Ch. 12 Operating Exposure

Topics

- Operating/Economic Exposure
- Managing Operating Exposure
  - Diversification
  - Matching currency cash flows
  - Risk-sharing agreements
  - Back-to-back or parallel loans
  - Currency swaps

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Operating Exposure

- Operating exposure: The degree to which a firm's present value of future cash flows can be influenced by exchange rate fluctuations.
- Operating exposure is also referred as economic exposure, competitive exposure and strategic exposure.
- Corporate cash flows can be affected by exchange rate movements in ways not directly associated with foreign transactions.
- If there are significant changes in exchange rate, MNEs have to adjust their financing and operating strategies.

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Operating Exposure

- Operating exposure is far more important for the long-run health of a business than changes caused by transaction or translation exposure.
  - Planning for operating exposure is total management responsibility since it depends on the interaction of strategies in finance, marketing, purchasing, and production.
  - An expected change in exchange rates is not included in the definition of operating exposure because management and investors should have factored this into their analysis of anticipated operating results and market value.

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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: Coca Cola has a transaction exposures from present and future sales abroad.
  - The sum of these future exposures will have an effect on Coca Cola's cash flows as exchange rates change.
  - Coca Cola's value and competitiveness depends 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.

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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.

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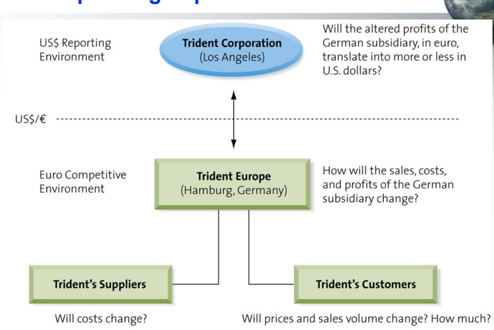
Trident's Operating Exposure



An unexpected depreciation in the value of the euro alters both the competitiveness of the subsidiary and the financial results, which are consolidated with the parent company.

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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.

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Managing Operating Exposure

- MNEs can then reduce its exposure by restructuring its operations to balance its exchange-rate-sensitive cash flows.
  - Increase/reduce sales in new or existing foreign markets.
  - Increase/reduce dependency on foreign suppliers.
  - Establish or eliminate production facilities in foreign markets.
  - Increase or reduce the level of debt denominated in foreign currencies.
- Caution: Due to the high costs of reversal, MNEs should carefully weigh the long-term potential benefits against costs before they implement the restructuring.

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Managing Operating Exposure

Example: MNEs with large foreign inflows

- To reduce its economic exposure:
  - MNEs may ask foreign customers to provide payments in U.S. dollars.
  - MNEs could attempt to shift some of its expenses.
    1. Increase borrowing from the foreign country.
    2. Purchase supplies from the foreign country.
    3. Shift part of the production process to the foreign country. → Caution: It forces MNEs to forgo the economies of scale because production plants will be scattered across several countries.
- These strategies will increase foreign exchange cash outflows, so that the foreign inflows and outflows are more balanced.

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Managing Operating Exposure

Example: MNEs with large foreign outflows

- To reduce its economic exposure:
  - MNEs may ask foreign suppliers to accept payments in U.S. dollars.
  - MNEs may shut down or relocate foreign production facilities.
  - MNEs could attempt to increase its revenues from the foreign country.
  - MNEs could attempt to decrease its borrowings from the foreign country.
- These strategies will increase foreign exchange cash inflows and reduce foreign exchange cash outflows so that the foreign inflows and outflows are more balanced.

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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.

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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.

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Proactive Policies

- Most commonly employed proactive policies are
  - Matching currency cash flows
  - Risk-sharing agreements
  - Back-to-back or parallel loans
  - Currency swaps
  - Leads and lags
  - Reinvoicing centers

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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.

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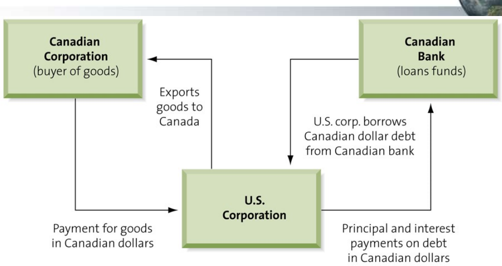
Matching Currency Cash Flows



Exposure: The sale of goods to Canada creates a foreign currency exposure from the inflow of Canadian dollars.

Hedge: The Canadian dollar debt payments act as a financial hedge by requiring debt service, an outflow of Canadian dollars.

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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)

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Currency Clauses: Risk-sharing

- Ford's payment to Mazda would therefore be

$$\left[\frac{¥25,000,000}{¥115.00/\$ - \frac{¥5.00/\$}{2}}\right] = \frac{¥25,000,000}{¥112.50/\$} = \$222,222.22$$

- Note that this movement is in Ford's favor, however if the yen depreciated to ¥130/$ Mazda would be the beneficiary of the risk-sharing agreement.

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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 FX 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.

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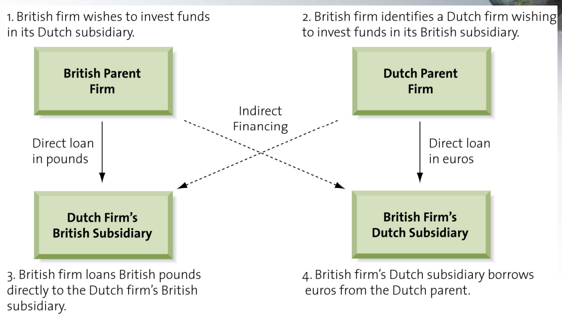
Back-to-Back Loans



The back-to-back loan provides a method for parent-subsidiary cross-border financing without incurring direct currency exposure.

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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.

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Currency Swaps

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 Japanese firm would end up "paying dollars" and "receiving yen" and the US firm would end up "paying yen" and "receiving dollars."
- This is also called a cross-currency swap.

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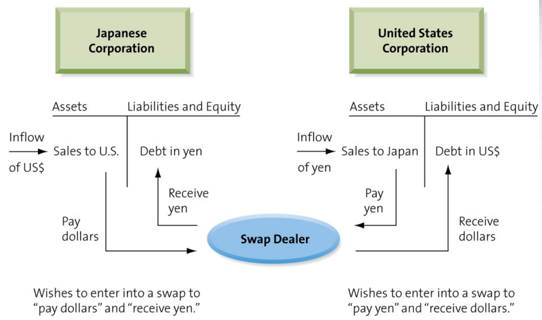
Cross-Currency Swap

Both the Japanese corporation and the U.S. corporation would like to enter into a cross-currency swap that would allow them to use foreign currency cash inflows to service debt.



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Leads & Lags: Re-timing the Fund Transfer

- Firms can reduce both operating and transaction exposure by accelerating or decelerating the timing of payments that must be made or received in foreign currencies.
  - To lead is to pay early
  - To lag is to pay late
- Leading and lagging can be done between related firms (intracompany) or with independent firms (intercompany).

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Leads & Lags: Intracompany

- Leading and lagging between related firms is more feasible because they presumably embrace a common set of goals for the consolidated group.
- In the case of financing cash flows with foreign subsidiaries, there is an additional motivation for early or late payments to position funds for liquidity reasons.
- For example, a subsidiary which is allowed to lag payments to the parent company is in reality "borrowing" from the parent.
- Because the use of leads and lags is an obvious technique for minimizing foreign exchange exposure, and for shifting the burden of financing, many governments impose limits on the allowed range.

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Leads & Lags: Intercompany

- Leading or lagging between independent firms requires the time preference of one firm to be imposed to the detriment of the other firm.
- For example, Trident Europe may wish to lead in collecting its Brazilian accounts receivable that are denominated in reais because it expects the reais to drop in value compared with the euro.
- However, the only way the Brazilians would be willing to pay their accounts payable early would be for the German creditor to offer a discount about equal to the forward discount on the reais (or the difference between Brazilian and German interest rates for the period of prepayment).

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Leads & Lags: Reinvoicing Centers

- A reinvoicing center is a separate corporate subsidiary that serves as a type of “middle-man” between the parent or related unit in one location and all foreign subsidiaries in a geographic region.

Example

- The U.S. manufacturing unit of Trident Corporation invoicing the firm’s reinvoicing center – located within the corporate HQ in Los Angeles – in U.S. dollars.
- The reinvoicing center in turn re-sells to Trident Brazil in Brazilian reais. However, the physical goods are shipped directly to Trident Brazil.
- Consequently, all operating units deal only in their own currency, and all transaction exposure lies with the reinvoicing center.

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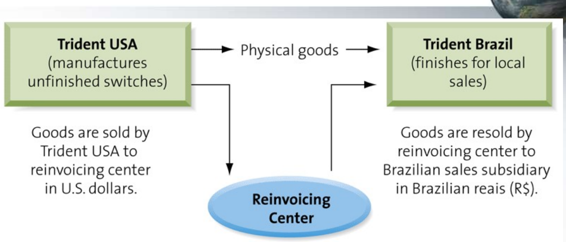
Use of a Reinvoicing Center



1. Trident USA ships goods directly to the Brazilian subsidiary.
2. The invoice by Trident USA, which is denominated in U.S. dollars, is passed to the reinvoicing center.
3. The reinvoicing center takes legal title to the goods.
4. The reinvoicing center invoices Trident Brazil in Brazilian reais, repositioning the currency exposure from both operating units to the reinvoicing center.

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Leads & Lags: Reinvoicing Centers

- There are three basic benefits arising from the creation of a reinvoicing center:
  - Management of foreign exchange exposures
  - Guaranteeing the exchange rate for future orders
  - Managing intra-subsidiary cash flows
- The main disadvantage is one of cost relative to benefits received as an additional corporate unit must be created and a separate set of books must be kept.

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