



16: Country Risk Analysis

An MNC conducts country risk analysis when assessing whether to continue conducting business in a particular country. The analysis can also be used when determining whether to implement new projects in foreign countries. Country risk can be partitioned into the country's political risk and its financial risk. Financial managers must understand how to measure country risk so that they can make investment decisions that maximize their MNC's value.

The specific objectives of this chapter are to:

- identify the common factors used by MNCs to measure a country's political risk,
- identify the common factors used by MNCs to measure a country's financial risk,
- explain the techniques used to measure country risk, and
- explain how MNCs use the assessment of country risk when making financial decisions.

Why Country Risk Analysis Is Important

Country risk is the potentially adverse impact of a country's environment on an MNC's cash flows. Country risk analysis can be used to monitor countries where the MNC is currently doing business. If the country risk level of a particular country begins to increase, the MNC may consider divesting its subsidiaries located there. MNCs can also use country risk analysis as a screening device to avoid conducting business in countries with excessive risk. Events that heighten country risk tend to discourage U.S. direct foreign investment in that particular country.

Country risk analysis is not restricted to predicting major crises. An MNC may also use this analysis to revise its investment or financing decisions in light of recent events. In any given week, the following unrelated international events might occur around the world:

- A terrorist attack
- A major labor strike in an industry
- A political crisis due to a scandal within a country
- Concern about a country's banking system that may cause a major outflow of funds
- The imposition of trade restrictions on imports

Any of these events could affect the potential cash flows to be generated by an MNC or the cost of financing projects and therefore affect the value of the MNC.

Even if an MNC reduces its exposure to all such events in a given week, a new set of events will occur in the following week. For each of these events, an MNC must consider whether its cash flows will be affected and whether there has been a change in policy to which it should respond. Country risk analysis is an ongoing process.

Most MNCs will not be affected by every event, but they will pay close attention to any events that may have an impact on the industries or countries in which they do business. They also recognize that they cannot eliminate their exposure to all events but may at least attempt to limit their exposure to any single country-specific event.

Political Risk Factors

An MNC must assess country risk not only in countries where it currently does business but also in those where it expects to export or establish subsidiaries. Several risk characteristics of a country may significantly affect performance, and the MNC should be concerned about the likely degree of impact for each. The September 11, 2001, terrorist attack on the United States heightened the awareness of political risk.

As one might expect, many country characteristics related to the political environment can influence an MNC. An extreme form of political risk is the possibility that the host country will take over a subsidiary. In some cases of expropriation, some compensation (the amount decided by the host country government) is awarded. In other cases, the assets are confiscated and no compensation is provided. Expropriation can take place peacefully or by force. The following are some of the more common forms of political risk:

- Attitude of consumers in the host country
- Actions of host government
- Blockage of fund transfers
- Currency inconvertibility
- War
- Bureaucracy
- Corruption

Each of these characteristics will be examined.

Attitude of Consumers in the Host Country

A mild form of political risk (to an exporter) is a tendency of residents to purchase only locally produced goods. Even if the exporter decides to set up a subsidiary in the foreign country, this philosophy could prevent its success. All countries tend to exert some pressure on consumers to purchase from locally owned manufacturers. (In the United States, consumers are encouraged to look for the “Made in the U.S.A.” label.) MNCs that consider entering a foreign market (or have already entered that market) must monitor the general loyalty of consumers toward locally produced products. If consumers are very loyal to local products, a joint venture with a local company may be more feasible than an exporting strategy. The September 11, 2001, terrorist attack caused some consumers to pay more attention to the country where products are produced.

HTTP://

<http://www.cia.gov>

Valuable information about political risk that should be considered by MNCs that engage in direct foreign investment.

Actions of Host Government

Various actions of a host government can affect the cash flow of an MNC. For example, a host government might impose pollution control standards (which affect costs) and additional corporate taxes (which affect after-tax earnings) as well as withholding taxes and fund transfer restrictions (which affect after-tax cash flows sent to the parent).

EXAMPLE

Recently, the Chinese government enacted a law requiring computer chips to include security technology that is licensed by Chinese firms. In addition, China imposes a 17 percent tax on computer chips sold there, but provides a rebate of up to 14 percent for

chips produced locally. This may discourage chip manufacturers such as Intel and Broadcom from selling chips in China. ■

Some MNCs use turnover in government members or philosophy as a proxy for a country's political risk. While this can significantly influence the MNC's future cash flows, it alone does not serve as a suitable representation of political risk. A subsidiary will not necessarily be affected by changing governments. Furthermore, a subsidiary can be affected by new policies of the host government or by a changed attitude toward the subsidiary's home country (and therefore the subsidiary), even when the host government has no risk of being overthrown.

A host government can use various means to make an MNC's operations coincide with its own goals. It may, for example, require the use of local employees for managerial positions at a subsidiary. In addition, it may require social facilities (such as an exercise room or nonsmoking areas) or special environmental controls (such as air pollution controls). Furthermore, it is not uncommon for a host government to require special permits, impose extra taxes, or subsidize competitors. All of these actions represent political risk in that they reflect a country's political characteristics and could influence an MNC's cash flows.

EXAMPLE

In March 2004, antitrust regulators representing the European Union countries decided to fine Microsoft about 500 million euros (equivalent to about \$610 million at the time) for abusing its monopolistic position in computer software. They also imposed restrictions on how Microsoft can bundle its Windows MediaPlayer (needed to access music or videos) in its personal computers sold in Europe. Microsoft argued that the fine is unfair because it is not subject to such restrictions in its home country, the United States. Some critics argue, however, that the European regulators are not being too strict, but rather that the U.S. regulators are being too lenient. ■

Lack of Restrictions. In some cases, MNCs are adversely affected by a lack of restrictions in a host country, which allows illegitimate business behavior to take market share. One of the most troubling issues for MNCs is the failure by host governments to enforce copyright laws against local firms that illegally copy the MNC's product. For example, local firms in Asia commonly copy software produced by MNCs and sell it to customers at lower prices. Software producers lose an estimated \$3 billion in sales annually in Asia for this reason. Furthermore, the legal systems in some countries do not adequately protect a firm against copyright violations or other illegal means of obtaining market share.

Blockage of Fund Transfers

Subsidiaries of MNCs often send funds back to the headquarters for loan repayments, purchases of supplies, administrative fees, remitted earnings, or other purposes. In some cases, a host government may block fund transfers, which could force subsidiaries to undertake projects that are not optimal (just to make use of the funds). Alternatively, the MNC may invest the funds in local securities that provide some return while the funds are blocked. But this return may be inferior to what could have been earned on funds remitted to the parent.

Currency Inconvertibility

Some governments do not allow the home currency to be exchanged into other currencies. Thus, the earnings generated by a subsidiary in these countries cannot be remitted to the parent through currency conversion. When the currency is inconvertible, an MNC's parent may need to exchange it for goods to extract benefits from projects in that country.

War

Some countries tend to engage in constant conflicts with neighboring countries or experience internal turmoil. This can affect the safety of employees hired by an MNC's subsidiary or by salespeople who attempt to establish export markets for the MNC. In addition, countries plagued by the threat of war typically have volatile business cycles, which make the MNC's cash flows generated from such countries more uncertain. The terrorist attack on the United States on September 11, 2001, aroused the expectation that the United States would be involved in a war. MNCs were adversely affected by their potential exposure to terrorist attacks, especially if their subsidiaries were located in countries where there might be anti-U.S. sentiment. Even if an MNC is not directly damaged due to a war, it may incur costs from ensuring the safety of its employees.

The 2003 War in Iraq. When the war in Iraq began in 2003, MNCs' cash flows were affected in various ways. The war caused friction between the United States and some countries in the Middle East. Consequently, MNCs faced the possibility that their buildings or offices overseas might be destroyed and that their employees might be attacked. Furthermore, demand for U.S. products and services by consumers in the Middle East declined. In addition, because of friction between the United States and France over how the situation in Iraq should be handled, French demand for some products produced by U.S.-based MNCs also declined. To a lesser extent, there were protests by citizens in other countries, which could have reduced the demand for products produced by U.S. firms. This form of country risk is not limited to U.S.-based MNCs. Friction periodically arises between many countries. Just as French consumers reduced their demand for U.S. products in 2003, U.S. consumers reduced their demand for French wine and reduced their travel to France. The French Government Tourist Office estimated that revenue received in France due to U.S. tourism in 2003 was about \$500 million less than in the previous year.

Even if MNCs were not directly affected by the various protests, there was substantial uncertainty about how the war might adversely affect MNCs by weakening economic conditions. There was concern that oil prices would rise because of the possible destruction of oil wells, and higher oil prices have a direct impact on transportation and energy costs. Higher interest rates were feared because of the substantial funding needed to finance the military spending. Some of the more pessimistic predictions suggested there would be a major world recession combined with high inflation. Thus, MNCs were concerned about the potential higher costs of supplies and the potential impact of high U.S. inflation or interest rates on exchange rates. Given all this uncertainty, MNCs restricted their expansion until the impact of the war on oil prices, the U.S. budget deficit, and the political relationships between the United States and other countries was clear.

Bureaucracy

Another country risk factor is government bureaucracy, which can complicate an MNC's business. Although this factor may seem irrelevant, it was a major deterrent for MNCs that considered projects in Eastern Europe in the early 1990s. Many of the Eastern European governments were not experienced at facilitating the entrance of MNCs into their markets.

Corruption

Corruption can adversely affect an MNC's international business because it can increase the cost of conducting business or it can reduce revenue. Various forms of corruption can occur between firms or between a firm and the government. For example, an MNC may lose revenue because a government contract is awarded to a local firm

HTTP://

<http://finance.yahoo.com/>
Assessments of various
political risk characteristics
by outside evaluators.

that paid off a government official. Laws and their enforcement vary among countries, however. For example, in the United States, it is illegal to make a payment to a high-ranking government official in return for political favors, but it is legal for U.S. firms to contribute to a politician's election campaign.

A corruption index is derived for most countries by Transparency International (see <http://www.transparency.org>). The index for selected countries is shown in Exhibit 16.1.

Financial Risk Factors

Along with political factors, financial factors should be considered when assessing country risk. One of the most obvious financial factors is the current and potential state of the country's economy. An MNC that exports to a country or develops a subsidiary in a country is highly concerned about that country's demand for its products. This demand is, of course, strongly influenced by the country's economy. A recession in the country could severely reduce demand for the MNC's exports or products sold by the MNC's local subsidiary. In the early 1990s and again in the 2000–2002 period, the European business performance of Ford Motor Co., Nike, Walt Disney Co., and many other U.S.-based MNCs was adversely affected by a weak European economy.

HTTP://

<http://www.heritage.org>
Interesting insight into international political risk issues that should be considered by MNCs conducting international business.

Indicators of Economic Growth

A country's economic growth is dependent on several financial factors:

- *Interest rates.* Higher interest rates tend to slow the growth of an economy and reduce demand for the MNC's products. Lower interest rates often stimulate the economy and increase demand for the MNC's products.

Exhibit 16.1 Corruption Index Ratings for Selected Countries (Maximum rating = 10. High ratings indicate low corruption.)

Country	Index Rating	Country	Index Rating
Finland	9.6	Chile	7.3
New Zealand	9.6	United States	7.3
Denmark	9.5	Spain	6.8
Singapore	9.4	Uruguay	6.4
Sweden	9.2	Taiwan	5.9
Switzerland	9.1	Hungary	5.2
Netherlands	8.9	Malaysia	5.0
Austria	8.6	Italy	4.9
United Kingdom	8.6	Czech Republic	4.8
Canada	8.5	Greece	4.4
Hong Kong	8.3	Brazil	3.9
Germany	8.0	China	3.3
Belgium	7.4	India	3.3
France	7.4	Mexico	3.3
Ireland	7.4	Russia	2.5

Source: Transparency International, 2007.

- *Exchange rates.* Exchange rates can influence the demand for the country's exports, which in turn affects the country's production and income level. A strong currency may reduce demand for the country's exports, increase the volume of products imported by the country, and therefore reduce the country's production and national income. A very weak currency can cause speculative outflows and reduce the amount of funds available to finance growth by businesses.
- *Inflation.* Inflation can affect consumers' purchasing power and therefore their demand for an MNC's goods. It also indirectly affects a country's financial condition by influencing the country's interest rates and currency value. A high level of inflation may also lead to a decline in economic growth.

Most financial factors that affect a country's economic conditions are difficult to forecast. Thus, even if an MNC considers them in its country risk assessment, it may still make poor decisions because of an improper forecast of the country's financial factors.

Some financial conditions may be caused by political risk. For example, the September 11, 2001, terrorist attack on the United States affected U.S.-based MNCs because of political risk and financial risk. Political uncertainty caused uncertainty about economic conditions, which resulted in a reduction in spending by consumers and, therefore, a reduction in cash flows of MNCs.

Types of Country Risk Assessment

Although there is no consensus as to how country risk can best be assessed, some guidelines have been developed. The first step is to recognize the difference between (1) an overall risk assessment of a country without consideration of the MNC's business and (2) the risk assessment of a country as it relates to the MNC's type of business. The first type can be referred to as **macroassessment** of country risk and the latter type as a **microassessment**. Each type is discussed in turn.

HTTP://

<http://lcweb2.loc.gov/frd/cs/cshome.html>
Detailed studies of 85 countries provided by the Library of Congress.

Macroassessment of Country Risk

A macroassessment involves consideration of all variables that affect country risk except those unique to a particular firm or industry. This type of assessment is convenient in that it remains the same for a given country, regardless of the firm or industry of concern; however, it excludes relevant information that could improve the accuracy of the assessment. Although a macroassessment of country risk is not ideal for any individual MNC, it serves as a foundation that can then be modified to reflect the particular business of the MNC.

Any macroassessment model should consider both political and financial characteristics of the country being assessed:

- *Political factors.* Political factors include the relationship of the host government with the MNC's home country government, the attitude of people in the host country toward the MNC's government, the historical stability of the host government, the vulnerability of the host government to political takeovers, and the probability of war between the host country and neighboring countries. Consideration of such political factors will indicate the probability of political events that may affect an MNC and the magnitude of the impact. The September 11, 2001, terrorist attack on the United States caused more concern about political risk for U.S.-based MNCs because of all the factors cited here.
- *Financial factors.* The financial factors of a macroassessment model should include GDP growth, inflation trends, government budget levels (and the government deficit), interest rates, unemployment, the country's reliance on export income,

the balance of trade, and foreign exchange controls. The list of financial factors could easily be extended several pages. The factors listed here represent just a subset of the financial factors considered when evaluating the financial strength of a country.

HTTP://

<http://www.stat-usa.gov>
Access to a variety of
microeconomic and
macroeconomic data on
emerging markets.

Uncertainty Surrounding a Macroassessment. There is clearly a degree of subjectivity in identifying the relevant political and financial factors for a macroassessment of country risk. There is also some subjectivity in determining the importance of each factor for the overall macroassessment for a particular country. For instance, one assessor may assign a much higher weight (degree of importance) to real GDP growth than another assessor. Finally, there is some subjectivity in predicting these financial factors. Because of these various types of subjectivity, it is not surprising that risk assessors often arrive at different opinions after completing a macroassessment of country risk.

Microassessment of Country Risk

While a macroassessment of country risk provides an indication of the country's overall status, it does not assess country risk from the perspective of the particular business of concern. A microassessment of country risk is needed to determine how the country risk relates to the specific MNC.

EXAMPLE

Since Nike conducts a large amount of international business, it must monitor country risk in many countries. Nike could be affected by country risk in several ways. First, a conflict between the United States and a specific foreign country could cause either the foreign country's government or its people to vent their anger against a Nike subsidiary in that country. Thus, Nike could be a target simply because it is viewed as a U.S. company, even if all the employees at that subsidiary are locals. Second, a change in a foreign government could result in new tax laws and other restrictions imposed on subsidiaries of U.S. firms or firms from any other country that are based there. Third, other local shoe manufacturers could possibly use government ties to impose more restrictions against Nike so that they could have a competitive advantage in the country of concern. Fourth, Nike's subsidiary could be adversely affected by other political problems that cause a deterioration in economic conditions in that country. Any of these events could cause an increase in the subsidiary's expenses or a decline in its revenue. ■

The specific impact of a particular form of country risk can affect MNCs in different ways.

EXAMPLE

Country Z has been assigned a relatively low macroassessment by most experts due to its poor financial condition. Two MNCs are deciding whether to set up subsidiaries in Country Z. Carco, Inc., is considering developing a subsidiary that would produce automobiles and sell them locally, while Milco, Inc., plans to build a subsidiary that would produce military supplies. Carco's plan to build an automobile subsidiary does not appear to be feasible, unless Country Z does not have a sufficient number of automobile producers already.

Country Z's government may be committed to purchasing a given amount of military supplies, regardless of how weak the economy is. Thus, Milco's plan to build a military supply subsidiary may still be feasible, even though Country Z's financial condition is poor.

It is possible, however, that Country Z's government will order its military supplies from a locally owned firm because it wants its supply needs to remain confidential. This possibility is an element of country risk because it is a country characteristic (or attitude) that can affect the feasibility of a project. Yet, this specific characteristic is relevant only to Milco, Inc., and not to Carco, Inc. ■

This example illustrates how an appropriate country risk assessment varies with the firm, industry, and project of concern and therefore why a macroassessment of country risk has its limitations. A microassessment is also necessary when evaluating the country risk related to a particular project proposed by a particular firm.

In addition to political variables, financial variables must also be included in a microassessment of country risk. Microfactors include the sensitivity of the firm's business to real GDP growth, inflation trends, interest rates, and other factors. Due to differences in business characteristics, some firms are more susceptible to the host country's economy than others.

In summary, the overall assessment of country risk consists of four parts:

1. Macropolitical risk
2. Macrofinancial risk
3. Micropolitical risk
4. Microfinancial risk

Although these parts can be consolidated to generate a single country risk rating, it may be useful to keep them separate so that an MNC can identify the various ways its direct foreign investment or exporting operations are exposed to country risk.

Techniques to Assess Country Risk

Once a firm identifies all the macro- and microfactors that deserve consideration in the country risk assessment, it may wish to implement a system for evaluating these factors and determining a country risk rating. Various techniques are available to achieve this objective. The following are some of the more popular techniques:

- Checklist approach
- Delphi technique
- Quantitative analysis
- Inspection visits
- Combination of techniques

Each technique is briefly discussed in turn.

Checklist Approach

A checklist approach involves making a judgment on all the political and financial factors (both macro and micro) that contribute to a firm's assessment of country risk. Ratings are assigned to a list of various financial and political factors, and these ratings are then consolidated to derive an overall assessment of country risk. Some factors (such as real GDP growth) can be measured from available data, while others (such as probability of entering a war) must be subjectively measured.

A substantial amount of information about countries is available on the Internet. This information can be used to develop ratings of various factors used to assess country risk. The factors are then converted to some numerical rating in order to assess a particular country. Those factors thought to have a greater influence on country risk should be assigned greater weights. Both the measurement of some factors and the weighting scheme implemented are subjective.

Delphi Technique

The **Delphi technique** involves the collection of independent opinions without group discussion. As applied to country risk analysis, the MNC could survey specific

employees or outside consultants who have some expertise in assessing a specific country's risk characteristics. The MNC receives responses from its survey and may then attempt to determine some consensus opinions (without attaching names to any of the opinions) about the perception of the country's risk. Then, it sends this summary of the survey back to the survey respondents and asks for additional feedback regarding its summary of the country's risk.

Quantitative Analysis

Once the financial and political variables have been measured for a period of time, models for quantitative analysis can attempt to identify the characteristics that influence the level of country risk. For example, regression analysis may be used to assess risk, since it can measure the sensitivity of one variable to other variables. A firm could regress a measure of its business activity (such as its percentage increase in sales) against country characteristics (such as real growth in GDP) over a series of previous months or quarters. Results from such an analysis will indicate the susceptibility of a particular business to a country's economy. This is valuable information to incorporate into the overall evaluation of country risk.

Although quantitative models can quantify the impact of variables on each other, they do not necessarily indicate a country's problems before they actually occur (preferably before the firm's decision to pursue a project in that country). Nor can they evaluate subjective data that cannot be quantified. In addition, historical trends of various country characteristics are not always useful for anticipating an upcoming crisis.

Inspection Visits

Inspection visits involve traveling to a country and meeting with government officials, business executives, and/or consumers. Such meetings can help clarify any uncertain opinions the firm has about a country. Indeed, some variables, such as inter-country relationships, may be difficult to assess without a trip to the host country.

Combination of Techniques

A survey of 193 corporations heavily involved in foreign business found that about half of them have no formal method of assessing country risk. This does not mean that they neglect to assess country risk, but rather that there is no proven method to use. Consequently, many MNCs use a variety of techniques, possibly using a checklist approach to identify relevant factors and then using the Delphi technique, quantitative analysis, and inspection visits to assign ratings to the various factors.

EXAMPLE

Missouri, Inc., recognizes that it must consider several financial and political factors in its country risk analysis of Mexico, where it plans to establish a subsidiary. Missouri creates a checklist of several factors and assigns a rating to each factor. It uses the Delphi technique to rate various political factors. It uses quantitative analysis to predict future economic conditions in Mexico so that it can rate various financial factors. It conducts an inspection visit to complement its assessment of the financial and political factors. ■

Measuring Country Risk

Deriving an overall country risk rating using a checklist approach requires separate ratings for political and financial risk. First, the political factors are assigned values within some arbitrarily chosen range (such as values from 1 to 5, where 5 is the best value/lowest risk). Next, these political factors are assigned weights (representing degree of importance), which should add up to 100 percent. The assigned values of the factors times their respective weights can then be summed to derive a political risk rating.

The process is then repeated to derive the financial risk rating. All financial factors are assigned values (from 1 to 5, where 5 is the best value/lowest risk). Then the assigned values of the factors times their respective weights can be summed to derive a financial risk rating.

Once the political and financial ratings have been derived, a country's overall country risk rating as it relates to a specific project can be determined by assigning weights to the political and financial ratings according to their perceived importance. The importance of political risk versus financial risk varies with the intent of the MNC. An MNC considering direct foreign investment to attract demand in that country must be highly concerned about financial risk. An MNC establishing a foreign manufacturing plant and planning to export the goods from there should be more concerned with political risk.

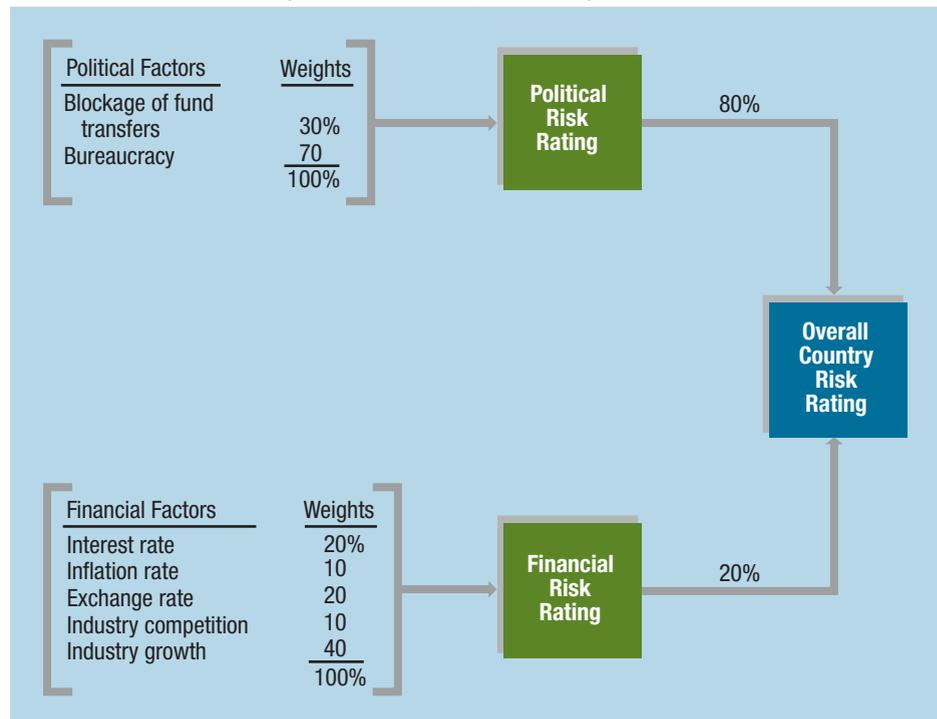
If the political risk is thought to be much more influential on a particular project than the financial risk, it will receive a higher weight than the financial risk rating (together both weights must total 100 percent). The political and financial ratings multiplied by their respective weights will determine the overall country risk rating for a country as it relates to a particular project.

EXAMPLE

Assume that Cougar Co. plans to build a steel plant in Mexico. It has used the Delphi technique and quantitative analysis to derive ratings for various political and financial factors. The discussion here focuses on how to consolidate the ratings to derive an overall country risk rating.

Exhibit 16.2 illustrates Cougar's country risk assessment of Mexico. Notice in Exhibit 16.2 that two political factors and five financial factors contribute to the overall country risk rating in this example. Cougar Co. will consider projects only in countries that have a country risk rating of 3.5 or higher, based on its country risk rating.

Exhibit 16.2 Determining the Overall Country Risk Rating



Cougar Co. has assigned the values and weights to the factors as shown in Exhibit 16.3. In this example, the company generally assigns the financial factors higher ratings than the political factors. The financial condition of Mexico has therefore been assessed more favorably than the political condition. Industry growth is the most important financial factor in Mexico, based on its 40 percent weighting. The bureaucracy is thought to be the most important political factor, based on a weighting of 70 percent; regulation of international fund transfers receives the remaining 30 percent weighting. The political risk rating is estimated at 3.3 by adding the products of the assigned ratings (column 2) and weights (column 3) of the political risk factors.

The financial risk is computed to be 3.9, based on adding the products of the assigned ratings and the weights of the financial risk factors. Once the political and financial ratings are determined, the overall country risk rating can be derived (as shown at the bottom of Exhibit 16.3), given the weights assigned to political and financial risk. Column 3 at the bottom of Exhibit 16.3 indicates that Cougar perceives political risk (receiving an 80 percent weight) to be much more important than financial risk (receiving a 20 percent weight) in Mexico for the proposed project. The overall country risk rating of 3.42 may appear low given the individual category ratings. This is due to the heavy weighting given to political risk, which in this example is critical from the firm's perspective. In particular, Cougar views Mexico's bureaucracy as a critical factor and assigns it a low rating. Given that Cougar considers projects only in countries that have a rating of at least 3.5, it decides not to pursue the project in Mexico. ■

Exhibit 16.3 Derivation of the Overall Country Risk Rating Based on Assumed Information

(1)	(2)	(3)	(4) = (2) × (3)
Political Risk Factors	Rating Assigned by Company to Factor (within a Range of 1–5)	Weight Assigned by Company to Factor According to Importance	Weighted Value of Factor
Blockage of fund transfers	4	30%	1.2
Bureaucracy	3	<u>70</u>	<u>2.1</u>
		100%	3.3 = Political risk rating
Financial Risk Factors			
Interest rate	5	20%	1.0
Inflation rate	4	10	.4
Exchange rate	4	20	.8
Industry competition	5	10	.5
Industry growth	3	<u>40</u>	<u>1.2</u>
		100%	3.9 = Financial risk rating
(1)	(2)	(3)	(4) = (2) × (3)
Category	Rating as Determined Above	Weight Assigned by Company to Each Risk Category	Weighted Rating
Political risk	3.3	80%	2.64
Financial risk	3.9	<u>20</u>	<u>.78</u>
		100%	3.42 = Overall country risk rating

Variation in Methods of Measuring Country Risk

Country risk assessors have their own individual procedures for quantifying country risk. The procedure described here is just one of many. Most procedures are similar, though, in that they somehow assign ratings and weights to all individual characteristics relevant to country risk assessment.

The number of relevant factors comprising both the political risk and the financial risk categories will vary with the country being assessed and the type of corporate operations planned for that country. The assignment of values to the factors, along with the degree of importance (weights) assigned to the factors, will also vary with the country being assessed and the type of corporate operations planned for that country.

Using the Country Risk Rating for Decision Making

If the country risk is too high, then the firm does not need to analyze the feasibility of the proposed project any further. Some firms may contend that no risk is too high when considering a project. Their reasoning is that if the potential return is high enough, the project is worth undertaking. When employee safety is a concern, however, the project may be rejected regardless of its potential return.

Even after a project is accepted and implemented, the MNC must continue to monitor country risk. With a labor-intensive MNC, the host country may feel it is benefiting from a subsidiary's existence (due to the subsidiary's employment of local people), and the chance of expropriation may be low. Nevertheless, several other forms of country risk could suddenly make the MNC consider divesting the project. Furthermore, decisions regarding subsidiary expansion, fund transfers to the parent, and sources of financing can all be affected by any changes in country risk. Since country risk can change dramatically over time, periodic reassessment is required, especially for less stable countries.

Regardless of how country risk analysis is conducted, MNCs are often unable to predict crises in various countries. MNCs should recognize their limitations when assessing country risk and consider ways they might limit their exposure to a possible increase in that risk.

Comparing Risk Ratings among Countries

An MNC may evaluate country risk for several countries, perhaps to determine where to establish a subsidiary. One approach to comparing political and financial ratings among countries, advocated by some foreign risk managers, is a **foreign investment risk matrix (FIRM)**, which displays the financial (or economic) and political risk by intervals ranging across the matrix from "poor" to "good." Each country can be positioned in its appropriate location on the matrix based on its political rating and financial rating.

Actual Country Risk Ratings across Countries

Country risk ratings are shown in Exhibit 16.4. This exhibit is not necessarily applicable to a particular MNC that wants to pursue international business because the risk assessment here may not focus on the factors that are relevant to that MNC. Nevertheless, the exhibit illustrates how the risk rating can vary substantially among countries. Many industrialized countries have high ratings, indicating low risk. Emerging countries tend to have lower ratings. Country risk ratings change over time in response to the factors that influence a country's rating.

HTTP://

http://www.duke.edu/~charvey/Country_risk/couindex.htm

Results of Campbell R. Harvey's political, economic, and financial country risk analysis.

Exhibit 16.4 Country Risk Ratings among Countries



Source: Coface, 2007. These ratings measure the likelihood of customers in the country to make payment. They do not measure all other country risk characteristics such as government stability.

Incorporating Country Risk in Capital Budgeting

If the risk rating of a country is in the tolerable range, any project related to that country deserves further consideration. Country risk can be incorporated in the capital budgeting analysis of a proposed project by adjusting the discount rate or by adjusting the estimated cash flows. Each method is discussed here.

Adjustment of the Discount Rate

The discount rate of a proposed project is supposed to reflect the required rate of return on that project. Thus, the discount rate can be adjusted to account for the country risk. The lower the country risk rating, the higher the perceived risk and the higher the discount rate applied to the project's cash flows. This approach is convenient in that one adjustment to the capital budgeting analysis can capture country risk. However, there is no precise formula for adjusting the discount rate to incorporate country risk. The adjustment is somewhat arbitrary and may therefore cause feasible projects to be rejected or infeasible projects to be accepted.

Adjustment of the Estimated Cash Flows

Perhaps the most appropriate method for incorporating forms of country risk in a capital budgeting analysis is to estimate how the cash flows would be affected by each form of risk. For example, if there is a 20 percent probability that the host government will temporarily block funds from the subsidiary to the parent, the MNC should estimate the project's net present value (*NPV*) under these circumstances, realizing that there is a 20 percent chance that this *NPV* will occur.

If there is a chance that a host government takeover will occur, the foreign project's *NPV* under these conditions should be estimated. Each possible form of risk has an estimated impact on the foreign project's cash flows and therefore on the project's *NPV*. By analyzing each possible impact, the MNC can determine the probability distribution of *NPVs* for the project. Its accept/reject decision on the project will be based on its assessment of the probability that the project will generate a positive *NPV*, as well as the size of possible *NPV* outcomes. Though this procedure may seem somewhat tedious, it directly incorporates forms of country risk into the cash flow estimates and explicitly illustrates the possible results from implementing the project. The more convenient method of adjusting the discount rate in accordance with the country risk rating does not indicate the probability distribution of possible outcomes.

EXAMPLE

Reconsider the example of Spartan, Inc., that was discussed in Chapter 14. Assume for the moment that all the initial assumptions regarding Spartan's initial investment, project life, pricing policy, exchange rate projections, and so on still apply. Now, however, we will incorporate two country risk characteristics that were not included in the initial analysis. First, assume that there is a 30 percent chance that the withholding tax imposed by the Singapore government will be at a 20 percent rate rather than a 10 percent rate. Second, assume that there is a 40 percent chance that the Singapore government will provide Spartan a payment (salvage value) of S\$7 million rather than S\$12 million. These two possibilities represent a form of country risk.

Assume that these two possible situations are unrelated. To determine how the *NPV* is affected by each of these scenarios, a capital budgeting analysis similar to that shown in Exhibit 14.2 in Chapter 14 can be used. If this analysis is already on a spreadsheet, the *NPV* can easily be estimated by adjusting line items no. 15 (withholding tax on remitted funds) and no. 17 (salvage value). The capital budgeting analysis measures the effect of a 20 percent

withholding tax rate in Exhibit 16.5. Since items before line no. 14 are not affected, these items are not shown here. If the 20 percent withholding tax rate is imposed, the *NPV* of the 4-year project is \$1,252,160.

Now consider the possibility of the lower salvage value, while using the initial assumption of a 10 percent withholding tax rate. The capital budgeting analysis accounts for the lower salvage value in Exhibit 16.6. The estimated *NPV* is \$800,484, based on this scenario.

Finally, consider the possibility that both the higher withholding tax and the lower salvage value occur. The capital budgeting analysis in Exhibit 16.7 accounts for both of these situations. The *NPV* is estimated to be $-\$177,223$.

Once estimates for the *NPV* are derived for each scenario, Spartan, Inc., can attempt to determine whether the project is feasible. There are two country risk variables that are uncertain, and there are four possible *NPV* outcomes, as illustrated in Exhibit 16.8. Given the probability of each possible situation and the assumption that the withholding tax outcome

Exhibit 16.5 Analysis of Project Based on a 20 Percent Withholding Tax: Spartan, Inc.

	Year 0	Year 1	Year 2	Year 3	Year 4
14. S\$ remitted by subsidiary		\$6,000,000	\$6,000,000	\$7,600,000	\$8,400,000
15. Withholding tax imposed on remitted funds (20%)		<u>\$1,200,000</u>	<u>\$1,200,000</u>	<u>\$1,520,000</u>	<u>\$1,680,000</u>
16. S\$ remitted after withholding taxes		\$4,800,000	\$4,800,000	\$6,080,000	\$6,720,000
17. Salvage value					\$12,000,000
18. Exchange rate of S\$		\$.50	\$.50	\$.50	\$.50
19. Cash flows to parent		\$2,400,000	\$2,400,000	\$3,040,000	\$9,360,000
20. <i>PV</i> of parent cash flows (15% discount rate)		\$2,086,956	\$1,814,745	\$1,998,849	\$5,351,610
21. Initial investment by parent	\$10,000,000				
22. Cumulative <i>NPV</i>		$-\$7,913,044$	$-\$6,098,299$	$-\$4,099,450$	\$1,252,160

Exhibit 16.6 Analysis of Project Based on a Reduced Salvage Value: Spartan, Inc.

	Year 0	Year 1	Year 2	Year 3	Year 4
14. S\$ remitted by subsidiary		\$6,000,000	\$6,000,000	\$7,600,000	\$8,400,000
15. Withholding tax imposed on remitted funds (10%)		<u>\$600,000</u>	<u>\$600,000</u>	<u>\$760,000</u>	<u>\$840,000</u>
16. S\$ remitted after withholding taxes		\$5,400,000	\$5,400,000	\$6,840,000	\$7,560,000
17. Salvage value					\$7,000,000
18. Exchange rate of S\$		\$.50	\$.50	\$.50	\$.50
19. Cash flows to parent		\$2,700,000	\$2,700,000	\$3,420,000	\$7,280,000
20. <i>PV</i> of parent cash flows (15% discount rate)		\$2,347,826	\$2,041,588	\$2,248,706	\$4,162,364
21. Initial investment by parent	\$10,000,000				
22. Cumulative <i>NPV</i>		$-\$7,652,174$	$-\$5,610,586$	$-\$3,361,880$	\$800,484

is independent from the salvage value outcome, joint probabilities can be determined for each pair of outcomes by multiplying the probabilities of the two outcomes of concern. Since the probability of a 20 percent withholding tax is 30 percent, the probability of a 10 percent withholding tax is 70 percent. Given that the probability of a lower salvage value is 40 percent, the probability of the initial estimate for the salvage value is 60 percent. Thus, scenario no. 1 (10 percent withholding tax and S\$12 million salvage value) created in Chapter 14 has a joint probability (probability that both outcomes will occur) of $70\% \times 60\% = 42\%$.

In Exhibit 16.8, scenario no. 4 is the only scenario in which there is a negative *NPV*. Since this scenario has a 12 percent chance of occurring, there is a 12 percent chance that the project will adversely affect the value of the firm. Put another way, there is an 88 percent chance that the project will enhance the firm's value. The expected value of the project's *NPV* can be measured as the sum of each scenario's estimated *NPV* multiplied by its respective probability across all four scenarios, as shown at the bottom of Exhibit 16.8. Most MNCs would accept the proposed project, given the likelihood that the project will have a positive *NPV* and the limited loss that would occur under even the worst-case scenario. ■

Exhibit 16.7 Analysis of Project Based on a 20 Percent Withholding Tax and a Reduced Salvage Value: Spartan, Inc.

	Year 0	Year 1	Year 2	Year 3	Year 4
14. S\$ remitted by subsidiary		\$6,000,000	\$6,000,000	\$7,600,000	\$8,400,000
15. Withholding tax imposed on remitted funds (20%)		<u>\$1,200,000</u>	<u>\$1,200,000</u>	<u>\$1,520,000</u>	<u>\$1,680,000</u>
16. S\$ remitted after withholding taxes		\$4,800,000	\$4,800,000	\$6,080,000	\$6,720,000
17. Salvage value					\$7,000,000
18. Exchange rate of S\$		\$.50	\$.50	\$.50	\$.50
19. Cash flows to parent		\$2,400,000	\$2,400,000	\$3,040,000	\$6,860,000
20. <i>PV</i> of parent cash flows (15% discount rate)		\$2,086,956	\$1,814,745	\$1,998,849	\$3,922,227
21. Initial investment by parent	\$10,000,000				
22. Cumulative <i>NPV</i>		−\$7,913,044	−\$6,098,299	−\$4,099,450	−\$177,223

Exhibit 16.8 Summary of Estimated *NPVs* across the Possible Scenarios: Spartan, Inc.

Scenario	Withholding Tax Imposed by Singapore Government	Salvage Value of Project	<i>NPV</i>	Probability
1	10%	S\$12,000,000	\$2,229,867	(70%)(60%) = 42%
2	20%	S\$12,000,000	\$1,252,160	(30%)(60%) = 18%
3	10%	S\$7,000,000	\$800,484	(70%)(40%) = 28%
4	20%	S\$7,000,000	−\$177,223	(30%)(40%) = 12%
$E(NPV) = \$2,229,867(42\%)$ $+ \$1,252,160(18\%)$ $+ \$800,484(28\%)$ $- \$177,223(12\%)$ $= \$1,364,801$				

Using an Electronic Spreadsheet to Account for Uncertainty. In the previous example, the initial assumptions for most input variables were used as if they were known with certainty. However, Spartan, Inc., could account for the uncertainty of country risk characteristics (as in our current example) while also allowing for uncertainty in the other variables as well. This process can be facilitated if the analysis is on a computer spreadsheet.

EXAMPLE

If Spartan, Inc., wishes to allow for three possible exchange rate trends, it can adjust the exchange rate projections for each of the four scenarios assessed in the current example. Each scenario will reflect a specific withholding tax outcome, a specific salvage value outcome, and a specific exchange rate trend. There will be a total of 12 scenarios, with each scenario having an estimated *NPV* and a probability of occurrence. Based on the estimated *NPV* and the probability of each scenario, Spartan, Inc., can then measure the expected value of the *NPV* and the probability that the *NPV* will be positive, which leads to a decision regarding whether the project is feasible. ■

How Country Risk Affects Financial Decisions

When incorporating country risk into the capital budgeting analysis, some projects are no longer feasible, and MNCs reduced their involvement in politically tense countries.

Asian Crisis. As a result of the 1997–1998 Asian crisis, MNCs realized that they had underestimated the potential financial problems that could occur in the high-growth Asian countries. Country risk analysts had concentrated on the high degree of economic growth, even though the Asian countries had high debt levels and their commercial banks had massive loan problems. The loan problems were not obvious because commercial banks were typically not required to disclose much information about their loans. Some MNCs recognized the potential problems in Asia, though, and discontinued their exports to those Asian businesses that were not willing to pay in advance.

Terrorist Attack on United States. Following the September 11, 2001, attack on the United States, some MNCs reduced their exposure to various forms of country risk by discontinuing business in countries where U.S. firms might be subject to more terrorist attacks. Some MNCs also reduced employee travel to protect employees from attacks. MNCs recognize that some unpredictable events will unfold that will affect their exposure to country risk. Yet, they can at least be prepared to revise their operations in order to reduce their exposure.

GOVERNANCE

Governance over the Assessment of Country Risk

Many international projects by MNCs last for 20 years or more. Yet, an MNC's managers may not expect to be employed for such a long period of time. Thus, they do not necessarily feel accountable for the entire lifetime of a project. There are many countries that may have low country risk today, but that are very fragile. Some governments could easily experience a major shift in the government regime from capitalist to socialist or vice versa. In addition, some countries rely heavily on the production of a specific commodity (such as oil) and could experience major financial problems if the world's market price of that commodity declines. When managers want to pursue a project because of its potential success during the next few years, they may overlook the potential for increased country risk surrounding the project over time. In their minds, they may no longer be held accountable if the project fails several years from now. Consequently, MNCs need a proper governance system to ensure that managers fully consider country risk when assessing potential projects. One solution is to require that major long-term projects use input from an external source (such as a consulting firm) regarding the country risk assessment of a specific project and that this assessment be directly incorporated in

the analysis of the project. In this way, a more unbiased measurement of country risk may be used to determine whether the project is feasible. In addition, the board of directors may attempt to oversee large long-term projects to make sure that country risk is fully incorporated into the analysis. ■

Reducing Exposure to Host Government Takeovers

Although direct foreign investment offers several possible benefits, country risk can offset such benefits. The most severe country risk is a host government takeover. This type of takeover may result in major losses, especially when the MNC does not have any power to negotiate with the host government.

The following are the most common strategies used to reduce exposure to a host government takeover:

- Use a short-term horizon.
- Rely on unique supplies or technology.
- Hire local labor.
- Borrow local funds.
- Purchase insurance.
- Use project finance.

Use a Short-Term Horizon

An MNC may concentrate on recovering cash flow quickly so that in the event of expropriation, losses are minimized. An MNC would also exert only a minimum effort to replace worn-out equipment and machinery at the subsidiary. It may even phase out its overseas investment by selling off its assets to local investors or the government in stages over time.

Rely on Unique Supplies or Technology

If the subsidiary can bring in supplies from its headquarters (or a sister subsidiary) that cannot be duplicated locally, the host government will not be able to take over and operate the subsidiary without those supplies. Also the MNC can cut off the supplies if the subsidiary is treated unfairly.

If the subsidiary can hide the technology in its production process, a government takeover will be less likely. A takeover would be successful in this case only if the MNC would provide the necessary technology, and the MNC would do so only under conditions of a friendly takeover that would ensure that it received adequate compensation.

Hire Local Labor

If local employees of the subsidiary would be affected by the host government's takeover, they can pressure their government to avoid such action. However, the government could still keep those employees after taking over the subsidiary. Thus, this strategy has only limited effectiveness in avoiding or limiting a government takeover.

Borrow Local Funds

If the subsidiary borrows funds locally, local banks will be concerned about its future performance. If for any reason a government takeover would reduce the probability that the banks would receive their loan repayments promptly, they might attempt to prevent a takeover by the host government. However, the host government may

guarantee repayment to the banks, so this strategy has only limited effectiveness. Nevertheless, it could still be preferable to a situation in which the MNC not only loses the subsidiary but also still owes home country creditors.

Purchase Insurance

Insurance can be purchased to cover the risk of expropriation. For example, the U.S. government provides insurance through the Overseas Private Investment Corporation (OPIC). The insurance premiums paid by a firm depend on the degree of insurance coverage and the risk associated with the firm. Typically, however, any insurance policy will cover only a portion of the company's total exposure to country risk.

Many home countries of MNCs have investment guarantee programs that insure to some extent the risks of expropriation, wars, or currency blockage. Some guarantee programs have a one-year waiting period or longer before compensation is paid on losses due to expropriation. Also, some insurance policies do not cover all forms of expropriation. Furthermore, to be eligible for such insurance, the subsidiary might be required by the country to concentrate on exporting rather than on local sales. Even if a subsidiary qualifies for insurance, there is a cost. Any insurance will typically cover only a portion of the assets and may specify a maximum duration of coverage, such as 15 or 20 years. A subsidiary must weigh the benefits of this insurance against the cost of the policy's premiums and potential losses in excess of coverage. The insurance can be helpful, but it does not by itself prevent losses due to expropriation.

In 1993, Russia established an insurance fund to protect MNCs against various forms of country risk. The Russian government took this action to encourage more direct foreign investment in Russia.

The World Bank has established an affiliate called the Multilateral Investment Guarantee Agency (MIGA) to provide political insurance for MNCs with direct foreign investment in less developed countries. MIGA offers insurance against expropriation, breach of contract, currency inconvertibility, war, and civil disturbances.

Use Project Finance

Many of the world's largest infrastructure projects are structured as "project finance" deals, which limit the exposure of the MNCs. First, project finance deals are heavily financed with credit. Thus, the MNC's exposure is limited because it invests only a limited amount of equity in the project. Second, a bank may guarantee the payments to the MNC. Third, project finance deals are unique in that they are secured by the project's future revenues from production. That is, the project is separate from the MNC that manages the project. The loans are "nonrecourse" in that the creditor cannot pursue the MNC for payment but only the assets and cash flows of the project itself. Thus, the cash flows of the project are relevant, and not the credit risk of the borrower. Because of the transparency of the process arising from the single purpose and finite plan for termination, project finance allows projects to be financed that otherwise would likely not obtain financing under conventional terms. A host government is unlikely to take over this type of project because it would have to assume the existing liabilities due to the credit arrangement.

EXAMPLE

The largest project financed by the International Financial Corp. (IFC) is the \$1.34 billion Mozal aluminum smelter in Mozambique. The IFC's investment in the smelter involves the extension of \$133 million of credit. The credit risk of the government of Mozambique is very high, as is the political risk inherent in the project, especially since the country has experienced 20 years of civil war. The project is managed by Mitsubishi, BHB Billiton, and the Industrial Development Corp. of South Africa. The plant and the aluminum output serve as collateral for the loan. The project has had a major impact on the economy of Mozambique. ■

SUMMARY

■ The factors used by MNCs to measure a country's political risk include the attitude of consumers toward purchasing locally produced goods, the host government's actions toward the MNC, the blockage of fund transfers, currency inconvertibility, war, bureaucracy, and corruption. These factors can increase the costs of international business.

■ The factors used by MNCs to measure a country's financial risk are the country's interest rates, exchange rates, and inflation rates.

■ The techniques typically used by MNCs to measure the country risk are the checklist approach, the Delphi technique, quantitative analysis, and inspection visits. Since no one technique covers all aspects of country risk, a combination of these techniques is commonly used. The measurement of country risk is

essentially a weighted average of the political or financial factors that are perceived to comprise country risk. Each MNC has its own view as to the weights that should be assigned to each factor. Thus, the overall rating for a country may vary among MNCs.

■ Once country risk is measured, it can be incorporated into a capital budgeting analysis by adjustment of the discount rate. The adjustment is somewhat arbitrary, however, and may lead to improper decision making. An alternative method of incorporating country risk analysis into capital budgeting is to explicitly account for each factor that affects country risk. For each possible form of risk, the MNC can recalculate the foreign project's net present value under the condition that the event (such as blocked funds, increased taxes, etc.) occurs.

POINT COUNTER-POINT

Does Country Risk Matter for U.S. Projects?

Point No. U.S.-based MNCs should consider country risk for foreign projects only. A U.S.-based MNC can account for U.S. economic conditions when estimating cash flows of a U.S. project or deriving the required rate of return on a project, but it does not need to consider country risk.

Counter-Point Yes. Country risk should be considered for U.S. projects. Country risk can indirectly affect the cash flows of a U.S. project. Consider a U.S.

project in which supplies are produced and sent to a U.S. exporter. The demand for the supplies will be dependent on the demand for the exports over time, and the demand for exports over time may be dependent on country risk.

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. Key West Co. exports highly advanced phone system components to its subsidiary shops on islands in the Caribbean. The components are purchased by consumers to improve their phone systems. These components are not produced in other countries. Explain how political risk factors could adversely affect the profitability of Key West Co.
2. Using the information in question 1, explain how financial risk factors could adversely affect the profitability of Key West Co.
3. Given the information in question 1, do you expect that Key West Co. is more concerned about the adverse effects of political risk or of financial risk?
4. Explain what types of firms would be most concerned about an increase in country risk as a result

of the terrorist attack on the United States on September 11, 2001.

5. Rockford Co. plans to expand its successful business by establishing a subsidiary in Canada. However, it is concerned that after 2 years the Canadian government will either impose a special tax on any income sent back to the U.S. parent or order the subsidiary to be sold at that time. The executives

have estimated that either of these scenarios has a 15 percent chance of occurring. They have decided to add four percentage points to the project's required rate of return to incorporate the country risk that they are concerned about in the capital budgeting analysis. Is there a better way to more precisely incorporate the country risk of concern here?

QUESTIONS AND APPLICATIONS

1. **Forms of Country Risk.** List some forms of political risk other than a takeover of a subsidiary by the host government, and briefly elaborate on how each factor can affect the risk to the MNC. Identify common financial factors for an MNC to consider when assessing country risk. Briefly elaborate on how each factor can affect the risk to the MNC.
2. **Country Risk Assessment.** Describe the steps involved in assessing country risk once all relevant information has been gathered.
3. **Uncertainty Surrounding the Country Risk Assessment.** Describe the possible errors involved in assessing country risk. In other words, explain why country risk analysis is not always accurate.
4. **Diversifying Away Country Risk.** Why do you think that an MNC's strategy of diversifying projects internationally could achieve low exposure to country risk?
5. **Monitoring Country Risk.** Once a project is accepted, country risk analysis for the foreign country involved is no longer necessary, assuming that no other proposed projects are being evaluated for that country. Do you agree with this statement? Why or why not?
6. **Country Risk Analysis.** If the potential return is high enough, any degree of country risk can be tolerated. Do you agree with this statement? Why or why not? Do you think that a proper country risk analysis can replace a capital budgeting analysis of a project considered for a foreign country? Explain.
7. **Country Risk Analysis.** Niagra, Inc., has decided to call a well-known country risk consultant to conduct a country risk analysis in a small country where it plans to develop a large subsidiary. Niagra prefers to hire the consultant since it plans to use its employees for other important corporate functions. The consultant uses a computer program that has assigned weights of importance linked to the various factors. The consultant will evaluate the factors for this small country and insert a rating for each factor into the computer. The weights assigned to the factors are not adjusted by the computer, but the factor ratings are adjusted for each country that the consultant assesses. Do you think Niagra, Inc., should use this consultant? Why or why not?
8. **Microassessment.** Explain the microassessment of country risk.
9. **Incorporating Country Risk in Capital Budgeting.** How could a country risk assessment be used to adjust a project's required rate of return? How could such an assessment be used instead to adjust a project's estimated cash flows?
10. **Reducing Country Risk.** Explain some methods of reducing exposure to existing country risk, while maintaining the same amount of business within a particular country.
11. **Managing Country Risk.** Why do some subsidiaries maintain a low profile as to where their parents are located?
12. **Country Risk Analysis.** When NYU Corp. considered establishing a subsidiary in Zenland, it performed a country risk analysis to help make the decision. It first retrieved a country risk analysis performed about one year earlier, when it had planned to begin a major exporting business to Zenland firms. Then it updated the analysis by incorporating all current information on the key variables that were used in that analysis, such as Zenland's willingness to accept exports, its existing quotas, and existing tariff laws. Is this country risk analysis adequate? Explain.
13. **Reducing Country Risk.** MNCs such as Alcoa, DuPont, Heinz, and IBM donated products and technology to foreign countries where they had subsidiaries. How could these actions have reduced some forms of country risk?
14. **Country Risk Ratings.** Assauer, Inc., would like to assess the country risk of Glovanskia. Assauer has

identified various political and financial risk factors, as shown below.

Political Risk Factor	Assigned Rating	Assigned Weight
Blockage of fund transfers	5	40%
Bureaucracy	3	60%

Financial Risk Factor	Assigned Rating	Assigned Weight
Interest rate	1	10%
Inflation	4	20%
Exchange rate	5	30%
Competition	4	20%
Growth	5	20%

Assauer has assigned an overall rating of 80 percent to political risk factors and of 20 percent to financial risk factors. Assauer is not willing to consider Glovanskia for investment if the country risk rating is below 4.0. Should Assauer consider Glovanskia for investment?

15. **Effects of September 11.** Arkansas, Inc., exports to various less developed countries, and its receivables are denominated in the foreign currencies of the importers. It considers reducing its exchange rate risk by establishing small subsidiaries to produce products. By incurring some expenses in the countries where it generates revenue, it reduces its exposure to exchange rate risk. Since September 11, 2001, when terrorists attacked the United States, it has questioned whether it should restructure its operations. Its CEO believes that its cash flows may be less exposed to exchange rate risk but more exposed to other types of risk as a result of restructuring. What is your opinion?

Advanced Questions

16. **How Country Risk Affects NPV.** Hoosier, Inc., is planning a project in the United Kingdom. It would lease space for one year in a shopping mall to sell expensive clothes manufactured in the United States. The project would end in one year, when all earnings would be remitted to Hoosier, Inc. Assume that no additional corporate taxes are incurred beyond those imposed by the British government. Since Hoosier, Inc., would rent space, it would not have any long-term assets in the United Kingdom and expects the salvage (terminal) value of the project to be about zero.

Assume that the project's required rate of return is 18 percent. Also assume that the initial outlay required by the parent to fill the store with clothes is \$200,000. The pretax earnings are expected to be £300,000 at the end of one year. The British pound is expected to be worth \$1.60 at the end of one year, when the after-tax earnings are converted to dollars and remitted to the United States. The following forms of country risk must be considered:

- The British economy may weaken (probability = 30 percent), which would cause the expected pretax earnings to be £200,000.
- The British corporate tax rate on income earned by U.S. firms may increase from 40 to 50 percent (probability = 20 percent).

These two forms of country risk are independent. Calculate the expected value of the project's net present value (*NPV*) and determine the probability that the project will have a negative *NPV*.

17. **How Country Risk Affects NPV.** Explain how the capital budgeting analysis in the previous question would need to be adjusted if there were three possible outcomes for the British pound along with the possible outcomes for the British economy and corporate tax rate.
18. **J.C. Penney's Country Risk Analysis.** Recently, J.C. Penney decided to consider expanding into various foreign countries; it applied a comprehensive country risk analysis before making its expansion decisions. Initial screenings of 30 foreign countries were based on political and economic factors that contribute to country risk. For the remaining 20 countries where country risk was considered to be tolerable, specific country risk characteristics of each country were considered. One of J.C. Penney's biggest targets is Mexico, where it planned to build and operate seven large stores.
- Identify the political factors that you think may possibly affect the performance of the J.C. Penney stores in Mexico.
 - Explain why the J.C. Penney stores in Mexico and in other foreign markets are subject to financial risk (a subset of country risk).
 - Assume that J.C. Penney anticipated that there was a 10 percent chance that the Mexican government would temporarily prevent conversion of peso profits into dollars because of political conditions. This event would prevent J.C. Penney from remitting earnings generated in Mexico and could adversely affect the performance of these stores (from the U.S. perspective). Offer a way in which this type of political risk could be explicitly

incorporated into a capital budgeting analysis when assessing the feasibility of these projects.

d. Assume that J.C. Penney decides to use dollars to finance the expansion of stores in Mexico. Second, assume that J.C. Penney decides to use one set of dollar cash flow estimates for any project that it assesses. Third, assume that the stores in Mexico are not subject to political risk. Do you think that the required rate of return on these projects would differ from the required rate of return on stores built in the United States at that same time? Explain.

e. Based on your answer to the previous question, does this mean that proposals for any new stores in the United States have a higher probability of being accepted than proposals for any new stores in Mexico?

19. How Country Risk Affects NPV. Monk, Inc., is considering a capital budgeting project in Tunisia. The project requires an initial outlay of 1 million Tunisian dinar; the dinar is currently valued at \$.70. In the first and second years of operation, the project will generate 700,000 dinar in each year. After 2 years, Monk will terminate the project, and the expected salvage value is 300,000 dinar. Monk has assigned a discount rate of 12 percent to this project. The following additional information is available:

- There is currently no withholding tax on remittances to the United States, but there is a 20 percent chance that the Tunisian government will impose a withholding tax of 10 percent beginning next year.
- There is a 50 percent chance that the Tunisian government will pay Monk 100,000 dinar after 2 years instead of the 300,000 dinar it expects.
- The value of the dinar is expected to remain unchanged over the next 2 years.

a. Determine the net present value (*NPV*) of the project in each of the four possible scenarios.

b. Determine the joint probability of each scenario.

c. Compute the expected *NPV* of the project and make a recommendation to Monk regarding its feasibility.

20. How Country Risk Affects NPV. In the previous question, assume that instead of adjusting the estimated cash flows of the project, Monk had decided to adjust the discount rate from 12 to 17 percent. Reevaluate the *NPV* of the project's expected scenario using this adjusted discount rate.

21. Risk and Cost of Potential Kidnapping. In 2004 during the war in Iraq, some MNCs capitalized on opportunities to rebuild Iraq. However, in April

2004, some employees were kidnapped by local militant groups. How should an MNC account for this potential risk when it considers direct foreign investment (DFI) in any particular country? Should it avoid DFI in any country in which such an event could occur? If so, how would it screen the countries to determine which are acceptable? For whatever countries that it is willing to consider, should it adjust its feasibility analysis to account for the possibility of kidnapping? Should it attach a cost to reflect this possibility or increase the discount rate when estimating the net present value? Explain.

22. Integrating Country Risk and Capital Budgeting.

Tovar Co. is a U.S. firm that has been asked to provide consulting services to help Grecia Company (in Greece) improve its performance. Tovar would need to spend \$300,000 today on expenses related to this project. In one year, Tovar will receive payment from Grecia, which will be tied to Grecia's performance during the year. There is uncertainty about Grecia's performance and about Grecia's tendency for corruption.

Tovar expects that it will receive 400,000 euros if Grecia achieves strong performance following the consulting job. However, there are two forms of country risk that are a concern to Tovar Co. There is an 80 percent chance that Grecia will achieve strong performance. There is a 20 percent chance that Grecia will perform poorly, and in this case, Tovar will receive a payment of only 200,000 euros.

While there is a 90 percent chance that Grecia will make its payment to Tovar, there is a 10 percent chance that Grecia will become corrupt, and in this case, Grecia will not submit any payment to Tovar.

Assume that the outcome of Grecia's performance is independent of whether Grecia becomes corrupt. The prevailing spot rate of the euro is \$1.30, but Tovar expects that the euro will depreciate by 10 percent in one year, regardless of Grecia's performance or whether it is corrupt.

Tovar's cost of capital is 26 percent. Determine the expected value of the project's net present value. Determine the probability that the project's *NPV* will be negative.

23. Capital Budgeting and Country Risk. Wyoming Co. is a nonprofit educational institution that wants to import educational software products from Hong Kong and sell them in the United States. It wants to assess the net present value of this project since any profits it earns will be used for its foundation. It expects to pay HK\$5 million for the imports. Assume the existing exchange rate is HK\$1 = \$.12. It would also incur selling expenses of \$1 million to sell the products in the United States. It would

be able to sell the products in the United States for \$1.7 million. However, it is concerned about two forms of country risk. First, there is a 60 percent chance that the Hong Kong dollar will be revalued to be worth HK\$1 = \$.16 by the Hong Kong government. Second, there is a 70 percent chance that the Hong Kong government will impose a special tax of 10 percent on the amount that U.S. importers must pay for Hong Kong exports. These two forms of country risk are independent, meaning that the probability that the Hong Kong dollar will be revalued is independent of the probability that the Hong Kong government will impose a special tax. Wyoming's required rate of return on this project is 22 percent. What is the expected value of the project's net present value? What is the probability that the project's *NPV* will be negative?

24. Accounting for Country Risk of a Project.

Kansas Co. wants to invest in a project in China. It would require an initial investment of 5 million yuan. It is expected to generate cash flows of 7 million yuan at the end of one year. The spot rate of the yuan is \$.12, and Kansas thinks this exchange rate is the best forecast of the future. However, there are two forms of country risk.

First, there is a 30 percent chance that the Chinese government will require that the yuan cash flows earned by Kansas at the end of one year be reinvested in China for one year before it can be remitted (so that cash would not be remitted until 2 years from today). In this case, Kansas would earn 4 percent after taxes on a bank deposit in China during that second year.

Second, there is a 40 percent chance that the Chinese government will impose a special remittance tax of 400,000 yuan at the time that Kansas Co. remits cash flows earned in China back to the United States.

The two forms of country risk are independent. The required rate of return on this project is 26 percent. There is no salvage value. What is the expected value of the project's net present value?

- 25. Accounting for Country Risk of a Project.** Slidell Co. (a U.S. firm) considers a foreign project in which it expects to receive 10 million euros at the end of this year. It plans to hedge receivables of 10 million euros with a forward contract. Today, the spot rate of the euro is \$1.20, while the one-year forward rate of the euro is presently \$1.24, and the expected spot rate of the euro in one year is \$1.19. The initial outlay is \$7 million. Slidell has a required return of 18 percent.

There is a 20 percent chance that political problems will cause a reduction in foreign business, such that it would only receive 4 million euros at the end of one year. Determine the expected value of the net present value of this project.

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

Country Risk Assessment

Recently, Ben Holt, Blades' chief financial officer (CFO), has assessed whether it would be more beneficial for Blades to establish a subsidiary in Thailand to manufacture roller blades or to acquire an existing manufacturer, Skates'n'Stuff, which has offered to sell the business to Blades for 1 billion Thai baht. In Holt's view, establishing a subsidiary in Thailand yields a higher net present value (*NPV*) than acquiring the existing business. Furthermore, the Thai manufacturer has rejected an offer by Blades, Inc., for 900 million baht. A purchase price of 900 million baht for Skates'n'Stuff would make the acquisition as attractive as the establishment of a subsidiary in Thailand in terms of *NPV*. Skates'n'Stuff has indicated that it is not willing to accept less than 950 million baht.

Although Holt is confident that the *NPV* analysis was conducted correctly, he is troubled by the fact that the same discount rate, 25 percent, was used in each analysis. In his view, establishing a subsidiary in Thailand may be associated with a higher level of country risk than acquiring Skates'n'Stuff. Although either approach would result in approximately the same level of financial risk, the political risk associated with establishing a subsidiary in Thailand may be higher than the political risk of operating Skates'n'Stuff. If the establishment of a subsidiary in Thailand is associated with a higher level of country risk overall, then a higher discount rate should have been used in the analysis. Based on these considerations, Holt wants to measure the country risk associated with Thailand on both a macro

and a micro level and then to reexamine the feasibility of both approaches.

First, Holt has gathered some more detailed political information for Thailand. For example, he believes that consumers in Asian countries prefer to purchase goods produced by Asians, which might prevent a subsidiary in Thailand from being successful. This cultural characteristic might not prevent an acquisition of Skates'n'Stuff from succeeding, however, especially if Blades retains the company's management and employees. Furthermore, the subsidiary would have to apply for various licenses and permits to be allowed to operate in Thailand, while Skates'n'Stuff obtained these licenses and permits long ago. However, the number of licenses required for Blades' industry is relatively low compared to other industries. Moreover, there is a high possibility that the Thai government will implement capital controls in the near future, which would prevent funds from leaving Thailand. Since Blades, Inc., has planned to remit all earnings generated by its subsidiary or by Skates'n'Stuff back to the United States, regardless of which approach to direct foreign investment it takes, capital controls may force Blades to reinvest funds in Thailand.

Ben Holt has also gathered some information regarding the financial risk of operating in Thailand. Thailand's economy has been weak lately, and recent forecasts indicate that a recovery may be slow. A weak economy may affect the demand for Blades' products, roller blades. The state of the economy is of particular concern to Blades since it produces a leisure product. In the case of an economic turndown, consumers will first eliminate these types of purchases. Holt is also worried about the high interest rates in Thailand, which may further slow economic growth if Thai citizens begin saving more. Furthermore, Holt is also aware that inflation levels in Thailand are expected to remain high. These high inflation levels can affect the purchasing power of Thai consumers, who may adjust their spending habits to purchase more essential products than roller blades. However, high levels of inflation also indicate that consumers in Thailand are still spending a relatively high proportion of their earnings.

Another financial factor that may affect Blades' operations in Thailand is the baht-dollar exchange rate. Current forecasts indicate that the Thai baht may depreciate in the future. However, recall that Blades will sell all roller blades produced in Thailand to Thai consumers. Therefore, Blades is not subject to a lower level of U.S. demand resulting from a weak baht. Blades will remit the earnings generated in Thailand back to the United States, however, and a weak baht would reduce the dollar amount of these translated earnings.

Based on these initial considerations, Holt feels that the level of political risk of operating may be

higher if Blades decides to establish a subsidiary to manufacture roller blades (as opposed to acquiring Skates'n'Stuff). Conversely, the financial risk of operating in Thailand will be roughly the same whether Blades establishes a subsidiary or acquires Skates'n'Stuff. Holt is not satisfied with this initial assessment, however, and would like to have numbers at hand when he meets with the board of directors next week. Thus, he would like to conduct a quantitative analysis of the country risk associated with operating in Thailand. He has asked you, a financial analyst at Blades, to develop a country risk analysis for Thailand and to adjust the discount rate for the riskier venture (i.e., establishing a subsidiary or acquiring Skates'n'Stuff). Holt has provided the following information for your analysis:

- Since Blades produces leisure products, it is more susceptible to financial risk factors than political risk factors. You should use weights of 60 percent for financial risk factors and 40 percent for political risk factors in your analysis.
- You should use the attitude of Thai consumers, capital controls, and bureaucracy as political risk factors in your analysis. Holt perceives capital controls as the most important political risk factor. In his view, the consumer attitude and bureaucracy factors are of equal importance.
- You should use interest rates, inflation levels, and exchange rates as the financial risk factors in your analysis. In Holt's view, exchange rates and interest rates in Thailand are of equal importance, while inflation levels are slightly less important.
- Each factor used in your analysis should be assigned a rating in a range of 1 to 5, where 5 indicates the most unfavorable rating.

Ben Holt has asked you to provide answers to the following questions for him, which he will use in his meeting with the board of directors:

1. Based on the information provided in the case, do you think the political risk associated with Thailand is higher or lower for a manufacturer of leisure products such as Blades as opposed to, say, a food producer? That is, conduct a microassessment of political risk for Blades, Inc.
2. Do you think the financial risk associated with Thailand is higher or lower for a manufacturer of leisure products such as Blades as opposed to, say, a food producer? That is, conduct a microassessment of financial risk for Blades, Inc. Do you think a leisure product manufacturer such as Blades will be more affected by political or financial risk factors?
3. Without using a numerical analysis, do you think establishing a subsidiary in Thailand or acquiring

Skates'n'Stuff will result in a higher assessment of political risk? Of financial risk? Substantiate your answer.

4. Using a spreadsheet, conduct a quantitative country risk analysis for Blades, Inc., using the information Ben Holt has provided for you. Use your judgment to assign weights and ratings to each political and financial risk factor and determine an overall country risk rating for Thailand. Conduct two separate analyses for (a) the establishment of a subsidiary in Thailand and (b) the acquisition of Skates'n'Stuff.
5. Which method of direct foreign investment should utilize a higher discount rate in the capital budgeting analysis? Would this strengthen or weaken the tentative decision of establishing a subsidiary in Thailand?

SMALL BUSINESS DILEMMA

Country Risk Analysis at the Sports Exports Company

The Sports Exports Company produces footballs in the United States and exports them to the United Kingdom. It also has an ongoing joint venture with a British firm that produces some sporting goods for a fee. The Sports Exports Company is considering the establishment of a small subsidiary in the United Kingdom.

1. Under the current conditions, is the Sports Exports Company subject to country risk?
2. If the firm does decide to develop a small subsidiary in the United Kingdom, will its exposure to country risk change? If so, how?

INTERNET/EXCEL EXERCISES

Go to the website of the CIA *World Factbook* at <http://www.cia.gov/cia/publications/factbook/>. Select a country and review the information about the country's political conditions. Explain whether these

conditions would likely discourage an MNC from engaging in direct foreign investment. Explain how the political conditions could adversely affect the cash flows of the MNC.