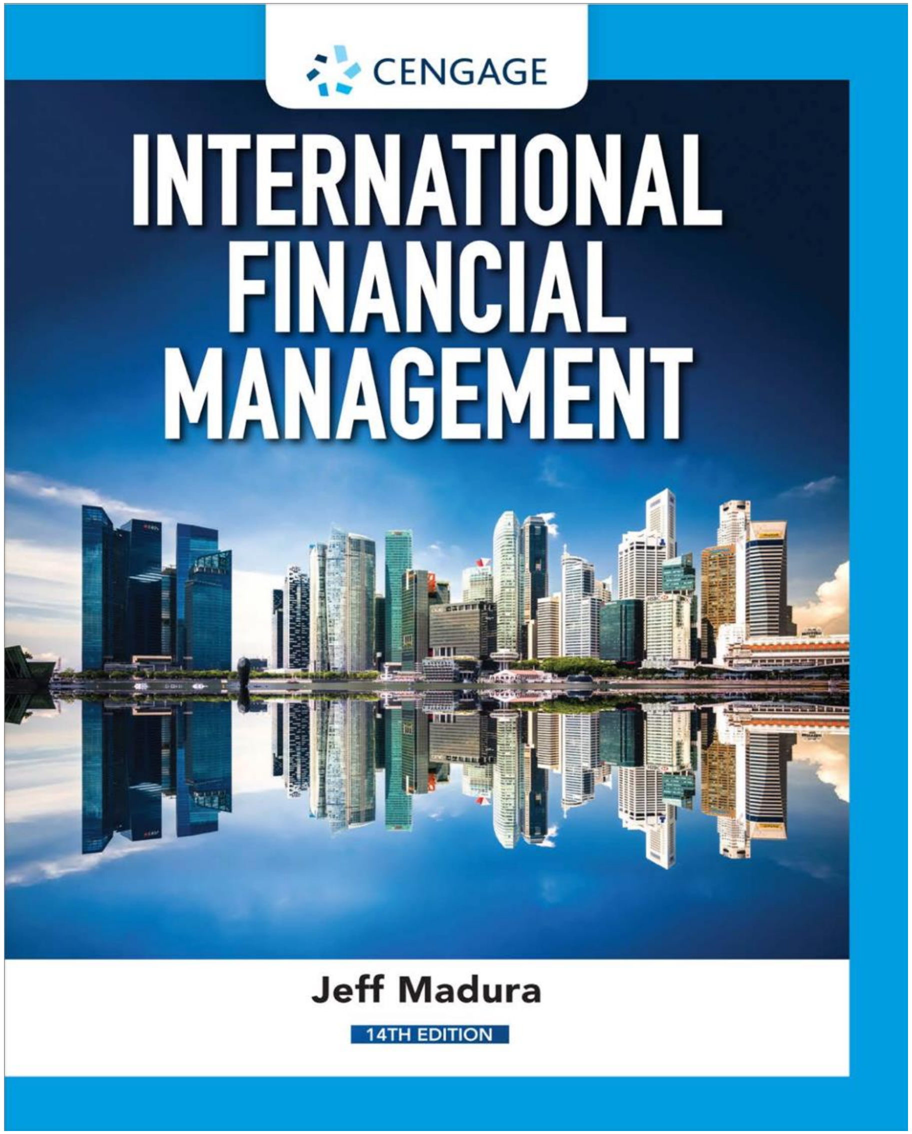
INTERNATIONAL FINANCIAL MANAGEMENT



LECTURE 3: FOREIGN DIRECT INVESTMENT (FDI)

Lecture Objectives

- Describe common motives for initiating foreign direct investment.
- Illustrate the benefits of international diversification.
- Describe how the host governemnt can encourage DFI with incentives for MNCs or discourage DFI by imposing barriers.
- Explain how MNCs can assess their potential DFI projects to determine which projects should be given serious consideration.

Motives for Direct Foreign Investment

Revenue-Related Motives

- **Attract new sources of demand:** MNCs commonly pursue DFI in countries experiencing economic growth so that they can benefit from the increased demand for products and services there.
- **Enter profitable markets:** when similar industries are generating very high earnings in a particular country, an MNC may decide to sell its own products in those markets.

Motives for Direct Foreign Investment

Revenue-Related Motives

- **Exploit monopolistic advantages:** Firms posessing resources or skills not available to competing firms may attempt to exploit it internationally. If a firm possess advanced technology and has exploited this advantage successfully in local markets, the firm may attempt to exploit it internationally as well.
- **React to trade restrictions:** MNCs use DFI as a defensive rather than an aggressive strategy. MNCs may pursue DFI to circumvent trade barriers.
- **Diversify internationally:** by diversifying sales (and possibly even production) internationally, a firm can make its net cash flows less volatile and then the loss of liquidity will be reduced.

Motives for Direct Foreign Investment

Cost Related Motives

- **Fully benefit from economies of scale:** A corporation that attempts to sell its primary product in new markets may increase its earnings and shareholder wealth due to economies of scale (lower average cost per unit resulting from increased production).
- **Use foreign factors of production:** labour and land costs can vary dramatically among countries. MNCs often attempt to set up production in locations where land and labor are cheap.
- **Use foreign raw materials:** Due to transportation costs, a corporation may attempt to avoid importing raw materials from a given country, especially when it plans to sell the finished product back to consumers in that country. MNCs can develop the product in the country where the raw materials are located.

Motives for Direct Foreign Investment

Cost Related Motives

- **Use foreign technology:** Corporations are increasingly establishing overseas plants or acquiring existing overseas plants to learn about unique technologies in foreign countries. This technology is then used to improve their own production processes and increase production efficiency at all subsidiary plants around the world.
- **React to exchange rate movements:** When a firm perceives that a foreign currency is undervalued, the firm may consider DFI in that country, as the initial outlay should be relatively low.

Summary of Motives for Direct Foreign Investment

BENEFIT	MEANS OF USING DFI TO ACHIEVE THIS BENEFIT
Revenue-Related Motives	
1. Attract new sources of demand	Establish a subsidiary or acquire a competitor in a new market.
2. Enter markets where superior profits are possible	Accquire a competitor that has control of its local market.
3. Exploit monopolistic advantages	Establish a subsidiary in a market where competitors are unable to produce the identical product, sell products in that country.
4. React to trade restrictions	Establish a subsidiary in a market where tougher trade restrictions will adversely affect the firm's export volume.
5. Diversify internationally	Establish subsidiaries in markets whose business cycles differ from those where existing subsidiaries are based.

Summary of Motives for Direct Foreign Investment

BENEFITS	MEANS OF USING DFI TO ACHIEVE THIS BENEFIT
Cost-Related Motives	
6. Fully benefit from Economies of scale	Estiablish a subsidiary in a new market that can sell prodcuts produced elsewhere, this allows for increased production and possibly greater production efficiency.
7. Use foreign factors of production	Establish a subsidiary in a market that has relatively low costs of labor or land; sell the finished product to countries where the cost of production is higher.
8. Use foreign raw materials	Establish a subsidiary in a market where raw materials are cheal and accessible; set the finished product to countries where the raw materials are more expensive.
9. Use foreign technology	Participants in a joint venture in order to learn about a production process or other operations.
10. React to exchange Rate movements	Establish a subsidiary in a new market where the local currency is weak but is expected to strengthen over time.

Motives for Direct Foreign Investment

Comparing Benefits of DFI among countries

Though disadvantages of DFI may exist, MNCs can compare benefits of DFI among countries and use DFI to achieve those benefits.

The potential benefits from DFI vary with the country.

- Countries in Western Europe have well-established markets where the demand for most products and services is large. These countries may appeal to MNCs that want to penetrate markets because they have better products than those already being offered.
- Countries in Eastern Europe, Asia, and Latin America tend to have relatively low costs of land and labor. If an MNC desires to establish a low-cost production facility, it would also consider other factors such as the work ethic and skills of the local people, availability of labor, and cultural traits.

Motives for Direct Foreign Investment

Comparing the Benefits of FDI Over Time

- The selection of target countries for foreign direct investment (FDI) has also changed over time.
- Canada is receiving a smaller share of FDI compared to previous years.
- European, Asian, and Latin American countries are now receiving a larger share of FDI than in the past.
- The opening up of Eastern European countries and the expansion of the European Union have driven increased FDI in Europe.
- Multinational companies are targeting Latin America and Asia to take advantage of production factors that are less costly than those in the United States.

Benefits of International Diversification

An international project can reduce a firm's overall risk as a result of international diversification benefits.

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

Benefits of International Diversification

Example: Merrimack Co., a U.S. firm, plans to invest in a new project in either the United States or the United Kingdom. Once the project is completed, it will constitute 30% of the firm's total funds invested in itself. The remaining 70% of its investment in its business is exclusively in the United States.

- Merrimack Co. plans to assess the feasibility of each proposed project based on expected risk and return, using a 5-year time horizon. Its expected annual after-tax return on investment on its prevailing business is 20%, and its variability of returns (as measured by the standard deviation) is expected to be 0.10
- In the first portfolio, 70% of its total funds are invested in its prevailing U.S. business, with the remaining 30% invested in a new project located in the United States.
- In the second portfolio, again 70% of the firm's total funds are invested in its prevailing business, but the remaining 30% are invested in a new project located in the United Kingdom.

Evaluation of Proposed Projects in Alternative Locations

		CHARACTERISTICS OF PROPOSED PROJECT	
	EXISTING BUSINESS	IF LOCATED IN THE U.S.	IF LOCATED IN THE UK
Mean expected annual return on investment (after taxes)	20%	25%	25%
Standard deviation of expected annual after-tax returns on invesment	0.10	0.09	0.11
Correlation of expected annual after-tax returns on investment with after-tax returns of prevailling U.S. business	—	0.80	0.02

Benefits of International Diversification

If the new project is located in the United States, the firm's overall expected after-tax return (r_p) is:

Rp =	[(70%)	x	(20%)]	+	[(30%)	x	(25%)]	=	21.5%
	% of funds invested in prevailing business		Expected return on prevailing business		% of funds invested in new U.S. project		Expected return on return on new U.S. project		Firm's overall expected return

- Regard to expected return, the new project's expected return is the same regardless of the country of location.
- With regard to risk, the new project is expected to exhibit slightly less variability in returns during the five-year period if it is located in the United States.
- However, estimating the risk of the individual project without considering the overall firm would be a mistake. The firm must also consider the expected correlation of the new project's returns with those of the existing business.

Benefits of International Diversification

The variance (σ_p^2), a porfolio consisting of just two investments (A and B) is computed as:

$$\sigma_p^2 = w_A^2\sigma_A^2 + w_B^2\sigma_B^2 + 2w_A w_B \sigma_A \sigma_B CORR_{AB}$$

w = the percentage of total funds allocated to investment A and B

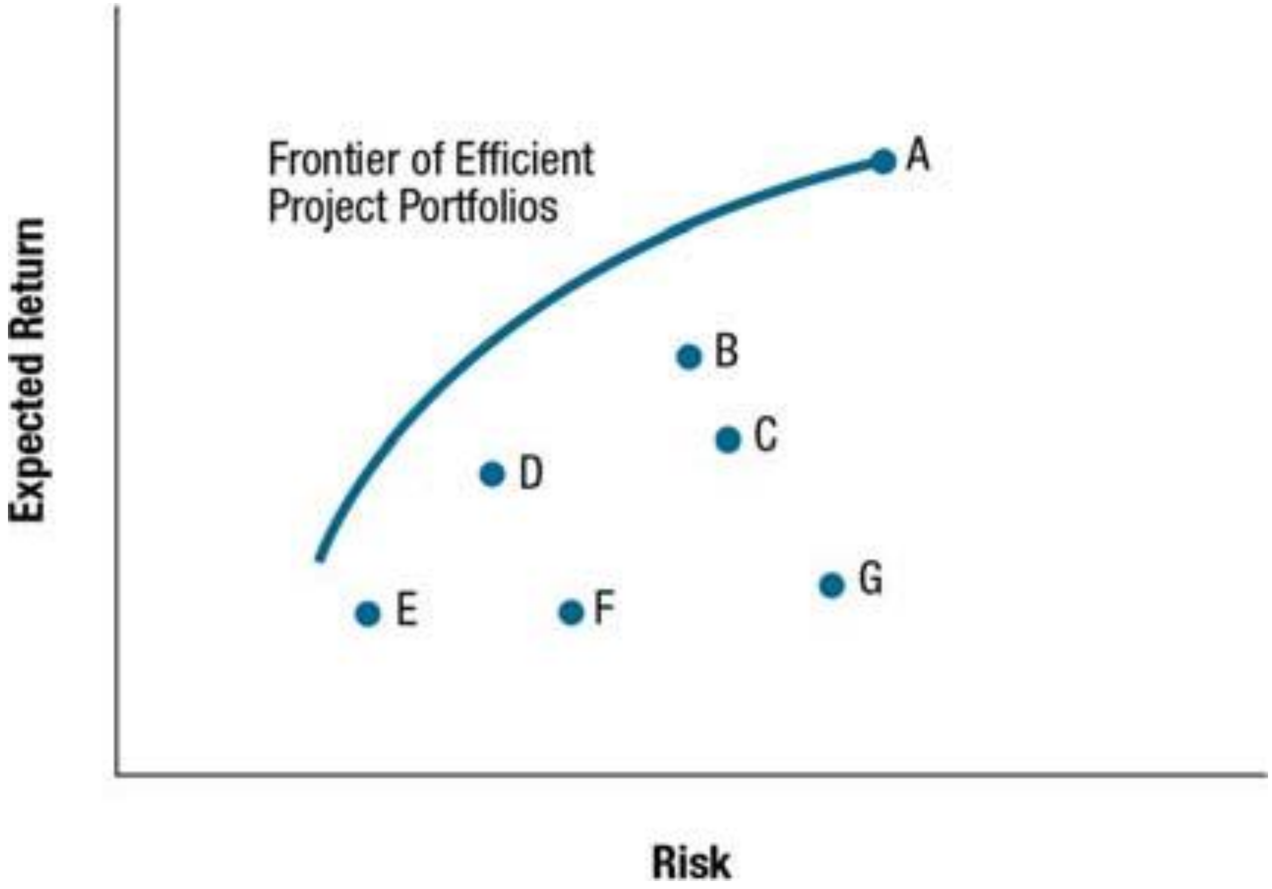
σ = stadard devation of returns on investments A and B

CORR = corelation coefficient of returns between investments A and B

Benefits of International Diversification

Diversification Analysis of International Projects

- **Comparing Portfolios Along the Frontier**



Benefits of International Diversification

Diversification Analysis of International Projects

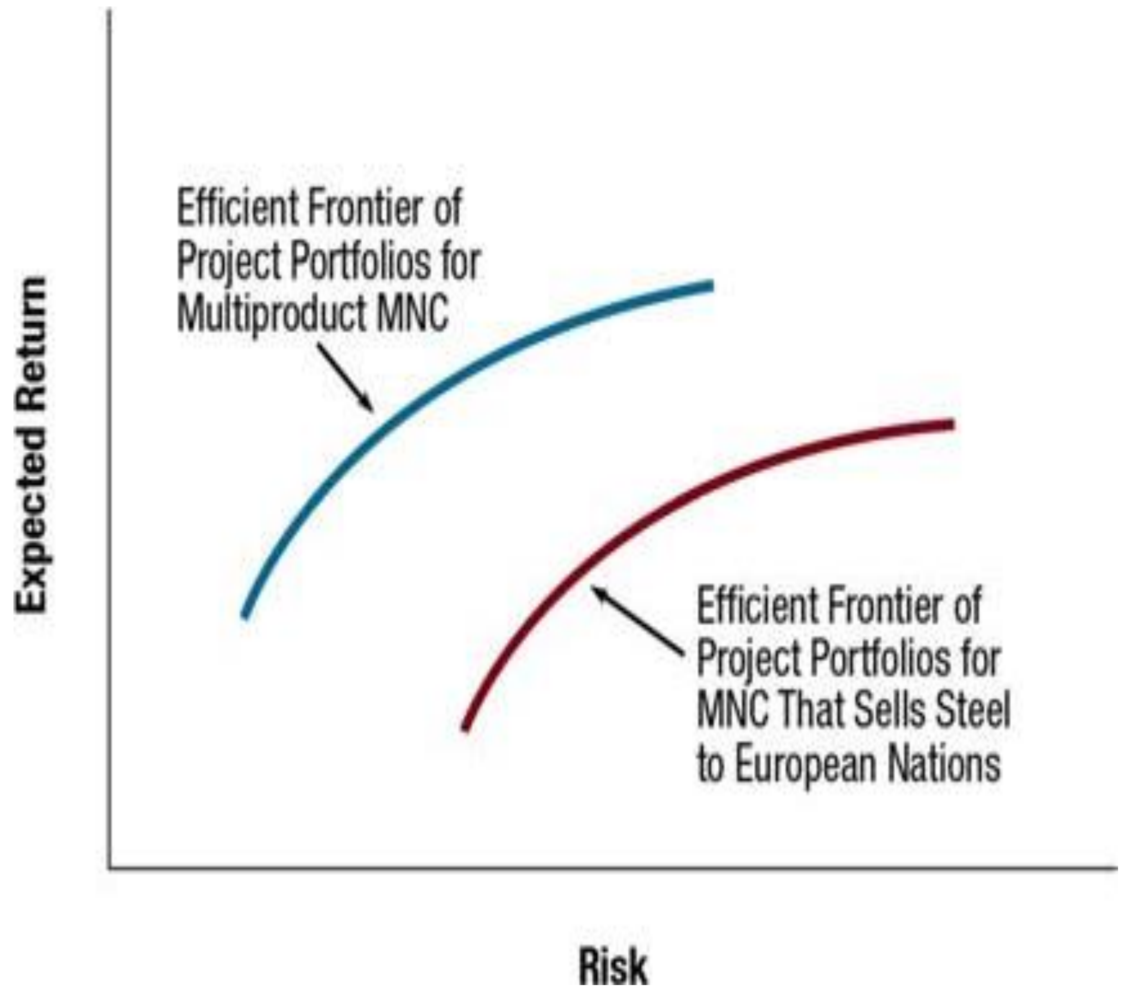
- **Comparing Portfolios Along the Frontier**
  - ✓ Along the frontier of efficient project portfolios, no portfolio can be singled out as “optimal” for all MNCs.
  - ✓ Because MNCs vary in their willingness to accept risk
  - ✓ If the MNC is very conservative and has the choice of any portfolios represented by the frontier, it will probably prefer one that exhibits low risk (near the bottom of the frontier).
  - ✓ In contrast, an MNC pursuing a more aggressive strategy might implement a portfolio of projects that exhibits risk–return characteristics such as those near the top of the frontier.

Benefits of International Diversification

Diversification Analysis of International Projects

- **Comparing Frontiers Among MNCs**
  - ✓The actual location of the frontier of efficient project portfolios depends on the business in which the firm is involved
  - ✓Some MNCs have frontiers of possible project portfolios that are more desirable than the frontiers of other MNCs.

Benefits of International Diversification



Host Government Impact on DFI

Incentives to Encourage DFI

- The ideal DFI solves problems such as unemployment and lack of technology without taking business away from local firms.
- A government will offer incentives to MNCs that consider DFI in its country. Governments are particularly willing to offer incentives for DFI that will result in the employment of local citizens or an increase in technology
- Common incentives offered by the host government include tax breaks on the income earned there, rent-free land and buildings, low-interest loans, subsidized energy, and reduced environmental regulations.

Host Government Impact on DFI

Barriers to DFI

- **Protective Barriers** – These agencies may prevent an MNC from acquiring companies in their country if they believe it will attempt to lay off employees. They may even restrict foreign ownership of any local firms.
- **"Red Tape" Barriers** – The "red tape" is involved things such as procedural and documentation requirements. An MNC pursuing DFI is subject to a different set of requirements in each country.
- **Industry Barriers** – In certain countries, local firms in some industries have substantial influence within the government and will likely use their influence to prevent competition from MNCs that attempt DFI.
- **Environmental Barriers** – Each country enforces its own environmental regulations. Some countries may impose more stringent restrictions on a subsidiary whose parent is based in a different country such as building codes, disposal of production waste materials and pollution controls.

Host Government Impact on DFI

Barriers to DFI

- **Regulatory Barriers** - Each country also enforces its own regulatory constraints pertaining to taxes, currency convertibility, earnings remittance, employee rights, and other policies that can affect cash flows of a subsidiary established there
- **Ethical Differences** – A business practice perceived as unethical in one country may be considered totally ethical in another.
- **Political Instability** – The governments of some countries may prevent DFI. If a country is susceptible to abrupt changes in government and political conflicts, the feasibility of DFI may depend on the outcome of those conflicts.

Assessing the Feasibility of Potential DFI

A Case Study of Assessing Potential DFI

- Monterey Co. created a facility 20 years ago to produce and sell health care products in the United States.
- For the last several years, U.S. demand for Monterey's products has been stagnant due to increasing competition.
- Over the same period, Monterey has promoted its health care products in the country of Zuva because there was not much competition there. Its promotion strategy in Zuva has been successful.
- Last year it generated $40 million from its exports to Zuva. However, this year Zuva's government imposed a quota on imports that had the effect of limiting the volume of products that Monterey can export to Zuva.
- Monterey Co. generated only $10 million (one-fourth of last year's level) from its exports to Zuva.
- Monterey Co. is considering establishing a production facility in Zuva to accommodate the foreign demand for its health care products, while also circumventing the country's quota limits.

Assessment by Montery Co. to Determine whether DFI in the Country of Zuva Should be Considered?

CHARACTERISTICS	DESCRIPTION FOR THE COUNTRY OF ZUVA
Existing demand in Zuva for Monterey's products	Demand is restricted because of a quota that restricts Montery's exports to Zuva.
Potential demand in Zuva for Montery's products	Demand would be at least four times higher without the quota. But the government of Zuva plans to maintain the quota for a long-term period.
Competition in Zuva for Monterey's products	Only one local competitor is in the same industry as Monterey Co. This competitor is partially owned by Zuva's government.
Labor characteristics in Zuva	The sole competitor in Zuva pays very high wages to its employees and offers very high retirement benefits, which partially explains why its operating costs are very high.
Government tax incentives	The government of Zuva typically offers foreign firms a tax incentive to establish a local subsidiary that employs its local citizens. The corporate income tax imposed on income earned in Zuva is reduced from 25% to 15%

Assessing the Feasibility of Potential DFI

A Case Study of Assessing Potential DFI

In the face of the potential benefits and risks of pursuing DFI in Zuva, Monterey decides to have its top financial managers meet with government officials in Zuva to address the following questions:

- Will Monterey be able to obtain a business license to produce and sell its health care products in Zuva?
- Is the government of Zuva planning to privatize the sole local competitor?
- Does the country of Zuva have specific labor laws that lead to high labor costs for all companies there?
- Would Zuva's government allow Monterey a tax break on income earned by a subsidiary in Zuva?
- Would the government of Zuva want to buy a stake in any subsidiary established by Monterey?

Assessing the Feasibility of Potential DFI

Evaluating DFI Opportunities That Pass the First Screen

- For those DFI opportunities that deserve more attention, the MNC should develop detailed plans for its proposed international project so that it can quantify the potential benefits.
- MNC must consider all of these steps simultaneously when determining whether and how to expand internationally.

Steps Taken by MNCs to Determine Whether to Pursue DFI

Identify motives: Review the revenue and cost-related motives for DFI, and determine which motives may apply
Capital budgeting: Identify a particular international project that may be feasible and estimate the cash flows, and the initial investment associated with that project. Apply a capital budgeting analysis to determine whether the proposed project is feasible
International corporate control: Determine the appropriate corporate control structure to over- see any international subsidiaries that would be created. In addition, assess potential corporate control targets in foreign countries that could be acquired. Apply capital budgeting analysis to corporate control candidates and to any existing subsidiaries that could be sold
Country risk analysis: Analyze the country risk in countries where the MNC presently does business as well as in countries where the MNC plans to expand. Incorporate any conclusions from the country risk analysis into the capital budgeting analysis for those proposed projects in which the country risk may affect cash flows or the cost of financing projects
Capital structure: Assess the capital structure of existing and newly proposed international subsidiaries and determine whether it is suitable based on the MNC's existing operations and its ability to repay debt. Estimate the cost of capital that could be obtained to finance new international projects, and incorporate that estimate into the capital budgeting analysis
Long-term financing: Consider sources of long-term funds in foreign countries that could be used to finance existing or proposed international projects. Determine whether the MNC needs to revise the financing to hedge exchange rate risk (match loan repayment currency with cash inflow currency) or to reduce the cost of capital

Made in Vietnam?

- Suppose you are a member of the Board of Directors of Apple and have to decide whether to move production out of China? Discuss the pros and cons of investing in Vietnam and China.
- How does Vietnam benefit from FDI? What is stopping us from taking full advantage of FDI?