

Ch. 11 Translation Exposure



Topics

- Translation Exposure
 - Functional Currency
 - Translation Methods
 - Current Rate Method
 - Temporal Method
 - Managing Translation Exposure

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Translation Exposure



- **Translation exposure**, also called **accounting exposure**, results when an MNE translates each subsidiary's financial data to its home currency for consolidated financial reporting.
- Translation exposure does not directly affect cash flows, but MNEs are concerned about it due to its potential impact on reported consolidated earnings caused by a change in exchange rates since the last transaction.

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Translation Exposure



- FASB-52 requires that the the current exchange rate be used to translate assets and liabilities of a foreign entity from its functional currency to the reporting currency.
- In most cases, translated income gains and losses due to changes in foreign currency values are reported as a component of stockholder's equity when using FASB-52.

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Subsidiary Characterization



- Most countries specify the translation method to be used by a foreign subsidiary based upon its operations.
- A foreign subsidiary can be classified as
 - Integrated Foreign Entity:** One which operates as an extension of the parent company, with cash flows and line items that are highly integrated with the parent.
 - Self-sustaining Foreign Entity:** One which operates in the local economy independent of its parent.

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Functional Currency



- The US differentiates foreign subsidiaries on the basis of functional currency, not subsidiary characterization.
- Functional Currency:** Currency of the primary economic environment in which the subsidiary operates.
- The geographic location of a subsidiary and its functional currency can be different.
 - Example: US subsidiary located in Singapore may find that its functional currency could be
 - US dollars (integrated subsidiary)
 - Singapore dollars (self-sustaining subsidiary)
 - British pounds (self-sustaining subsidiary)

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Translation Methods



- There are two basic methods for the translation of foreign subsidiary financial statements:
 - The current rate method
 - The temporal method
- Regardless of which is used, either method must designate
 - The exchange rate at which individual balance sheet and income statement items are remeasured.
 - Where any imbalances are to be recorded.
 - This can affect either the balance sheet or the income statement.

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Current Rate Method



- Under this method, all financial statement items are translated at the "current" exchange rate.
 - Assets & liabilities are translated at the rate of exchange in effect on the balance sheet date.
 - Income statement items are translated at either the actual exchange rate on the dates the various revenues, expenses, gains and losses were incurred or at a weighted average exchange rate for the period.
 - Dividends paid are translated at the rate in effect on the date of payment.
 - Common stock and paid-in capital are translated at historical rates; year end retained earnings consist of year-beginning plus or minus any income or loss on the year.

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Current Rate Method



- Any gain or loss from re-measurement is closed to an equity reserve account entitled the cumulative translation adjustment.
- These cumulative gains and losses from remeasurement are only recognized in current income under the current rate method when the foreign subsidiary giving rise to that gain or loss is liquidated.

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Temporal Method



- Under the temporal method, specific assets and liabilities are translated at exchange rates consistent with the timing of the item's creation.
 - The temporal method assumes that a number of line items such as inventories and net plant and equipment are restated to reflect market value.
 - If these items were not restated and carried at historical costs, then the temporal method becomes the monetary/non-monetary method.
- Any gains or losses from remeasurement are carried directly to current consolidated income and not to equity reserves.

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Temporal Method



- **Monetary assets** (primarily cash, accounts receivable, and long-term receivables) and all monetary liabilities are translated at current exchange rates.
- **Non-monetary assets** (primarily inventory and plant and equipment) are translated at historical exchange rates.
- **Income statement items** are translated at the average exchange rate for the period except for depreciation and cost of goods sold which are associated with non-monetary items, these items are translated at their historical rate.
- **Dividends paid** are translated at the exchange rate in effect the date of payment.
- **Common stock and paid-in capital** are translated at historical rates; year end **retained earnings** consist of year-beginning plus or minus any income or loss on the year plus or minus any imbalance from translation.

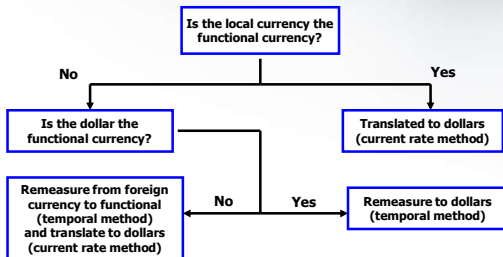
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US Translation Procedures



Purpose: Foreign currency financial statements must be translated into U.S. dollars

If the financial statements of the foreign subsidiary are expressed in a foreign currency, the following determinations need to be made.



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Hyperinflation Countries



- FASB #52 has a special provision for translating statements of US subsidiaries operating in countries where cumulative inflation has been approximately 100% or more for over a three-year period.
- Financial statements of these subsidiaries must be translated using the temporal method.
 - The rationale is to correct the problem of the "disappearing asset."
 - If the current rate method were used, depreciation would be overstated in real terms and the book value of the physical assets would disappear from the balance sheet.

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Translation Exposure



Trident Europe Example

- Recall that the euro depreciated by 16.67% or moved from \$1.200/€ in December 2002 to \$1.000/€ in January 2003.
- The functional currency of the subsidiary is the euro and the currency of the parent is US dollars.
- PP&E, common stock, and long-term debt were acquired by Trident Europe at a past rate of \$1.2760/€.
- Inventory on hand was purchased or manufactured during the immediately prior quarter when the average exchange rate was \$1.2180/€.

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Trident Europe: Current Method



EXHIBIT 10.4

Trident Europe: Translation Loss Just After Depreciation of the Euro

		December 31, 2001		January 2, 2002	
	In euros	\$/€	Just before Depreciation	\$/€	Just after Depreciation
Current Rate Method					
Cash	€1,600,000	1.2000	\$1,920,000	1.0000	\$1,600,000
Accounts receivable	3,200,000	1.2000	3,840,000	1.0000	3,200,000
Inventory	2,400,000	1.2000	2,880,000	1.0000	2,400,000
Net plant and equipment	4,800,000	1.2000	5,760,000	1.0000	4,800,000
	€12,000,000		\$14,400,000		\$12,000,000
Accounts payable	€ 800,000	1.2000	\$ 960,000	1.0000	\$ 800,000
Short-term bank loan	1,600,000	1.2000	1,920,000	1.0000	1,600,000
Long term debt	1,600,000	1.2000	1,920,000	1.0000	1,600,000
Common stock	1,800,000	1.2760	2,296,800	1.2000	2,296,800
Retained earnings	6,200,000	(a)	7,440,000	1.2000(b)	7,440,000
Translation adjustment (CTA)	—	—	(136,800)	—	(1,736,800)
	€12,000,000		\$14,400,000		\$12,000,000

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Trident Europe: Temporal Method



Temporal Method

Cash	€1,600,000	1.2000	\$1,920,000	1.0000	\$1,600,000
Accounts receivable	3,200,000	1.2000	3,840,000	1.0000	3,200,000
Inventory	2,400,000	1.2180	2,923,200	1.2180	2,923,200
Net plant and equipment	4,800,000	1.2760	6,124,800	1.2760	6,124,800
	€12,000,000		\$14,808,000		\$13,848,000
Accounts payable	€ 800,000	1.2000	\$ 960,000	1.0000	\$ 800,000
Short-term bank loan	1,600,000	1.2000	1,920,000	1.0000	1,600,000
Long term debt	1,600,000	1.2000	1,920,000	1.0000	1,600,000
Common stock	1,800,000	1.2760	2,296,800	1.2760	2,296,800
Retained earnings	6,200,000	(a)	7,711,200	(b)	7,711,200
Translation gain (loss)	—	—	—	(c)	(160,000)
	€12,000,000		\$14,808,000		\$13,848,000

a Dollar retained earnings before depreciation are the cumulative sum of additions to retained earnings of all prior years, translated at exchange rates in each year. See text for assumptions used in this example.

b Translated into dollars at the same rate as before depreciation of the euro.

c Under the temporal method, the translation loss of \$160,000 would be closed into retained earnings via the income statement rather than left as a separate line item shown here. Hence, under the temporal method, ending retained earnings would actually be \$7,711,200 - \$160,000 = \$7,551,200.

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Trident Europe: Comparison

EXHIBIT 10.5

Trident Europe:
Translation Loss
Comparison of
Euro
Depreciation and
Appreciation

Panel A: Depreciation of the euro, from \$1.2000/€ to \$1.0000/€ (-16.67%)

	Current Rate Method	Temporal Method
Exposed Assets		
Cash	\$1,920,000	\$1,920,000
Accounts receivable	3,840,000	3,840,000
Inventory	2,880,000	not exposed
Net plant and equipment	5,760,000	not exposed
Total exposed assets ("A")	\$14,400,000	\$5,760,000
Exposed Liabilities		
Accounts payable	\$ 960,000	\$ 960,000
Short-term bank loan	1,920,000	1,920,000
Long-term debt	1,920,000	1,920,000
Total exposed liabilities ("L")	\$4,800,000	\$4,800,000

Gain (loss) if euro depreciates

Net exposed assets ("A" - "L")	\$ 9,600,000	\$ 960,000
Times amount of depreciation	x (0.1667)	x (0.1667)
Translation gain (loss)	(\$1,600,000)	(\$ 160,000)

Panel B: Appreciation of the euro, from \$1.2000/€ to \$1.3200/€ (+ 10.00%)

Gain (loss) if euro appreciates		
Net exposed assets ("A" - "L")	\$ 9,600,000	\$ 960,000
Times amount of appreciation	x 0.1000	x 0.1000
Translation gain (loss)	\$ 960,000	\$96,000

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Managerial Implications

- In the previous slides, the translation loss or gain is larger under the current rate method because inventory and PP&E as well as monetary assets are deemed exposed.
- The managerial implications are
 - If management expects a currency to depreciate, it could minimize translation exposure by reducing net exposed assets.
 - If management expects appreciation, it should increase net exposed assets to benefit from the gain.

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Managing Translation Exposure

- **Balance Sheet Hedge:** An MNE may attempt to avoid translation exposure by matching its foreign liabilities with its foreign assets.
 - A change in exchange rates will change the value of exposed assets but offset that with an opposite change in liabilities.
 - This is termed monetary balance.
 - The cost of this method depends on relative borrowing costs in the varying currencies.

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Managing Translation Exposure



- When is a balance sheet hedge justified?
 - The foreign subsidiary is about to be liquidated so that the value of its CTA would be realized.
 - The firm has debt covenants or bank agreements that state the firm's debt/equity ratios will be maintained within specific limits.
 - Management is evaluated on the basis of certain income statement and balance sheet measures that are affected by translation losses or gains.
 - The foreign subsidiary is operating in a hyperinflationary environment.

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Managing Translation Exposure



- To hedge translation exposure, forward or futures contracts can be used.
- Even if management chooses to follow an active policy of hedging translation exposure, it is nearly impossible to offset both transaction and translation exposure simultaneously; if forced, most managers will choose to reduce transaction exposure first and then translation exposure.
- Hedging translation exposure is limited by:
 - inaccurate earnings forecasts,
 - inadequate forward contracts for some currencies,
 - accounting distortions (the choice of the translation exchange rate, taxes, etc.), and
 - increased transaction exposure (due to hedging activities).
- Note that the translation gain/loss is simply a paper gain/loss, while the gain/loss resulting from the hedge is a real gain/loss.

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