Chapter 9
Operating Exposure

Learning Objectives
• Examine how operating exposure arises through the unexpected changes in both operating and financing cash flows
• Analyze how unexpected exchange rate changes alter the economic performance of a business unit through the sequence of volume, price, cost and other key variable changes
• Evaluate strategic alternatives to managing operating exposure
• Detail the proactive policies firms use in managing operating exposure

Operating Exposure
• Measuring the operating exposure of a firm requires forecasting and analyzing all the firm’s future individual transaction exposures together with the future exposure of all the firm’s competitors and potential competitors
  • Example: Eastman Kodak has transaction exposures from present and future sales abroad
  • The sum of these future exposures will have an effect on Kodak’s cash flows as exchange rates change
  • Kodak’s value and competitiveness depend on these cash flows and whether or not it can manage them better than their competition
• This long term view is the objective of operating exposure analysis

Operating & Financing Cash Flows
• Operating cash flows arise from intercompany and intracompany receivables and payables, rent and lease payments, royalty and licensing fees, and other associated fees
• Financing cash flows are payments for the use of inter and intracompany loans and stockholder equity
Trident’s Operating Exposure

- Trident derives much of its reported profits from its German subsidiary and there has been an unexpected change in the value of the euro thus affecting Trident significantly.
- Trident’s German subsidiary is operating in a euro-denominated competitive environment.
  - The subsidiary’s profitability and performance will be impacted by any changes in performance and pricing from its suppliers and customers as a result of changes in the US$/euro exchange rate.

Trident’s Operating Exposure

- Trident Europe manufactures in Germany from European material and labor.
- Half of production is sold within Europe the other half is exported to non-European countries.
- All sales are invoiced in euros and average collection period is 90 days.
- Inventory is equal to 25% of annual direct costs.
- Depreciation is €600,000 per annum.
- Corporate tax is 34% in Germany.

Case 1: Devaluation only

- Assume that on January 1, 2003 the euro unexpectedly drops 16.67% in value from $1.200/€ to $1.000/€.
  - If no devaluation had occurred, Trident Europe was expected to perform as shown in the base case.
  - To illustrate let us assume three various post-devaluation scenarios on Trident Europe’s operating exposures.
    - Case 1: Devaluation, no change in any variable.
    - Case 2: Increase in sales volume only.
    - Case 3: Increase in sales price only.

Case 1: Devaluation only

- Insert income statement chart.
Strategic Management of Operating Exposure

- The objective of both operating and transaction exposure management is to anticipate and influence the effect of unexpected changes in exchange rates on a firm’s future cash flows.
- To meet this objective, management can diversify the firm’s operating and financing base.
- Management can also change the firm’s operating and financing policies.

Diversifying Operations

- Diversifying operations means diversifying the firm’s sales, location of production facilities, and raw material sources.
- If a firm is diversified, management is prepositioned to both recognize disequilibrium when it occurs and react competitively.
- Recognizing a temporary change in worldwide competitive conditions permits management to make changes in operating strategies.

Diversifying Financing

- Diversifying the financing base means raising funds in more than one capital market and in more than one currency.
- If a firm is diversified, management is prepositioned to take advantage of temporary deviations from the International Fisher effect.

Proactive Management of Operating Exposure

- Operating and transaction exposures can be partially managed by adopting operating or financing policies that offset anticipated currency exposures.
- Four of the most commonly employed proactive policies are:
  - Matching currency cash flows
  - Risk-sharing agreements
  - Back-to-back or parallel loans
  - Currency swaps
Matching Currency Cash Flows

- One way to offset an anticipated continuous long exposure to a particular currency is to acquire debt denominated in that currency.
- This policy results in a continuous receipt of payment and a continuous outflow in the same currency.
- This can sometimes occur through the conduct of regular operations and is referred to as a natural hedge.

Currency Clauses: Risk-sharing

- Risk-sharing is a contractual arrangement in which the buyer and seller agree to “share” or split currency movement impacts on payments.
  - Example: Ford purchases from Mazda in Japanese yen at the current spot rate as long as the spot rate is between ¥115/$ and ¥125/$.
  - If the spot rate falls outside of this range, Ford and Mazda will share the difference equally.
  - If on the date of invoice, the spot rate is ¥110/$, then Mazda would agree to accept a total payment which would result from the difference of ¥115/$ - ¥110/$ (i.e. ¥5).

Back-to-Back Loans

- A back-to-back loan, also referred to as a parallel loan or credit swap, occurs when two firms in different countries arrange to borrow each other’s currency for a specific period of time.
  - The operation is conducted outside the FOREX markets, although spot quotes may be used.
  - This swap creates a covered hedge against exchange loss, since each company, on its own books, borrows the same currency it repays.
Currency Swaps

- *Currency swaps* resemble back-to-back loans except that it does not appear on a firm’s balance sheet.
- In a currency swap, a dealer and a firm agree to exchange an equivalent amount of two different currencies for a specified period of time:
  - Currency swaps can be negotiated for a wide range of maturities.
  - A typical currency swap requires two firms to borrow funds in the markets and currencies in which they are best known or get the best rates.

For example, a Japanese firm exporting to the US wanted to construct a matching cash flow swap, it would need US dollar denominated debt.
But if the costs were too great, then it could seek out a US firm who exports to Japan and wanted to construct the same swap.
The US firm would borrow in dollars and the Japanese firm would borrow in yen.
The swap-dealer would then construct the swap so that the US firm would end up “paying yen” and “receiving dollars”.
The Japanese firm would then be “paying dollars” and “receiving yen”.
This is also called a *cross-currency swap*.

Wishes to enter into a swap to “pay dollars” and “receive yen”

Wishes to enter into a swap to “pay yen” and “receive dollars”

Contractual Approaches

- Some MNEs now attempt to hedge their operating exposure with contractual strategies.
- These firms have undertaken long-term currency option positions hedges designed to offset lost earnings from adverse changes in exchange rates.
- The ability to hedge the “unhedgeable” is dependent upon predictability:
  - Predictability of the firm’s future cash flows.
  - Predictability of the firm’s competitor responses to exchange rate changes.
- Few in practice feel capable of accurately predicting competitor response, yet some firms employ this strategy.

Summary of Learning Objectives

- *Foreign exchange exposure* is a measure of the potential for a firm’s profitability, cash flow, and market value to change because of a change in exchange rates.
- MNEs encounter three types of currency exposure: (1) transaction; (2) operating; and (3) translation exposure.
- *Operating exposure* measures the change in value of the firm that results from changes in future operating cash flows caused by an unexpected change in exchange rates.
- Operating strategies for the management of operating exposures emphasize the structuring of firm operations in order to create matching streams of cash flows by currency: this is termed matching.