Chapter Fourteen

Management of Translation Exposure

14

Chapter Objective:

This chapter discusses the impact that unanticipated changes in exchange rates may have on the consolidated financial statements of the multinational company.

Chapter Outline

- Translation Methods
- FASB Statement 8
- FASB Statement 52
- Management of Translation Exposure
- Empirical Analysis of the Change from FASB 8 to FASB 52

Translation Methods

- Current/Noncurrent Method
- Monetary/Nonmonetary Method
- Temporal Method
- Current Rate Method

Current/Noncurrent Method

- The underlying principal is that assets and liabilities should be translated based on their maturity.
  - Current assets translated at the spot rate.
  - Noncurrent assets translated at the historical rate in effect when the item was first recorded on the books.
- This method of foreign currency translation was generally accepted in the United States from the 1930s until 1975, at which time FASB 8 became effective.

Current/Noncurrent Method

- Current assets translated at the spot rate.

e.g. DM2=$1

- Noncurrent assets translated at the historical rate in effect when the item was first recorded on the books.

e.g. DM3=$1

Balance Sheet	Local Currency	Current/ Noncurrent
Cash	2,100 DM	$1,050
Inventory	1,500 DM	$750
Net fixed assets	3,000 DM	$1,000
Total Assets	6,600 DM	$2,800
Current liabilities	1,200 DM	$600
Long-Term debt	1,800 DM	$600
Common stock	2,700 DM	$900
Retained earnings	900 DM	$700
CTA	--------	--------
Total Liabilities and Equity	6,600 DM	$2,800

Monetary/Nonmonetary Method

- The underlying principal is that monetary accounts have a similarity because their value represents a sum of money whose value changes as the exchange rate changes.
- All monetary balance sheet accounts (cash, marketable securities, accounts receivable, etc.) of a foreign subsidiary are translated at the current exchange rate.
- All other (nonmonetary) balance sheet accounts (owners' equity, land) are translated at the historical exchange rate in effect when the account was first recorded.

Monetary/Nonmonetary Method

- All monetary balance sheet accounts are translated at the current exchange rate. *e.g.* DM2=$1
- All other balance sheet accounts are translated at the historical exchange rate in effect when the account was first recorded. *e.g.*DM3=$1

Balance Sheet	*Local Currency*	*Monetary/ Nonmonetary*
Cash	2,100 DM	$1,050
Inventory	1,500 DM	$500
Net fixed assets	3,000 DM	$1,000
Total Assets	6,600 DM	$2,550
Current liabilities	1,200 DM	$600
Long-Term debt	1,800 DM	$900
Common stock	2,700 DM	$900
Retained earnings	900 DM	$0
CTA	--------	--------
Total Liabilities and Equity	6,600 DM	$2,400

Temporal Method

- The underlying principal is that assets and liabilities should be translated based on how they are carried on the firm's books.
- Balance sheet account are translated at the current spot exchange rate if they are carried on the books at their current value.
- Items that are carried on the books at historical costs are translated at the historical exchange rates in effect at the time the firm placed the item on the books.

Temporal Method

- Items carried on the books at their current value are translated at the spot exchange rate.

  e.g. DM2=$1

- Items that are carried on the books at historical costs are translated at the historical exchange rates.

  e.g. DM3=$1

Balance Sheet	***Local Currency***	***Temporal***
Cash	2,100 DM	$1,050
Inventory	1,500 DM	$900
Net fixed assets	3,000 DM	$1,000
Total Assets	6,600 DM	$2,950
Current liabilities	1,200 DM	$600
Long-Term debt	1,800 DM	$900
Common stock	2,700 DM	$900
Retained earnings	900 DM	$0
CTA	--------	--------
Total Liabilities and Equity	6,600 DM	$2,400

Current Rate Method

- All balance sheet items (except for stockholder's equity) are translated at the current exchange rate.
- Very simple method in application.
- A "plug" equity account named **cumulative translation adjustment** is used to make the balance sheet balance.

Current Rate Method

- All balance sheet items (except for stockholder's equity) are translated at the current exchange rate.
- A "plug" equity account named **cumulative translation adjustment** is used to make the balance sheet balance

Balance Sheet	*Local Currency*	*Current Rate*
Cash	DM2,100	$1,050
Inventory	DM1,500	$750
Net fixed assets	DM3,000	$1,500
Total Assets	DM6,600	$3,300
Current liabilities	DM1,200	$600
Long-Term debt	DM1,800	$900
Common stock	DM2,700	$900
Retained earnings	DM900	$360
CTA	--------	$540
Total Liabilities and Equity	DM6,600	$3,300

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Balance Sheet	Local Currency	Current/ Noncurrent	Monetary/ Nonmonetary	Temporal	Current Rate
Cash	2,100 DM	$1,050	$1,050	$1,050	$1,050
Inventory	1,500 DM	$750	$500	$900	$750
Net fixed assets	3,000 DM	$1,000	$1,000	$1,000	$1,500
Total Assets	6,600 DM	$2,800	$2,550	$2,950	$3,300
Current liabilities	1,200 DM	$600	$600	$600	$600
Long-Term debt	1,800 DM	$600	$900	$900	$900
Common stock	2,700 DM	$900	$900	$900	$900
Retained earnings	900 DM	$700	$150	$550	$360
CTA	--------	--------	--------	--------	$540
Total Liabilities and Equity	6,600 DM	$2,800	$2,550	$2,950	$3,300

Spot exchange rate

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Balance Sheet	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Cash	2,100 DM	$1,050	$1,050	$1,050	$1,050
Inventory	1,500 DM	$750	$500	$900	$750
Net fixed assets	3,000 DM	$1,000	$1,000	$1,000	$1,500
Total Assets	6,600 DM	$2,800	$2,550	$2,950	$3,300
Current liabilities	1,200 DM	$600	$600	$600	$600
Long-Term debt	1,800 DM	$600	$900	$900	$900
Common stock	2,700 DM	$900	$900	$900	$900
Retained earnings	900 DM	$700	$150	$550	$360
CTA	--------	--------	--------	--------	$540
Total Liabilities and Equity	6,600 DM	$2,800	$2,550	$2,950	$3,300

Book value of inventory historic rate

Book value of inventory at spot exchange rate

Current value of inventory at spot exchange rate.

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Balance Sheet	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Cash	2,100 DM	$1,050	$1,050	$1,050	$1,050
Inventory	1,500 DM	$750	$500	$900	$750
Net fixed assets	3,000 DM	$1,000	$1,000	$1,000	$1,500
Total Assets	6,600 DM	$2,800	$2,550	$2,950	$3,300
Current liabilities	1,200 DM	$600	$600	$600	$600
Long-Term debt	1,800 DM	$600	$900	$900	$900
Common stock	2,700 DM	$900	$900	$900	$900
Retained earnings	900 DM	$700	$150	$550	$360
CTA	--------	--------	--------	--------	$540
Total Liabilities and Equity	6,600 DM	$2,800	$2,550	$2,950	$3,300

historic rate

spot exchange rate.

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Balance Sheet	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Cash	2,100 DM	$1,050	$1,050	$1,050	$1,050
Inventory	1,500 DM	$750	$500	$900	$750
Net fixed assets	3,000 DM	$1,000	$1,000	$1,000	$1,500
Total Assets	6,600 DM	$2,800	$2,550	$2,950	$3,300
Current liabilities	1,200 DM	$600	$600	$600	$600
Long-Term debt	1,800 DM	$600	$900	$900	$900
Common stock	2,700 DM	$900	$900	$900	$900
Retained earnings	900 DM	$700	$150	$550	$360
CTA	--------	--------	--------	--------	$540
Total Liabilities and Equity	6,600 DM	$2,800	$2,550	$2,950	$3,300

spot rate

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Balance Sheet	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Cash	2,100 DM	$1,050	$1,050	$1,050	$1,050
Inventory	1,500 DM	$750	$500	$900	$750
Net fixed assets	3,000 DM	$1,000	$1,000	$1,000	$1,500
Total Assets	6,600 DM	$2,800	$2,550	$2,950	$3,300
Current liabilities	1,200 DM	$600	$600	$600	$600
Long-Term debt	1,800 DM	$600	$900	$900	$900
Common stock	2,700 DM	$900	$900	$900	$900
Retained earnings	900 DM	$700	$150	$550	$360
CTA	--------	--------	--------	--------	$540
Total Liabilities and Equity	6,600 DM	$2,800	$2,550	$2,950	$3,300

historical rate

spot rate

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Balance Sheet	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Cash	2,100 DM	$1,050	$1,050	$1,050	$1,050
Inventory	1,500 DM	$750	$500	$900	$750
Net fixed assets	3,000 DM	$1,000	$1,000	$1,000	$1,500
Total Assets	6,600 DM	$2,800	$2,550	$2,950	$3,300
Current liabilities	1,200 DM	$600	$600	$600	$600
Long-Term debt	1,800 DM	$600	$900	$900	$900
Common stock	2,700 DM	$900	$900	$900	$900
Retained earnings	900 DM	$700	$150	$550	$360
CTA	--------	--------	--------	--------	$540
Total Liabilities and Equity	6,600 DM	$2,800	$2,550	$2,950	$3,300

historical rate

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Balance Sheet	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Cash	2,100 DM	$1,050	$1,050	$1,050	$1,050
Inventory	1,500 DM	$750	$500	$900	$750
Net fixed assets	3,000 DM	$1,000	$1,000	$1,000	$1,500
Total Assets	6,600 DM	$2,800	$2,550	$2,950	$3,300
Current liabilities	1,200 DM	$600	$600	$600	$600
Long-Term debt	1,800 DM	$600	$900	$900	$900
Common stock	2,700 DM	$900	$900	$900	$900
Retained earnings	900 DM	$700	$150	$550	$360
CTA	--------	--------	--------	--------	$540
Total Liabilities and Equity	6,600 DM	$2,800	$2,550	$2,950	$3,300

From income statement

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Balance Sheet	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Cash	2,100 DM	$1,050	$1,050	$1,050	$1,050
Inventory	1,500 DM	$750	$500	$900	$750
Net fixed assets	3,000 DM	$1,000	$1,000	$1,000	$1,500
Total Assets	6,600 DM	$2,800	$2,550	$2,950	$3,300
Current liabilities	1,200 DM	$600	$600	$600	$600
Long-Term debt	1,800 DM	$600	$900	$900	$900
Common stock	2,700 DM	$900	$900	$900	$900
Retained earnings	900 DM	$700	$150	$550	$360
CTA	--------	--------	--------	--------	$540
Total Liabilities and Equity	6,600 DM	$2,800	$2,550	$2,950	$3,300

Under the current rate method, a "plug" equity account named **cumulative translation adjustment** makes the balance sheet balance.

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Income Statement	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Sales	10,000 DM	$4,000	$4,000	$4,000	$4,000
COGS	7,500 DM	$3,000	$2,500	$3,000	$3,000
Depreciation	1,000 DM	$333	$333	$333	$400
Net operating income	1,500 DM	$667	$1,167	$667	$600
Income tax (40%)	600 DM	$267	$467	$267	$240
Profit after tax	900 DM	$400	$700	$400	$360
Foreign exchange gain (loss)		$300	-$550	$150	
Net income	900 DM	$700	$150	$550	$360
Dividends	0 DM	$0	$0	$0	$0
Addition to Retained Earnings	900 DM	$700	$150	$550	$360

Sales translate at average exchange rate over the period, DM2.50 = $1

For notes, see Exhibit 14.1

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Income Statement	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Sales	10,000 DM	$4,000	$4,000	$4,000	$4,000
COGS	7,500 DM	$3,000	$2,500	$3,000	$3,000
Depreciation	1,000 DM	$333	$333	$333	$400
Net operating income	1,500 DM	$667	$1,167	$667	$600
Income tax (40%)	600 DM	$267	$467	$267	$240
Profit after tax	900 DM	$400	$700	$400	$360
Foreign exchange gain (loss)		$300	-$550	$150	
Net income	900 DM	$700	$150	$550	$360
Dividends	0 DM	$0	$0	$0	$0
Addition to Retained Earnings	900 DM	$700	$150	$550	$360

Translate at DM2.50 = $1

Translate at new exchange rate, DM2.00 = $1

For notes, see Exhibit 14.1

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Income Statement	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Sales	10,000 DM	$4,000	$4,000	$4,000	$4,000
COGS	7,500 DM	$3,000	$2,500	$3,000	$3,000
Depreciation	1,000 DM	$333	$333	$333	$400
Net operating income	1,500 DM	$667	$1,167	$667	$600
Income tax (40%)	600 DM	$267	$467	$267	$240
Profit after tax	900 DM	$400	$700	$400	$360
Foreign exchange gain (loss)		$300	-$550	$150	
Net income	900 DM	$700	$150	$550	$360
Dividends	0 DM	$0	$0	$0	$0
Addition to Retained Earnings	900 DM	$700	$150	$550	$360

Translate at DM3 = $1

Translate at average exchange rate, DM2.5 = $1

For notes, see Exhibit 14.1

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Income Statement	*Local Currency*	*Current/ Noncurrent*	*Monetary/ Nonmonetary*	*Temporal*	*Current Rate*
Sales	10,000 DM	$4,000	$4,000	$4,000	$4,000
COGS	7,500 DM	$3,000	$2,500	$3,000	$3,000
Depreciation	1,000 DM	$333	$333	$333	$400
Net operating income	1,500 DM	$667	$1,167	$667	$600
Income tax (40%)	600 DM	$267	$467	$267	$240
Profit after tax	900 DM	$400	$700	$400	$360
Foreign exchange gain (loss)		$300	-$550	$150	
Net income	900 DM	$700	$150	$550	$360
Dividends	0 DM	$0	$0	$0	$0
Addition to Retained Earnings	900 DM	$700	$150	$550	$360

Note the effect on after-tax profit.

For notes, see Exhibit 14.1

How Various Translation Methods Deal with a Change from DM3 to DM2 = $1

Income Statement	Local Currency	Current/ Noncurrent	Monetary/ Nonmonetary	Temporal	Current Rate
Sales	10,000 DM	$4,000	$4,000	$4,000	$4,000
COGS	7,500 DM	$3,000	$2,500	$3,000	$3,000
Depreciation	1,000 DM	$333	$333	$333	$400
Net operating income	1,500 DM	$667	$1,167	$667	$600
Income tax (40%)	600 DM	$267	$467	$267	$240
Profit after tax	900 DM	$400	$700	$400	$360
Foreign exchange gain (loss)		$300	-$550	$150	
Net income	900 DM	$700	$150	$550	$360
Dividends	0 DM	$0	$0	$0	$0
Addition to Retained Earnings	900 DM	$700	$150	$550	$360

Note the effect that foreign exchange gains (losses) has on net income.

For notes, see Exhibit 14.1

FASB Statement 8

- Essentially the temporal method, with some subtleties.
  - Such as translating inventory at historical rates, which is a hassle.
- Requires taking foreign exchange gains and losses through the income statement.
- This leads to variability in reported earnings.
- Which leads to irritated corporate executives.

FASB Statement 52

- The Mechanics of the FASB 52 Translation Process
  - Function Currency
  - Reporting Currency
- Highly Inflationary Economies

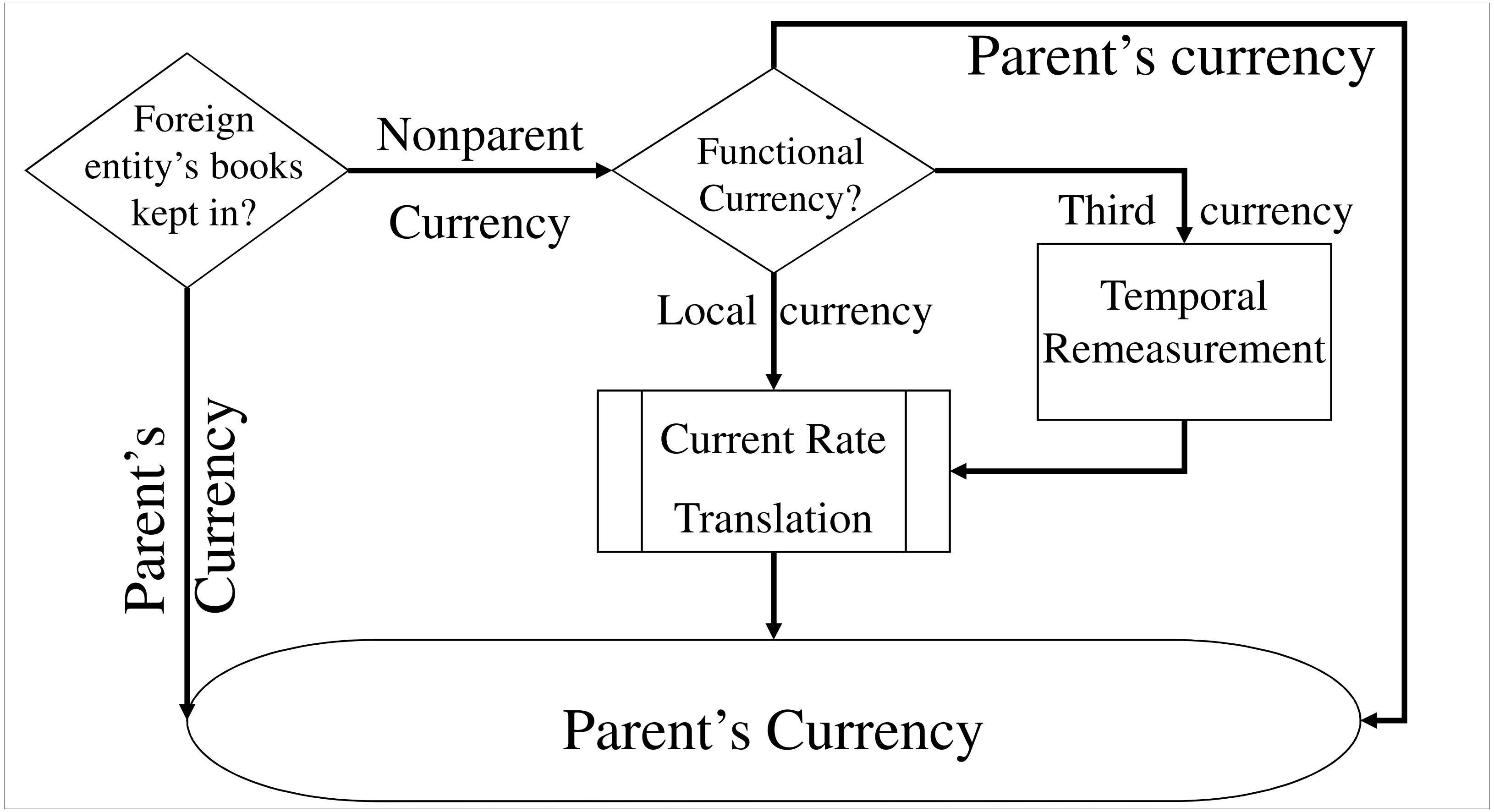
The Mechanics of FASB Statement 52

- Function Currency
  - The currency that the business is conducted in.
- Reporting Currency
  - The currency in which the MNC prepares its consolidated financial statements.

The Mechanics of FASB Statement 52

- Two-Stage Process
  - First, determine in which currency the foreign entity keeps its books.
  - If the local currency in which the foreign entity keeps its books is not the functional currency, remeasurement into the functional currency is required.
  - Second, when the foreign entity's functional currency is not the same as the parent's currency, the foreign entity's books are translated using the current rate method.

The Mechanics of FASB Statement 52



Highly Inflationary Economies

- Foreign entities are required to remeasure financial statements using the temporal method "as if the functional currency were the reporting currency".

Management of Translation Exposure

- Translation Exposure vs. Transaction Exposure
- Hedging Translation Exposure
  - Balance Sheet Hedge
  - Derivatives Hedge
- Translation Exposure vs. Operating Exposure

Translation Exposure versus Transaction Exposure

- Translation Exposure
  - The effect that unanticipated changes in exchange rates has on the firm's consolidated financial statements.
  - An accounting issue.
- Transaction Exposure
  - The effect that unanticipated changes in exchange rates has on the firm's cash flows.
  - A finance issue and the subject of Chapter 13.
- It is generally not possible to eliminate both translation exposure and transaction exposure.

Hedging Translation Exposure

- If the managers of the firm wish to manage their accounting numbers as well as their business, they have two methods for dealing with translation exposure.
  - Balance Sheet Hedge
  - Derivatives Hedge

Balance Sheet Hedge

- Eliminates the mismatch between net assets and net liabilities denominated in the same currency.
- May create transaction exposure, however.

Derivatives Hedge

- An example would be the use of forward contracts with a maturity of the reporting period to attempt to manage the accounting numbers.
- Using a derivatives hedge to control translation exposure really involves speculation about foreign exchange rate changes, however.

Translation Exposure versus Operating Exposure

- The effect that unanticipated changes in exchange rates has on the firm's ongoing operations.
- Operating exposure is a substantive issue with which the management of the firm should concern itself with.

Empirical Analysis of the Change from FASB 8 to FASB 52

- There did not appear to be a revaluation of firms' values following the change.
- This suggests that market participants do not react to cosmetic earnings changes.
- Other researchers have found similar results when investigating other accounting changes.
- This highlights the futility of attempting to manage translation gains and losses.

End Chapter Fourteen

