OUTLINE FOR CHAPTER 11

- Understand Translation Exposure
  - How does translation exposure arise?
  - Definition
  - How do the Current and Temporal Methods work?
  - What are the U.S. rules?
  - Calculation of exchange gains/losses

Chapter 11 - Translation Exposure

- Arises because financial statements of foreign affiliates which are typically stated in foreign currencies need to be restated (translated) in terms of the currency of the parent
- Main purpose of translation - preparation of consolidated financial statements

Translated Statements

- Income Statement
- Balance Sheet

- Consolidated statement of cash flows is prepared from consolidated statements of income and balance sheet

Translation Exposure

- Definition - Potential for an increase or decrease on the parent's net worth and reported net income caused by a change in the exchange rate
- Operating exposure is more important (for financial managers) but in the real world translation exposure is quite important

Translation Methods

- Methods we will discuss in class:
  Current Rate - most prevalent in the world
  Temporal Method

Current Rate Method

- Assets and liabilities use current rate
- Income statement - use actual exchange rate for the day when revenues, expenses, etc. were incurred or use an appropriate weighted average exchange rate
- Dividends - use exchange rate in effect on date of payment

Current Rate Method - Continued

- Equity - common stock and paid-in capital accounts use an appropriate historical rate
- In the U.S., translation gains / losses are put in a special account (Cumulative Translation Adjustment - CTA). When foreign affiliate is sold or liquidated gains or losses become realized

Temporal Method (similar to the Monetary/Nonmonetary Method)

- Monetary assets (cash, marketable securities, accounts receivable, etc.) and monetary liabilities (current liabilities and long-term debt) use current exchange rate
- Nonmonetary assets (inventory, fixed assets, etc.) use appropriate historical rate
- Dividends - use exchange rate in effect on date of payment

Temporal Method - Continued

- Income statement - In general use average exchange rate for period. For depreciation and cost of goods sold use appropriate historical rate
- Common stock and paid-in capital accounts use appropriate historical rate
- Gains / losses from translation go to <u>current</u> consolidated income

U.S. Rules

- For each affiliate must figure out the functional currency
- Functional currency - currency of the primary economic environment in which the affiliate operates and generates cash flows
- Company could have one subsidiary having the dollar as the functional currency and another with the local currency as the functional currency.

U.S. Rules - Continued

- From page 312 of Multinational Business Finance

- If the financial statements of the foreign affiliate are in U.S. dollars no translation is required

- If the financial statements of the foreign affiliate are in the local currency and the local currency is the functional currency use the current rate method

U.S. Rules - Continued

- If the financial statements of the foreign affiliate are in the local currency and the dollar is the functional currency use (remeasured by) temporal method

- If the financial statements of the foreign affiliate are in the local currency and neither the local currency nor the dollar is the functional currency, then financial statements are first remeasured into the functional currency by the temporal method and then translated by the current rate method

U.S. Rules - Continued

- If a country has cumulative inflation of approximately 100 % over a 3 year period must use the temporal method

Examples of Translation Methods

- Exchange rates:
  - Plant and equipment, common stock, long-term debt, and inventory were acquired when the exchange rate was $ .06 / peso
  - Right before devaluation the exchange rate was $ .05 / peso (at end of period)
  - At start of the new period the rate is $ .04 / peso

Current Rate Method Example

Accounts	Pesos	Value Before in $ (rate)	Value After in $ (rate)
Cash	6000	300 (.05)	240 (.04)
Accounts Receivable	12000	600 (.05)	480 (.04)
Inventory	12000	600 (.05)	480 (.04)
Net Plant	24000	1200 (.05)	960 (.04)
Total	54000	2700	2160

Example Continued

Accounts	Pesos	Value Before in $ (rate)	Value After in $ (rate)
Current L.	3000	150 (.05)	120 (.04)
L.T. Debt	9000	450 (.05)	360 (.04)
Capital St.	6000	360 (.06)	360 (.06)
Ret. Earn	36000	1980	1980
CTA		(240)	(660)
Total	54000	2700	2160

Notes to Previous Example

- Dollar retained earnings are the sum of additions to retained earnings each year
- Assume a prior CTA account of (240)
- The additional loss of $ 420 = cash (-$ 60) + a.r. (-$ 120) + inv (-$ 120) + net plant (-$ 240) + c. liab. (+$ 30) + l.t. debt (+$ 90)

Exchange Gain or Loss

- Formula for exchange gain or loss:
- ($ exposed assets - $ exposed liabilities) x (percentage change in the exchange rate)
- ($ 2700 - $ 600) (-.2) = - $ 420
- where exposed means that the $ value changes when the exchange rate changes

Temporal Method Example

Accounts	Pesos	Value Before in $ (rate)	Value After in $ (rate)
Cash	6000	300 (.05)	240 (.04)
Accounts Receivable	12000	600 (.05)	480 (.04)
Inventory	12000	720 (.06)	720 (.06)
Net Plant	24000	1440 (.06)	1440 (.06)
Total	54000	3060	2880

Example - Continued

Accounts	Pesos	Value Before in $ (rate)	Value After in $ (rate)
Current L.	3000	150 (.05)	120 (.04)
L.T. Debt	9000	450 (.05)	360 (.04)
Capital St.	6000	360 (.06)	360 (.06)
Ret. Earn.	36000	2100	2100
Translation gain / loss			(60)
Total	54000	3060	2880

Notes to the Example

- The translation gain or loss would not be shown as a separate item. Retained earnings would be \$ 2040.
- Translation loss = (\$ 900 - \$ 600) (-.2) = - \$ 60

Comparison of Temporal and Current Rate Methods

- Note in this example the two methods give very different magnitudes of losses
- Can also have the situation where there are accounting losses (gains) but operating gains (losses)

Managing Translation Exposure

- Balance Sheet Hedge - make $ exposed assets = $ exposed liabilities (no matter what the exchange rate does there will be no accounting losses or gains)
- Creating a balance sheet hedge may and probably will reduce operating efficiency (may for example have too much inventory)

Managing - Continued

- Under the temporal method in this example could borrow 6000 pesos and convert to dollars or buy inventory or plant and equipment
- Under the current rate method could borrow 42000 pesos and convert to dollars

Rules in Other Countries

- Many countries make a distinction between an integrated foreign entity (foreign affiliate is an extension of the parent and cash flows of affiliate are highly related to cash flows of parent) and a self-sustaining foreign entity (basically cash flows of local affiliate are “independent” of those of the parent)

Rules - Continued

- In many countries integrated foreign entities use the temporal method and self-sustaining entities use current rate method

Homework - Chapter 11

- # 8 (do both the current rate method and the temporal method)