Depending on its location within a country, the risks may be different. How much power do the country’s regional governments have versus the national government? What is the attitude of local communities to the MNC’s proposed projects? Are there any armed opposition groups in the area, and how do they view the presence of a foreign company? These are questions that managers must ask. Later on in the chapter, we mention a number of specialized organizations that can provide such an analysis.

**Political Risk Factors**

In this section, we provide a partial list of the most important factors an MNC should be aware of in assessing political risk.

**Expropriation or Nationalization**

The most extreme form of political risk is the possibility that the host country takes over an MNC’s subsidiary, with or without compensation. This is the worst-case scenario for firms. Whereas outright expropriations have been rare in recent times, they used to be common: Regimes in Eastern Europe (after World War II) and in Cuba (in 1960) expropriated private businesses, both domestic and foreign. The ouster of the Shah of Iran by the Ayatollah Khomeini in 1979 also led to expropriations.

**Contract Repudiation**

In 1996, Mexico’s Instituto Nacional de Ecologia (INE), an agency of the federal government, awarded Tecmed, a Spanish multinational corporation, a renewable license to operate a hazardous waste landfill in Mexico. In 1998, however, the INE suddenly refused to renew the license, and Tecmed faced the realization of political risk. Governments sometimes revoke, or repudiate, contracts without compensating companies for their existing investments in projects or services. This action can include the government defaulting on the payments associated with the contracts, canceling licenses (as Mexico did with Tecmed), or otherwise introducing laws and regulations that interfere with the contracts to which the government and the MNC agreed. Such acts are sometimes referred to as “creeping,” or “indirect,” expropriation because they deprive the company of the expected benefits of its investment.

In May 2006, Bolivia’s new socialist president, Evo Morales, sent troops to the gas fields and put YPBF, a state company, in charge, repudiating existing contracts with multinationals such as Brazil’s Petrobras, Spain’s Repsol, and British Petroleum. Morales stopped short of a full nationalization, leaving a piece of the production in foreign hands.

**Taxes and Regulation**

Governments can dramatically change the “rules of the game” that were in place when an MNC first made its investment in the host country. This can take various explicit forms, such as unexpected increases in taxes, restrictions on hiring and firing local workers, and sudden stricter environmental standards. MNCs are also sometimes forced by governments to sell their equity stakes in local subsidiaries because of foreign ownership restrictions.

One set of regulations that MNCs find particularly problematic are regulations restricting the transfer of their profits earned abroad back to their home countries. Governments not only have the power to change the tax rates on these earnings, but they can completely block their transfer. This essentially forces the MNC to invest its funds locally, even if doing so is less profitable. Finally, governments often make decisions that can indirectly affect the cash flows of MNCs.

The situations in Peru and Chile provide examples of this type of political risk. Until 2004, international mining companies doing business in Peru and Chile enjoyed favorable tax treatment on the sale of their mineral concentrates, but in June 2004, Peru’s congress approved a law to levy taxes on royalties (in this context, essentially taxes levied on minerals...
extracted in accordance with a mining license) of up to 3%. Chile’s government proposed a similar law. These tax increases constitute a change in the rules of the game for the mining companies that will make them less profitable in the future.

**Exchange Controls**

Another political risk factor relates to exchange controls. Governments have been known to prevent the conversion of their local currencies to foreign currencies. In general, doing business in countries with inconvertible currencies puts an MNC at considerable risk.

An interesting case is the 2002 collapse of the Argentine currency board, which effectively ended the one-for-one convertibility of pesos into dollars. The Argentine government also curtailed bank deposit withdrawals and prohibited the unauthorized export of foreign currency from the country.

**Corruption and Legal Inefficiency**

Highly inefficient governments often increase the red tape companies have to deal with and hence increase their costs of doing business. Governments may also be corrupt and demand bribes. Transparency International (TI) produces an annual “Corruption Perceptions Index” for more than 150 countries, using expert assessments and opinion surveys. In 2005, Iceland was perceived as the least corrupt country; Chad and Bangladesh were perceived as the most corrupt.

TI also compiles information on which companies have the highest propensity to pay bribes and therefore undermine efforts of governments to improve governance. Multinationals from Russia, China, and India were the worst offenders in 2005, whereas Swiss and Swedish companies had the least tendency to pay bribes.

A country’s legal system is an important factor in determining the overall quality of its institutions and how attractive it is for firms to do business there. Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer (2003) used an interesting measure to gauge the quality and efficiency of the legal systems of 109 countries: They measured the time it takes to evict a tenant or clear a bounced check through the legal system. Exhibit 14.1 shows these measures for the G5 countries and for the best- and worst-performing countries on this score.

The United States and the United Kingdom seem to have the speediest legal systems among the G5 countries, but there are five countries (Uganda, Tunisia, Malawi, Swaziland, and Canada) where evicting a tenant happens even faster. In contrast, in Poland and Slovenia, it takes almost 3 years to either evict a tenant or collect on a bounced check. Such a tardy legal system poses a potential risk factor for MNCs.

**Ethnic Violence, Political Unrest, and Terrorism**

Significant MNC losses can occur due to internal civil strife or wars. An interesting historical case involves Consolidated Foods, Inc., which constructed a manufacturing plant in what the company perceived to be a “happy, sleepy country” in 1976. The country happened to be El Salvador, which within 2 years of the decision got embroiled in an internal war between the government and left-wing rebels. At one point, the rebels took about 120 employees of the company hostage. The plant was closed in 1979. More recently, in war-torn regions of Somalia and Iraq, companies have been forced to hire their own private armies in order to try to function normally. This, of course, is expensive.

**Home-Country Restrictions**

The politics of a company’s home country can affect its cash flows from foreign operations. For example, after the Iranian Revolution in 1979, a U.S. embargo on Iran forced Coca-Cola to shut down its operations there. Coke later resumed operations in the country by the late 1980s, until President Clinton reimposed the embargo in 1995.
Adjusting Expected Cash Flows for Political Risk

Consider a multinational corporation with a shareholder base that is globally diversified. In this case, the discount rate should reflect only international, systematic risks. Chapter 13 showed that systematic risks are typically related to how an MNC's return in a particular country covaries with the world market return. If the risk of loss from political risk does not covary with the world market return, no adjustment to the discount rate is necessary. Positive covariation between the cash flows from the project and the world market return increases the required global discount rate. Consequently, unless political risk, which adversely affects the MNC's investment returns, is systematically high when the world market return is low, political risk should not enter the calculation of the discount rate. Instead, the company's cash flows should be adjusted for the presence of political risk.

To fully understand this argument, consider a simple scenario. Suppose a company takes out an insurance policy against political risk and that the policy covers all contingencies and has no deductible. In this case, a company would simply compute its expected cash flows as if there were no political risk and then subtract the insurance premium it must pay each year from the cash flows of the project. The cash flows would then be discounted at the usual discount rate. It is, indeed, possible to purchase political risk insurance, and in some countries, such insurance is even subsidized by the government. (However, it is seldom the case that an investment can be fully insured. We discuss insurance and other ways companies can mitigate political risks in Section 14.4.)

If a company chooses not to purchase political risk insurance, when it forecasts its future cash flows, it must incorporate into the calculation how its cash flows might be affected by various political risks, such as expropriation, unexpected taxation, and so forth. In the following example, we show how this can be done.

Example 14.2 Oconoc's Project in Zuenvela

Suppose Oconoc, an American oil company, wants to do a joint project with Atauz Petrol, an oil company in the oil-producing country of Zuenvela. Oconoc’s contribution to the project is $75 million, and Oconoc predicts that the project will yield $50 million per year for 2 years. However, Zuenvela has a very unstable political system and in the past has witnessed widespread strikes. The president of Zuenvela, Ugo Vezcha, has expressed some dismay with the management of Atauz Petrol, and he has hinted that he might renationalize the company, which would have drastic consequences for Oconoc’s cash flows. Given this information, the managers of Oconoc think that the probability that the government will expropriate the project is 12% each year. Furthermore, if the government interferes, the cash flows will be zero from then onward.

Exhibit 14.3 presents this analysis in a simple diagram. If there were no political risk, the value of the project would be easy to calculate. Let $C$ be the expected cash flow, let $r$ be the discount rate, and let $V$ be the present value of the project. Then, we know that

$$V = \frac{C}{1 + r} + \frac{C}{(1 + r)^2}$$

With a 10% discount rate, we obtain

$$V = \frac{50}{1.1} + \frac{50}{1.1^2} = 86.78$$

Because the value of the project, $86.78$ million, is greater than the cost of the project, $75$ million, the net present value is $11.78$ million; the project should therefore be undertaken.
Exhibit 14.3 Adjusting the MNC’s Cash Flows for Political Risk

Notes: Expected cash flows are $30 million in period 1 and period 2. There is a 12% chance each period that the host government will expropriate the project. In this case, the cash flow to the MNC is 0.

However, the political risk adjustments change the computation considerably. Let’s follow Exhibit 14.3 to make the adjustments. For the first year, there are two scenarios. There is a 0.88 chance that the cash flow of $50 million will be realized and a 0.12 chance that the project will return 0. For the second year, there are three scenarios: (1) expropriation in the first year implies no second-year cash flows; (2) no expropriation in the first year but expropriation in the second year, so no cash flows; and (3) no expropriation at all. The probability of the first scenario occurring is 0.12, the probability of the second scenario occurring is $0.88 \times 0.12 = 0.1056$, and the probability of the third scenario occurring is $0.88 \times 0.88 = 0.7744$. Note that to obtain the probabilities for the second year, we must multiply the probability of no expropriation in the first year by the probabilities of the second-year events. These three scenarios exhaust all possible outcomes, and hence, the probabilities must add to 1.

Bringing it all together, we obtain:

\[
V = \frac{0.88 \times 50 + (0.12 \times 0) - 0.88 \times 0.12 \times 30 + (0.12 \times 0.88) \times 0 + (0.12 \times 0)}{1.12} = \frac{40 - 32}{1.12} = 72
\]

Hence, the value of the project is now less than its cost, and the project should not be undertaken because the net present value (NPV) is $-54.00 million.

An alternative way to compute the project’s NPV is to calculate the probability-weighted average of the scenario-specific NPVs. Let’s first set up the different scenarios.

<table>
<thead>
<tr>
<th>Scenarios</th>
<th>Probability</th>
<th>Value</th>
<th>NPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>No expropriation</td>
<td>0.7744</td>
<td>86.78</td>
<td>11.78</td>
</tr>
<tr>
<td>Expropriation in first year</td>
<td>0.12</td>
<td>0</td>
<td>-75</td>
</tr>
<tr>
<td>Expropriation in second year</td>
<td>0.1056</td>
<td>45.45*</td>
<td>-29.35</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td><strong>This is \frac{50}{11}</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Only when there is no expropriation does the project capture the full NPV of $11.78 million computed before. When the project is expropriated in the second period, the company still receives cash flows in the first period, with a current worth of
$45.45 million. In sum, the NPV of the project is the probability weighted average of the three outcomes:

\[
NPV = (11.78 \times 0.7744) - (75 \times 0.12) - (29.55 \times 0.1056)
\]
\[
= -3.00
\]

If Oconuc's managers find it difficult to figure out the probability of expropriation, they can still do an informative analysis: They can find the expropriation probability that would cause the project to have an NPV of 0. That is, Oconuc management can solve for \( p \) such that

\[
-75 + \frac{(1 - p)50}{1.1} + \frac{(1 - p)^250}{1.1^2} = 0
\]

Such an equation can be solved analytically when a few periods are involved, as is the case here, but it soon becomes difficult to calculate for a large number of periods. However, because \( p \) is in the interval [0, 1], trial and error can yield a solution relatively quickly; in Microsoft Excel, the Goal Seek function can solve the equation. The solution here is \( p = 9.48\% \). So, if management believes the expropriation probability is lower than 9.5%, it should take on the project.

**Example 14.3** The Infinite Cash Flow Case

Most investments in the oil business generate cash flows over much longer periods of time than just 2 years. Let's investigate the extreme case that an oil investment generates an expected $50 million per year forever. The value of the project, not taking into account political risk, is

\[
\frac{50}{1 + r} + \frac{50}{(1 + r)^2} + \frac{50}{(1 + r)^3} + \ldots = \frac{50}{r}
\]

With a discount rate of 10%, the value of the project is $500 million.

How much will political risk reduce the value of the project? Let's assume that the probability of an adverse political event, again denoted by \( p \), is constant over time. Note that the expected value of the project now decreases with time because it is less and less certain that the government won't seize the revenues earned from the project:

\[
V = \frac{50(1 - p)}{1 + r} + \frac{50(1 - p)^2}{(1 + r)^2} + \frac{50(1 - p)^3}{(1 + r)^3} + \ldots
\]

where \( p \) is the probability of expropriation (\( p = 0.12 \)), and \( r \) is the discount rate (\( r = 10\% \)). To compute this infinite sum, we can use a trick we have used before. If \( S = 1 + \lambda + \lambda^2 + \lambda^3 + \ldots \) and \( \lambda < 1 \), it is true that \( S = \frac{1}{1 - \lambda} \). In our case, we have

\[
V = \frac{50(1 - p)}{1 + r} [1 + \lambda + \lambda^2 + \ldots]
\]

with \( \lambda = \frac{1 - p}{1 + r} \). Hence, we obtain
General Formulas

In general, capital budgeting analysis must be adjusted for political risk as follows:

Step 1. Compute the discount rate, \( r \), and future expected cash flows for period \( t \), \( C(t) \), as usual, without expropriation risk.

Step 2. Compute a series of expropriation probabilities, \( p(t) \), for each future period.

Step 3. Let \( \prod_{n=0}^{t-1} (1 - p(t - n)) \) be shorthand notation for \((1 - p(t)) (1 - p(t - 1)) \ldots (1 - p(1))\), which is the probability that at time \( t \), there has not yet been any expropriation.

For an investment of \( I \), compute the NPV as

\[
NPV = -I + \sum_{t=1}^{T} \frac{C(t) \prod_{n=0}^{t-1} (1 - p(t - n))}{(1 + r)^t}
\]  
(14.1)

The formula assumes total expropriation. However, in many cases, the MNC might actually receive at least some compensation or experience only a reduction in its cash flow. If this is the case, additional terms are necessary to reflect these additional cash flows with their corresponding probabilities.

In the previous example, we had

- Infinite cash flows
- The same cash flows every period (C)
- The same probability of expropriation in each period

The formula then becomes

\[ V = C \times \frac{1 - p}{r + p} \]

This represents a rather extreme estimate of the effect of political risk. It assumes that the MNC will receive no compensation and that the political risk will be present forever. However, in the case of an imminent crisis, it is likely that the political risk outlook will improve after a few years, so \( p \) will decrease over time if the crisis is resolved favorably.

Adjusting the Discount Rate Instead of Cash Flows

Many textbooks propose initially ignoring political risk and projecting an MNC’s cash flows under the rosy scenario that no expropriation takes place. The books then suggest applying a discount rate scaled up to account for political risk. As the following example and formulas show, such a method can indeed yield exactly the same solution, as long as the new discount rate is

\[ r^* = \frac{r + p}{1 - p} \]  
(14.2)
Note that this formula is valid only in the special case we discussed—that is, the case in which cash flows occur forever and a constant probability of expropriation is assumed—and that a dramatically higher discount rate must be used. In our example, the discount rate adjusted for political risk is 25.0%. That is more than double the original 10% rate. However, as we just explained, it may well be the case that a country’s political risk is unusually high for a short period of time but that the MNC’s managers expect the situation to normalize after a few years if nothing happens during the crisis. The next example shows how to deal with a situation in which political risk subsides over time.

**Example 14.4 Decreasing Political Risk**

Say that Oecoc judges political risk to be negligible after 1 year. Either the company will be expropriated in the first year, or the populace of Zuenela will have elected a more business-friendly president. In this case, the value of the project is

\[ V = \frac{50 \times 0.88}{1 + r} + \frac{50 \times 0.88}{(1 + r)^2} + \frac{50 \times 0.88}{(1 + r)^3} + \ldots \]

The first cash flow calculation accounts for the probability of an adverse political event, but cash flows from the second period onward assume that there is no further political risk. However, there is only 0.88 probability that there are any positive cash flows from the second period onward. Hence, the value of the project is

\[ V = \frac{44}{0.10} = \$440 \text{ million} \]

Under this scenario for political risk, adjusting the discount rate from 10% to 11.36% would yield the “correct” discount rate. The new rate of 11.36% is the solution for \( r^* \) of 440 = \( \frac{50}{r^*} \).

More realistically, some probability of an expropriation after a first, tumultuous year would remain. Suppose the probability of expropriation decreases from 12% to 1% after the first year. We now obtain

\[ V = \frac{50 \times 0.88}{1.1} + \frac{0.88 \times 0.99 \times 50}{1.1^2} + \frac{0.88 \times 0.99^2 \times 50}{1.1^3} + \ldots \]

\[ = \frac{44}{1.1} + 43.56 \left[ 1 + \frac{0.99}{1.1} + \left( \frac{0.99}{1.1} \right)^2 + \ldots \right] \]

Applying our infinite sum formula with \( \lambda = \frac{0.99}{1.1} = 0.9 \), we obtain

\[ V = \frac{44}{1.1} + \frac{43.56}{1.1^2} \times \frac{1}{1 - 0.9} = \$400 \text{ million} \]

The remaining political risk reduces the value of the project further from $440 million to $400 million. Hence, the discount rate that would yield the correct project value would satisfy 400 = \( \frac{50}{r^{**}} \), implying \( r^* = 12.50\% \). It is unlikely that one can guess the correct political risk-adjusted discount rate in this case.

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