CHAPTER 10

Translation Exposure Management

Opening Case 10: Main Features of Accounting Exposure

Translation exposure has these main features:

1 Because accounting exposure, commonly known as translation exposure, is based on book values only, it does not reflect the true economic value a company has at risk. By the same token, the gains and losses of foreign-exchange trading as measured by this concept bear no relationship to the real impact exchange rate changes have on the value of the firm itself. They are purely of a paper nature.

2 In connection with the above feature, accounting exposure is incapable of encompassing the various and complex ways in which exchange rate changes will really affect a company.

3 Accounting exposure is a function of the method used in translating foreign-currency financial statements. The application of different translation methods may lead to very different account exposures and to different bases for corporate decision-making.

4 Accounting exposure is a concept that is static and historically oriented rather than dynamic and geared toward the future; in other words, it measures assets and liabilities for given past dates instead of flows of currencies over future periods of time. Under this accounting concept, the exposure of two companies may show exactly the same values although they can be in different economic situations and would be affected differently by exchange rate changes.

Source: Martin Glau, "Strategic Management of Exchange Rate Risks," *Long Range Planning*, Aug. 1990, pp. 65–71.

Translation exposure, sometimes called accounting exposure, measures the effect of an exchange rate change on published financial statements of a firm. Foreign-currency assets and liabilities that are translated at the current exchange rate are considered to be exposed. In accounting terms, the difference between exposed assets and exposed liabilities is frequently called net exposure. If exposed assets are greater than exposed liabilities, foreign-currency depreciations will result in exchange losses and foreign-currency appreciations will produce exchange gains. On the other hand, if exposed assets are smaller than exposed liabilities, foreign-currency depreciations will lead to exchange gains and foreign-currency appreciations will lead to exchange losses.

This chapter has three major sections. The first section discusses four translation rules commonly used by multinational companies (MNCs) to consolidate their worldwide operations into home currency. The second section analyzes major differences between two major translation rules: FASB 8 and FASB 52. The third section considers some techniques designed to reduce translation risk.

10.1 Translation Rules

Before we discuss translation rules, we will look at a numerical example to see how net exchange gains or losses occur.

Example 10.1

A US parent company has a single wholly owned subsidiary in Malaysia. This subsidiary has exposed assets of 100 million ringgits and exposed liabilities of 50 million ringgits. The exchange rate declines from M$4 per dollar to M$5 per dollar.

The potential foreign-exchange loss on the company's exposed net assets of 50 million ringgits would be $2.5 million:

Exposed assets	M$100 million	
Exposed liabilities	–50 million	
Net exposure	M$ 50 million	
Predevaluation rate (M$4 = $1)	M$50 million =	$12.5 million
Postdevaluation rate (M$5 = $1)	M$50 million =	–$10.0 million
Potential exchange loss		$2.5 million

These translation gains and losses do not involve actual cash flows because they are only translated into dollars, not converted into dollars. In other words, they are purely of a paper nature. Some companies are concerned about this risk, because it affects their ability to raise capital, the cost of capital, their earnings per share, their stock price, and key financial ratios.

Financial statements are intended to present information about the performance, financial position, and cash flows of a company. To meet this purpose, the financial statements of separate entities within a business enterprise are consolidated and presented as though they were the financial statements of a single economic entity. Financial statements are frequently restated or translated from one currency into another to assist the users of the financial statements, such as investors and creditors.

Accounting for foreign-currency translation is undoubtedly one of the most controversial technical issues facing MNCs. Many of the problems associated with currency translation derive from the fact that foreign-exchange rates, used to carry out the translation process, are seldom fixed. Consequently, actual operating results can vary, often markedly, from reported results because of differences in the translation rates employed. This is why foreign-currency translation has become even more controversial and important since 1973, when the flexible exchange rate system was established. This flexible exchange system abolished the old fixed exchange rate system that was established in 1944, on the basis of the Bretton Woods Agreement.

If exchange rates have changed since the previous accounting period, the translation of financial statement items denominated in foreign currencies will result in foreign-exchange gains or losses. The possible extent of these gains or losses often depends on the rules that govern translation. The four translation methods most widely used by MNCs are current/noncurrent, monetary/nonmonetary, temporal, and current rate.

10.1.1 The current/noncurrent method

In using this, one assumes that financial-statement accounts should be grouped according to maturity. Under the **current/noncurrent method**, all current assets and current liabilities of foreign affiliates are translated into the parent currency at current exchange rates. All noncurrent assets, noncurrent liabilities, and owners' equity are translated at historical exchange rates.

10.1.2 The monetary/nonmonetary method

Under the **monetary/nonmonetary method**, monetary assets and monetary liabilities are translated at current exchange rates. Nonmonetary assets, nonmonetary liabilities, and owners' equity are translated at historical rates. Monetary assets include cash, accounts receivable, and notes receivable. Nonmonetary assets include inventory and fixed assets. In general, all liabilities are monetary liabilities.

10.1.3 The temporal method

Under generally accepted accounting principles of historical accounting in the United States, the **temporal method** produces essentially the same results as the monetary/nonmonetary method. The only difference is that under the monetary/nonmonetary method, inventory is always translated at the historical rate. Under the temporal method, inventory is usually translated at the his-

Table 10.1 Exchange rates used to translate balance-sheet items

Balance-sheet accounts	*Current/ noncurrent*	*Monetary/ nonmonetary*	*Temporal*	*Current-rate*
Cash	C	C	C	C
Receivables	C	C	C	C
Payables	C	C	C	C
Inventory	C	H	H or C	C
Fixed assets	H	H	H	C
Long-term debt	H	C	C	C
Net worth	H	H	H	H

Note: C represents the current rate and H represents the historical rate.

torical rate, but it could be translated at the current rate if inventory is carried at market prices or at replacement costs.

10.1.4 The current-rate method

The **current-rate method** is the simplest; all assets and liabilities are translated at the current rate. Existing equity accounts such as common stock and paid-in capital are translated at the historical rate.

10.1.5 A comparison of the four translation methods

All financial-statement items restated in terms of the parent currency are the foreign-currency amount multiplied by the appropriate exchange rate. Table 10.1 compares the four translation methods – current/noncurrent, monetary/nonmonetary, temporal, and current-rate – in terms of the exchange rate for each balance-sheet item.

Example 10.2

Assume that a foreign subsidiary of a US MNC has the following (FC = functional currency): (1) cash = FC100; (2) accounts receivable = FC150; (3) inventory = FC200; (4) fixed assets = FC250; (5) current liabilities = FC100; (6) long-term debt = FC300; and (7) net worth = FC300. Let us further assume that the historical exchange rate is $2 = FC1, the current exchange rate is $1 = FC1, and inventory is carried at market prices. Remember that the functional currency depreciates from $2 per FC to $1 per FC.

Table 10.2 illustrates the effect of each translation method on the balance sheet. Exchange gains or losses are shown here as a separate plug (balancing) account to show

Table 10.2 A comparison of the four translation methods

Accounts	*Foreign currency*	*Current/ noncurrent*		*Monetary/ nonmonetary*		*Temporal*		*Current-rate*	
Cash	FC100	1	$100	1	$100	1	$100	1	$100
Receivables	150	1	150	1	150	1	150	1	150
Inventory	200	1	200	2	400	1	200	1	200
Fixed assets	250	2	500	2	500	2	500	1	250
Total	FC700		$950		$1,150		$950		$700
Current debts	FC100	1	$100	1	$100	1	$100	1	$100
Long-term debt	300	2	600	1	300	1	300	1	300
Net worth	300	2	600	2	600	2	600	2	600
Gains (losses)	–		(350)		150		(50)		(300)
Total	FC700		$950		$1,150		$950		$700

how they would be derived. However, in actual practice net worth would be used as a plug figure, or exchange gains and losses would be closed out to retained earnings.

Under the current/noncurrent method, an exchange loss of $350 is recorded, because current assets are greater than current liabilities. On the other hand, under the monetary/nonmonetary method, an exchange gain of $150 is recorded, because monetary liabilities exceed monetary assets. Under the current-rate method, the exchange loss is $300 for two reasons: (1) all accounts except net worth are translated at the current exchange rate; and (2) exposed assets are greater than exposed liabilities.

10.2 FASBs 8 and 52

The accounting profession has recognized the growing importance of foreign-currency transactions and/or foreign operations. In October 1975, the Financial Accounting Standards Board (FASB) issued its Statement 8, *Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements*. FASB 8 formerly required US companies to translate their foreign-currency financial statements into dollars by applying the appropriate exchange rate to the measurement basis of each account; the appropriate exchange rate may be the historical rate, the current rate, or the average rate. This statement also requires companies to show all foreign-exchange gains or losses in their quarterly and annual income statements, regardless of whether these gains or losses were realized or unrealized.

FASB 8 was a product of considerable effort, including extensive exposure drafts and discussion memoranda, by the FASB to resolve the translation issue. However, from its inception in autumn 1975, FASB 8 was the subject of extensive debate; most of the criticism centered on recognizing foreign-exchange gains or losses. Companies claimed that FASB 8 grossly distorted their earnings because of the sharp fluctuations in foreign-exchange rates. The FASB issued its Statement 52, *Foreign Currency Translation*, on December 7, 1981. FASB 52 supersedes FASB 8. In 1982, US companies were allowed to utilize either FASB 8 or FASB 52. Ford used FASB 52 in 1982 to exclude its translation loss of about $220 million from the income statement. In the

same year, General Motors employed FASB 8 to include its translation gain of about $384 million in the income statement.

FASB 52 requires the use of the current exchange rate in translating foreign-currency financial statements into US dollars. Such translation adjustments are placed directly in stockholders' equity rather than income. Thus, FASB 52 has substantially reduced fluctuations in many companies' reported earnings caused by gyrations in foreign-exchange rates under FASB 8.

10.2.1 *Functional currency*

In this section, two terms are extensively used: parent currency and functional currency. **Parent currency**, sometimes called reporting currency, is the currency of the country where the parent company is located. For example, the parent currency of US-based MNCs is the dollar. The **functional currency**, usually called foreign currency or local currency, is the currency of the country where the foreign operation of an MNC is located. The functional currency of an entity, as defined in FASB 52 (paragraph 39), is "the currency of the primary economic environment in which the entity operates; normally, that is the currency of the environment in which an entity primarily generates and expends cash."

The term "functional currency" was first used in the translation literature in conjunction with FASB 52. Functional currency is, in fact, a key feature of FASB 52, because it determines the choice of translation method. This feature is very important, because the translation method employed determines the translation rate and the disposition of exchange gains and losses. If the foreign currency is determined to be the functional currency, FASB 52 is used to carry out the translation process. On the other hand, if the US dollar is deemed to be the functional currency, FASB 8 is used to remeasure foreign-currency operations in dollars.

Normally, a foreign subsidiary's functional currency is the currency of the foreign country in which it operates and generates net cash flows. For example, a French subsidiary with relatively contained and integrated operations in France would have the euro as its functional currency. Such translation adjustments do not affect cash flows and are not included in net income. Consequently, translation adjustments are placed directly in stockholders' equity. However, if the French subsidiary has some transactions and open-account balances denominated in Swiss francs from a Swiss customer, those balances must be restated in euros, and gains or losses must be included in the subsidiary's net income before the statements are translated into US dollars during the consolidation process.

The functional currency of an entity is not always identical with the currency of the country in which the foreign operation is located or the currency of the country in which the records are maintained. The dollar is the functional currency, and exchange gains or losses must be included in the net income for those foreign operations whose cash flows directly affect the parent's US dollar cash flows on a current basis. Such a situation may occur when the foreign entity is merely an extension of the parent company. In this case, the functional currency is the reporting currency of the parent company. For example, if the Mexican subsidiary of a US parent company received all of its raw materials from the USA and resold all of its output back to the USA, the US dollar should be the functional currency.

Foreign subsidiaries in countries with runaway inflation are another case in which the reporting currency is used as the functional currency. FASB 52 (paragraph 11) states that "the financial statements of a foreign entity in a highly inflationary economy shall be remeasured as if the

functional currency were the reporting currency." A highly inflationary economy is defined as one that has cumulative inflation of approximately 100 percent or more over a 3-year period. The cumulative inflation for 3 years is a compounded rate; as a result, an annual inflation rate of about 26 percent produces a cumulative inflation of 100 percent over 3 years.

10.2.2 Differences between FASBs 8 and 52

The underlying assumption of FASB 8 was that consolidated financial statements should reflect the transactions of the consolidated group as though all operations, including foreign operations, were extensions of the parent's domestic operations. This premise failed to recognize the fact that in many cases the operations of foreign subsidiaries exist in other environments and involve foreign-currency cash flows in those other environments. Thus, the results of accounting after translation did not correctly portray the foreign-currency cash flows.

FASB 52 is intended to portray foreign-currency cash flows. Companies using the functional currency approach and the current-rate method can maintain compatible income and cash flows before and after translation. Financial summary indicators, such as profit margin, gross profit, and debt-to-equity ratio, are almost the same after translation into the reporting currency as they are in the functional currency. In addition, the volatility of a company's reported earnings should be reduced under FASB 52, because its foreign-exchange gains or losses are placed directly in stockholders' equity rather than in income.

10.2.3 Translation of foreign-currency financial statements

FASB 8 had formally required US firms to use the temporal method from 1976 until the FASB replaced it with FASB 52 in December 1981. According to the temporal method, balance-sheet items carried at current or future prices should be translated at the current exchange rate, while balance-sheet items carried at historical prices should be translated at the applicable historical rate. Under this method, sales revenue and operating expenses are translated at the average exchange rate, while cost of goods sold and depreciation are translated at the applicable historical rate. Exchange gains or losses from the translation of the balance sheet should be included in the income statement.

Under FASB 52, the current exchange rate method is used to translate foreign-currency balance sheets from their functional currency into the reporting currency. The current exchange rate method is the easiest to apply because under this method, all assets and liabilities are translated at the current exchange rate. Only owners' equity is translated at the historical exchange rate. Unlike the controversial FASB 8, FASB 52 does not require companies to include translation adjustments in net income. Instead, a company will report these translation adjustments separately and accumulate them in a separate component of equity until it sells or substantially liquidates the foreign net investment.

Under FASB 52, all income-statement elements are translated in a manner that produces approximately the same result as using the exchange rate in effect on the dates on which these elements are recognized. However, paragraph 12 of FASB 52 provides that "because translation at the exchange rates on the dates the numerous revenues, expenses, gains, and losses are recognized is generally impractical, an appropriately weighted average exchange rate for the period may be used to translate those elements."

Example 10.3

The Canadian subsidiary of a US multinational corporation with a Canadian dollar functional currency started business and acquired fixed assets on January 1, 2004, when the Canadian dollar/US dollar exchange rate was 0.85. Table 10.3 applies the temporal method and the current exchange rate method to hypothetical financial statements that are affected by an 11.8 percent devaluation of the Canadian dollar. For this devaluation, the exchange rate on December 31, 2004, was 0.75 and the weighted average rate for the period was 0.80.

Table 10.3 shows that fluctuations in reported earnings in this example are reduced significantly under FASB 52, because we used a single rate in translating balance-sheet items

Table 10.3 Translation of foreign-currency operations under FASBs 8 and 52

		FASB 8		*FASB 52*	
	Canadian dollars	*Rates used*	*US dollars*	*Rates used*	*US dollars*
Balance sheet					
Cash and receivables	100	.75	75	.75	75
Inventory	300	.81*	243	.75	225
Fixed assets, net	600	.85	510	.75	450
Total	1,000		828		750
Current liabilities	180	.75	135	.75	135
Long-term debt	700	.75	525	.75	525
Common stock	100	.85	85	.85	85
Retained earnings	20		83		16
Equity adjustments from translation	–				–11
Total	1,000		828		750
Income statement					
Revenue	130	.80	104	.80	104
Cost of goods sold	–60	.83*	–50	.80	–48
Depreciation	–20	.85*	–17	.80	–16
Other expenses	–10	.80	–8	.80	–8
Exchange gain (loss)	–		70		–
Income before tax	40		99		32
Income tax	–20	.80	–16	.80	–16
Net income	20		83		16
Ratios					
Net income to revenue	0.15		0.80		0.15
Gross profit margin	0.54		0.52		0.54
Long-term debt to equity	5.83		3.13		5.83

*Historical rates for inventory, cost of goods sold, and depreciation of fixed assets.

and reported translation adjustments in equity. Under the new standard, moreover, the net income of the US parent company is the same as what is expected based on the level of earnings in Canadian dollars.

Under FASB 52, a translation loss of $11 is the expected economic effect of the Canadian dollar, whose value declined against the US dollar. This translation loss of $11 is reported in the balance sheet as "equity adjustments from translation." On the other hand, FASB 8 required the US parent company to report a translation gain of $70 in the income statement.

Under FASB 52, key Canadian-dollar ratios, such as net income to revenue, gross profit, and long-term debt to equity, are maintained after translation from the Canadian dollar to the US dollar. However, these ratios in the Canadian dollar are significantly different from those in the US dollar under FASB 8.

10.3 Hedging Translation Exposure

When a devaluation or upvaluation seems likely, a company must determine whether it has an unwanted net exposure to exchange risk. Management's basic objective with any exposure is to minimize the amount of probable exchange losses and the cost of protection. A **hedge** is an approach designed to reduce or offset a possible loss. An arrangement that eliminates translation risk is said to hedge that risk. A hedge is designed to substitute a known cost of buying protection against foreign-exchange risk for an unknown translation loss. One can use a variety of techniques to deal with translation exposure. These techniques consist of one major group of hedging devices: a balance-sheet hedge.

10.3.1 The balance-sheet hedge

Balance-sheet hedges are generally employed to minimize translation exposure. A **balance-sheet hedge** involves the selection of the currency in which exposed assets and liabilities are denominated so that an exchange rate change would make exposed assets equal to exposed liabilities. To attain this objective, a company must maintain the same amount of exposed assets and exposed liabilities in a particular currency. A devaluation would affect both types of balance-sheet accounts equally; thus, the company would suffer neither a gain nor a loss.

When an MNC has several subsidiaries, a variety of funds-adjustment techniques can be used to reduce its translation loss. These techniques require the company to adopt the following two basic strategies:

1 The company must decrease soft-currency assets and increase soft-currency liabilities.
2 The company must increase hard-currency assets and decrease hard-currency liabilities.

Hard currencies are those currencies that are likely to appreciate; soft currencies are those currencies that are likely to depreciate.

Most techniques for hedging an impending local-currency (soft-currency) devaluation reduce local-currency assets and/or increase local-currency liabilities to generate local-currency cash. In order to reduce translation exposure, these local-currency funds must be converted into hard-

currency assets. This conversion can be accomplished, either directly or indirectly, by a variety of funds-adjustment techniques. Direct funds-adjustment techniques include pricing exports in hard currencies and imports in the local currency, investing in hard-currency securities, and replacing hard-currency loans with local-currency loans.

10.3.2 Indirect funds-adjustment methods

A variety of indirect funds-adjustment methods can be used to reduce foreign-currency exposure.

EXPOSURE NETTING MNCs can net certain exposures from different operations around the world so that they may hedge only their net exposure. For example, when an MNC has both receivables and payables in a given foreign currency, these receivables and payables can be offset through netting, which will reduce the amount of foreign-exchange exposure. **Exposure netting** is a method of offsetting exposures in one currency with exposures in the same or another currency in such a way that gains or losses on the first exposure will be offset by losses or gains on the second exposure. Unlike the simple case of exposure netting on a currency-by-currency basis that we discussed above, MNCs have a portfolio of currency positions. If MNCs want to apply exposure netting aggressively, it helps to centralize their exposure management function in one location.

LEADING AND LAGGING Leading and lagging is another operational technique that MNCs can use to reduce foreign-exchange exposure. **Leading** means to pay or collect early, whereas **lagging** means to pay or collect late. MNCs should lead soft-currency receivables and lag hard-currency receivables to avoid the loss from the depreciation of the soft currency and to obtain the gain from the appreciation of the hard currency. For the same reason, MNCs will try to lead hard-currency payables and to lag soft-currency payables.

TRANSFER PRICING **Transfer prices** are prices of goods and services sold between related parties, such as a parent and its subsidiary. Transfer prices are frequently different from arm's-length prices (fair market prices) so that they can be used to avoid foreign-currency exposure. For example, an MNC can remove funds from soft-currency countries by charging higher transfer prices on goods sold to its subsidiaries in those countries. For the same reason, an MNC can keep funds at those subsidiaries in hard-currency countries by charging lower prices on goods sold to its subsidiaries in those countries. Governments usually assume that MNCs manipulate their transfer prices to avoid financial problems or to improve financial conditions. Thus, most governments set up policing mechanisms to review the transfer pricing policies of MNCs.

SUMMARY

Translation exposure occurs when companies translate financial-statement accounts from a foreign currency to their home currency. The possible extent of translation gains and losses often depends on the rules that govern translation. The four translation methods most widely used by MNCs are

current/noncurrent, monetary/nonmonetary, temporal, and current-rate. This chapter presented a numerical example to compare these four recognized methods.

US companies were required to use FASB 8 (the temporal method) from 1975 until the FASB issued its Statement 52 (the current-rate method) in 1981. The FASB issued its Statement 52 because accountants and executives raised two major complaints about FASB 8. First, FASB 8 required US companies to show gains and losses in their current income statement, thereby distorting their earnings. Second, FASB 8 required US companies to use different rates for different balance-sheet items. Under FASB 52, all gains and losses are treated as net worth, and all balance-sheet items are translated at the current exchange rate except net worth.

MNCs can use a variety of methods to deal with translation exposure. These methods consist of one major group of hedging devices: balance-sheet hedges, which are generally employed to minimize translation exposure. A balance-sheet hedge involves the selection of the currency in which exposed assets and liabilities are denominated so that an exchange rate change would make exposed assets equal to exposed liabilities. Because translation gains and losses are purely of a paper nature, most MNCs do not employ financial instruments, such as currency forwards, futures, and options.

Questions

1 Explain the conditions under which items and/or transactions are exposed to foreign-exchange risks.
2 Three basic types of exchange exposure are translation exposure, transaction exposure, and economic exposure. Briefly explain each of these three types of exposure.
3 What is the basic purpose of exposure netting?
4 How does FASB 8 differ from FASB 52?
5 What is the basic translation hedging strategy?
6 How will the weakened US dollar affect the reported earnings of a US company with subsidiaries all over the world? How will the strengthened US dollar affect the reported earnings of a US company with subsidiaries all over the world?
7 How could an MNC use leading and lagging to hedge its soft-currency receivables and its soft-currency payables?
8 Which method do most MNCs use to hedge their translation exposure: financial instruments or operational techniques?

Problems

1 A US company has a single, wholly owned affiliate in Japan. This affiliate has exposed assets of ¥500 million and exposed liabilities of ¥800 million. The exchange rate appreciates from ¥150 per dollar to ¥100 per dollar.
   (a) What is the amount of net exposure?
   (b) What is the amount of the translation gain or loss?
   (c) If the Japanese yen declines from ¥150 per dollar to ¥200 per dollar, what would be the amount of the translation gain or loss?

2 The British subsidiary of a US company had current assets of £1 million, fixed assets of £2 million, and current liabilities of £1 million at both the beginning and the end of the year. There are no long-term liabilities. The pound depreciated during the year from $1.50 per pound to $1.30 per pound.
   (a) What is the amount of net exposure?
   (b) What is the amount of the translation gain or loss?

3 Assume that a Malaysian subsidiary of a US company has the following: (1) cash = M$1,000; (2) accounts receivable = M$1,500; (3) inventory = M$2,000; (4) fixed assets = M$2,500; (5) current liabilities = M$1,000; (6) long-term debt = M$3,000; (7) net worth = M$3,000; and (8) net income before translation gain or loss = M$225. Let us further assume that the historical exchange rate is $0.25 per ringgit, the current exchange rate is $0.20 per ringgit, the average exchange rate is $0.225 per ringgit, and inventory is carried at cost.
   (a) Prepare the balance sheet of the US subsidiary in Malaysia.
   (b) Determine the dollar net income without the translation gain or loss.
   (c) Determine the translation gain or loss under FASBs 8 and 52.
   (d) If the functional currency is determined to be the US dollar, which translation method should be used? What kind of impact would it have on the company's net income?
   (e) Compute the Malaysian ringgit debt ratio, the return on investment, and the long-term debt-to-equity ratio. Compare these ratios with the ratios in dollars under FASBs 8 and 52.

4 In 1982, Ford incurred an after-tax loss of $658 million, adopted FASB 52, and had a translation loss of $220 million. In the same year, General Motors earned an after-tax profit of $963 million, used FASB 8, and had a translation gain of $348 million.
   (a) Why do you think that in 1982, Ford adopted a new accounting rule FASB 52, while GM used an old accounting rule FASB 8?
   (b) What would have been Ford's reported net loss if it had used FASB 8 instead of FASB 52?
   (c) What would have been GM's reported net income if it had adopted FASB 52 instead of FASB 8?

5 Assume that a subsidiary in New Zealand needs NZ$500,000 and that a credit swap has been proven to be the least costly hedged alternative. Further assume that the best

unhedged alternative is the direct loan from the parent and that the cost of the direct loan is 20 percent. The current exchange rate is $0.5000 per New Zealand dollar. To obtain NZ$500,000 for the subsidiary in New Zealand, the parent must open a $250,000 credit ($0.5000 × NZ$500,000) in favor of a New Zealand bank. The New Zealand bank charges 10 percent per year on the NZ$500,000 made available to the subsidiary and pays no interest on the $250,000 deposit that the parent has deposited in the bank.

(a) What is the exchange rate that would make the direct loan and the credit swap equally attractive?
(b) If most market analysts predict that the exchange rate will be NZ$2 per dollar in 180 days, which alternative would you recommend?
(c) If most market analysts predict that the exchange rate will be NZ$3 per dollar in 180 days, which alternative would you recommend?
(d) If the New Zealand bank should pay 5 percent interest on the $250,000 credit, what is the exchange rate that would make the direct loan and the credit swap equally attractive?

6 The current exchange rate of Saudi Arabian riyal is SR4 per $1. The Exton Company, the Saudi Arabian subsidiary of a US multinational company, has the following balance sheet:

Assets		Claims on assets	
Cash	SR 500		
Accounts receivable	600	Accounts payable	SR 100
Inventory (cost)	400	Notes payable	200
Inventory (market price)	800	Other payables	1,000
Total current assets	SR2,300	Total current liabilities	SR1,300
		Long-term debt	800
Plant and equipment	2,400	Common stock	1,000
Accumulated depreciation	(1,400)	Retained earnings	200
Net plant and equipment	1,000	Exchange loss or gain	–
Total assets	SR3,300	Total claims	SR3,300

If the Saudi Arabian riyal devalues from SR4 per $1 to SR5 per $1, what would be the translation loss (gain) under each of the following methods: current/noncurrent, monetary/nonmonetary, temporal, and current-rate?

REFERENCES

Coopers & Lybrand, *Foreign Currency Translation and Hedging*, New York: Coopers & Lybrand, Feb. 1994.

DeVries, M. G., "The Magnitude of Exchange Devaluation," *Finance and Development*, No. 2, 1968, pp. 8–16.

Ford Motor Company, *Annual Report 1982*, Dearborn, MI: Ford Motor Company, 1982, pp. 22–35.

General Motors Corporation, *Annual Report 1982*, Detroit: General Motors Corporation, 1982, pp. 17–27.

Glau, M., "Strategic Management of Exchange Rate Risks," *Long Range Planning*, Aug. 1990, pp. 65–71.

Houston, C. O., "Translation Exposure Hedging Post FASB No. 52," *Journal of International Financial Management and Accounting*, Summer and Autumn 1990, pp. 145–70.

Veazey, R. E., and S. H. Kim, "Translation of Foreign Currency Operations: SFAS No. 52," *Columbia Journal of World Business*, Winter 1982, pp. 17–22.

Case Problem 10: Dell Mercosur

At the end of 2002, Todd Pickett, CFO of Dell Mercosur, was faced with conflicting predictions of the value of the Brazilian currency, the real, and what to do to hedge Dell's operation in Brazil. Although Pickett was concerned about Dell's exposure in the other Mercosur countries, especially Argentina, Brazil was clearly the largest concern. The year 2002 began with the shocks resulting from the Argentine financial crisis that started at the end of 2001, and it ended with the election in October of Luiz Ina'cio Lula da Silva, known simply as Lula, as the president of Brazil. Lula, the leader of the Worker's Party and long-time leftist politician, had held the lead throughout the year. The markets were skeptical of Lula's potential leadership, a factor that caused the real to fall from 2.312 reals per US dollar at the end of 2001 to a record 4 reals to one US dollar at one point just prior to the election. After the election, the real began to strengthen somewhat, but Pickett had to base his strategies on whether the real would continue to strengthen or would weaken again. Figure 10.1 shows the Brazilian real/US dollar exchange rate changes for 1995 through 2002.

The History of Dell

Founded in 1984 by Michael Dell, the computer company operates in 34 countries with 36,000 employees (of which about 14,400 are outside the USA) and recorded $32 billion in sales for 2002. In the past 5 years, Dell has expanded beyond PCs, to servers, storage, and communications equipment. Most PC manufactures have claimed poor results since the technology bubble burst in 2000 – IBM left the industry in 2000 and Compaq and Hewlett-Packard (HP) merged in 2001 in hopes of boosting their competitive position. Unlike its competitors, Dell has thrived in the past few years, moving from a market share of 12 percent to 15 percent in

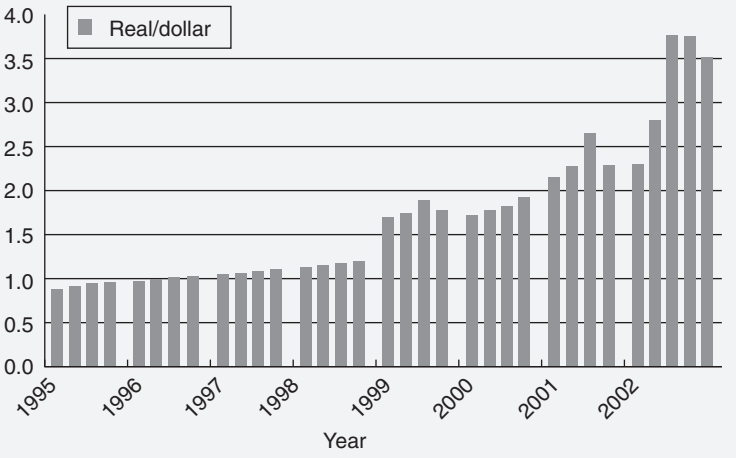

Figure 10.1 Exchange rates for the Brazilian real and the US dollar

2001, the number one spot in the industry. Fiscal 2002 was one of the toughest years to date in the PC industry. Because of the softening of the global economy and the events of September 11, demand for PCs was down sharply. Dell responded with an aggressive price strategy and reduced costs through workforce reductions and facility consolidations. Although global industry shipments fell in 2002 by 5 percent, Dell's unit shipments increased by 15 percent, thus enabling the company to retain its number one position.

Dell bases its success on its build-to-order, direct sales model. Dell has eliminated resellers and retailers and sells directly to the customer by phone or over the Internet. Dell customizes every computer to the customer's needs and waits to build the computer until it is ordered. As a result, Dell requires little inventory (4 days on average) and is able to deliver the newest technology to its customers. Costs are kept to a minimum compared to its competitors, because it has no costly retail outlets and little inventory.

Dell began assembling computers in Round Rock, Texas, in 1985 and moved to global production in the following order:

1990	Opened manufacturing plant in Ireland
1996	Opened manufacturing plant in Malaysia
1998	Opened manufacturing plants in China
1999	Opened manufacturing plants in Tennessee and Brazil

Dell's 2002 Form 10K Reports

Sales outside the USA accounted for approximately 35 percent of the company's revenues in fiscal year 2002. The company's future growth rates and success are dependent on continued growth and success in international markets. As is the case with most international operations, Dell's overseas sales are subject to numerous risks and uncertainties, including local economic and labor conditions, political instability, unexpected changes in the regulatory envi-

ronment, trade protection measures, tax laws (including US taxes on foreign operations), and foreign-currency exchange rates.

Dell in Brazil

Dell's production facility in Brazil is in Eldorado do Sul, close to Porto Alegre, the capital of Rio Grande do Sul, the southernmost state in Brazil. Its call center in Brazil is similar to the one in Bay, Ireland, and services both Brazil and Argentina. Its Brazilian facility, which consists of 100,000 square feet of leased property, is the smallest of its facilities outside the USA, but the potential in Brazil and Argentina is huge, and Dell is planning further expansion. Because of the tariff-free provisions of Mercosur and the close proximity of Dell's manufacturing facilities in the south of Brazil, Dell is well positioned to service all of Mercosur with its Brazilian manufacturing operations. In 2002, it held a 4.5 percent market share in Brazil, behind HP/Compaq, IBM, and a Brazilian company. However, it was rapidly moving up to third place in the market and growing quickly.

Although Dell is divided into products and customers, it is managed generally on a geographical basis. Terry Kahler, the general manager of Dell Mercosur, reports to the head of the Americas/International group, who in turn reports to the Rosendo Parra, the Vice President of the Americas/International Group in Austin, Texas. Pickett works closely with Kahler, but reports directly to the CFO staff in Austin.

Dell's revenues in Brazil are denominated in reals, and most of its operating costs are also denominated in reals. However, about 97 percent of Dell's manufacturing costs in Brazil are denominated in US dollars, since Dell imports parts and components from the USA. It translates its financial statements according to the current-rate method, which means that assets and liabilities are translated at the average exchange rate for the period. Because of business development loans from the Brazilian government, Dell's net exposed asset position in Brazil is quite small, but it is subject to foreign-exchange gains and losses as the rate changes.

The Hedging Strategy

In its Form 10K for 2002, Dell states its foreign-currency hedging strategy as follows:

> The Company's objective in managing its exposure to foreign currency exchange-rate fluctuations is to reduce the impact of adverse fluctuations on earnings and cash flows associated with foreign currency exchange-rate changes. Accordingly, the Company utilizes foreign currency option contracts and forward contracts to hedge its exposure on forecasted transactions and firm commitments in most foreign countries in which the Company operates. The principal currencies hedged during fiscal 2002 were British pound, Japanese yen, euro, and Canadian dollar. The Company monitors its foreign currency exchange exposures to ensure the overall effectiveness of its foreign currency hedge positions. However, there can be no assurance the Company's foreign currency activities will substantially offset the impact of fluctuations in currency exchange rates on its results of operations and financial position.
>
> The Company uses purchased option contracts and forward contracts designated as cash flow hedges to protect against the foreign currency exchange risk inherent in its forecasted

transactions denominated in currencies other than the US dollar. Hedged transactions include international sales by US dollar functional currency entities, foreign currency denominated purchases of certain components, and intercompany shipments to certain international subsidiaries. The risk of loss associated with forward contracts is entered into until the time it is settled. These contracts generally expire in three months or less.

The Company also uses forward contracts to economically hedge monetary assets and liabilities, primary receivables and payables that are denominated in a foreign currency. These contracts are not designated as hedging instruments under generally accepted accounting principals, and therefore, the change in the instrument's fair value is recognized currently in earnings and is reported as a component of investment and other income (loss), net. The change in the fair value of these instruments represents a natural hedge as their gains and losses offset the changes in the underlying fair value of the monetary assets and liabilities due to movements in currency exchange rates. These contracts generally expire in three months or less.

Based on these general statements of principle, Dell's strategy is to hedge all foreign-exchange risk, which is a very aggressive hedging strategy. Since there is no options market for Brazilian reals, Pickett uses forward contracts to hedge the foreign-exchange risk in Brazil. Corporate treasury monitors currency movements worldwide and provides support to Pickett's Brazilian treasury group in terms of currency forecast and hedging strategies. Within the broad strategy approved by corporate treasury, the Brazilian group establishes a strategy and then works with corporate on specific executions of the strategy.

There are two key parts to the strategy. One has to do with forecasting exposure, and the other has to do with designing and executing the strategy to hedge the exposure. Although the balance-sheet exposure is not material, it still must be forecast and is partly a function of the cash flows generated by revenues. The revenue side is more difficult to forecast, so Pickett hedges about 80 percent of forecasted revenues. However, the Dell team in Brazil has become very adept at forecasting revenues and in executing a strategy in order to reach its target forecast. The team works hard on identifying the challenges in reaching its target and in devising policies to overcome those challenges. Its execution strategies vary widely quarter by quarter, and the management team has become very good at meeting its targets by working closely together and being flexible. Pickett and Kahler work closely together on a daily basis to execute their strategy.

The second key to this strategy is designing and executing the hedging strategy. Since revenues vary on a daily basis, Pickett does not enter into contracts all at once. Instead, he works with corporate treasury to enter into contracts in different amounts and different maturities depending on when it expects to generate the revenues. Revenues are generally lower at the beginning of the quarter and are always higher in the last week or two of the quarter, so he enters into contracts accordingly. Timing is a crucial issue. The gain or loss on a forward contract is the difference in exchange rates between when the contract is entered into and when it is settled. The key is to unwind (or settle) the contracts while the rate is still favorable. Pickett noted that if Dell began to unwind the contracts in the last week or two of the quarter instead of the last day or two of the quarter, it could get much more favorable foreign-exchange gains. His strategy was so successful that in some quarters, Dell was generating more finan-

cial income than operating income. Although Pickett and his treasury team have some flexibility in designing and implementing strategy, corporate treasury keeps in touch, depending on their forecast of exchange rate and the strategy that Dell Brazil is following.

Corporate treasury uses a consensus forecast of exchange rates that is provided by a group of banks, but banks have different scenarios. For example, in the last quarter of 2002, corporate treasury was relying on a bank forecast that the real would revalue even more by the end of the year. Pickett's dilemma was that his gut feeling was that the real would actually fall instead of rise. That would indicate a different hedging strategy. He was resisting entering into hedges while corporate treasury was pressuring him to do just that. However, he was closely watching the forward market, and when it began to move, he decided it was time to enter into the contracts. But who knows what will happen to Brazil if Lula, Brazil's new president, loses fiscal control of the ninth largest economy in the world, resulting in another round of inflation and a falling currency. Dell has significant market opportunities in Mercosur, but the financial risk will make for exciting times in the years to come.

Case Questions

1 Given how Dell translates its foreign-currency financial statements into dollars, how would a falling Brazilian real affect Dell Mercosur's financial statement?
2 Dell imports about 97 percent of its manufacturing cost. What type of exposure does this create for it? What are its options to reduce that exposure?
3 Describe and evaluate Dell's exposure management strategy.
4 What are the costs and benefits of hedging all foreign-exchange risk?
5 The mission of the Financial Accounting Standard Board (FASB) is to establish and improve standards of financial accounting and reporting for the guidance and education of the public, including issuers, auditors, and users of financial information. Visit the FASB's home page, www.fasb.org, to see current accounting standards and letters commenting on proposed standards.

Source: J. D. Daniels, L. H. Radebaugh, and D. P. Sullivan, *International Business: Environments and Operations*, 10th edn, Upper Saddle River, NJ: Prentice Hall, 2004, pp. 623–6. This case is reprinted with permission by Prentice Hall.