

Finance 581: Translation Exposure

Module 11: Lecture 1

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MODULE 11

Translation exposure

[Sheen Liu]: In this module, we're looking at the third foreign currency exposure: translation exposure. Translation exposure occurs when each subsidiary's financial data is translated to its home currency for consolidated financial statements. Translation exposure could increase or decrease the reported net worth and the reported net income of the company as a whole [*Emphasized*]. In this module, we're looking at the different methods for the translation of foreign subsidiary's financial statements and looking at the impact of unexpected changes in exchange rates have on the consolidated financial statements of the multinational firms. We're explaining what the multinational firm can do to manage its translation exposure.

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OUTLINE

- Chapter 12 Translation Exposure
 - Overview of Translation
 - Translation Methods
 - Translation Example: Trident Europe
 - Comparing Translation Exposure with Operating Exposure
 - Managing Translation Exposure

[Sheen Liu]: First we're looking at what is translation exposure [*Emphasized*]. What are the translation methods? We're illustrating different translation methods by examples [*Emphasized*]. We're also comparing translation exposure and operating exposures to see the link and the difference between the two [*Emphasized*]. Finally, we're discussing how to manage a translation exposure.

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OVERVIEW OF TRANSLATION

- Translation is a restatement of the value of a financial account of subsidiaries originally measure in one currency in the parent's home currency for preparation of a consolidated financial statement.
- Translation may cause an accounting-derived gain or loss, which is the translation exposure.
- Translation exposure is also called accounting exposure.

- Management uses translated statements to assess and compare performance across many geographically distributed subsidiaries.

[Sheen Liu]: Translation refers to the process by which the financial statements of separate subsidiaries are added to the financial statements of the parent in order to prepare a consolidated financial statement that will reflect the financial status of the entire business rather than just the financial status of one subsidiary or the parent [*Emphasized*]. For the subsidiaries located in the same country as the parent, consolidation of subsidiaries is simple because only one currency is involved. For subsidiaries located in foreign countries, the financial statements of subsidiaries are kept in other currencies so consolidation involves adjusting each year for changes in the value of foreign currencies. The process of restating the foreign currency financial statements of a subsidiary is called translation [*Emphasized*]. Translation could increase or decrease the reported net worth and the reported net income of a company as a whole. Because exchange rates change from one time period to another, imbalances occur. These imbalances may cause accounting gains or losses which are taken into the consolidated statement [*Emphasized*]. The possibility of gain or losses give rise to the word “exposure”. Because translation occurs as a result of the accounting process, the restatement is also called “accounting” and the translation exposure has another name: “accounting exposure” [*Emphasized*]. The main purpose of translation is to prepare consolidated statements [*Emphasized*]. Management uses translated statements to assess and compare performance of subsidiaries across different geographical locations [*Emphasized*].

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OVERVIEW OF TRANSLATION

- Imbalance (gain or losses):
 - If the same set of exchange rates were used to measure the items on the financial statement, there would be no imbalances resulting from the translation.
 - If different set of exchange rates were used to measure the items on the financial statement, an imbalance would result.
 - Translation principles in many countries are often a complex compromise between historical and current market valuation.
 - Historical exchange rates can be used for certain equity accounts, fixed assets, and inventory items.
 - Current exchange rates can be used for current assets, current liabilities, income, and expense items.

[Sheen Liu]: Where does gains or losses come from in the translation process? Foreign currency financial statements must be restated in the parent company’s reporting currency. If we stick to the same set of exchange rates to measure the items on the individual statement, income statement and balance sheet, there would be no imbalances resulting from the translation. But if we change it and use different sets of exchange rates to measure the same items on the financial statement, the values of those items would change because of the change in exchange

rate [*Emphasized*]. We'd have accounting gains or losses (or imbalance). Why do we want to use different sets of exchange rates for translation purposes? First, foreign exchange rates keep changing. The current market value of subsidiaries' assets does change in terms of the parent's home currency. We also know that historical costs are often used in accounting [*Emphasized*]. Translation principle is a compromise. In many countries, translation principles are mixed between historical and current market valuation [*Emphasized*]. Which exchange rates can be used for which items gives rise to different translation methods. For example, current exchange rates may be used for current assets, current liabilities, income, and expense items [*Emphasized*]. Historical exchange rates may be used for certain equity accounts, fixed assets, and inventory items [*Emphasized*].

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OVERVIEW OF TRANSLATION

- Subsidiary characterization
 - An integrated foreign entity is one that operates as an extension of the parent, with cash flows and business lines that are highly interrelated.
 - A self-sustaining foreign entity is one that operates in the local economic environment independent of the parent company.
- Functional currency is the dominant currency used by that foreign subsidiary in its day-to-day operations.
 - In US, the Financial Accounting Standard Board (FASB) defines approved practices for US firms.

[Sheen Liu]: Many countries pacify the translation method used by foreign subsidiaries based on the subsidiary characterization [*Emphasized*]. An integrated foreign subsidiary is one that operates as an extension of the parent's operations with the cash flows and general business highly integrated into those of the parent [*Emphasized*]. An example would be Toyota plant that manufactures automobile engines in Mexico and ships the engines only to Toyota assembly lines in US, Canada and other countries. A self-sustaining foreign subsidiary is an entity that operates in the local economy more or less independent of its parent [*Emphasized*]. To a large degree, its operations (including purchasing, production and sales) are tied into the local economy and the subsidiary could probably operate on its own without foreign parent ownership. An example would be the operations of Shell Petroleum in the United States. Although owned by the Dutch/British parent, the US operations of Shell in refining and transporting stand pretty much on their own. Like many gas stations, most of Shell gas stations in the United States are owned by the local operators. Functional currency is the currency of the primary economic environment in which the subsidiary operates and in which it generates cash flows. In other words, it is the dominant currency used by the foreign subsidiaries in its day-to-day operations. The United States requires that the functional currency of the foreign subsidiaries be determined based on the nature and purpose of the subsidiaries. The US Financial Accounting Standard Board (FASB) defines approved practices for US firms.

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TRANSLATION METHODS

- Two basic methods for the translation of foreign subsidiary financial statements
 - The current rate method
 - The temporal method
- The two methods differ
 - At what exchange rate individual balance sheet and income statement items are translated
 - Where any imbalance is to be recorded
- Many countries are
 - Using the temporal method for integrated foreign entities
 - Using the current rate method for self-sustaining foreign entities

[Sheen Liu]: There are two basic methods for the translation of foreign subsidiary financial statements which are employed worldwide: the current rate method and the temporal method [*Emphasized*]. The current rate method is also called the closing rate method. Under the current rate method, all assets are translated at the exchange rate in effect on the date the accounts are translated. Under the temporal method, current assets (cash, marketable securities, and account receivable) are translated at the current exchange rate, but the inventory and the fixed assets are translated at the historical exchange rate which is the exchange rate that was in effect at the time the assets were acquired. There are some exceptions such as the local inflation rate exceeds 100% over a three year period. So the two methods differ at what exchange rate individual balance sheet and income statements are translated [*Emphasized*]. In addition, they are different in terms of where to record any imbalance [*Emphasized*]. The imbalances record as current income or an equity reserve account. Many of the world's largest industrial countries as well as the countries in the newly formed International Accounting Standards Committee follow the same basic translation procedure. Integrated foreign entities are typically translated using the temporal method [*Emphasized*]. Self-sustaining foreign entities are translated by the current rate method.

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TRANSLATION METHOD

- The current rate method: all financial statement line items are translated at the current rate of exchange with exceptions:
 - Income statement items are translated at
 - The exchange rate on the dates they were recorded or
 - An appropriately weighted average rate for the period.
 - Dividends are translated at the rate in effect on the date of payment.
 - Common stock are translated at historical rates.
- Translation gains or losses
 - Are accumulated in a separate equity reserve account – cumulative translation adjustment
 - Do not pass through the income statement

[Sheen Liu]: The current rate method is the most widely used method in the world today [Emphasized]. The principle of the current rate method is that all assets are translated at the current rate which is the exchange rate in effect on the date the accounts are translated [Emphasized]. There are some exceptions: income statement items are translated at exchange rate on the dates they were recorded or a properly weighted average weight for the period [Emphasized]. Dividend distributions are translated at the rate in effect on the date of payment. Common stock and paying capital accounts are translated at historical rates [Emphasized]. Translation gain or losses are reported separately and accumulated in a separate equity reserve account on the balance sheet. The equity reserve account is called cumulative translation adjustment [Emphasized]. The biggest advantage of the current rate method is that the gain or losses on translation do not pass through the income statement but goes directly to a reserve account [Emphasized]. That is gains or losses caused by translation adjustments are not included in the calculation consolidated in net income which reduces variability of reported earnings.

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[Excel spreadsheet]

[Sheen Liu]: Let's look at an example. We're going to apply current rate method to the example Trident Europe. All of the imports are in the yellow cells. So over here is the balance sheet in euros. You can see their balanced total assets equals to liability and equity or liabilities and net worth. In the current rate method, all financial statement line items are translated at the current rate of exchange. If there's no exceptions, then everything multiplied by current exchange, 1.2, we would expect the new balance sheet would be balanced so there would be no imbalance, no gains or losses. However, we know that in current rate method there are some exceptions. One of the exceptions is the common stock. Common stock are translated at the historical rate, so this is the historical rate at which the common stock is issued. Another exception is the returned earnings. Each year's returned earnings were translated at the exchange rate of that year then all prior earnings are added up to get this number. That means all the earnings before devaluation are added up to get this number. This number reflects the historical exchange rate, so its import won't change with the current exchange rate.

However, other items would change with the exchange rate. So the current exchange rate is 1.2 then we calculate the cash in dollars. So this is just the cash in euro multiplied by the exchange rate. So other items we do the same thing. The exchange rate we just say equals to F8, that's just the cell number. We don't want to use numbers here; we don't have to copy numbers here. As I said before, a spread sheet is not a table. It's supposed to make the spread sheet a computer program. Only the imports in the yellow cells are numbers. No numbers in the white cells, only formulas linked to the imports supposed to be in the white cells. Once we change a number in the imports, immediately we'll get outputs. We'll copy the formula below into the cell below. So here I already put the formula and it's automatically calculated the particular items in US dollar. This item is missing: it goes to the common stock in euro

multiplied by the historical exchange rate. Now we have all of the items, it's supposed to be the total liability and equity is the sum of all those numbers. Now we see the problem. The total assets 40,400,000 are not equal to the liabilities and net worth. This is the imbalance after translation because we're using different exchange rates to different line items. The exceptions common stock and returned earnings make the balance sheet imbalanced. Under the current rate method, we're going to use an additional account, accumulative translation adjustment account, to make it balanced. So what number is supposed to be here? It must be the total assets minus all of those numbers. So basically, the difference between total assets and all those numbers. Now you see the total assets equals to liability and net worth so they're balanced because we put 136,800 dollars over here. We put the losses here and eventually the balance sheet is balanced. So we complete the calculation before devaluation.

Let's see after devaluation. Let's say after devaluation, the exchange rate is 1 dollar per euro. The cash just equals to the cash in euro multiplied by the exchange rate. We know they are same thing. We copy this over here, so this is J8. Now we copy this formula down. So this one is missing. We know that the returned earnings based on the historical exchange rate, so it won't be affected by the current exchange rate. I already put the formula over here so you can see how the cumulative translation adjustment account have bigger loss in order to make the balance sheet balanced. So what are the losses or gains before and after devaluation? Now we just make a calculation. We put this number over here. So here this formula we use the new number in the cumulative translation adjustment account minus the old number, old cumulative translation adjustment account. So the difference is the losses. So here we can see the devaluation causes 1.6 million dollars loss. So this is the illustration of the current rate method.

If after devaluation the exchange rate is 0.9, just change the inputs. It automatically calculates all of the outputs for us. Cumulative Translation Adjustment Account has an even bigger loss. You look at the gain and losses before and after devaluation: 2.4 million dollars. You can try different numbers and the sheet will automatically give you the new cumulative translation adjustment account and the new translation gain or losses.