

**Topic**

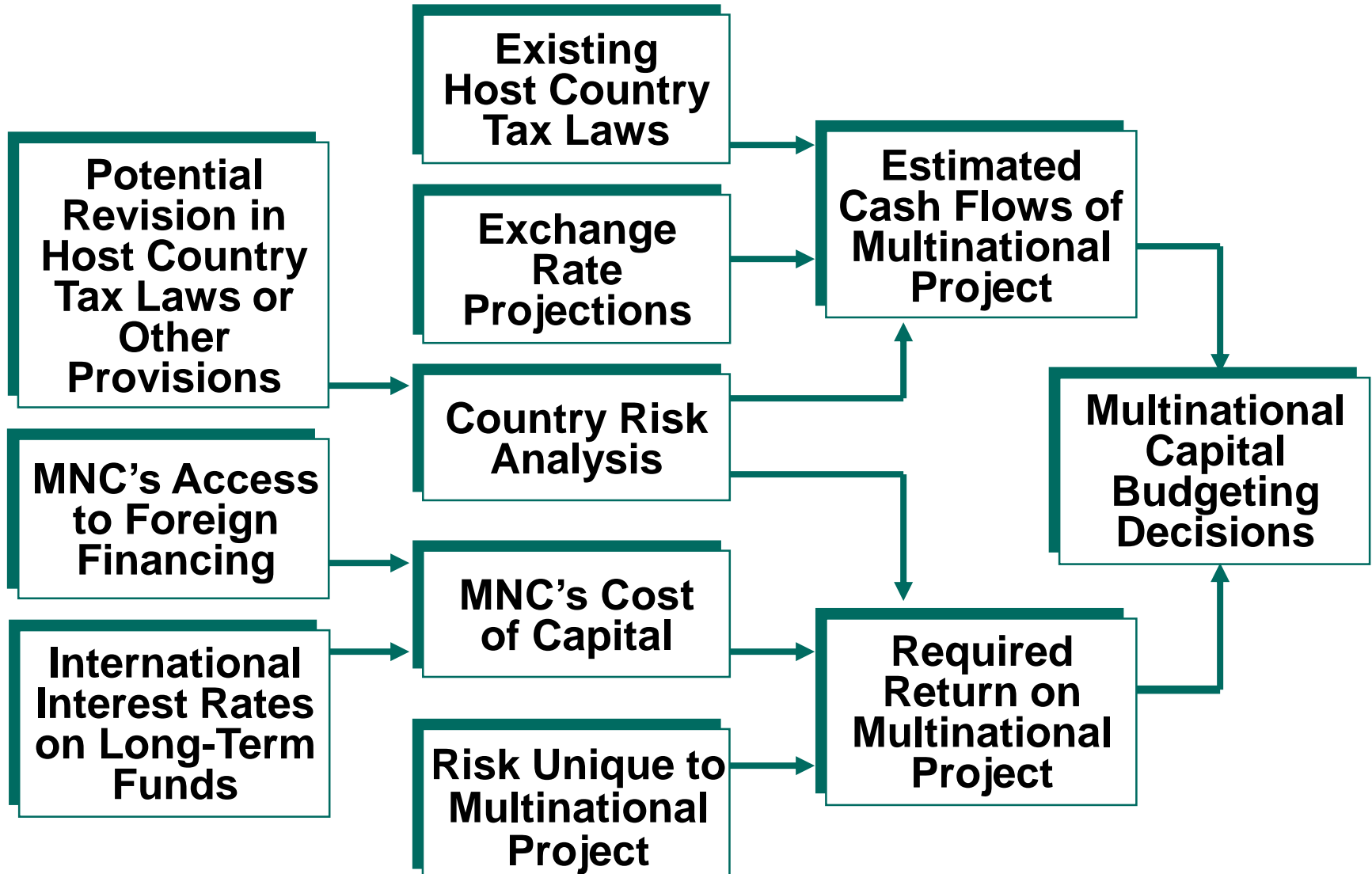
**10**

# Direct Foreign Investment

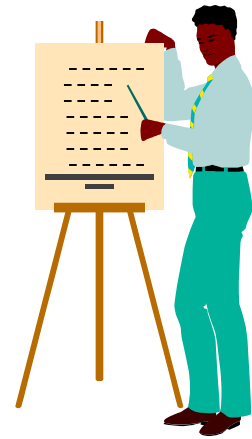


# Part IV

## Long-Term Asset and Liability Management

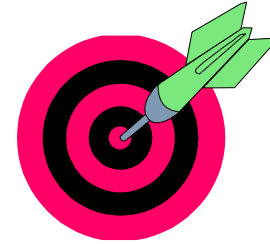


# Chapter Objectives



- **To describe common motives for initiating direct foreign investment (DFI); and**
- **To illustrate the benefits of international diversification.**

# Motives for DFI

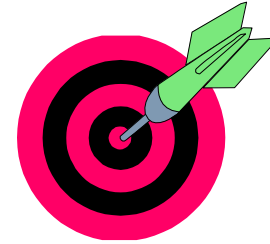


- **DFI can improve profitability and enhance shareholder wealth, either by boosting revenues or reducing costs.**

## *Revenue-Related Motives*

- ① **Attract new sources of demand, especially when the potential for growth in the home country is limited.**

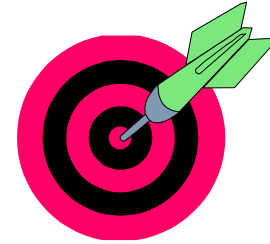
# Motives for DFI



## *Revenue-Related Motives*

- ② Enter profitable markets.
- ③ Exploit monopolistic advantages, especially for firms that possess resources or skills not available to competing firms.
- ④ React to trade restrictions.

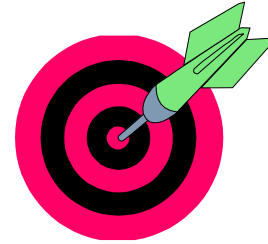
# Motives for DFI



## *Cost-Related Motives*

- ① Fully benefit from economies of scale, especially for firms that utilize much machinery.
- ② Use cheaper foreign factors of production.
- ③ Use foreign raw materials, especially if the MNC plans to sell the finished product back to the consumers in that country.

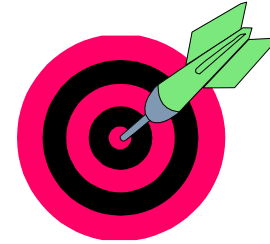
# Motives for DFI



## *Cost-Related Motives*

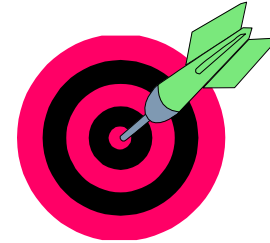
- ④ Use foreign technology.
- ⑤ React to exchange rate movements, such as when the foreign currency appears to be undervalued. DFI can also help reduce the MNC's exposure to exchange rate fluctuations.
- ⑥ Diversify sales/production internationally.

# Motives for DFI



- **The optimal method for a firm to penetrate a foreign market is partially dependent on the characteristics of the market.**
- **For example, if the consumers are used to buying domestic products, then licensing arrangements or joint ventures may be more appropriate.**

# Motives for DFI

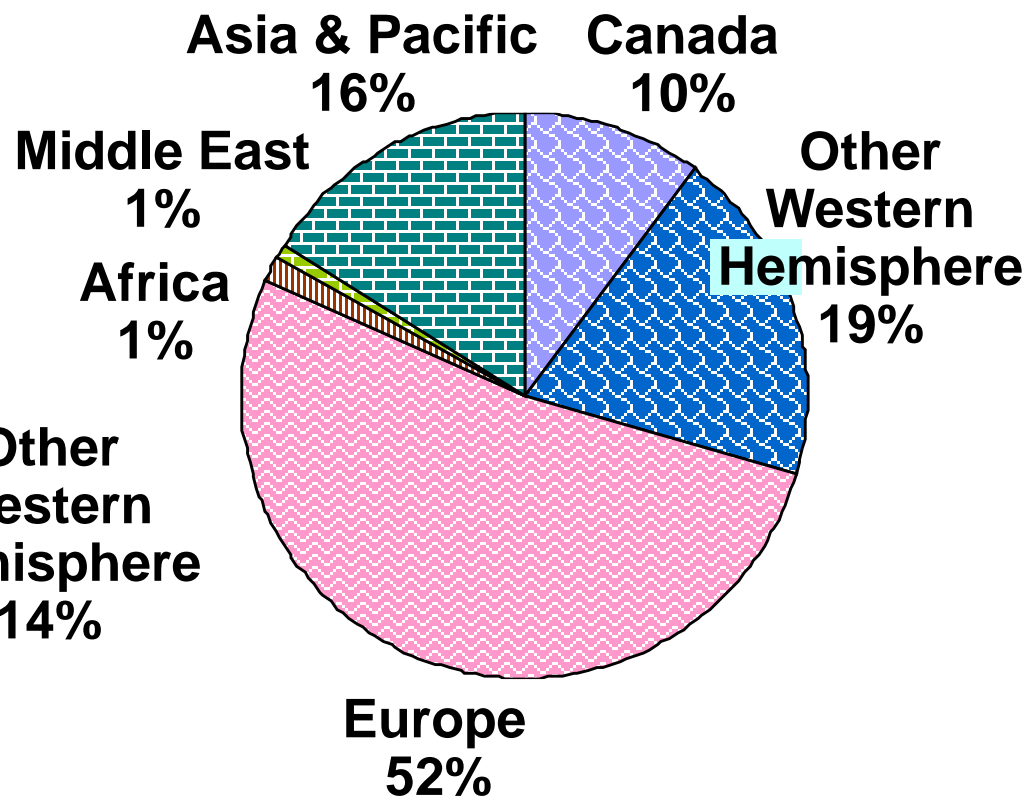
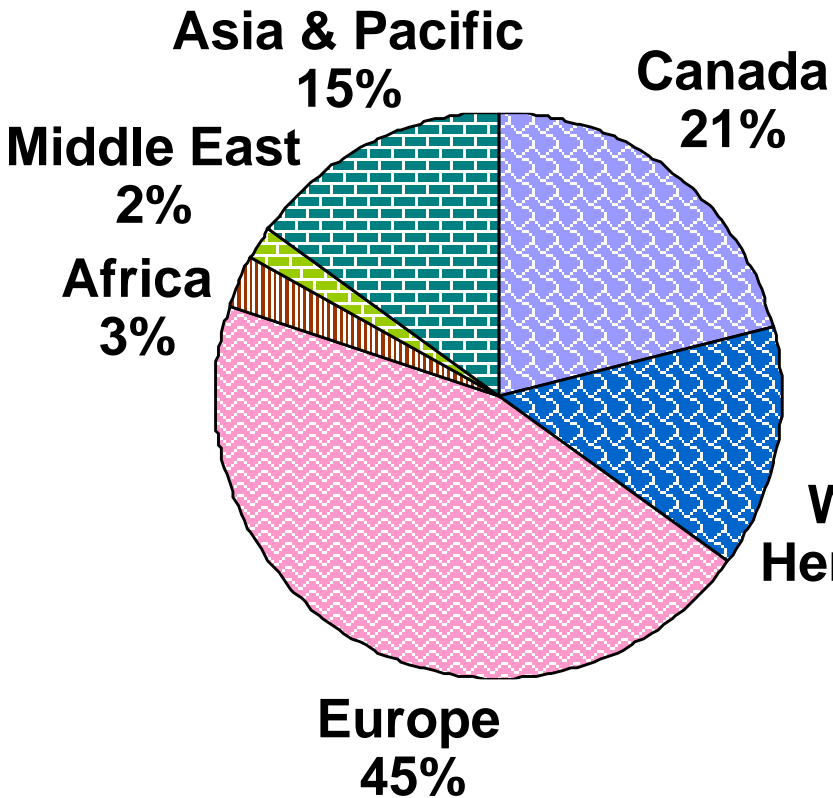


- **Before investing in a foreign country, the potential benefits must be weighed against the costs and risks.**
- **As conditions change over time, some countries may become more attractive targets for DFI, while other countries become less attractive.**

# Change in Distribution of DFI By U.S. Firms Over Time

DFI Distribution in 1982

DFI Distribution in 2000



# Online Application



- **Which countries should you invest in?**

- α Consult the *Country Commercial Guides* prepared by embassy staff at <http://www.usatrade.gov/website/ccg.nsf/ccghomepage?openform>.



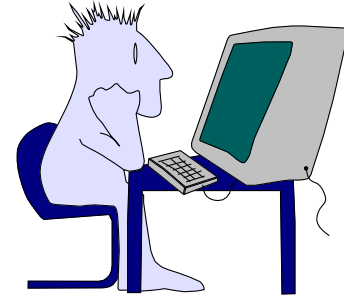
- α Visit the Library of Congress at [lcweb2.loc.gov/frd/cs/cshome.html](http://lcweb2.loc.gov/frd/cs/cshome.html).



- α Refer to the CIA's World Factbook at <http://www.odci.gov/>.

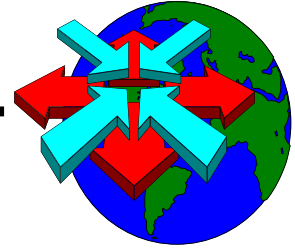


# Online Application



- **Which countries should you invest in?**
  - α Check out <http://ciber.bus.msu.edu>.
  - α Consult <http://www.pwcglobal.com> and <http://www.morganstanley.com/gef/>.
  - α Visit the Yahoo! International Finance Center at <http://biz.yahoo.com/ifc/>.

# Benefits of International Diversification



- **The key to international diversification is to select foreign projects whose performance levels are not highly correlated over time.**

# **Diversification Benefits for Merrimack Co.**

*Merrimack Co. is a U.S. firm that is considering the location of a new investment project.*

## **Characteristics of Proposed Project If Located in**

	<b>the U.S.</b>	<b>the U.K.</b>
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**Project's mean expected annual after-tax return**

**25%**

**25%**

**Standard deviation of project's return**

**.09**

**.11**

**Correlation of project's return with return on existing U.S. business**

**.80**

**.02**

## **Diversification Benefits for Merrimack Co.**

- **In terms of return, neither new project has an advantage.**
- **With regard to risk, the new project is expected to exhibit slightly less variability in returns if located in the U.S.**

## Diversification Benefits for Merrimack Co.

- Suppose that the project constitutes 30% of Merrimack's total funds, and that the standard deviation of Merrimack's return on existing U.S. business is .10.
- If the new project is located in the U.S., the portfolio variance for the overall firm

$$= W_A^2 \sigma_A^2 + W_B^2 \sigma_B^2 + 2W_A W_B \sigma_A \sigma_B \text{CORR}_{AB}$$

$$= .70^2 .10^2 + .30^2 .09^2 + 2(.70)(.30)(.10)(.09)(.80)$$

$$= .008653$$

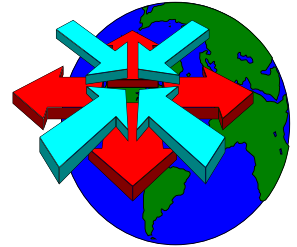
## Diversification Benefits for Merrimack Co.

- If the new project is located in the U.K., the portfolio variance for the overall firm

$$\begin{aligned} &= W_A^2 \sigma_A^2 + W_B^2 \sigma_B^2 + 2W_A W_B \sigma_A \sigma_B \text{CORR}_{AB} \\ &= .70^2 .10^2 + .30^2 .11^2 + 2(.70)(.30)(.10)(.11)(.02) \\ &= .0060814 \end{aligned}$$

- Thus, as a whole, Merrimack will generate more stable returns if the new project is located in the U.K.

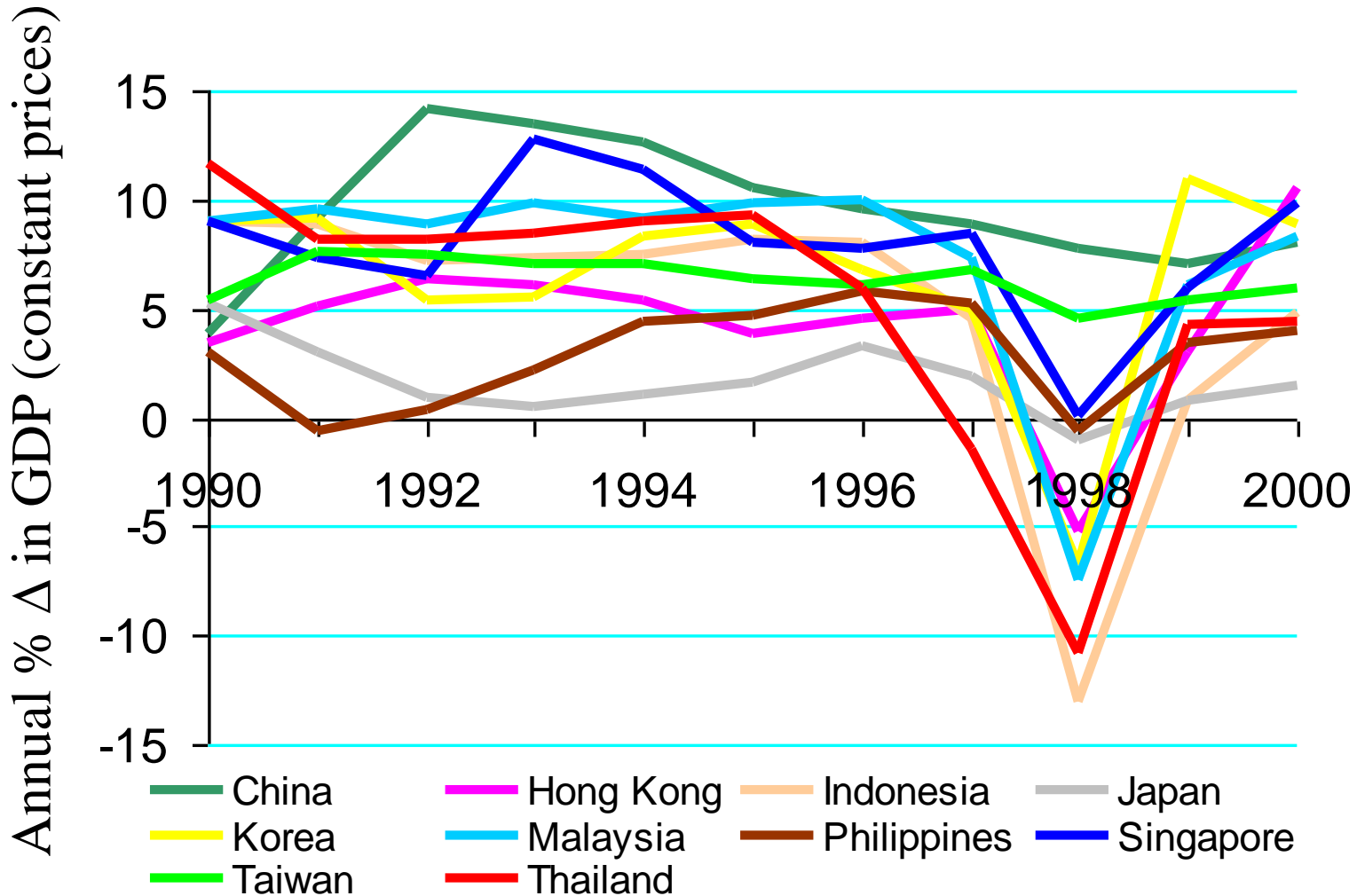
# Benefits of International Diversification



- **An MNC may not be insulated from a global crisis, since many countries will be adversely affected.**
- **However, as can be seen from the 1997-98 Asian crisis, an MNC that had diversified among the Asian countries might have fared better than if it had focused on one country. Even better would be diversification among the continents.**

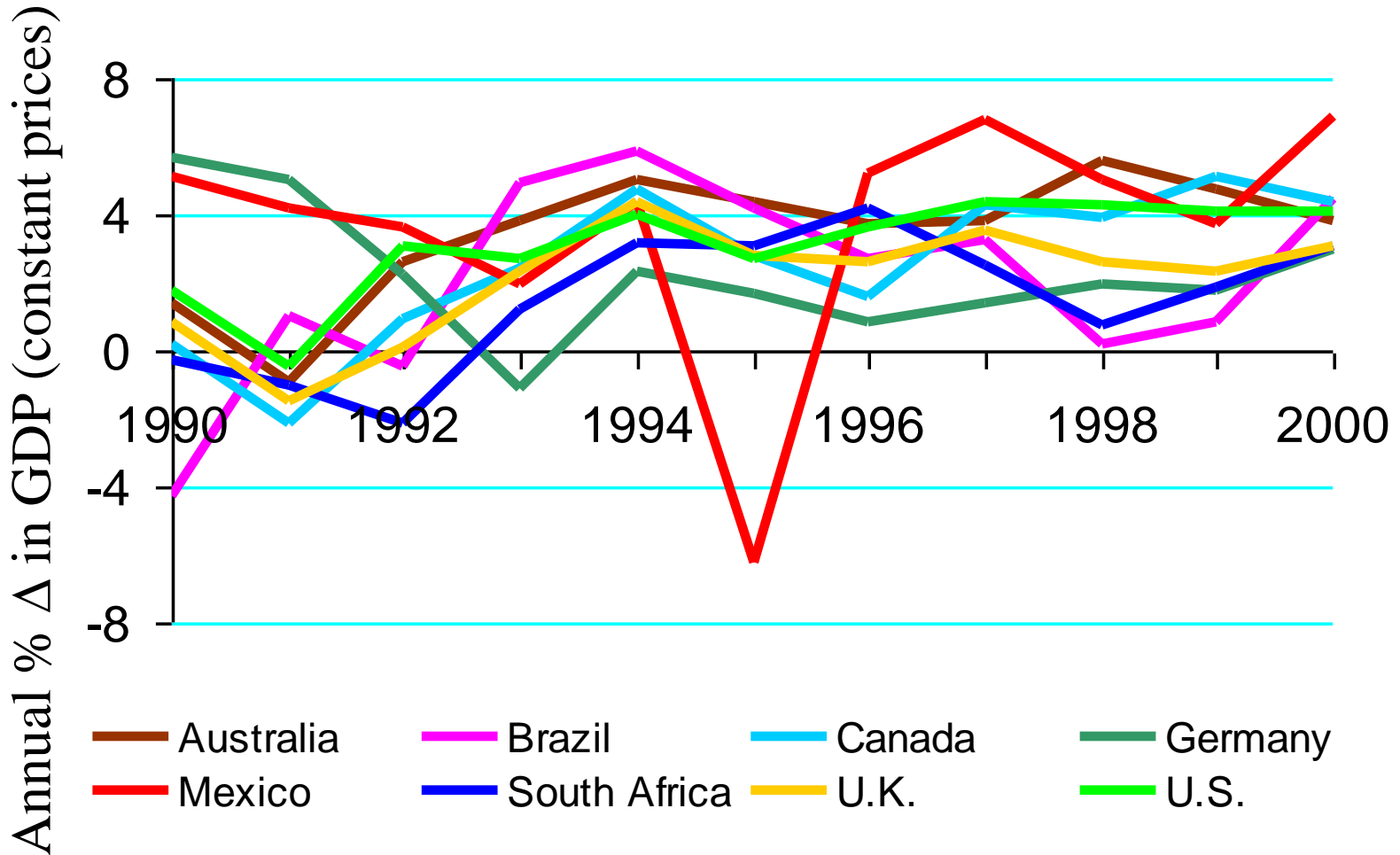
# Real Growth in GDP

## *For Selected Asian Economies*

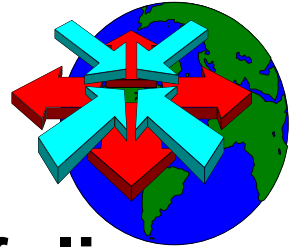


# Real Growth in GDP

## *For Selected Non-Asian Economies*

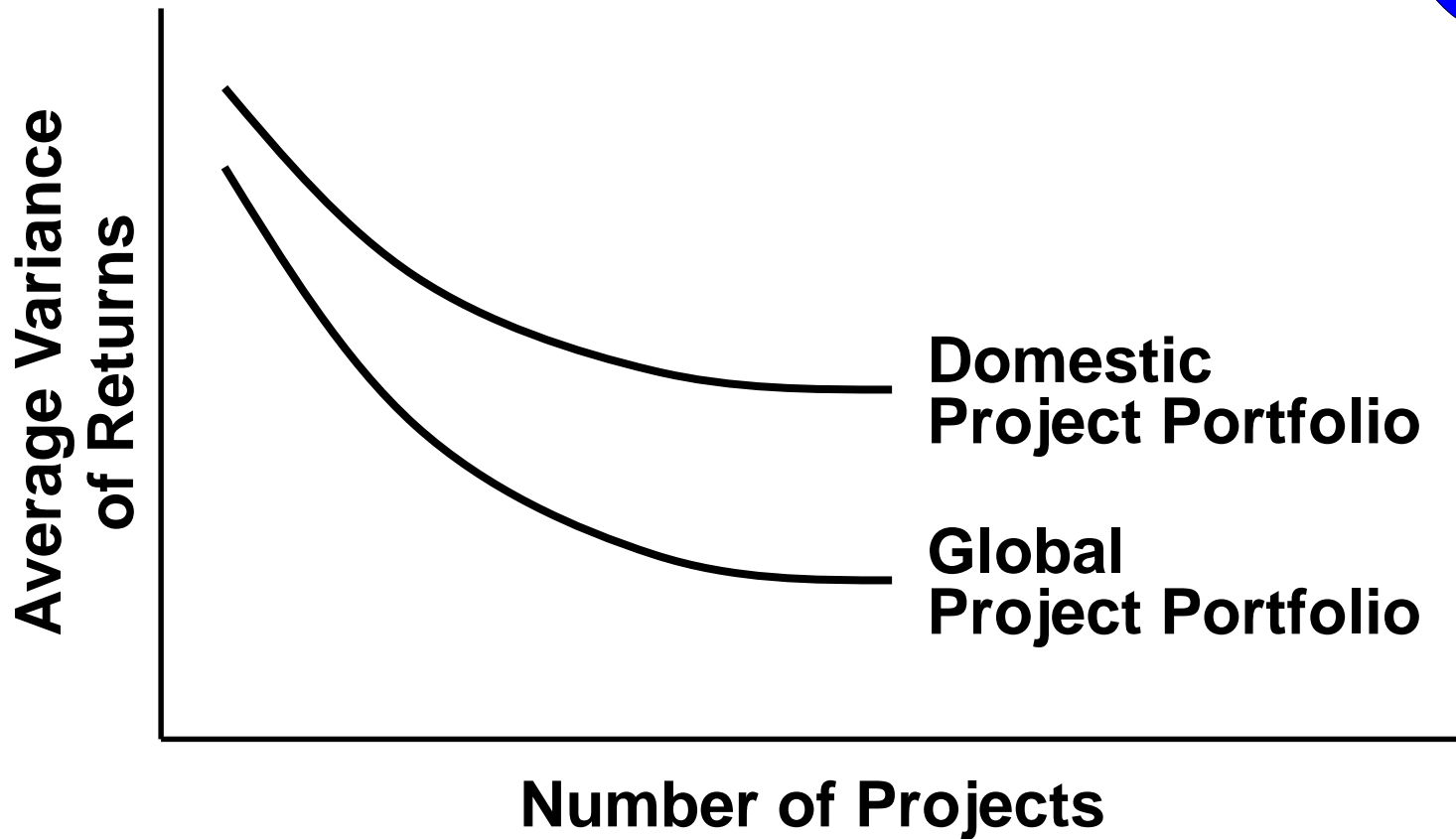
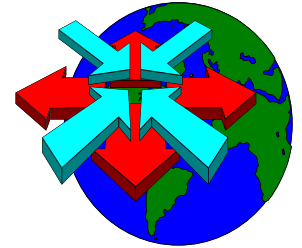


# Benefits of International Diversification

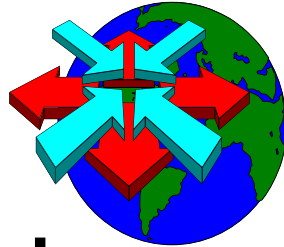


- **As more projects are added to a portfolio, the portfolio variance should decrease on average, up to a certain point.**
- **However, the degree of risk reduction is greater for a global portfolio than for a domestic portfolio, due to the lower correlations among the returns of projects implemented in different economies.**

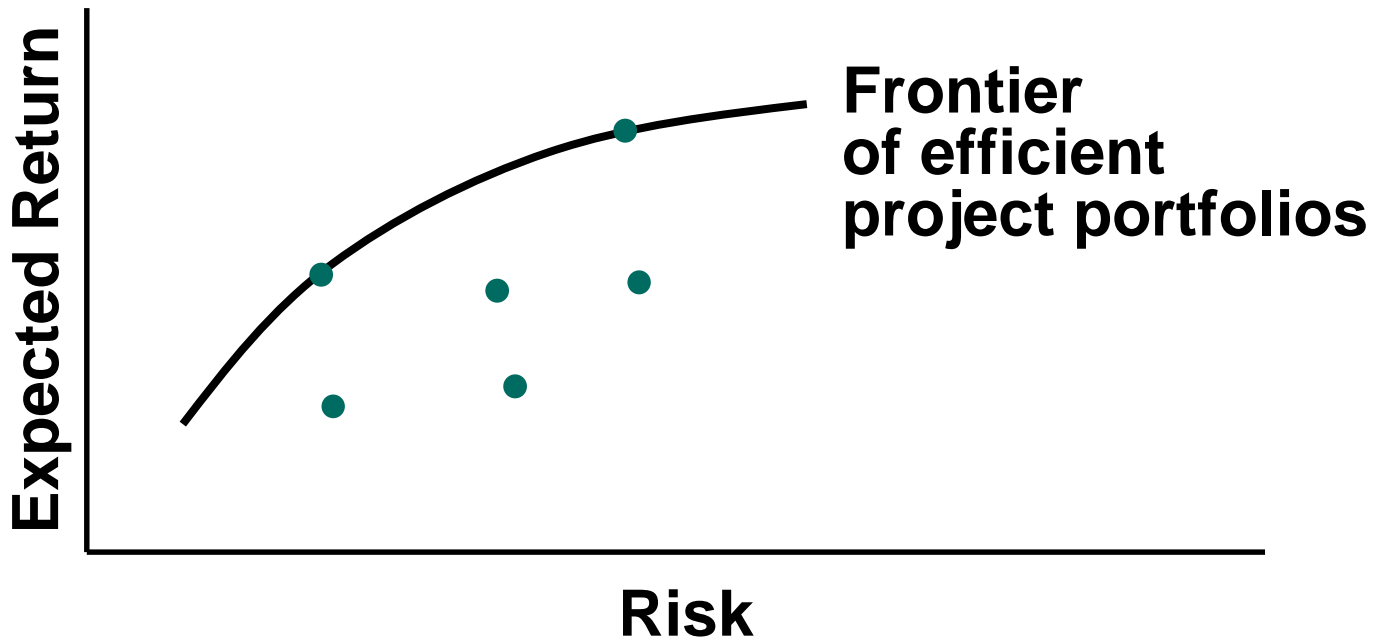
# Benefits of International Diversification



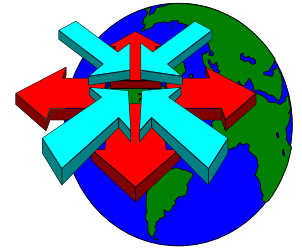
# Benefits of International Diversification



- An MNC with projects positioned around the world is concerned about the risk and return characteristics of its projects.

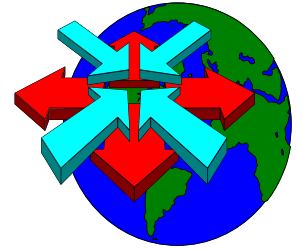


# Benefits of International Diversification

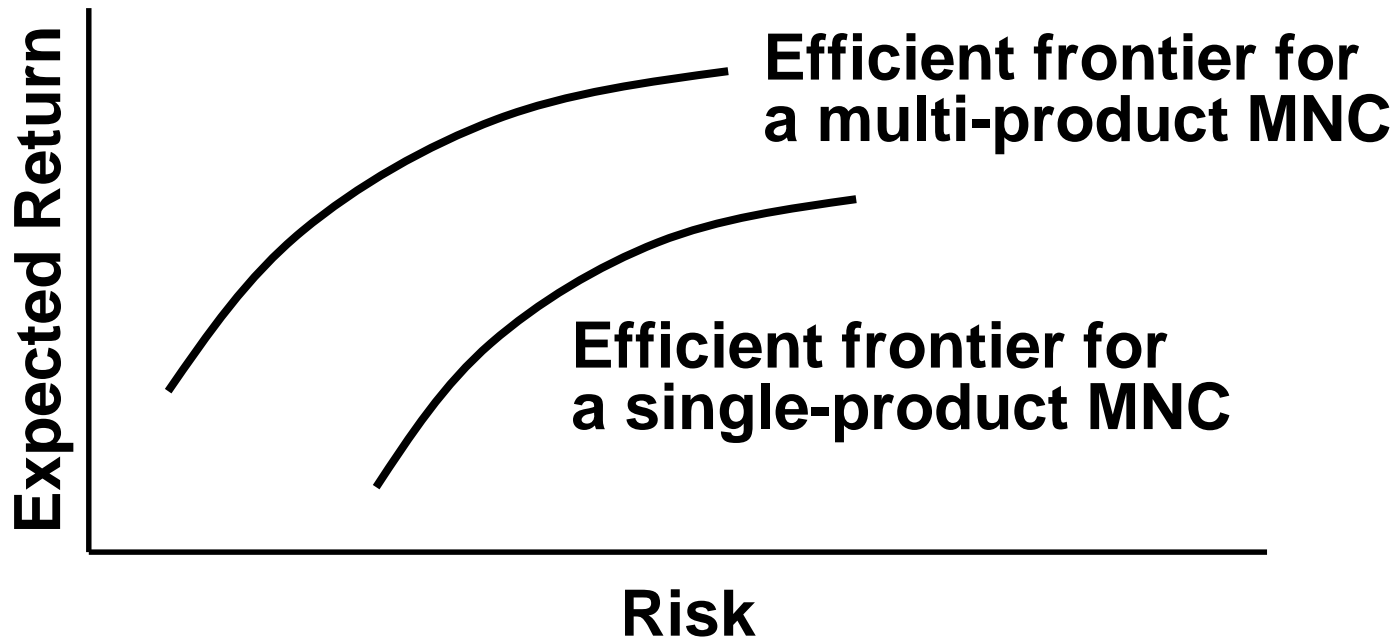


- **Project portfolios along the efficient frontier exhibit minimum risk for a given expected return.**
- **Of these efficient portfolios, an MNC may choose one that corresponds to its willingness to accept risk.**

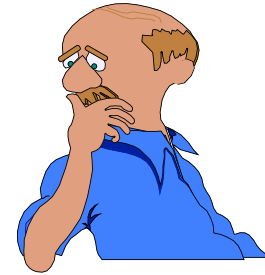
# Benefits of International Diversification



- The frontiers of efficient project portfolios of some MNCs are more desirable than the frontiers of other MNCs.



# Decisions Subsequent to DFI



- **Some periodic decisions are necessary.**
  - **Should further expansion take place?**
  - **Should the earnings be remitted to the parent, or used by the subsidiary?**

# **Host Government View of DFI**

- **For the government, the ideal DFI solves problems such as unemployment and lack of technology without taking business away from the local firms.**
- **The government may provide incentives to encourage the forms of DFI that it desires, and impose preventive barriers or conditions on the forms of DFI that it does not want.**

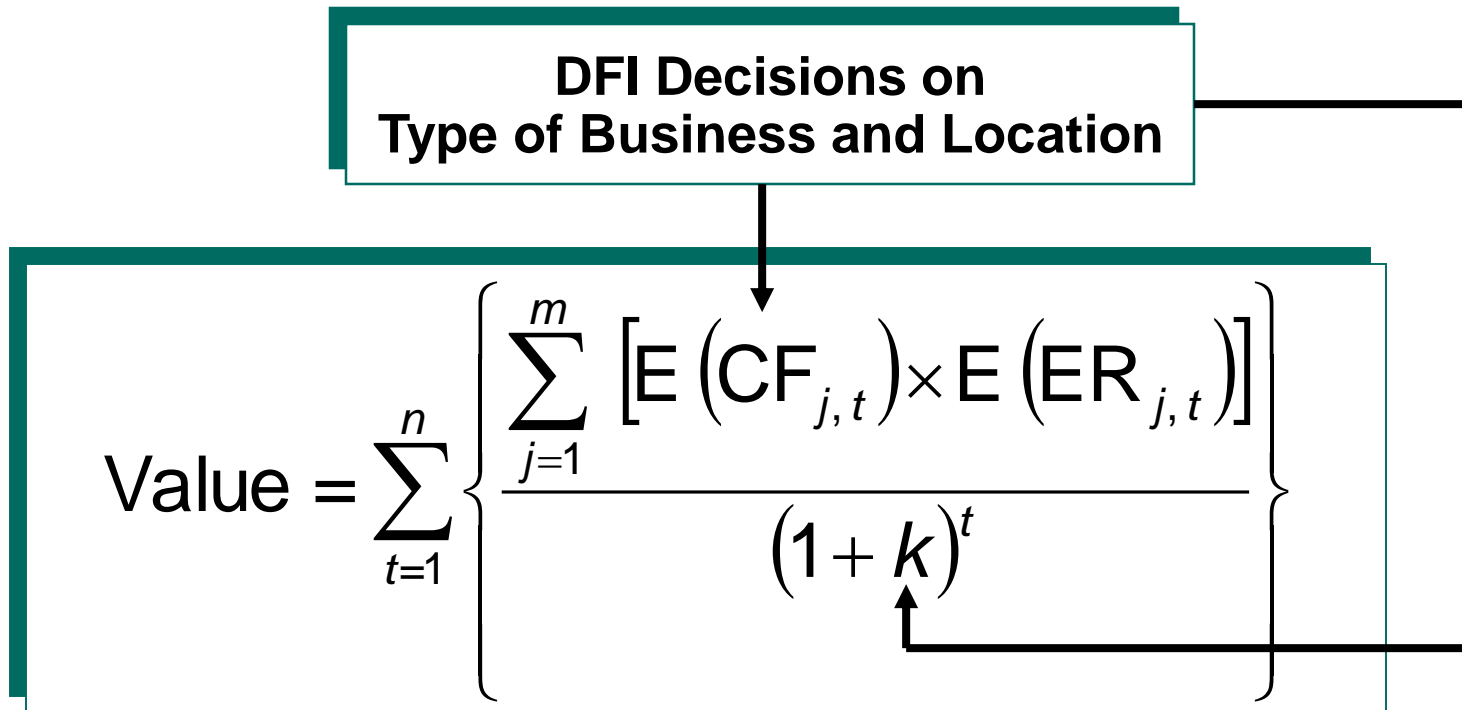
# **Host Government View of DFI**

- **The ability of a host government to attract DFI is dependent on the country's markets and resources, as well as government regulations and incentives.**
- **Common incentives offered by the host government include tax breaks, discounted rent for land and buildings, low-interest loans, subsidized energy, and reduced environmental restrictions.**

# **Host Government View of DFI**

- **Common barriers imposed by the host government include the power to block a merger/acquisition, foreign majority ownership restrictions, excessive procedure and documentation requirements (red tape), and operational conditions.**

# Impact of DFI Decisions on an MNC's Value

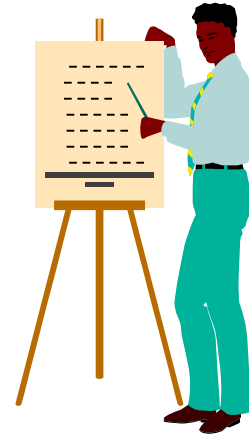


$E(CF_{j,t})$  = expected cash flows in currency  $j$  to be received by the U.S. parent at the end of period  $t$

$E(ER_{j,t})$  = expected exchange rate at which currency  $j$  can be converted to dollars at the end of period  $t$

$k$  = weighted average cost of capital of the parent

# Chapter Review



- **Motives for DFI**
  - Revenue-Related Motives
  - Cost-Related Motives
  - Comparing the Benefits of DFI Among Countries
  - Comparing the Benefits of DFI Over Time

# Chapter Review

- **Benefits of International Diversification**
  - Example of Diversification Benefits
  - Diversification Benefits During a Global Crisis
  - Diversification Benefits of Multiple Projects
  - Risk-Return Analysis of International Projects
    - Comparing Portfolios Along the Frontier
    - Comparing Frontiers Among MNCs

# Chapter Review

- **Decisions Subsequent to DFI**
- **Host Government View of DFI**
  - ⌘ Incentives to Encourage DFI
  - ⌘ Barriers to DFI
- **Impact of the DFI Decision on an MNC's Value**