



15: International Acquisitions

Multinational corporations (MNCs) commonly engage in international acquisitions as a means of penetrating a foreign market or capitalizing on lower costs of production. International acquisitions involve the identification of possible foreign targets, valuation of targets, negotiating the deal, and revising the organizational structure.

The specific objectives of this chapter are to:

- provide a background on how MNCs use international acquisitions as a form of multinational restructuring,

- explain how MNCs conduct valuations of foreign target firms,
- explain why valuations of a target firm vary among MNCs that plan to restructure by acquiring a target, and
- identify other types of multinational restructuring besides international acquisitions.

Background on International Acquisitions

An international acquisition of a firm is similar to other international projects in that it requires an initial outlay and is expected to generate cash flows whose present value will exceed the initial outlay. Many international acquisitions are motivated by the desire to increase global market share or to capitalize on economies of scale through global consolidation. U.S.-based MNCs such as Oracle Corporation, Ford Motor Co., Google, Inc., Borden, Inc., and Dow Chemical Co. have recently engaged in international acquisitions.

MNCs may view international acquisitions as a better form of direct foreign investment (DFI) than establishing a new subsidiary. However, there are distinct differences between these two forms of DFI. Through an international acquisition, the firm can immediately expand its international business since the target is already in place. Establishing a new subsidiary requires time.

EXAMPLE

Yahoo! had successfully established portals in Europe and Asia. However, it believed that it could improve its presence in Asia by focusing on the Greater China area. China has much potential because of its population base, but it also imposes restrictions that discourage DFI by firms. Meanwhile, Kimo, a privately held company and the leading portal in Taiwan, had 4 million registered users in Taiwan. Yahoo! agreed to acquire Kimo for about \$150 million. With this DFI, Yahoo! not only established a presence in Taiwan, but also established a link to mainland China. ■

When viewed as a project, the international acquisition usually generates quicker and larger cash flows than the establishment of a new subsidiary, but it also requires a larger initial outlay. International acquisitions also necessitate the integration of the parent's management style with that of the foreign target.

Trends in International Acquisitions

The volume of foreign acquisitions of U.S. firms has increased consistently since 1993. In particular, European firms have been attractive targets for U.S. firms attempting to establish a presence in Europe due to the more uniform regulations across countries in the European Union, the momentum for free enterprise in Eastern Europe, and the inception of the euro. U.S. firms acquire more targets in the United Kingdom than in any other country. British and Canadian firms are the most common non-U.S. acquirers of U.S. targets.

HTTP://

<http://www.cia.gov>
Provides a link to the *World Factbook*, which has valuable information about countries that would be considered by MNCs that may attempt to acquire foreign targets.

Model for Valuing a Foreign Target

Recall from Chapter 1 that the value of an MNC is based on the present value of expected cash flows to be received. When an MNC engages in restructuring, it affects the structure of its assets, which will ultimately affect the present value of its cash flows. For example, if it acquires a company, it will incur a large initial outlay this year, but its expected annual cash flows will now be larger.

An MNC's decision to invest in a foreign company is similar to the decision to invest in other projects in that it is based on a comparison of benefits and costs as measured by net present value. From an MNC's parent's perspective, the foreign target's value can be estimated as the present value of cash flows that it would receive from the target, as the target would become a foreign subsidiary owned by the parent.

The MNC's parent would consider investing in the target only if the estimated present value of the cash flows it would ultimately receive from the target over time exceeds the initial outlay necessary to purchase the target. Thus, capital budgeting analysis can be used to determine whether a firm should be acquired. The net present value of a company from the acquiring firm's perspective (NPV_a) is

$$NPV_a = -IO_a + \sum_{t=1}^n \frac{CF_{a,t}}{(1+k)^t} + \frac{SV_a}{(1+k)^n}$$

where

IO_a = initial outlay needed by the acquiring firm to acquire the target

$CF_{a,t}$ = cash flow to be generated by the target for the acquiring firm

k = required rate of return on the acquisition of the target

SV_a = salvage value of the target (expected selling price of the target at a point in the future)

n = time when the target will be sold by the acquiring firm

Estimating the Initial Outlay. The initial outlay reflects the price to be paid for the target. When firms acquire publicly traded foreign targets, they commonly pay premiums of between 10 and 40 percent above the prevailing stock price of the target in order to gain ownership. This type of premium is also typical for acquisitions of domestic targets. The main point here is that the estimate of the initial outlay must account for the premium since an MNC normally will not be able to purchase a publicly traded target at the target's prevailing market value.

For an acquisition to be successful, it means that the acquirer must substantially improve the target's cash flows so that it can overcome the large premium it pays for the target. Some international acquisitions backfire because the MNC overestimates the net cash flows of the target. That is, the MNC's managers are excessively optimistic when estimating the target's future cash flows, which leads them to make acquisitions that are not feasible.

The capital budgeting analysis of a foreign target must also account for the exchange rate of concern. For example, consider a U.S.-based MNC that assesses the acquisition of a foreign company. The dollar initial outlay ($IO_{U.S.}$) needed by the U.S.

firm is determined by the acquisition price in foreign currency units (IO_f) and the spot rate of the foreign currency (S):

$$IO_{U.S.} = IO_f(S)$$

Estimating the Cash Flows. The dollar amount of cash flows to the U.S. firm is determined by the foreign currency cash flows ($CF_{f,t}$) per period remitted to the United States and the spot rate at that time (S_t):

$$CF_{a,t} = (CF_{f,t})S_t$$

This ignores any withholding taxes or blocked-funds restrictions imposed by the host government and any income taxes imposed by the U.S. government. The dollar amount of salvage value to the U.S. firm is determined by the salvage value in foreign currency units (SV_f) and the spot rate at the time (period n) when it is converted to dollars (S_n):

$$SV_a = (SV_f)S_n$$

Estimating the NPV. The net present value of a foreign target can be derived by substituting the equalities just described in the capital budgeting equation:

$$\begin{aligned} NPV_a &= -IO_a + \sum_{t=1}^n \frac{CF_{a,t}}{(1+k)^t} + \frac{SV_a}{(1+k)^n} \\ &= -(IO_f)S + \sum_{t=1}^n \frac{(CF_{f,t})S_t}{(1+k)^t} + \frac{(SV_f)S_n}{(1+k)^n} \end{aligned}$$

Market Assessment of International Acquisitions

In general, announcements of acquisitions of foreign targets lead to neutral or slightly favorable stock price effects for acquirers, on average, whereas acquisitions of domestic targets lead to negative effects for acquirers, on average. The more favorable results for foreign targets are possibly attributed to the ability of acquirers to more easily capitalize on their strengths in foreign markets. For example, they may have a comparative advantage in terms of their technology or image in a foreign market where competition is not as intense as in their domestic market. The publicly traded targets almost always experience a large favorable stock price response at the time of the acquisition, which is attributed to the large premium that the acquirer is willing to pay for the target. Once international acquisitions are approved by the regulators, the MNC can acquire the target's shares.

HTTP://

<http://www.worldbank.org>
Data on socioeconomic development and performance indicators as well as links to statistical and project-oriented publications and analyses.

Assessing Potential Acquisitions after the Asian Crisis

Although the Asian crisis had devastating effects, it created an opportunity for some MNCs to pursue new business in Asia. The initial outlay for acquiring a firm in Asia was lower as a result of the crisis. First, property values in Asia had declined. Second, the parent's currency (for parents in the United States or Europe) had more purchasing power due to the weakening of the Asian currencies. Third, many firms in Asia were near bankruptcy and were unable to obtain necessary funding. Fourth, the governments in these countries were more willing to allow foreign acquisitions of local firms (especially those that were failing) as a means of resolving the crisis. Consequently, some U.S. and European firms pursued direct foreign investment in Asia during the Asian crisis.

EXAMPLE

In the first 6 months of 1998, U.S. firms invested more than \$8 billion in Asia—more than double the amount they had invested there in all of 1997. Procter & Gamble agreed to acquire Sanyong Paper (a large conglomerate in South Korea) during the crisis. Citicorp obtained a large stake in First City Bank in Thailand. ■

Firms that made acquisitions had to consider the obvious adverse effects of the crisis in their capital budgeting analysis. The lower economic growth meant that most Asian projects would generate lower cash flows, and the weak currencies reduced the amount of cash flows (in the parent's currency) that would ultimately be received as a return on the parent's investment.

To the extent that the firms believed that the Asian currency values had hit bottom and would rebound, they could assume that any new acquisitions of Asian firms would benefit from future exchange rate movements. Firms could initiate their investment in Asia by investing their home currency in exchange for the weak Asian currency. Then, if the Asian currency appreciated over time, the earnings generated there would be worth more (in terms of the parent's currency) when remitted to the parent.

Assessing Potential Acquisitions in Europe

Before the adoption of the euro, a U.S.-based MNC had to separately consider the exchange rate effects from acquiring firms in different European countries. For example, Italy's currency (the lira) was considered more likely to weaken against the dollar than some of the other European currencies, and this could affect the decision of whether to acquire an Italian firm versus a firm in Germany or France. The adoption of the euro as the local currency by several European countries has simplified the analysis for an MNC that is comparing possible target firms in those countries. The U.S.-based MNC can still be affected by future movements in the euro's value against the dollar, but those effects will occur regardless of whether the MNC purchases a firm in Italy or in any other euro zone country. Thus, the MNC can make its decision on which firm to acquire within these countries without being concerned about differential exchange rate effects. If the MNC is also considering firms in European countries that have not adopted the euro as their currency, however, it will still have to compare the potential exchange rate effects that could result from the acquisition.

GOVERNANCE

Impact of the Sarbanes-Oxley Act on the Pursuit of Targets

In response to some major abuses in financial reporting by some MNCs such as Enron and WorldCom, the Sarbanes-Oxley (SOX) Act was implemented in 2002. The SOX Act improved the process for reporting profits used by U.S. firms (including U.S.-based MNCs). The SOX Act requires firms to document an orderly and transparent process for reporting, so that they cannot distort their earnings. The SOX Act also requires more accountability for oversight by executives and the board of directors. This increased accountability has had a direct impact on the process for assessing acquisitions. Executives of MNCs are prompted to conduct a more thorough review of the target firm's operations and risk (called due diligence). In addition, the board of directors of an MNC conducts a more thorough review of any proposed acquisitions before agreeing to them. MNCs increasingly hire outside advisers (including attorneys and investment banks) to offer their assessment of proposed acquisitions. If a firm pursues an acquisition, financial information of the target is consolidated with that of the acquirer, and the acquirer must ensure that financial information of the target is accurate. ■

Factors That Affect the Expected Cash Flows of the Foreign Target

When an MNC estimates the future cash flows that it will ultimately receive after acquiring a foreign target, it considers several factors that reflect either conditions in the country of concern or conditions of the target itself.

Target-Specific Factors

The following characteristics of the foreign target are typically considered when estimating the cash flows that the target will provide to the parent.

Target's Previous Cash Flows. Since the foreign target has been conducting business, it has a history of cash flows that it has generated. The recent cash flows per period may serve as an initial base from which future cash flows per period can be estimated after accounting for other factors. Since the target firm has already been conducting business, it may be easier to estimate the cash flows it will generate than to estimate the cash flows to be generated from a new foreign subsidiary.

A company's previous cash flows are not necessarily an accurate indicator of future cash flows, however, especially when the target's future cash flows would have to be converted into the acquirer's home currency as they are remitted to the parent. Therefore, the MNC needs to carefully consider all the factors that could influence the cash flows that will be generated from a foreign target.

Managerial Talent of the Target. An acquiring firm must assess the target's existing management so that it can determine how the target firm will be managed after the acquisition. The way the acquirer plans to deal with the managerial talent will affect the estimated cash flows to be generated by the target.

If the MNC acquires the target, it may allow the target firm to be managed as it was before the acquisition. Under these conditions, however, the acquiring firm may have less potential for enhancing the target's cash flows.

A second alternative for the MNC is to downsize the target firm after acquiring it. For example, if the acquiring firm introduces new technology that reduces the need for some of the target's employees, it can attempt to downsize the target. Downsizing reduces expenses but may also reduce productivity and revenue, so the effect on cash flows can vary with the situation. In addition, an MNC may encounter significant barriers to increasing efficiency by downsizing in several countries. Governments of some countries are likely to intervene and prevent the acquisition if downsizing is anticipated.

A third alternative for the MNC is to maintain the existing employees of the target but restructure the operations so that labor is used more efficiently. For example, the MNC may infuse its own technology into the target firm and then restructure operations so that many of the employees receive new job assignments. This strategy may cause the acquirer to incur some additional expenses, but there is potential for improved cash flows over time.

Country-Specific Factors

An MNC typically considers the following country-specific factors when estimating the cash flows that will be provided by the foreign target to the parent.

Target's Local Economic Conditions. Potential targets in countries where economic conditions are strong are more likely to experience strong demand for their products in the future and may generate higher cash flows. However, some firms are more sensitive to economic conditions than others. Also, some acquisitions of firms are intended to focus on exporting from the target's home country, so the economic conditions in the target's country may not be as important. Economic conditions are difficult to predict over a long-term period, especially for emerging countries.

Target's Local Political Conditions. Potential targets in countries where political conditions are favorable are less likely to experience adverse shocks to their cash flows. The sensitivity of cash flows to political conditions is dependent on the firm's type of business. Political conditions are also difficult to predict over a long-term period, especially for emerging countries.

If an MNC plans to improve the efficiency of a target by laying off employees that are not needed, it must first make sure that the government would allow layoffs

before it makes the acquisition. Some countries offer protection of employees from layoffs, which may cause many of their firms to be inefficient. An MNC might not be capable of improving the efficiency if it is not allowed to lay off employees.

Target's Industry Conditions. Industry conditions within a country can cause some targets to be more desirable than others. Some industries in a particular country may be extremely competitive while others are not. In addition, some industries exhibit strong potential for growth in a particular country, while others exhibit very little potential. When an MNC assesses targets among countries, it would prefer a country where the growth potential for its industry is high and the competition within the industry is not excessive.

HTTP://

<http://research.stlouisfed.org/fred2>

Numerous economic and financial time series, e.g., on balance-of-payments statistics, interest rates, and foreign exchange rates.

Target's Currency Conditions. If a U.S.-based MNC plans to acquire a foreign target, it must consider how future exchange rate movements may affect the target's local currency cash flows. It must also consider how exchange rates will affect the conversion of the target's remitted earnings to the U.S. parent. In the typical case, ideally the foreign currency would be weak at the time of the acquisition (so that the MNC's initial outlay is low) but strengthen over time as funds are periodically remitted to the U.S. parent. There can be exceptions to this general statement, but the point is that the MNC forecasts future exchange rates and then applies those forecasts to determine the impact on cash flows.

Target's Local Stock Market Conditions. Potential target firms that are publicly held are continuously valued in the market, so their stock prices can change rapidly. As the target firm's stock price changes, the acceptable bid price necessary to buy that firm will likely change as well. Thus, there can be substantial swings in the purchase price that would be acceptable to a target. This is especially true for publicly traded firms in emerging markets in Asia, Eastern Europe, and Latin America where stock prices commonly change by 5 percent or more in a week. Therefore, an MNC that plans to acquire a target would prefer to make its bid at a time when the local stock market prices are generally low.

Taxes Applicable to the Target. When an MNC assesses a foreign target, it must estimate the expected after-tax cash flows that it will ultimately receive in the form of funds remitted to the parent. Thus, the tax laws applicable to the foreign target are used to derive the after-tax cash flows. First, the applicable corporate tax rates are applied to the estimated future earnings of the target to determine the after-tax earnings. Second, the after-tax proceeds are determined by applying any withholding tax rates to the funds that are expected to be remitted to the parent in each period. Third, if the acquiring firm's government imposes an additional tax on remitted earnings or allows a tax credit, that tax or credit must be applied.

Example of the Valuation Process

Lincoln Co. desires to expand in Latin America or Canada. The methods Lincoln uses to initially screen targets in various countries and then to estimate a target's value are discussed next.

International Screening Process

Lincoln Co. considers the factors just described when it conducts an initial screening of prospective targets. It has identified prospective targets in Mexico, Brazil, Colombia, and Canada, as shown in Exhibit 15.1. The target in Mexico has no plans to sell

its business and is unwilling to even consider an offer from Lincoln Co. Therefore, this firm is no longer considered. Lincoln anticipates potential political problems that could create barriers to an acquisition in Colombia, even though the Colombian target is willing to be acquired. Stock market conditions are not favorable in Brazil, as the stock prices of most Brazilian companies have recently risen substantially. Lincoln does not want to pay as much as the Brazilian target is now worth based on its prevailing market value.

Based on this screening process, the only foreign target that deserves a closer assessment is the target in Canada. According to Lincoln's assessment, Canadian currency conditions are slightly unfavorable, but this is not a reason to eliminate the target from further consideration. Thus, the next step would be for Lincoln to obtain as much information as possible about the target and conditions in Canada. Then Lincoln can use this information to derive the target's expected cash flows and to determine whether the target's value exceeds the initial outlay that would be required to purchase it, as explained next.

Estimating the Target's Value

Once Lincoln Co. has completed its initial screening of targets, it conducts a valuation of all targets that passed the screening process. Lincoln can estimate the present value of future cash flows that would result from acquiring the target. This estimation is then used to determine whether the target should be acquired.

Continuing with our simplified example, Lincoln's screening process resulted in only one eligible target, a Canadian firm. Assume the Canadian firm has conducted all of its business locally. Assume also that Lincoln expects that it can obtain materials at a lower cost than the target can because of its relationships with some Canadian suppliers and that it also expects to implement a more efficient production process. Lincoln also plans to use its existing managerial talent to manage the target and thereby reduce the administrative and marketing expenses incurred by the target. It also expects that the target's revenue will increase when its products are sold under Lincoln's name. Lincoln expects to maintain prices of the products as they are.

The target's expected cash flows can be measured by first determining the revenue and expense levels in recent years and then adjusting those levels to reflect the changes that would occur after the acquisition.

Revenue. The target's annual revenue has ranged between C\$80 million and C\$90 million in Canadian dollars (C\$) over the last 4 years. Lincoln Co. expects that it can improve sales, and forecasts revenue to be C\$100 million next year, C\$93.3 million in the following year, and C\$121 million in the year after. The cost of goods sold has been about 50 percent of the revenue in the past, but Lincoln expects it will fall to

Exhibit 15.1 Example of Process Used to Screen Foreign Targets

Target Based in:	Is the Target Receptive to an Acquisition?	Local Economic and Industry Conditions	Local Political Conditions	Local Currency Conditions	Prevailing Stock Market Prices	Tax Laws
Mexico	No	Favorable	OK	OK	OK	May change
Brazil	Maybe	OK	OK	OK	Too high	May change
Colombia	Yes	Favorable	Volatile	Favorable	OK	Reasonable
Canada	Yes	OK	Favorable	Slightly unfavorable	OK	Reasonable

40 percent of revenue because of improvements in efficiency. The estimates are shown in Exhibit 15.2.

Expenses. Selling and administrative expenses have been about C\$20 million annually, but Lincoln believes that through restructuring it can reduce these expenses to C\$15 million in each of the next 3 years. Depreciation expenses have been about C\$10 million in the past and are expected to remain at that level for the next 3 years. The Canadian tax rate on the target's earnings is expected to be 30 percent.

Earnings and Cash Flows. Given the information assumed here, the after-tax earnings that the target would generate under Lincoln's ownership are estimated in Exhibit 15.2. The cash flows generated by the target are determined by adding the depreciation expenses back to the after-tax earnings. Assume that the target will need C\$5 million in cash each year to support existing operations (including the repair of existing machinery) and that the remaining cash flow can be remitted to the U.S. parent. Assume that the target firm is financially supported only by its equity. It currently has 10 million shares of stock outstanding that are priced at C\$17 per share.

Cash Flows to Parent. Since Lincoln's parent wishes to assess the target from its own perspective, it focuses on the dollar cash flows that it expects to receive. Assuming no additional taxes, the expected cash flows generated in Canada that are to be remitted to Lincoln's parent are converted into U.S. dollars at the expected exchange rate at the end of each year. Lincoln uses the prevailing exchange rate of the Canadian dollar (which is \$.80) as the expected exchange rate for the Canadian dollar in future years.

Exhibit 15.2 Valuation of Canadian Target Based on the Assumptions Provided (in Millions of Dollars)

	Last Year	Year 1	Year 2	Year 3
Revenue	C\$90	C\$100	C\$93.3	C\$121
Cost of goods sold	<u>C\$45</u>	<u>C\$40</u>	<u>C\$37.3</u>	<u>C\$ 48.4</u>
Gross profit	C\$45	C\$60	C\$56	C\$ 72.6
Selling & administrative expenses	C\$20	C\$15	C\$15	C\$15
Depreciation	<u>C\$10</u>	<u>C\$10</u>	<u>C\$10</u>	<u>C\$10</u>
Earnings before taxes	C\$15	C\$35	C\$31	C\$47.6
Tax (30%)	<u>C\$ 4.5</u>	<u>C\$10.5</u>	<u>C\$ 9.3</u>	<u>C\$14.28</u>
Earnings after taxes	C\$10.5	C\$24.5	C\$21.7	C\$33.32
+Depreciation		C\$10	C\$10	C\$10
–Funds to reinvest		C\$5	C\$5	C\$5
Sale of firm after capital gains taxes				<u>C\$230</u>
Cash flows in C\$		C\$29.5	C\$26.7	C\$268.32
Exchange rate of C\$		\$.80	\$.80	\$.80
Cash flows in \$		\$23.6	\$21.36	\$214.66
PV (20% discount rate)		\$19.67	\$14.83	\$124.22
Cumulative PV		\$19.67	\$34.50	\$158.72

Estimating the Target's Future Sales Price. If Lincoln purchases the target, it will sell the target in 3 years, after improving the target's performance. Lincoln expects to receive C\$230 million (after capital gains taxes) from the sale. The price at which the target can actually be sold will depend on its expected future cash flows from that point forward, but those expected cash flows are partially dependent on its performance prior to that time. Thus, Lincoln can enhance the sales price by improving the target's performance over the 3 years it plans to own the target.

Valuing the Target Based on Estimated Cash Flows. The expected U.S. dollar cash flows to Lincoln's parent over the next 3 years are shown in Exhibit 15.2. The high cash flow in Year 3 is due to Lincoln's plans to sell the target at that time. Assuming that Lincoln has a required rate of return of 20 percent on this project, the cash flows are discounted at that rate to derive the present value of target cash flows. From Lincoln's perspective, the present value of the target is about \$158.72 million.

Given that the target's shares are currently valued at C\$17 per share, the 10 million shares are worth C\$170 million. At the prevailing exchange rate of \$.80 per dollar, the target is currently valued at \$136 million by the market (computed as C\$170 million \times \$.80). Lincoln's valuation of the target of about \$159 million is about 17 percent above the market valuation. However, Lincoln will have to pay a premium on the shares to persuade the target's board of directors to approve the acquisition. Premiums commonly range from 10 to 40 percent of the market price. If Lincoln allows for a premium of 10 percent above the prevailing stock price of C\$17 per share, it would pay C\$18.7 per share for the target. At this price per share, the price paid for the Canadian firm would be C\$187 million, or \$149.6 million at the existing exchange rate. This price is less than the perceived net present value of the target, so Lincoln may be willing to pay this amount.

Lincoln recognizes that the target may reject its offer of a 10 percent premium and ask for a higher premium, but it will not pay more than its estimate of the target's net present value. Since Lincoln values the target at about \$159 million, it will not pay more than about C\$199 million at the prevailing exchange rate (computed as \$159 million divided by \$.80 per Canadian dollar), or a share price of C\$19.90 (computed as C\$199 million divided by 10 million shares).

Sources of Uncertainty. This example shows how the acquisition of a publicly traded foreign firm differs from the creation of a new foreign subsidiary. Although the valuation of a publicly traded foreign firm can utilize information about an existing business, the cash flows resulting from the acquisition are still subject to uncertainty for several reasons, which can be identified by reviewing the assumptions made in the valuation process. First, the growth rate of revenue is subject to uncertainty. If this rate is overestimated (perhaps because Canadian economic growth is overestimated), the earnings generated in Canada will be lower, and cash flows remitted to the U.S. parent will be lower as well.

Second, the cost of goods sold could exceed the assumed level of 40 percent of revenue, which would reduce cash flows remitted to the parent. Third, the selling and administrative expenses could exceed the assumed amount of C\$15 million, especially when considering that the annual expenses were C\$20 million prior to the acquisition. Fourth, Canada's corporate tax rate could increase, which would reduce the cash flows remitted to the parent. Fifth, the exchange rate of the Canadian dollar may be weaker than assumed, which would reduce the cash flows received by the parent. Sixth, the estimated selling price of the target 3 years from now could be incorrect for any of these five reasons, and this estimate is very influential on the valuation of the target today.

Since one or more of these conditions could occur, the estimated net present value of the target could be overestimated. Consequently, it is possible for Lincoln to acquire the target at a purchase price exceeding its actual value. In particular, the future cash flows are very sensitive to exchange rate movements. This can be illustrated by using sensitivity analysis and reestimating the value of the target based on different scenarios for the exchange rate over time.

Changes in Valuation over Time

If Lincoln Co. decides not to bid for the target at this time, it will need to redo its analysis if it later reconsiders acquiring the target. As the factors that affect the expected cash flows or the required rate of return from investing in the target change, so will the value of the target.

Impact of Stock Market Conditions. A change in stock market conditions affects the price per share of each stock in that market. Thus, the value of publicly traded firms in that market will change. Remember that an acquirer needs to pay a premium above the market valuation to acquire a foreign firm.

Continuing with our example involving Lincoln Co.'s pursuit of a Canadian target, assume that the target firm has a market price of C\$17 per share, representing a valuation of C\$170 million, but that before Lincoln makes its decision to acquire the target, the Canadian stock market level rises by 20 percent. If the target's stock price rises by this same percentage, the firm is now valued at

$$\begin{aligned}\text{New stock price} &= \text{C\$170 million} \times 1.2 \\ &= \text{C\$204 million}\end{aligned}$$

Using the 10 percent premium assumed in the earlier example, Lincoln must now pay C\$224.4 million (computed as C\$204 million \times 1.1) if it wants to acquire the target. This example illustrates how the price paid for the target can change abruptly simply because of a change in the general level of the stock market.

Impact of Stock Market Conditions on the Value of Private Firms. Even if a target is privately held, general stock market conditions will affect the amount that an acquirer has to pay for the target because a privately held company's value is influenced by the market price multiples of related firms in the same country. A simple method of valuing a private company is to apply the price-earnings (P/E) ratios of publicly traded firms in the same industry to the private company's annual earnings.

For example, if the annual earnings of a private Canadian company are C\$8 million and the average P/E ratio of publicly traded Canadian firms in the same industry is 15, the company's market valuation can be estimated as

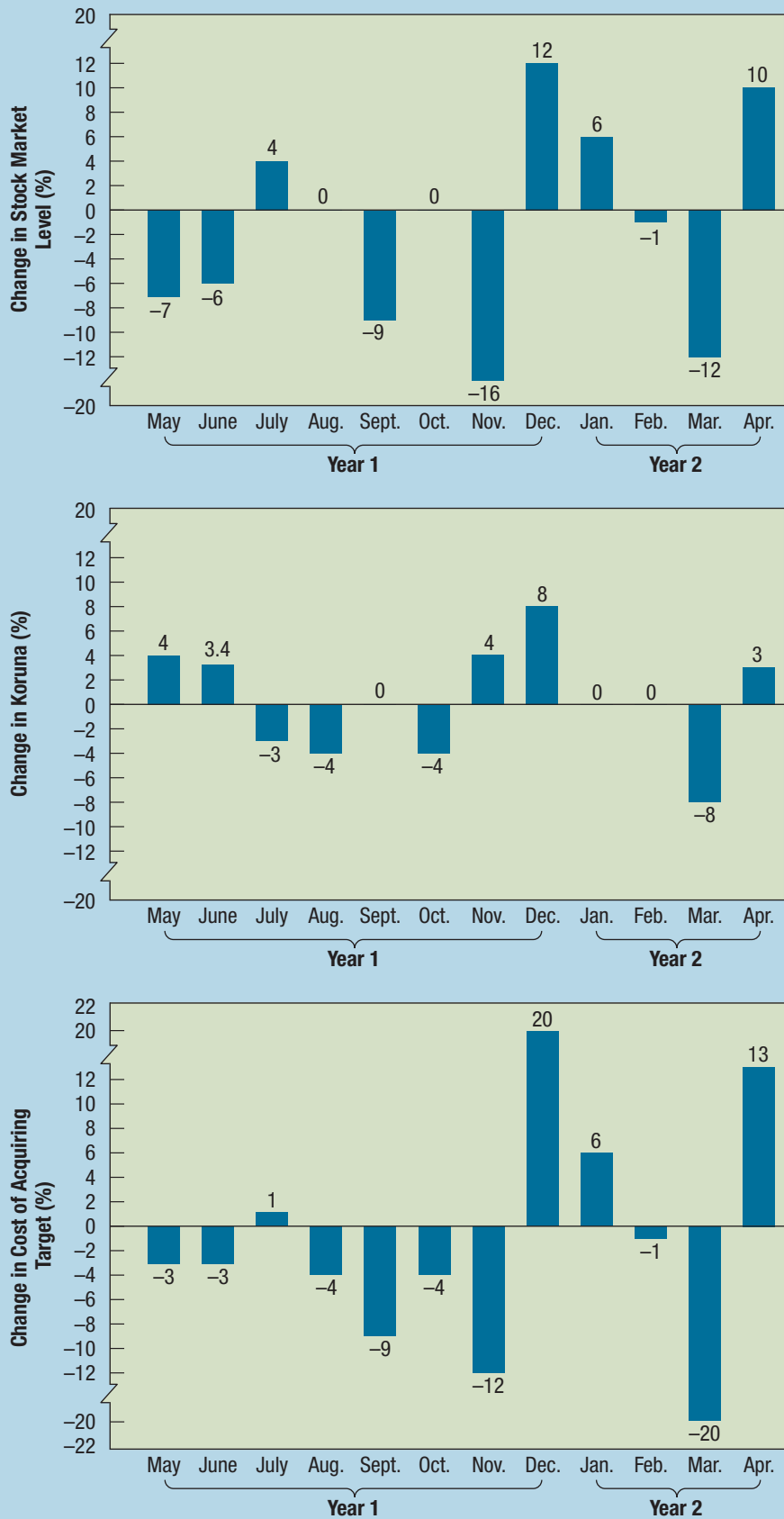
$$\begin{aligned}\text{Market valuation} &= \text{Earnings} \times \text{Average P/E ratio} \\ &= \text{C\$8 million} \times 15 \\ &= \text{C\$120 million}\end{aligned}$$

If the stock market level rises by 20 percent, the average P/E ratio of the firms in the same industry will likely rise by about 20 percent, which represents an increase in the P/E ratio from 15 to 18. The new market valuation of the Canadian firm will be

$$\begin{aligned}\text{New market valuation} &= \text{C\$8 million} \times 18 \\ &= \text{C\$144 million}\end{aligned}$$

As this example illustrates, private companies also become more expensive targets when local stock market conditions improve.

Exhibit 15.3 Influence of Czech Stock Market and Currency Conditions on the Cost of Acquiring a Czech Target



Impact of Exchange Rates. Whether a foreign target is publicly traded or private, a U.S. acquirer must convert dollars to the local currency to purchase the target. If the foreign currency appreciates by the time the acquirer makes payment, the acquisition will be more costly. The cost of the acquisition changes in the same proportion as the change in the exchange rate.

Combined Stock Market and Exchange Rate Effects. In reality, stock market levels and exchange rates change simultaneously. The effects on the cost of acquiring a foreign target are especially pronounced in emerging markets where stock and currency values are volatile.

EXAMPLE

Mizner, Inc., a U.S. firm, wants to acquire a firm in the Czech Republic so that it can expand its business in Eastern Europe. The Czech target's valuation moves in tandem with general Czech stock market conditions. Exhibit 15.3, which is based on actual data from a recent period, shows how the cost to Mizner of acquiring the Czech target could change over time, even though the performance of the firm itself does not change. During the period shown, the cost of acquisition could have increased by 20 percent in a single month (December of Year 1) as a result of a very strong stock market in that month and also appreciation of the Czech currency (koruna). At the other extreme, the cost of the acquisition declined by 20 percent in a single month (March of Year 2) as a result of a weakening stock market and koruna over that month. This exhibit illustrates how sensitive the cost of an acquisition of a foreign target is to foreign market conditions. ■

Impact of Market Anticipation Regarding the Target. The stock price of the target may increase if investors anticipate that the target will be acquired, since they are aware that stock prices of targets rise abruptly after a bid by the acquiring firm. Thus, it is important that Lincoln keep its intentions about acquiring the target confidential.

Why Valuations of a Target May Vary among MNCs

Most MNCs that consider acquiring a specific target will use a somewhat similar process for valuing the target. Nevertheless, their valuations will differ because of differences in the way the MNC's estimate the key determinants of a given target's valuation: (1) cash flows to be generated by the target, (2) exchange rate effects on funds remitted to the MNC's parent, and (3) the required rate of return when investing in the target.

Estimated Cash Flows of the Foreign Target

The target's expected future cash flows will vary among MNCs because the cash flows will be dependent on the MNC's management or oversight of the target's operations. If an MNC can improve the production efficiency of the target without reducing the target's production volume, it can improve the target's cash flows.

Each MNC may have a different plan as to how the target will fit within its structure and how the target will conduct future operations. The target's expected cash flows will be influenced by the way it is utilized. An MNC with production plants in Asia that purchases another Asian production plant may simply be attempting to increase its market share and production capacity. This MNC's cash flows change because of a higher production and sales level. Conversely, an MNC with all of its production plants in the United States may purchase an Asian production plant to shift its production where costs are lower. This MNC's cash flows change because of lower expenses.

Tax laws can create competitive advantages for acquirers based in some countries. Acquirers based in low-tax countries may be able to generate higher cash flows from acquiring a foreign target than acquirers in high-tax countries simply because they are subject to lower taxes on the future earnings remitted by the target (after it is acquired).

Exchange Rate Effects on the Funds Remitted

The valuation of a target can vary among MNCs simply because of differences in the exchange rate effects on funds remitted by the foreign target to the MNC's parent. If the target remits funds frequently in the near future, its value will be partially dependent on the expected exchange rate of the target's local currency in the near future. If the target does not remit funds in the near future, its value is more dependent on its local growth strategy and on exchange rates in the distant future.

Required Return of Acquirer

The valuation of the target could also vary among MNCs because of differences in their required rate of return from investing funds to acquire the target. If an MNC targets a successful foreign company with plans to continue the target's local business in a more efficient manner, the risk of the business will be relatively low, and therefore the MNC's required return from acquiring the target will be relatively low. Conversely, if an MNC targets the company because it plans to turn the company into a major exporter, the risk is much higher. The target has not established itself in foreign markets, so the cash flows that would result from the exporting business are very uncertain. Thus, the required return to acquire the target company will be relatively high as well.

If potential acquirers are based in different countries, their required rates of return from a specific target will vary even if they plan to use the target in similar ways. Recall that an MNC's required rate of return on any project is dependent on the local risk-free interest rate (since that influences the cost of funds for that MNC). Therefore, the required rate of return for MNCs based in countries with relatively high interest rates such as Brazil and Venezuela may differ from MNCs based in low-interest-rate countries such as the United States or Japan. The higher required rate of return for MNCs based in Latin American countries will not necessarily lead to a lower valuation. The target's currency might be expected to appreciate substantially against Latin American currencies (since some Latin American currencies have consistently weakened over time), which would enhance the amount of cash flows received as a result of remitted funds and could possibly offset the effects of the higher required rate of return.

Other Types of Multinational Restructuring

Besides acquiring foreign firms, MNCs can engage in multinational restructuring through international partial acquisitions, acquisitions of privatized businesses, international alliances, and international divestitures. Each type is described in turn.

International Partial Acquisitions

In many cases, an MNC may consider a partial international acquisition of a firm, in which it purchases part of the existing stock of a foreign firm. A partial international acquisition requires less funds because only a portion of the foreign target's shares are purchased. With this type of investment, the foreign target normally continues operating and may not experience the employee turnover that commonly occurs after a target's ownership changes. Nevertheless, by acquiring a substantial fraction of the shares, the MNC may have some influence on the target's management and is in a

position to complete the acquisition in the future. Some MNCs buy substantial stakes in foreign companies to have some control over their operations. For example, Coca-Cola has purchased stakes in many foreign bottling companies that bottle its syrup. In this way, it can ensure that the bottling operations meet its standards.

Valuation of a Foreign Firm That May Be Partially Acquired. When an MNC considers a partial acquisition in which it will purchase sufficient shares so that it can control the firm, the MNC can conduct its valuation of the target in much the same way as when it purchases the entire firm. If the MNC buys only a small proportion of the firm's shares, however, the MNC cannot restructure the firm's operations to make it more efficient. Therefore, its estimates of the firm's cash flows must be made from the perspective of a passive investor rather than as a decision maker for the firm.

International Acquisitions of Privatized Businesses

In recent years, government-owned businesses of many developing countries in Eastern Europe and South America have been sold to individuals or corporations. Many MNCs have capitalized on this wave of so-called privatization by acquiring businesses being sold by governments. These businesses may be attractive because of the potential for MNCs to increase their efficiency.

Valuation of a Privatized Business. An MNC can conduct a valuation of a foreign business that was owned by the government in a developing country by using capital budgeting analysis, as illustrated earlier. However, the valuation of such businesses is difficult for the following reasons:

- The future cash flows are very uncertain because the businesses were previously operating in environments of little or no competition. Thus, previous sales volume figures may not be useful indicators of future sales.
- Data concerning what businesses are worth are very limited in some countries because there are not many publicly traded firms in their markets, and there is limited disclosure of prices paid for targets in other acquisitions. Consequently, there may not be any benchmarks to use when valuing a business.
- Economic conditions in these countries are very uncertain during the transition to a market-oriented economy.
- Political conditions tend to be volatile during the transition, as government policies for businesses are sometimes unclear or subject to abrupt changes.
- If the government retains a portion of the firm's equity, it may attempt to exert some control over the firm. Its objectives may be very different from those of the acquirer, a situation that could lead to conflict.

Despite these difficulties, MNCs such as IBM and PepsiCo have acquired privatized businesses as a means of entering new markets. Hungary serves as a model country for privatizations. More than 25,000 MNCs have a foreign stake in Hungary's businesses. Hungary's government has been quick and efficient at selling off its assets to MNCs.

International Alliances

MNCs commonly engage in international alliances such as joint ventures and licensing agreements with foreign firms. International alliances are quite different from international acquisitions. The initial outlay is typically smaller because the MNC is not acquiring a foreign firm, and the cash flows to be received are typically smaller as well.

E X A M P L E

Laredo, Inc., plans to provide a Mexican firm with technology. In return, the Mexican firm will pay royalties amounting to 10 percent of its future sales of products resulting from use of this technology over the next 5 years. Laredo's initial outlay for this international alliance is the initial expense incurred as a result of providing the technology. Laredo can estimate the cash flows to be received from the Mexican firm by first forecasting the Mexican firm's annual sales (in pesos) of products based on the technology. Laredo will receive 10 percent of this amount. Then, it must forecast the value of the peso over each of the next 5 years so that it can determine the dollar cash flows resulting from these royalties. It must also consider any tax effects. ■

International Divestitures

An MNC should periodically reassess its direct foreign investments to determine whether they should be retained or sold (divested). Some foreign projects may no longer be feasible as a result of the MNC's increased cost of capital, increased host government taxes, increased political risk in the host country, or revised projections of exchange rates. Many divestitures occur as a result of a revised assessment of industry or economic conditions. For example, Pfizer, Johnson & Johnson, and several other U.S.-based MNCs recently divested some of their Latin American subsidiaries when economic conditions deteriorated there.

Assessing Whether to Divest Existing Operations in Asia.

During the Asian crisis in the 1997–1998 period, some MNCs with direct foreign investment in Asia reassessed the feasibility of their existing operations. The expected cash flows that these operations would generate for the parent had declined in many cases for two obvious reasons. First, the rate of economic growth in Asia declined, which led to a decline in expected local sales by the foreign subsidiaries and therefore a decline in the expected level of foreign currency cash flow. Second, the weak currencies of Asian countries led to a decline in the expected amount of the parent's currency to be received when foreign subsidiaries in Asian countries remitted funds. At the same time, however, market valuations had declined so much that any operations could be divested only if the parent was willing to sell them at a low price. The low prices deterred some divestitures.

Valuation of an International Project That May Be Divested. The valuation of a proposed international divestiture can be determined by comparing the present value of the cash flows if the project is continued to the proceeds that would be received (after taxes) if the project is divested.

E X A M P L E

Reconsider the example from the previous chapter in which Spartan, Inc., considered establishing a Singapore subsidiary. Assume that the Singapore subsidiary was created and, after 2 years, the spot rate of the Singapore dollar (S\$) is \$.46. In addition, forecasts have been revised for the remaining 2 years of the project, indicating that the Singapore dollar should be worth \$.44 in Year 3 and \$.40 in the project's final year. Because these forecasted exchange rates have an adverse effect on the project, Spartan, Inc., considers divesting the subsidiary. For simplicity, assume that the original forecasts of the other variables remain unchanged and that a potential acquirer has offered S\$13 million (after adjusting for any capital gains taxes) for the subsidiary if the acquirer can retain the existing working capital.

Spartan can conduct a divestiture analysis by comparing the after-tax proceeds from the possible sale of the project (in U.S. dollars) to the present value of the expected U.S. dollar inflows that the project will generate if it is not sold. This comparison will determine the net present value of the divestiture (NPV_d), as illustrated in Exhibit 15.4. Since the present value of the subsidiary's cash flows from Spartan's perspective exceeds the price at which it can sell the subsidiary, the divestiture is not feasible. Thus, Spartan should not divest the subsidiary at

Exhibit 15.4 Divestiture Analysis: Spartan, Inc.

	End of Year 2 (Today)	End of Year 3 (One Year from Today)	End of Year 4 (Two Years from Today)
S\$ remitted after withholding taxes		S\$6,840,000	S\$19,560,000
Selling price	S\$13,000,000		
Exchange rate	\$.46	\$.44	\$.40
Cash flow received from divestiture	\$5,980,000		
Cash flows forgone due to divestiture		\$3,009,600	\$7,824,000
<i>PV</i> of forgone cash flows (15% discount rate)		\$2,617,044	\$5,916,068
$NPV_0 = \$5,980,000 - (\$2,617,044 + \$5,916,068)$ $= \$5,980,000 - \$8,533,112$ $= -\$2,553,112$			

the price offered. Spartan may still search for another firm that is willing to acquire the subsidiary for a price that exceeds its present value. ■

Restructuring Decisions as Real Options

Some restructuring issues faced by MNCs involve **real options**, or implicit options on real assets (such as buildings, machinery, and other assets used by MNCs to facilitate their production). A real option can be classified as a call option on real assets or a put option on real assets, as explained next.

Call Option on Real Assets

A **call option on real assets** represents a proposed project that contains an option of pursuing an additional venture. Some possible forms of restructuring by MNCs contain a call option on real assets. Multinational capital budgeting can be conducted in a manner to account for the option.

EXAMPLE

Coral, Inc., an Internet firm in the United States, is considering the acquisition of an Internet business in Mexico. Coral estimates and discounts the expected dollar cash flows that would result from acquiring this business and compares them to the initial outlay. At this time, the present value of the future cash flows that are directly attributable to the Mexican business is slightly lower than the initial outlay that would be required to purchase that business, so the business appears to be an infeasible investment.

A Brazilian Internet firm is also for sale, but its owners will only sell the business to a firm that they know and trust, and Coral, Inc., has no relationship with this business. A possible advantage of the Mexican firm that is not measured by the traditional multinational capital budgeting analysis is that it frequently does business with the Brazilian Internet firm and could use its relationship to help Coral acquire the Brazilian firm. Thus, if Coral purchases the Mexican business, it will have an option to also acquire the Internet firm in Brazil. In essence, Coral will have a call option on real assets (of the Brazilian firm) because it will have the option (not the obligation) to purchase the Brazilian firm. The expected purchase price of the Brazilian firm over the next few months serves as the exercise price in the call option on real assets. If Coral acquires the Brazilian firm, it now has a second initial outlay and will generate a second stream of cash flows.

When the call option on real assets is considered, the acquisition of the Mexican Internet firm may now be feasible, even though it was not feasible when considering only the cash

flows directly attributable to that firm. The project can be analyzed by segmenting it into two scenarios. In the first scenario, Coral, Inc., acquires the Mexican firm but, after taking a closer look at the Brazilian firm, decides not to exercise its call option (decides not to purchase the Brazilian firm). The net present value in this scenario is simply a measure of the present value of expected dollar cash flows directly attributable to the Mexican firm minus the initial outlay necessary to purchase the Mexican firm. In the second scenario, Coral, Inc., acquires the Mexican firm and then exercises its option by also purchasing the Brazilian firm. In this case, the present value of combined (Mexican firm plus Brazilian firm) cash flow streams (in dollars) would be compared to the combined initial outlays.

If the outlay necessary to acquire the Brazilian firm was made after the initial outlay of the Mexican firm, the outlay for the Brazilian firm should be discounted to determine its present value. If Coral, Inc., knows the probability of the two scenarios, it can determine the probability of each scenario and then determine the expected value of the net present value of the proposed project by summing the products of the probability of each scenario times the respective net present value for that scenario. ■

Put Option on Real Assets

A **put option on real assets** represents a proposed project that contains an option of divesting part or all of the project. As with a call option on real assets, a put option on real assets can be accounted for by multinational capital budgeting.

EXAMPLE

Jade, Inc., an office supply firm in the United States, is considering the acquisition of a similar business in Italy. Jade, Inc., believes that if future economic conditions in Italy are favorable, the net present value of this project is positive. However, given that weak economic conditions in Italy are more likely, the proposed project appears to be infeasible.

Assume now that Jade, Inc., knows that it can sell the Italian firm at a specified price to another firm over the next 4 years. In this case, Jade has an implied put option attached to the project.

The feasibility of this project can be assessed by determining the net present value under both the scenario of strong economic conditions and the scenario of weak economic conditions. The expected value of the net present value of this project can be estimated as the sum of the products of the probability of each scenario times its respective net present value. If economic conditions are favorable, the net present value is positive. If economic conditions are weak, Jade, Inc., may sell the Italian firm at the locked-in sales price (which resembles the exercise price of a put option) and therefore may still achieve a positive net present value over the short time that it owned the Italian firm. Thus, the put option on real assets may turn an infeasible project into a feasible project. ■

SUMMARY

■ International acquisitions are one of the most common types of multinational restructuring. MNCs can use capital budgeting to determine whether a foreign target is worth acquiring. The expected cash flows of a foreign target are affected by target-specific factors (such as the target's previous cash flows and its managerial talent) and country-specific factors (such as

economic conditions, political conditions, currency conditions, and stock market conditions).

■ In the typical valuation process, an MNC initially screens prospective targets based on willingness to be acquired and country barriers. Then, each prospective target is valued by estimating its cash flows, based on

target-specific characteristics and the target's country characteristics, and by discounting the expected cash flows. Then the perceived value is compared to the target's market value to determine whether the target can be purchased at a price that is below the perceived value from the MNC's perspective.

■ Valuations of a foreign target may vary among potential acquirers because of differences in estimates of the target's cash flows or exchange rate movements or differences in the required rate of return among acquirers. These differences may be especially

pronounced when the acquirers are from different countries.

■ Besides international acquisitions of firms, the more common types of multinational restructuring include international partial acquisitions, international acquisitions of privatized businesses, international alliances (such as international licensing or joint ventures), and international divestitures. Each of these types of multinational restructuring can be assessed by applying multinational capital budgeting.

POINT COUNTER-POINT

Can a Foreign Target Be Assessed Like Any Other Asset?

Point Yes. The value of a foreign target to an MNC is the present value of the future cash flows to the MNC. The process of estimating a foreign target's value is the same as the process of estimating a machine's value. A target has expected cash flows, which can be derived from information about previous cash flows.

Counter-Point No. A target's behavior will change after it is acquired by an MNC. Its efficiency may improve depending on the ability of the MNC

to integrate the target with its own operations. The morale of the target employees could either improve or worsen after the acquisition, depending on the treatment by the acquirer. Thus, a proper estimate of cash flows generated by the target must consider the changes in the target due to the acquisition.

Who Is Correct? Use the Internet to learn more about this issue. Which argument do you support? Offer your own opinion on this issue.

SELF TEST

Answers are provided in Appendix A at the back of the text.

1. Explain why more acquisitions have taken place in Europe in recent years.
2. What are some of the barriers to international acquisitions?
3. Why might a U.S.-based MNC prefer to establish a foreign subsidiary rather than acquire an existing firm in a foreign country?

4. Provo, Inc. (based in Utah), has been considering the divestiture of a Swedish subsidiary that produces ski equipment and sells it locally. A Swedish firm has already offered to acquire this Swedish subsidiary. Assume that the U.S. parent has just revised its projections of the Swedish krona's value downward. Will the proposed divestiture now seem more or less feasible than it did before? Explain.

QUESTIONS AND APPLICATIONS

1. **Motives for Restructuring.** Why do you think MNCs continuously assess possible forms of multinational restructuring, such as foreign acquisitions or downsizing of a foreign subsidiary?
2. **Exposure to Country Regulations.** Maude, Inc., a U.S.-based MNC, has recently acquired a firm in Singapore. To eliminate inefficiencies, Maude downsized the target substantially, eliminating

- two-thirds of the workforce. Why might this action affect the regulations imposed on the subsidiary's business by the Singapore government?
3. **Global Expansion Strategy.** Poki, Inc., a U.S.-based MNC, is considering expanding into Thailand because of decreasing profit margins in the United States. The demand for Poki's product in Thailand is very strong. However, forecasts indicate that the baht is expected to depreciate substantially over the next 3 years. Should Poki expand into Thailand? What factors may affect its decision?
 4. **Alternatives to International Acquisitions.** Rastell, Inc., a U.S.-based MNC, is considering the acquisition of a Russian target to produce personal computers (PCs) and market them throughout Russia, where demand for PCs has increased substantially in recent years. Assume that the stock market conditions are not favorable in Russia, as the stock prices of most Russian companies rose substantially just prior to Rastell's assessment of the target. What are some alternatives available to Rastell?
 5. **Comparing International Projects.** Savannah, Inc., a manufacturer of clothing, wants to increase its market share by acquiring a target producing a popular clothing line in Europe. This clothing line is well established. Forecasts indicate a relatively stable euro over the life of the project. Marquette, Inc., wants to increase its market share in the personal computer market by acquiring a target in Thailand that currently produces radios and converting the operations to produce PCs. Forecasts indicate a depreciation of the baht over the life of the project. Funds resulting from both projects will be remitted to the respective U.S. parent on a regular basis. Which target do you think will result in a higher net present value? Why?
 6. **Privatized Business Valuations.** Why are valuations of privatized businesses previously owned by the governments of developing countries more difficult than valuations of existing firms in developed countries?
 7. **Valuing a Foreign Target.** Blore, Inc., a U.S.-based MNC, has screened several targets. Based on economic and political considerations, only one eligible target remains in Malaysia. Blore would like you to value this target and has provided you with the following information:
 - Blore expects to keep the target for 3 years, at which time it expects to sell the firm for 300 million Malaysian ringgit (MYR) after any taxes.
 - Blore expects a strong Malaysian economy. The estimates for revenue for the next year are MYR200 million. Revenues are expected to increase by 8 percent in each of the following 2 years.
 - Cost of goods sold are expected to be 50 percent of revenue.
 - Selling and administrative expenses are expected to be MYR30 million in each of the next 3 years.
 - The Malaysian tax rate on the target's earnings is expected to be 35 percent.
 - Depreciation expenses are expected to be MYR20 million per year for each of the next 3 years.
 - The target will need MYR7 million in cash each year to support existing operations.
 - The target's stock price is currently MYR30 per share. The target has 9 million shares outstanding.
 - Any remaining cash flows will be remitted by the target to Blore, Inc. Blore uses the prevailing exchange rate of the Malaysian ringgit as the expected exchange rate for the next 3 years. This exchange rate is currently \$.25.
 - Blore's required rate of return on similar projects is 20 percent.
 - a. Prepare a worksheet to estimate the value of the Malaysian target based on the information provided.
 - b. Will Blore, Inc., be able to acquire the Malaysian target for a price lower than its valuation of the target?
 8. **Uncertainty Surrounding a Foreign Target.** Refer to question 7. What are some of the key sources of uncertainty in Blore's valuation of the target? Identify two reasons why the expected cash flows from an Asian subsidiary of a U.S.-based MNC would have been lower as a result of the Asian crisis.
 9. **Divestiture Strategy.** The reduction in expected cash flows of Asian subsidiaries as a result of the Asian crisis likely resulted in a reduced valuation of these subsidiaries from the parent's perspective. Explain why a U.S.-based MNC might not have sold its Asian subsidiaries.
 10. **Why a Foreign Acquisition May Backfire.** Provide two reasons why an MNC's strategy of acquiring a foreign target will backfire. That is, explain why the acquisition might result in a negative *NPV*.

Advanced Questions

11. **Pricing a Foreign Target.** Alaska, Inc., would like to acquire Estoya Corp., which is located in Peru. In initial negotiations, Estoya has asked for a purchase price of 1 billion Peruvian new sol. If Alaska

completes the purchase, it would keep Estoya's operations for 2 years and then sell the company. In the recent past, Estoya has generated annual cash flows of 500 million new sol per year, but Alaska believes that it can increase these cash flows by 5 percent each year by improving the operations of the plant. Given these improvements, Alaska believes it will be able to resell Estoya in 2 years for 1.2 billion new sol. The current exchange rate of the new sol is \$.29, and exchange rate forecasts for the next 2 years indicate values of \$.29 and \$.27, respectively. Given these facts, should Alaska, Inc., pay 1 billion new sol for Estoya Corp. if the required rate of return is 18 percent? What is the maximum price Alaska should be willing to pay?

12. **Global Strategy.** Senser Co. established a subsidiary in Russia 2 years ago. Under its original plans, Senser intended to operate the subsidiary for a total of 4 years. However, it would like to reassess the situation, since exchange rate forecasts for the Russian ruble indicate that it may depreciate from its current level of \$.033 to \$.028 next year and to \$.025 in the following year. Senser could sell the subsidiary today for 5 million rubles to a potential acquirer. If Senser continues to operate the subsidiary, it will generate cash flows of 3 million rubles next year and 4 million rubles in the following year. These cash flows would be remitted back to the parent in the United States. The required rate of return of the project is 16 percent. Should Senser continue operating the Russian subsidiary?
13. **Divestiture Decision.** Colorado Springs Co. plans to divest either its Singapore or its Canadian subsidiary. Assume that if exchange rates remain constant, the dollar cash flows each of these subsidiaries would provide to the parent over time would be somewhat similar. However, the firm expects the Singapore dollar to depreciate against the U.S. dollar, and the Canadian dollar to appreciate against the U.S. dollar. The firm can sell either subsidiary for about the same price today. Which one should it sell?
14. **Divestiture Decision.** San Gabriel Corp. recently considered divesting its Italian subsidiary and determined that the divestiture was not feasible. The required rate of return on this subsidiary was 17 percent. In the last week, San Gabriel's required return on that subsidiary increased to 21 percent. If the sales price of the subsidiary has not changed, explain why the divestiture may now be feasible.
15. **Divestiture Decision.** Ethridge Co. of Atlanta, Georgia, has a subsidiary in India that produces products and sells them throughout Asia. In response to the September 11, 2001, terrorist attack on the United States, Ethridge Co. decided to conduct a capital budgeting analysis to determine whether it should divest the subsidiary. Why might this decision be different after the attack as opposed to before the attack? Describe the general method for determining whether the divestiture is financially feasible.
16. **Feasibility of a Divestiture.** Merton, Inc., has a subsidiary in Bulgaria that it fully finances with its own equity. Last week, a firm offered to buy the subsidiary from Merton for \$60 million in cash, and the offer is still available this week as well. The annualized long-term risk-free rate in the United States increased from 7 to 8 percent this week. The expected monthly cash flows to be generated by the subsidiary have not changed since last week. The risk premium that Merton applies to its projects in Bulgaria was reduced from 11.3 to 10.9 percent this week. The annualized long-term risk-free rate in Bulgaria declined from 23 to 21 percent this week. Would the *NPV* to Merton, Inc., from divesting this unit be more or less than the *NPV* determined last week? Why? (No analysis is necessary, but make sure that your explanation is very clear.)
17. **Accounting for Government Restrictions.** Sunbelt, Inc., plans to purchase a firm in Indonesia. It believes that it can install its operating procedure in this firm, which would significantly reduce the firm's operating expenses. However, the Indonesian government may approve the acquisition only if Sunbelt does not lay off any workers. How can Sunbelt possibly increase efficiency without laying off workers? How can Sunbelt account for the Indonesian government's position as it assesses the *NPV* of this possible acquisition?
18. **Foreign Acquisition Decision.** Florida Co. produces software. Its primary business in Boca Raton is expected to generate cash flows of \$4 million at the end of each of the next 3 years, and Florida expects that it could sell this business for \$10 million (after accounting for capital gains taxes) at the end of 3 years. Florida Co. also has a side business in Pompano Beach that takes the software created in Boca Raton and exports it to Europe. As long as the side business distributes this software to Europe, it is expected to generate \$2 million in cash flows at the end of each of the next 3 years. This side business in Pompano Beach is separate from Florida's main business.
 Recently, Florida was contacted by Ryne Co. located in Europe, which specializes in distributing software throughout Europe. If Florida acquires Ryne Co., it would rely on Ryne instead of its side business to sell its software in Europe because Ryne could easily reach all of Florida Co.'s existing European customers and additional potential

European customers. By acquiring Ryne, Florida would be able to sell much more software in Europe than it can sell with its side business, but it has to determine whether the acquisition would be feasible. The initial investment to acquire Ryne Co. would be \$7 million. Ryne would generate 6 million euros per year in profits and would be subject to a European tax rate of 40 percent. All after-tax profits would be remitted to Florida Co. at the end of each year, and the profits would not be subject to any U.S. taxes since they were already taxed in Europe. The spot rate of the euro is \$1.10, and Florida Co. believes the spot rate is a reasonable forecast of future exchange rates. Florida Co. expects that it could sell Ryne Co. at the end of 3 years for 3 million euros (after accounting for any capital gains taxes). Florida Co.'s required rate of return on the acquisition is 20 percent. Determine the net present value of this acquisition. Should Florida Co. acquire Ryne Co.?

19. **Foreign Acquisition Decision.** Minnesota Co. consists of two businesses. Its local business is expected to generate cash flows of \$1 million at the end of each of the next 3 years. It also owns a foreign subsidiary based in Mexico, whose business is selling technology in Mexico. This business is expected to generate \$2 million in cash flows at the end of each of the next 3 years. The main competitor of the Mexican subsidiary is Perez Co., a privately held firm that is based in Mexico. Minnesota Co. just contacted Perez Co. and wants to acquire it. If it acquires Perez, Minnesota would merge the operations of Perez Co. with its Mexican subsidiary's business. It expects that these merged operations in Mexico would generate a total of \$3 million in cash flows at the end of each of the next 3 years. Perez Co. is willing to be acquired for a price of 40 million pesos. The spot rate of the Mexican peso is \$.10. The required rate of return on this project is 24 percent. Determine the net present value of this acquisition by Minnesota Co. Should Minnesota Co. pursue this acquisition?
20. **Decision to Sell a Business.** Kentucky Co. has an existing business in Italy that it is trying to sell. It receives one offer today from Rome Co. for \$20 million (after capital gains taxes are paid). Alternatively, Venice Co. wants to buy the business but will not have the funds to make the acquisition until 2 years from now. It is meeting with Kentucky Co. today to negotiate the acquisition price that it will guarantee for Kentucky in 2 years (the price would be backed by a reputable bank so there would be no concern about Venice Co. backing out of the agreement). If Kentucky Co. retains the business for the next 2 years, it expects that the

business would generate 6 million euros per year in cash flows (after taxes are paid) at the end of each of the next 2 years, which would be remitted to the United States. The euro is presently \$1.20, and that rate can be used as a forecast of future spot rates. Kentucky would only retain the business if it can earn a rate of return of at least 18 percent by keeping the firm for the next 2 years rather than selling it to Rome Co. now. Determine the minimum price in dollars at which Kentucky should be willing to sell its business (after accounting for capital gain taxes paid) to Venice Co. in order to satisfy its required rate of return.

21. **Foreign Divestiture Decision.** Baltimore Co. considers divesting its six foreign projects as of today. Each project will last one year. Its required rate of return on each project is the same. The cost of operations for each project is denominated in dollars and is the same. Baltimore believes that each project will generate the equivalent of \$10 million in one year based on today's exchange rate. However, each project generates its cash flow in a different currency. Baltimore believes that interest rate parity (IRP) exists. Baltimore forecasts exchange rates as explained in the table below.
- a. Based on this information, which project will Baltimore be most likely to divest? Why?
- b. Based on this information, which project will Baltimore be least likely to divest? Why?

Project	Comparison of One-Year U.S. and Foreign Interest Rates	Forecast Method Used to Forecast the Spot Rate One Year from Now
Country A	U.S. interest rate is higher than currency A's interest rate	Spot rate
Country B	U.S. interest rate is higher than currency B's interest rate	Forward rate
Country C	U.S. interest rate is the same as currency C's interest rate	Forward rate
Country D	U.S. interest rate is the same as currency D's interest rate	Spot rate
Country E	U.S. interest rate is lower than currency E's interest rate	Forward rate
Country F	U.S. interest rate is lower than currency F's interest rate	Spot rate

22. **Factors That Affect the NPV of a Divestiture.** Washington Co. (a U.S. firm) has a subsidiary in Germany that generates substantial earnings in euros each year. One week ago, it received an offer from a company to purchase the subsidiary, and it has not yet responded to this offer.
- Since last week, the expected stream of euro cash flows has not changed, but the forecasts of the euro's value in future periods have been revised downward. Will the *NPV* of the divestiture be larger or smaller or the same as it was last week? Briefly explain.
 - Since last week, the expected stream of euro cash flows has not changed, but the long-term interest rate in the United States has declined. Will the *NPV* of the divestiture be larger or smaller or the same as it was last week? Briefly explain.
23. **Impact of Country Perspective on Target Valuation.** Targ Co. of the United States has been targeted by three firms that consider acquiring it: (1) Americo (from the United States), Japino (of Japan), and Canzo (of Canada). These three firms do not have

any other international business, have similar risk levels, and have a similar capital structure. Each of the three potential acquirers has derived similar expected dollar cash flow estimates for Targ Co. The long-term risk-free interest rate is 6 percent in the United States, 9 percent in Canada, and 3 percent in Japan. The stock market conditions are similar in each of the countries. There are no potential country risk problems that would result from acquiring Targ Co. All potential acquirers expect that the Canadian dollar will appreciate by 1 percent a year against the U.S. dollar and will be stable against the Japanese yen. Which firm will likely have the highest valuation of Targ Co.? Explain.

Discussion in the Boardroom

This exercise can be found in Appendix E at the back of this textbook.

Running Your Own MNC

This exercise can be found on the Xtra! website at <http://maduraxtra.swlearning.com>.

BLADES, INC. CASE

Assessment of an Acquisition in Thailand

Recall that Ben Holt, Blades' chief financial officer (CFO), has suggested to the board of directors that Blades proceed with the establishment of a subsidiary in Thailand. Due to the high growth potential of the roller blade market in Thailand, his analysis suggests that the venture will be profitable. Specifically, his view is that Blades should establish a subsidiary in Thailand to manufacture roller blades, whether an existing agreement with Entertainment Products (a Thai retailer) is renewed or not. Under this agreement, Entertainment Products is committed to the purchase of 180,000 pairs of "Speedos," Blades' primary product, annually. The agreement was initially for 3 years and will expire 2 years from now. At this time, the agreement may be renewed. Due to delivery delays, Entertainment Products has indicated that it will renew the agreement only if Blades establishes a subsidiary in Thailand. In this case, the price per pair of roller blades would be fixed at 4,594 Thai baht per pair. If Blades decides not to renew the agreement, Entertainment Products has indicated that it would purchase only 5,000 pairs of Speedos annually at prevailing market prices.

According to Ben Holt's analysis, renewing the agreement with Entertainment Products and establishing a subsidiary in Thailand will result in a net present

value (*NPV*) of \$2,638,735. Conversely, if the agreement is not renewed and a subsidiary is established, the resulting *NPV* is \$8,746,688. Consequently, Holt has suggested to the board of directors that Blades establish a subsidiary without renewing the existing agreement with Entertainment Products.

Recently, a Thai roller blade manufacturer called Skates'n'Stuff contacted Holt regarding the potential sale of the company to Blades. Skates'n'Stuff entered the Thai roller blade market a decade ago and has generated a profit in every year of operation. Furthermore, Skates'n'Stuff has established distribution channels in Thailand. Consequently, if Blades acquires the company, it could begin sales immediately and would not require an additional year to build the plant in Thailand. Initial forecasts indicate that Blades would be able to sell 280,000 pairs of roller blades annually. These sales are incremental to the acquisition of Skates'n'Stuff. Furthermore, all sales resulting from the acquisition would be made to retailers in Thailand. Blades' fixed expenses would be 20 million baht annually. Although Holt has not previously considered the acquisition of an existing business, he is now wondering whether acquiring Skates'n'Stuff may be a better course of action than building a subsidiary in Thailand.

Holt is also aware of some disadvantages associated with such an acquisition. Skates'n'Stuff's CFO has indicated that he would be willing to accept a price of 1 billion baht in payment for the company, which is clearly more expensive than the 550 million baht outlay that would be required to establish a subsidiary in Thailand. However, Skates'n'Stuff's CFO has indicated that it is willing to negotiate. Furthermore, Blades employs a high-quality production process, which enables it to charge relatively high prices for roller blades produced in its plants. If Blades acquires Skates'n'Stuff, which uses an inferior production process (resulting in lower quality roller blades), it would have to charge a lower price for the roller blades it produces there. Initial forecasts indicate that Blades will be able to charge a price of 4,500 Thai baht per pair of roller blades without affecting demand. However, because Skates'n'Stuff uses a production process that results in lower quality roller blades than Blades' Speedos, operating costs incurred would be similar to the amount incurred if Blades establishes a subsidiary in Thailand. Thus, Blades estimates that it would incur operating costs of about 3,500 baht per pair of roller blades.

Ben Holt has asked you, a financial analyst for Blades, Inc., to determine whether the acquisition of Skates'n'Stuff is a better course of action for Blades than the establishment of a subsidiary in Thailand. Acquiring Skates'n'Stuff will be more favorable than establishing a subsidiary if the present value of the cash flows generated by the company exceeds the purchase price by more than \$8,746,688, the *NPV* of establishing a new subsidiary. Thus, Holt has asked you to construct a spreadsheet that determines the *NPV* of the acquisition.

To aid you in your analysis, Holt has provided the following additional information, which he gathered from various sources, including unaudited financial statements of Skates'n'Stuff for the last 3 years:

- Blades, Inc., requires a return on the Thai acquisition of 25 percent, the same rate of return it would require if it established a subsidiary in Thailand.
- If Skates'n'Stuff is acquired, Blades, Inc., will operate the company for 10 years, at which time Skates'n'Stuff will be sold for an estimated 1.1 million baht.
- Of the 1 billion baht purchase price, 600 million baht constitutes the cost of the plant and equipment. These items are depreciated using straight-line depreciation. Thus, 60 million baht will be depreciated annually for 10 years.
- Sales of 280,000 pairs of roller blades annually will begin immediately at a price of 4,500 baht per pair.
- Variable costs per pair of roller blades will be 3,500 per pair.
- Fixed operating costs, including salaries and administrative expenses, will be 20 million baht annually.
- The current spot rate of the Thai baht is \$.023. Blades expects the baht to depreciate by an average of 2 percent per year for the next 10 years.
- The Thai government will impose a 25 percent tax on income and a 10 percent withholding tax on any funds remitted by Skates'n'Stuff to Blades, Inc. Any earnings remitted to the United States will not be taxed again in the United States. All earnings generated by Skates'n'Stuff will be remitted to Blades, Inc.
- The average inflation rate in Thailand is expected to be 12 percent annually. Revenues, variable costs, and fixed costs are subject to inflation and are expected to change by the same annual rate as the inflation rate.

In addition to the information outlined above, Ben Holt has informed you that Blades, Inc., will need to manufacture all of the 180,000 pairs to be delivered to Entertainment Products this year and next year in Thailand. Since Blades previously only used components from Thailand (which are of a lower quality but cheaper than U.S. components) sufficient to manufacture 72,000 pairs annually, it will incur cost savings of 32.4 million baht this year and next year. However, since Blades will sell 180,000 pairs of Speedos annually to Entertainment Products this year and next year whether it acquires Skates'n'Stuff or not, Holt has urged you not to include these sales in your analysis. The agreement with Entertainment Product will not be renewed at the end of next year.

Ben Holt would like you to answer the following questions:

1. Using a spreadsheet, determine the *NPV* of the acquisition of Skates'n'Stuff. Based on your numerical analysis, should Blades establish a subsidiary in Thailand or acquire Skates'n'Stuff?
2. If Blades negotiates with Skates'n'Stuff, what is the maximum amount (in Thai baht) Blades should be willing to pay?
3. Are there any other factors Blades should consider in making its decision? In your answer, you should consider the price Skates'n'Stuff is asking relative to your analysis in question 1, other potential businesses for sale in Thailand, the source of the information your analysis is based on, the production process that will be employed by the target in the future, and the future management of Skates'n'Stuff.

SMALL BUSINESS DILEMMA

Multinational Restructuring by the Sports Exports Company

The Sports Exports Company has been successful in producing footballs in the United States and exporting them to the United Kingdom. Recently, Jim Logan (owner of the Sports Exports Company) has considered restructuring his company by expanding throughout Europe. He plans to export footballs and other sporting goods that were not already popular in Europe to one large sporting goods distributor in Germany; the goods will then be distributed to any retail sporting goods stores throughout Europe that are willing to purchase these goods. This distributor will make payments in euros to the Sports Exports Company.

1. Are there any reasons why the business that has been so successful in the United Kingdom will not necessarily be successful in other European countries?
2. If the business is diversified throughout Europe, will this substantially reduce the exposure of the Sports Exports Company to exchange rate risk?
3. Now that several countries in Europe participate in a single currency system, will this affect the performance of new expansion throughout Europe?

INTERNET/EXCEL EXERCISES

1. Use an online news source to review an international acquisition in the last month. Describe the motive for this acquisition. Explain how the acquirer could benefit from this acquisition.
2. You consider acquiring a target in Argentina, Brazil, or Canada. You realize that the value of a target is partially influenced by stock market conditions in a country. Go to <http://finance.yahoo.com/intlindices?e=americas> and click on index MERV (which represents the Argentina stock market index). Click on 1y just below the chart provided. Then scroll down and click on Historical Prices. Set the date range so that you can obtain the stock

index value as of 3 years ago, 2 years ago, 1 year ago, and as of today. Insert the data on a spreadsheet. Compute the annual percentage change in the stock value. Also compute the annual percentage change in the stock value from 3 years ago until today. Repeat the process for the Brazilian stock index BVSP and the Canadian stock index GSPTSE. Based on this information, in which country have values of corporations increased the most? In which country have the values of corporations increased the least? Why might this information influence your decision on where to pursue a target?