French. When I go to lunch with

business associates in Morocco or Algeria, for instance, the parties will revert to their most comfortable language and it is almost never English.

“Much of the Islamic world has specific norms for women, who usually do not participate in professional business activities. To my surprise, I am pleased that people generally treat me with respect. Only occasionally, usually during the first encounter, will a business partner entirely disregard me in a business meeting. I have found that, if I establish myself as a knowledgeable professional, people in the Middle East generally treat me as well as they do their male colleagues.

“There is one last cultural difference that puts me at a disadvantage: being a non-smoker in countries where people still smoke a lot. Most

of the debriefing after a challenging meeting or conference call happens during cigarette breaks. Given the relaxed atmosphere, the parties are more likely to discuss issues in a candid manner. It is not culturally acceptable for a nonsmoker to join, because the purported reason for the break is to smoke, and if you don’t smoke it would appear that you were just wasting time from work. Nevertheless, I’m not willing to take up smoking just to be more effective in my job. It is a cultural difference that I accept.”

Maria’s Advice for an International Business Career

When asked what qualities have contributed most to her success,

she replies “hard work, having a deliberate career strategy, and cultivating relationships with helpful people both when I was in college and in the professional world. One thing I would say to college students today is that you really have to plan. Set goals for yourself and then work hard to meet them.”

What's Ahead?

As for the future, Maria hopes to obtain a law degree and then gradually move into the executive suite at Motorola or some other multinational firm. But having a career, especially an international one, is still challenging these days for women who also want to start a family. Maria Keeley is up to the task and looks forward to fulfilling both her career and personal goals.

Nations, the European Union, and the Asociación Interamericana de Contabilidad to harmonize world accounting systems, particularly regarding measurement, disclosure, and auditing standards. For example, the IASB has been working to develop a single set of high-quality, understandable, and enforceable global accounting standards that emphasize transparent and comparable information.

The IASB favors harmonization for a number of reasons. First, it increases the comparability and transparency of accounting practices, which enhances reliability of foreign financial statements. Second, it helps reduce the cost of preparing financial statements. Third, it increases the efficiency of consolidating financial information from various countries. Fourth, it facilitates investment analysis for both investors and managers, which reduces risk for investors and helps managers make better decisions.

Harmonization is particularly important to MNEs that seek to attract potential foreign investors by listing on foreign stock exchanges. Imagine that you are managing a European firm that wishes to list on the NYSE. While the idea makes sense, the process of producing and reporting your financial statement according to the U.S. Generally Accepted Accounting Practices (GAAP), as required by the U.S. Securities and Exchange Commission (SEC), is a costly and time-consuming bureaucratic ordeal. In Europe, you have been using the International Financial Reporting Standards (IFRS), which now have been adopted by more than 100 countries. A remarkable milestone was reached early in 2007 when the SEC announced that it will no longer require foreign firms to reconcile their accounts to the U.S. system, beginning with the 2009

fiscal year.³⁵ Indeed, the two organizations on both sides of the Atlantic, Europe's IASB and the U.S. Financial Accounting Standards Board, had been working closely over the previous six years for the convergence of the two systems. The next ambitious goal is to permit U.S. companies that operate globally to file only under the IFRS.

Consolidating the Financial Statements of Subsidiaries

A special challenge in international accounting is *foreign currency translation*—translating data denominated in foreign currencies into the firm's functional currency. It is a critical task, because the financial records of subsidiaries are normally maintained in the currencies of the countries where the subsidiaries are located. When the results of the subsidiaries are consolidated into headquarters' financial statements, they must be expressed in the parent's functional currency. Top management also undertakes translation to plan, evaluate, integrate, and control overseas activities.

When headquarters consolidates foreign financial records, it uses one of two methods to translate foreign currencies into the parent's functional currency: the current rate method and the temporal method. By using the **current rate method**, all foreign currency balance sheet and income statement items are translated at the current exchange rate—the spot exchange rate in effect on the day (in the case of balance sheets), or for the period (in the case of income statements), the statements are prepared. This method is typically used when translating records of foreign subsidiaries that are considered separate entities, rather than part of the parent firm's operations. Consider the case of Computershare Limited, an Australian firm that markets financial software through its worldwide network of subsidiaries. The company translates the financial statements of its subsidiaries using the current rate method, because these subsidiaries are considered stand-alone legal entities. Amounts payable and receivable in foreign currencies are converted to Australian dollars at the exchange rate in effect on the day of consolidation.³⁶

One feature of the current rate method is that it results in gains and losses, depending on the exchange rates in effect during the translation period. For instance, the value of income received in a foreign currency six months earlier may differ substantially from its value on the day it is translated. For firms with extensive international operations, the accounting translation method can strongly influence company performance. As mentioned earlier, in the case of translations, the gains or losses are “paper,” or “virtual,” while in the case of transactions, they are real. Nevertheless, paper gains or losses affect the valuation of a firm.

With the **temporal method**, the choice of exchange rate depends on the underlying method of valuation. If assets and liabilities are normally valued at historical cost, then they are translated at the historical rates—that is, the rates in effect when the assets were acquired. If assets and liabilities are normally valued at market cost, then they are translated at the current rate of exchange. Thus, monetary items such as cash, receivables, and payables are translated at the current exchange rate. Nonmonetary items such as inventory and property, plant, and equipment are translated at historical rates.

According to U.S. accounting standards, if the functional currency of the subsidiary is that of the local operating environment (for example, if the yen is the main currency used by the Japanese subsidiary of a U.S. multinational firm), the company must use the current rate method. If the functional currency is the parent's currency, the MNE must use the temporal method. The choice of method can give rise to very different profitability and other performance outcomes, and firms must adhere to accepted accounting practices and laws.

Current rate method

Translation of foreign currency balance sheet and income statements at the current exchange rate—the spot exchange rate in effect on the day, or for the period when the statements are prepared.

Temporal method Translation of foreign currency balance sheet and income statements at an exchange rate that varies with the underlying method of valuation.

International Taxation

In cross-border business, taxes include direct taxes, indirect taxes, sales taxes, and value-added taxes. A *direct tax* is imposed on income derived from business profits, intracorporate transactions, capital gains, and sometimes royalties, interest, and dividends. The tax may also be imposed on the acquisition or sale of real estate and other assets. An *indirect tax* applies to firms that license or franchise products and services or who charge interest. In effect, the local government withholds some percentage of royalty payments or interest charges as tax. A *sales tax* is a flat percentage tax on the value of goods or services sold, paid by the ultimate user. A *value-added tax* (VAT) is payable at each stage of processing in the value chain of a product or service. VAT is calculated as a percentage of the difference between the sale and purchase price of a good. This tax is common in Canada, Europe, and Latin America. Each business in the value chain involved in the production of a good is required to bill the VAT to its customers and pay the tax on its purchases, crediting the amounts it paid against the amounts due on its own activities. The net result is a tax on the added value of the produced good.

The most common form of direct tax is the *corporate income tax*. Exhibit 19.6 provides corporate income tax rates for a sample of countries. Called “corporation tax” in some localities, corporate income tax is a major factor in international planning because it encourages managers to organize business operations in ways that minimize this tax. Firms can usually reduce the amount of tax by deducting business expenses from the revenues that they earn. Thus, income tax influences the timing, magnitude, and composition of company investment in plant and equipment, R&D, inventories, and other business assets. As you can gather from the Exhibit, the recent trend in many countries has been toward falling tax rates, because governments recognize that high taxes can discourage investment.³⁷ For example, the corporate income tax rate in Russia has decreased from 43 percent to 24 percent. In Canada, the rate has decreased from 42 percent to 36 percent. Ireland has the lowest income tax rate, 13 percent—one of the pillars of its economic revitalization policy in the 1980s and 1990s.

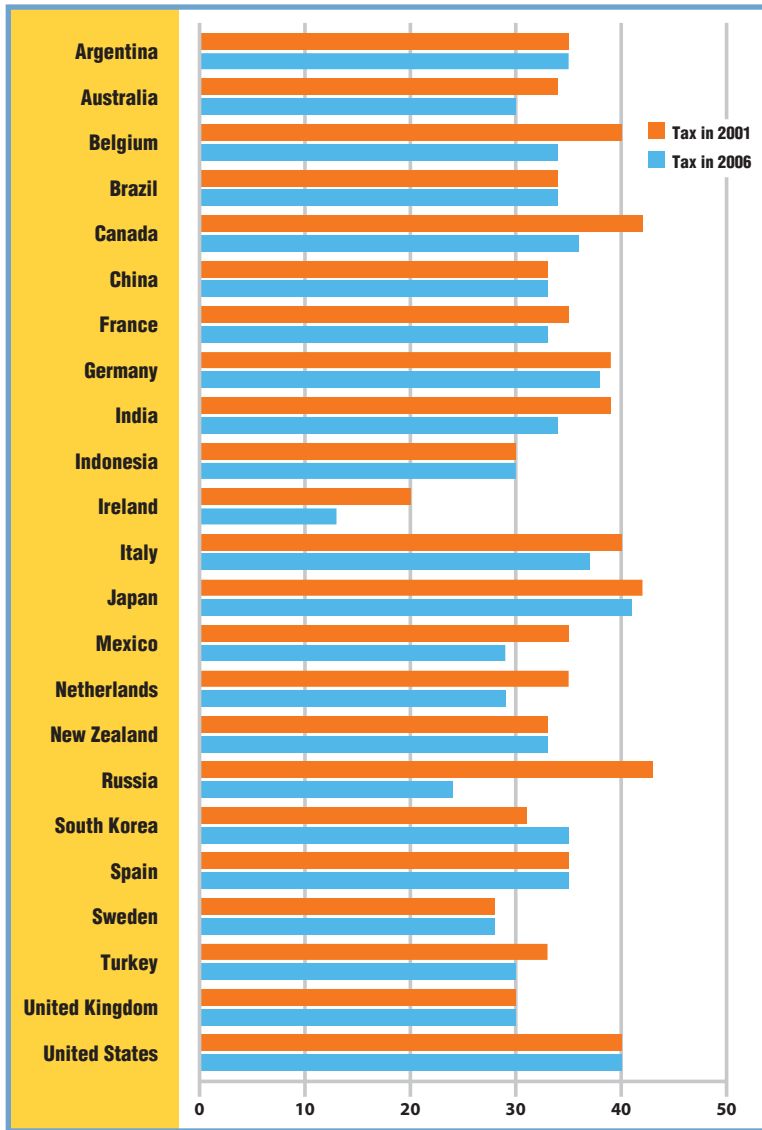
Historically, companies that earned income in more than one country would have been required to pay direct taxes in each country on the same earnings. Because multiple taxation reduces company earnings, and may even eliminate profitability, most countries have signed tax treaties with their trading partners that help ensure firms pay the appropriate taxes. A typical tax treaty between country A and country B states that, if the firm pays income tax in A, it need not pay the tax in B, if they are similar in amount. If it pays income tax in B, it need not pay the tax in A. This is often accomplished with a system of foreign tax credits—a type of automatic reduction in tax liability that the firm receives when it can prove that it has already paid income tax abroad. Alternatively, the firm may be liable to pay tax in each country, but the amount is prorated so that the total tax paid is no more than the maximum tax in either of the two countries. Tax treaties also usually obligate nations to assist each other in tax enforcement; that is, assuring that international firms pay taxes in one country or the other. In this way, tax treaties help prevent tax evasion.

Tax Havens As discussed earlier, tax havens are countries that are hospitable to business and inward investment because of their low corporate income taxes. Among the many tax havens worldwide are the Bahamas, Luxembourg, Monaco, Singapore, and Switzerland. Tax havens exist in part because tax systems vary greatly around the world. MNEs have an incentive to structure their global activities in ways that minimize taxes. MNEs take advantage of tax havens either by establishing operations in them or by funneling business transactions through them. For example, Accenture, a management consultancy operating in dozens of countries, moved its headquarters to Bermuda to minimize its U.S. tax obliga-

Exhibit 19.6

Corporate Income Tax Rates Around the World (as a percent of corporate income, rounded to the nearest whole percent)

SOURCE: Table reprinted from KPMG's *Corporate Tax Rate Survey: An International Analysis of Corporate Tax Rates from 1993 to 2006*. Copyright © 2006 KPMG International. KPMG International is a Swiss cooperative of which all KPMG firms are members. KPMG International provides no services to clients. Each member firm is a separate and independent legal entity and each describes itself as such. All rights reserved. Printed in U.S.A. Reprinted with permission of KPMG International.



tions. Similarly, the U.S. oil firm Halliburton announced in 2007 that it would move its corporate headquarters to Dubai, one of the United Arab Emirates known for its business friendly environment and tax incentives. While the use of tax havens is generally legal, governments often pass laws that restrict their use. For instance, the U.S. government imposed restrictions on the ability of firms to move major operations to tax havens.³⁸ When employed appropriately, tax havens are a legal means for reducing income taxes. Their use will likely continue as long as substantial differences in tax rates persist among nations. Corporations sometimes use tax havens to “park” revenues until needed somewhere else for trade or investment purposes.

The Organization for Economic Cooperation and Development (OECD), World Bank, and other international organizations discourage the wrongful use of tax havens by lobbying countries to develop transparent tax systems. The EU and OECD also pressure countries to reduce harmful tax competition. In Europe, for example, foreign investors tend to establish operations in countries with low taxes, and avoid countries with high taxes. Because this tendency can harm greater European unity and economic development, the EU wants to minimize tax differences and increase transparency.

Managing International Finance to Minimize Tax Burden While domestic tax systems are usually complex, dealing with taxes in several countries simultaneously is much more challenging. In the long run, taxation affects managerial decisions regarding the location of foreign investments, type of entry modes used, the legal form of foreign operations, approaches to transfer pricing, methods for obtaining capital, and even the choice of target markets.

Financial managers seek to minimize international taxes. For example, in the beer industry in Japan, the government imposes high taxes on malt, a key brewing ingredient. The malt tax is one of the highest in the world, roughly 20 times greater than in Europe. Accordingly, foreign firms that brew beer in Japan have begun to employ a new distillation technology for making beer that eliminates the need for malt. The end product tastes like beer, but is actually a type of liquor. Occasionally, governments may create tax breaks on income earned abroad. For example, in the United States, the American Jobs Creation Act of 2005 provided a one-time opportunity for U.S. MNEs to repatriate foreign subsidiary earnings at the maximum rate of 5.25 percent, instead of the typical 35 percent. It was estimated that as much as \$300–\$350 billion were repatriated in 2005–2006.

Many of the techniques for transferring funds within the MNE and company management of currency exposure described in this chapter are useful for minimizing the firm's tax burdens as well. For example, minimizing taxes is typically the main goal of transfer pricing strategies. MNEs benefit from a strategy that takes advantage of differences in taxation rates and systems between countries. MNEs establish holding companies or finance corporations in particular countries or operate in government designated low-tax zones (Foreign Trade Zones) within countries. The MNEs structure their production and selling activities in ways that minimize their tax obligations. As long as taxes reduce company profitability, and as long as substantial tax differences exist among nations, firms will develop strategies that aim to minimize tax obligations.



International Financial Operations at Tektronix

An oscilloscope is a measuring device with a display screen that checks the condition of electronic equipment. In 1946, the founders of United States-based Tektronix, Inc. built their first oscilloscope out of electronic parts purchased from government surplus sales. TEK, as Tektronix is known to employees and customers, went public in 1963. The firm is now the world's largest maker of oscilloscopes and the second largest maker of test and measurement equipment. TEK's oscilloscopes and other measuring devices have contributed immensely to the development of computers and communications equipment.

TEK employs several thousand employees in about 30 countries worldwide. The firm receives roughly half its sales from North America, 25 percent from Europe, 15 percent from Japan, and the rest from other countries. Total annual sales now exceed \$1 billion per year. TEK owes part of its original success to venture capital funding. However, the great majority of its capital comes from equity financing, with additional capital from debt sources. The firm's stock is listed on the New York Stock Exchange under the symbol TEK.

International Operations

TEK launched its first foreign distributor in Sweden in 1948. In later years, the firm set up many sales subsidiaries abroad. It developed joint ventures in Japan (with Sony, called "Sony-Tek") and in China to distribute TEK products in those countries. It also established manufacturing plants in Germany, Italy, and Malaysia. However, TEK still manufactures some three-quarters of its products in the United States. By contrast, TEK competitor Hewlett Packard has manufacturing plants in some 20 countries. Other major TEK competitors—Xerox, and Kodak,—similarly have multiple manufacturing plants around the world. TEK management prefers to centralize manufacturing, as this optimizes quality control and provides economies of scale and the opportunity to synchronize production with R&D.

Because TEK does most of its manufacturing in the United States and gets more than half its sales from abroad, the firm has substantial foreign exchange exposure. For instance, the yen-dollar exchange rate has experienced big swings after multigovernment intervention in the mid-1980s succeeded in strengthening the Japanese currency. Most of TEK's foreign sales are invoiced in local currencies. So when the U.S. dollar strengthens against other currencies, TEK's profits take a hit when revenues are converted into dollars. When sales are denominated in dollars, prices can become prohibitively expensive for foreign customers. TEK also

sources many inputs from abroad, which creates currency risks in its accounts payable.

In addition, for financial accounting, almost all of TEK's non-U.S. subsidiaries use their local currencies as the functional currency. Thus, assets and liabilities are translated into U.S. dollars at end-of-period exchange rates. Income and expense items are translated at the average rate during the accounting period. To minimize currency risk, management has to deal proactively with transaction, translation, and economic exposures.

Tax-Related Decisions

One goal of every MNE is to minimize domestic and foreign taxes while avoiding too much government scrutiny. In recent years, however, foreign tax authorities have been aggressively monitoring the intracompany pricing policies of multinationals doing business in their respective jurisdictions to ensure that relevant tax revenues stay on their home turf. Countries such as Australia, France, Canada, Germany, Japan, Mexico, and the United Kingdom have increased their tax audits of foreign firms.

To help address these and other tax challenges, TEK devised a long-term tax strategy. For its European operations, all treasury functions, including cash management, inventory, and receivables are centralized to TEK's subsidiary in England. The approach creates efficiencies in TEK's financial activities and simplifies tax preparation. In addition, worldwide pricing for TEK's thousands of products and components are set by the parent company in the United States. The goal is to lower TEK's global tax rate, which had been running at 32 percent in the past. The new structure also enhances TEK's ability to use foreign tax credits.

Currency Risk Management

TEK uses currency hedging on a selective basis rather than a 100 percent hedging approach. Financial managers hedge specific currency exposures to minimize the effect of harmful exchange rate fluctuations. But not all risks can be hedged, because of the cost of banking fees and interest charges. As a result, TEK has experienced big foreign exchange losses in the past. To help minimize these losses, management has established a unit at headquarters responsible for assessing and managing currency risk. TEK managers obtain intelligence from online sources and the forecasting departments of large banks. They monitor changes in key currencies on a regular basis. Among the approaches that TEK has used to minimize risk are multilateral netting, offsetting cash flows, a centralized depository, forward contracts, and currency options.

Multilateral Netting

TEK has many ongoing transactions with and among its various subsidiaries. The firm's financial managers can strategically reduce the number of cash transfers between these entities by eliminating offsetting cash flows between headquarters and the subsidiaries. This approach helps reduce transaction costs, such as bank charges. TEK performs a monthly multilateral netting process to minimize exposures. Specifically, all subsidiaries report to headquarters what is owed in foreign currencies to other subsidiaries, customers, suppliers, and to headquarters itself. Financial managers then advise each subsidiary how much to pay other subsidiaries in a way that minimizes the overall number and amount of intersubsidiary cash transfers. Management also matches hedging instruments with the firm's most pressing currency exposures. The netting process helps reduce the cost and hassle of dealing with many small internal transfers of cash. Fortunately, the 2002 launch of the euro greatly simplified international transactions and reduced the need for some netting operations.

Offsetting Cash Flows

Whenever possible, management consolidates accounts receivable and accounts payable, matching them against one another. For example, if TEK owes a French supplier 800,000 euros, it can grant a trade credit in the amount of 800,000 euros to a German customer, making the receivable and payable both offset each other in the same currency. TEK also has some flexibility to change the invoicing currency of its subsidiaries and affiliates—for example, by having some invoices from its Japan subsidiary denominated in yen instead of dollars. Offsetting cash flows is also accomplished with counterbalanced investments in Asia and Europe, as well as skillful transfer pricing and other types of intracorporate financing activities. For instance, if headquarters wants to spend \$1 million to establish a new subsidiary in Europe, it will request existing European subsidiaries to retain a similar amount of their earnings in euros. Then, instead of converting the foreign earnings into U.S. dollars, TEK uses the retained euro earnings to build the new subsidiary.

Centralized Depository

TEK centralizes management of currency risk at company headquarters. While some currency management is delegated to local managers, headquarters in the United States is in charge and sets basic guidelines for the subsidiaries to follow. Management pools funds into centralized depositories and directs these funds where needed to subsidiaries or invests them to generate income. Management also pools accounts receivable for some European subsidiaries into a regional depository.

The practice makes the receipt and dispersal of cash more manageable, allows the firm to benefit from economies of scale in the investment and other uses of excess cash, and helps reduce the amount of local borrowing that European subsidiaries would normally undertake. The centralized approach also concentrates managerial expertise and financial services at a central location, which provides more benefits to the subsidiaries. Finally, TEK employs a reinvoicing center that invoices foreign subsidiaries in the local currency but receives invoices in U.S. dollars.

Forward Contracts and Currency Options

TEK hedges against currency risk by selectively taking positions in forward contracts. These instruments allow financial managers to buy or sell currency at a specific future date at an agreed-upon exchange rate; they are especially useful for hedging transaction exposure that involves large foreign amounts. In this way, whenever management is concerned about the value of a receivable in the future, it can guarantee a fixed exchange rate and minimize the possibility of currency risk. The firm also employs currency options, a contract that grants the holder the right to buy or sell currency at a specified exchange rate during a specified period of time. In addition, TEK uses currency futures contracts with maturities of 1 to 3 months to mitigate currency risk. At any given time, TEK's currency contracts can exceed \$100 million. The downside is that TEK must pay substantial trading fees and other costs for its currency hedging activities.

Other Financial Developments

A few years ago, TEK undertook a major restructuring of company operations. The sale of a major division generated proceeds of more than \$900 million. Management had to decide whether to return these funds to shareholders or pay down the firm's corporate debt. TEK's equity financing is far greater than its debt. In comparison to its equity holdings, TEK's debt is modest and quite manageable, based on expected cash flows. Management has long favored a low debt-to-equity ratio.

TEK earnings suffered in the late 1990's due to the Asian financial crisis and the associated downturn in Asian markets. Like all international firms, TEK's sales are subject to ups and downs in the economies of its major markets abroad, as well as fluctuations in the various currencies in which the firm does business. Still, TEK management has shown itself capable of weathering even the most difficult of challenges. Careful planning and implementation of financial operations will help the firm to continue to reign as the leader in oscilloscopes and other measuring equipment.

AACSB: Reflective Thinking, Analytical Skills

Case Questions

1. What are the implications for currency risk of TEK focusing its manufacturing in the United States but generating most of its sales abroad? Are competitors, such as HP, Xerox, and Eastman Kodak geographically more diversified in their sourcing activities? If so, what advantages does this create for them?
2. The case lists various approaches that TEK follows to minimize its exposure to currency risk. If you were hired by TEK, what other strategies and tactics would you recommend top management use to reduce the firm's exposure even further? Justify your answer.
3. Visit TEK's Web site at www.tektronix.com and review the summary of the company's financial data. Based on this information, does TEK's debt-to-equity ratio appear to be excessive? Do you think TEK can sustain a higher level of debt? Why or why not? What other approaches could TEK use to generate financing for its international operations?
4. The case describes approaches that TEK follows to minimize its international tax liability. Based on your reading of the chapter, how would you advise TEK management to further reduce its taxes around the world? ◀

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CHAPTER ESSENTIALS

Key Terms

arbitrators, p. 596	eurodollars, p. 587	indirect quote, p. 595
bond, p. 588	foreign bond, p. 588	intracorporate financing, p. 588
consolidation, p. 593	forward contract, p. 597	multilateral netting, p. 591
currency option, p. 598	forward rate, p. 595	speculators, p. 595
currency swap, p. 598	fronting loan, p. 590	spot rate, p. 595
current rate method, p. 603	futures contract, p. 598	tax haven, p. 590
debt financing, p. 582	global bond market, p. 588	temporal method, p. 603
direct quote, p. 595	global capital market, p. 582	transaction exposure, p. 593
economic exposure, p. 593	global equity market, p. 584	translation exposure, p. 593
equity financing, p. 582	global money market, p. 582	transparency, p. 600
eurobond, p. 588	hedgers, p. 595	
eurocurrency, p. 587	hedging, p. 597	

Summary

In this chapter, you learned about:

1. Primary tasks in international financial management

International financial management involves the acquisition and use of funds for cross-border trade and investment activities. Participants include firms, banks, and brokerage houses. Managers such as Chief Financial Officers (CFOs) organize financial activities inside the

focal firm. CFOs decide on the firm's capital structure, raise capital, manage working capital and cash flows, do capital budgeting, manage currency risk, and deal with diverse accounting and tax practices.

2. How firms set up their international capital structure from equity and debt

The *capital structure* is the mix of long-term financing—**equity financing** and **debt financing**—that

the firm uses to support its international activities. Equity financing is obtained by selling shares in stock markets and by retaining earnings. Debt financing is obtained by borrowing money from banks and other financial institutions or by selling bonds.

3. How financial managers raise capital to fund international value-adding activities and investment projects

Companies can raise money in the **global capital market**. Equity financing can be obtained in the **global equity market**—the stock exchanges throughout the world where investors and firms meet to buy and sell shares of stock. In terms of debt financing, firms may borrow in the **Eurocurrency market**, which uses currency banked outside its country of origin. Firms also sell bonds—often **foreign bonds** or **Eurobonds**—in the **global bond market**. MNEs can also support the operations of their subsidiaries through **intracorporate financing**.

4. The management of working capital and cash flow for international operations

Net working capital is the difference between current assets and current liabilities. Firms often manage intracorporate funds by developing a *centralized depository*, into which funds are pooled from the firm's network of subsidiaries and affiliates to distribute to units that need funds. There are various methods for transferring funds within the MNE, including *dividend remittances*, *royalty payments*, *transfer pricing*, and *fronting loans*. A **fronting loan** is a loan from a parent firm to its subsidiary, channeled through a bank or other financial intermediary. **Multilateral netting** is the process of strategically reducing the number of cash transfers between the parent and subsidiaries by eliminating the offsetting cash flows between these entities.

5. Capital budgeting: decision-making on international capital expenditures

Capital budgeting rests on analyses that management undertakes to evaluate the viability of proposed international projects. Management calculates the *net present value* of a proposed project to decide whether it should be implemented.

6. Currency risk: exposure, forecasting, and management

There are three main types of currency exposure: transaction exposure, economic exposure, and translation exposure. A firm faces **transaction exposure** when outstanding accounts receivable or payable are denominated in foreign currencies. **Economic exposure** results from exchange rate fluctuations affecting the pricing of products, the cost of inputs, and the value of foreign investments. **Translation exposure** arises as the firm combines the financial statements of foreign subsidiaries into the parent's financial statements, a process called **consolidation**. Currency trading takes place between banks and currency brokers, often on behalf of multinational firms. Currency traders include **hedgers**, **speculators**, and **arbitragers**. Managers attempt to forecast exchange rates to minimize their firm's exposure to currency risk. They rely on various analyses and information technology to predict the future value of currencies. There are various approaches for minimizing exposure to currency risk, including centralizing currency management, measuring currency risk, monitoring long-term trends, and emphasizing flexibility in international operations. A key tool for minimizing exposure to currency risk is **hedging**, which is the use of specialized financial instruments to balance positions in foreign currencies. Key hedging tools include **forward contracts**, **futures contracts**, **currency options**, and **currency swaps**.

7. Managing international accounting practices and taxation issues

Financial statements prepared in one country may be difficult to compare with those prepared in another country. Accounting practices are based on one of several models. Through **transparency**, firms regularly and comprehensively reveal reliable information about their financial condition and accounting practices. Various factors account for differences in national accounting systems. Several international organizations are seeking to harmonize cross-national accounting practices. Managers use the **current rate method** and the **temporal method** for currency translation. Internationally, firms seek to minimize taxes, which consist of direct taxes, indirect taxes, sales taxes, and value-added taxes. Governments use two major methods for eliminating multiple taxation: the foreign tax credit and tax treaties. **Tax havens** are countries with low taxes that are friendly to business and inward investment.

Test Your Comprehension AACSB: Reflective Thinking

1. What international financial management tasks should managers handle on a long-term basis?
2. What are the components of the capital structure in the typical MNE? What about MNEs in Japan? What about a typical firm in your country?
3. From a managerial perspective, what are the advantages and disadvantages of financing obtained from each of the following: equity, debt, and intra-corporate sources?
4. Suppose you had to raise capital to fund international value-adding activities and investment projects. From what types of sources (e.g., stock markets) would you most likely obtain each type of financing? What are financial centers and where are they located?
5. What are the major tasks involved in managing working capital and cash flow for international operations?
6. What are the major steps involved in capital budgeting? For what types of ventures do international managers typically need to engage in capital budgeting?
7. What are the types of currency exposure? Why is currency exposure potentially harmful to the firm's international operations? How can managers go about forecasting currency exposure? What steps could you take to minimize currency exposure?
8. Who are the major players involved in foreign-exchange trading?
9. What are the major methods for translating foreign-currency denominated financial statements into the financial statements of the parent firm?
10. As an international tax consultant to an MNE, what steps would you take to minimize tax obligations around the world?

Apply Your Understanding AACSB: Reflective Thinking, Analytical Skills

1. Marite Perez is CEO of Havana, Inc., a large manufacturer of high-tech medical equipment, based in North Miami Beach, Florida. The firm makes vital signs monitors, MRIs, X-ray machines, and other equipment for exploratory medical diagnostics. Marite wants to rapidly expand the firm into foreign markets. To accomplish this, she plans to invest a lot of money in developing new products and establishing production and marketing subsidiaries abroad. To whom can Marite possibly turn in order to raise capital for these projects? What is the relevance of various methods of raising capital (e.g., equity financing, debt financing, and intracorporate financing) for her firm? What are the advantages and disadvantages associated with each?
2. Michael Norton is the president of Liberty Enterprises, a large MNE based in Singapore that makes computers and related peripherals. The firm has many subsidiaries around the world. Demand for Liberty's products has been growing in Asia and Europe, especially in Indonesia, Japan, France, and Spain. Michael has always used external sources to finance the firm's working capital needs. Currently, with rapidly expanding business, he needs to access more working capital. What is the feasibility of raising funds through intracorporate sources? What should Michael know about the process of multilateral netting?
3. Emi Aoki, the treasurer at a major Canadian MNE, considers dealing with foreign currencies as one of the biggest challenges of her job. She uses a lead or lag strategy to minimize transaction and translation currency risks. If the particular foreign currency is expected to weaken, Emi's firm tries to collect foreign-currency receivables before they are due (a lead strategy), and pay foreign-currency payables late (a lag strategy). If the foreign currency is expected to strengthen, she attempts to delay receiving receivables and speed up payables. If Emi's firm is operating in a high-inflation country, then she tries to collect receivables early. How sound is this strategy? To what extent is the strategy feasible?
4. You have just returned from a seminar on doing business in developing countries. Many of these countries are suffering from weak currencies. One of the suggestions you heard is to keep cash and receivables to a minimum when currency depreciation is expected. In a weak-currency situation, you are advised to remit cash from subsidiaries to the parent as rapidly as possible or invest it locally in assets that can appreciate in value, such as real estate. Similarly, your local subsidiary in such a country should confine its dealings to the local currency as much as possible, minimizing the need to translate it into other currencies. To the extent that the cost of local debt is not excessive, the subsidiary may obtain needed capital from local sources. Evaluate these two guidelines for minimizing currency exposure.

AACSB: Reflective Thinking, Analytical Skills

Refer to Chapter 1, page 27, for instructions on how to access and use globalEDGE™.

1. The *World Federation of Exchanges* is the organization that represents major stock exchanges around the world. Visit the online portal at: www.world-exchanges.org and use the annual report of the Federation as well as detailed statistics available on individual exchanges to answer the following questions:
 - a. What percentage of the world market capitalization is represented by the top 10 exchanges?
 - b. For the most recent year, what exchanges accounted for the largest increases in market capitalization?
 - c. Which exchanges have seen the greatest increase over the recent past in the number of firms that are listed?
 - d. Worldwide consolidation trends have also affected the stock exchanges. A good example is the merger of Paris-based Euronext with the NYSE. What are the underlying causes of these cross-border mergers?
2. Suppose your job is to ensure that your firm has enough foreign exchange on hand to pay outstanding accounts payable. Assume your firm owes 1,000,000 yen to a Japanese supplier, which is due exactly 60 days from now. Your task is to exchange dollars for the right amount of yens. To do this, you can enter a contract with a bank today to buy 1,000,000 yen 60 days forward, or wait 60 days and buy 1,000,000 yen at the then-prevailing spot exchange rate. Which alternative do you prefer, and why? If you expect that the spot rate 60 days from now will be the same as the spot rate today, what is the expected dollar cost of buying 1,000,000 yen in the spot market 60 days from now? How many dollars will it cost you to obtain 1,000,000 yen if you entered the forward contract? You can use the following online sites to obtain the spot exchange rates: go to www.ft.com and click on "market data, currencies," or go to globalEDGE™ and enter "exchange rates" in the search engine.
3. Many corporate Web sites provide financial information (including financial statements), as well as other information about companies' status and progress. As an institutional investor, you are thinking of investing in one of the following firms: Diageo (www.diageo.com), the premium drinks firm; Vivendi (www.vivendi.com), a French telecom; Grupo Carso (www.gcarso.com.mx), a major Mexican retailing conglomerate and SK Telecom (www.sktelecom.com), the largest wireless communication services provider in South Korea. Look up each firm's corporate Web site. Based on the information provided, answer the following questions:
 - a. How would you rate the transparency of each firm?
 - b. How inclined are you to invest in each firm, based on the information provided? Justify your answer.
 - c. In terms of transparency and investor-oriented information, which site is best?
 - d. Based on the best site, what recommendations would you make to the firm that owns the weakest site to improve its transparency and attract investors?



Understanding Currencies: Big Macs and Dell Computers

There are more than a hundred currencies in use worldwide, most of which fluctuate daily due to a wide range of macroeconomic and political conditions. In today's integrated global economy, dealing with foreign currencies requires managers to forecast currency values and proactively manage currency risk. Currency risk dramatically affects the revenues and expenses of firms. The problem is especially acute for accounts payable, accounts receivable, and other assets and obligations that endure for more than a few weeks.

AACSB: Reflective Thinking, Use of Information Technology

Managerial Challenge

Properly forecasting currency values and managing currency risk are essential activities for the international firm. The management challenge is to assess the relative cost of identical Dell computer models across a number of countries using the *Economist's* "Big Mac" Index of currency values.

Background

Currency values fluctuate in response to many interacting factors. In this C/K/R Management Skill Builder®, you will work with the *Economist's* Big Mac Index of currency values. The index tracks the prices of McDonald's Big Mac hamburgers, produced in 120 countries. It is a useful gauge of international pricing because Big Macs are one of the relatively few goods that are available almost everywhere. Another widely available product is Dell computers. In this exercise, you will assess the relative cost of identical Dell computer models across a number of countries using the Big Mac Index.

Managerial Skills You Will Gain

In this C/K/R Management Skill Builder®, as a prospective manager, you will:

1. Learn about the "real" value of international currencies.
2. Understand the difference between foreign prices interpreted via exchange rates and interpreted via purchasing power parity.

3. Learn about translating and dealing with foreign currencies.
4. Interpret prices expressed in Purchasing Power Parity terms.
5. Examine factors in addition to simple market forces that influence currency values.
6. Explore different currencies around the world.

Your Task

Your task is to recreate the Big Mac Index, using the price of a single model of Dell computers. You will pick several countries and replicate the table found on the C/K/R Knowledge Portal® by accessing an exchange rate table and Web sites for Dell computers worldwide. At each Dell Web site the local price is given for various computer models. Generally, Dell sells the same computer models worldwide.

Go to the C/K/R Knowledge Portal®

www.prenhall.com/cavusgil

Proceed to the C/K/R Knowledge Portal® to obtain the expanded background information, your task and methodology, suggested resources for this exercise, and the presentation template.