

# THE MANAGEMENT OF CURRENCY EXCHANGE RISK BY THE SINGER COMPANY

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**A** multinational company is exposed to a variety of risks not encountered by a firm doing business solely in one country. The most prevalent of these, and the most financially significant, if one excludes outright confiscation of property, is exchange risk. Exchange rates between currencies change frequently. If extensive currency devaluations or revaluations occur in a single accounting period, a multinational company may incur losses sufficiently large to require their being treated as "extraordinary."

Like the risk of fire, exchange risk can either be insured or the full financial consequences borne at the time a catastrophe occurs. If exchange risk is managed, a modest cost is incurred in each accounting period; if the risk is not managed, there is always a chance that a large loss may be realized in a single period. Most managements in this country try to operate their foreign businesses in such a way that a steady growth in earnings expressed in U.S. dollars is maintained. With this objective, large extraordinary losses are unacceptable and the insured or managed approach to exchange risk is a necessity.

Merely avoiding exchange losses and profit fluctuations is not enough. The costs of avoidance must be kept as low as possible. The goal should be:

Over the short term, the cost of avoiding exchange losses must be less than the exchange losses that otherwise would have occurred.

Over the long term, the costs must be only a fraction of potential losses.

Experience has shown that under a program of managed exchange risk, the costs incurred in avoiding exchange losses should average less than one third of the losses that would have been experienced otherwise.

## *Characteristics of the Risk*

At the outset it may be well to define what is meant by "exchange risk" and to describe the different effects that currency fluctuations have on the dollar values of various assets and liabilities.

"Exchange risk" is the possibility of loss (or gain) resulting from a change in the rate of conversion of one currency into another. For purposes of financial reporting, it exists whenever a company has either assets or liabilities expressed in a foreign currency or when transactions are conducted in more than one currency. Since every public company publishes its financial statements in a single currency, a parent with foreign offspring must focus its attention on changes in the rates of conversion of that currency into the currencies of all countries in which its subsidiaries do business. Throughout this article, the home currency is assumed to be the U.S. dollar.

One tends to think of exchange risk as the chance of realizing a loss if a foreign currency is devalued, but it is equally possible to gain from a devaluation. For example, two U.S. companies found themselves affected quite differently when the pound sterling was devalued in November of 1967. Company A had a

sterling time deposit in a London bank to take advantage of the high interest rates then prevailing; as a result of the devaluation it had a 14% capital loss. That is, at the new rate of exchange, the sterling balance would buy 14% fewer dollars. On the other hand, Company B imported machinery from England in October of 1967, and owed a payable which was denominated in sterling to the British supplier when the pound was devalued. The dollar requirement to make payment after the devaluation was 14% less than at the time the goods were shipped. Thus a gain resulted. Had the pound been revalued upward instead of devalued, the results would have been reversed: Company A with net pound sterling assets would have gained; Company B with net pound sterling liabilities would have had an exchange loss.

Furthermore, in considering the risk of investing in another country, many assume that a particular foreign currency is prone either to devaluation or revaluation against the dollar, but alternation through time often occurs—i.e., a currency may first devalue and later revalue. The Canadian dollar, for instance, was roughly at par with the U.S. dollar in the 1930's, dropped to \$.90 during World War II, floated in the range \$1.02 to \$1.04 during the 1950's, had a fixed parity of \$.92½ during the 1960's, and now floats in the range \$.97½ to \$1.00. Measures taken to protect against a devaluation of the Canadian dollar would have created losses when the Canadian currency rose against the U.S. dollar.

The pound sterling is another excellent example. Even after its devaluation from \$2.80 to \$2.40 in 1967, it was almost universally considered a prime candidate for further devaluation. However, following President Nixon's momentous announcement of August 15, 1971, removing the link between the dollar and gold, the pound began to strengthen against the dollar and, as this is written, the pound is trading about 6% above its previous parity. In this case, too, steps taken to protect against a devaluation would have resulted in losses.

## *Currency Fluctuations and Asset Values*

The nature of the assets owned by a multinational company also affects vitally the gain or loss that may result from a change in currency exchange rates.

Cash, securities, accounts receivable, and contracts calling for future performance with payment to be made in the local currency are all fully exposed to exchange risk. That is, if the currency devalues by 10%, these assets immediately become

worth 10% less in dollar terms. Conversely, if the local currency is revalued, these assets immediately are more valuable in dollar terms.

When a foreign currency is devalued, it is usually because prices are rising faster there than in the United States. During an inflationary period, land, buildings, productive equipment, and other fixed assets such as automobiles tend to increase in price in local currency terms and, generally speaking, maintain their dollar value (their original cost expressed in dollars less normal depreciation calculated in dollars). Consequently, under most circumstances, a U.S. parent company may consider fixed assets as *not exposed* to exchange risk.

If devaluation of a foreign currency is accompanied by a price freeze, as frequently is the case, inventory is fully exposed to its effects. On the other hand, if there are no price constraints, either regulatory or imposed by competition, inventories may be considered not exposed to exchange risk. Inventories to be exported are normally not exposed to exchange risk in the producing country; their prices are usually governed by conditions in the customer's country.

Liabilities expressed in foreign currencies are also affected by any change in currency conversion rate. Payables to suppliers, bank borrowings, and local tax liabilities are fully exposed, their value in dollar terms being decreased or increased by the percentage change in conversion rate. Thus, they act as a perfect hedge to the current assets on the balance sheet and, if local currency liabilities equal current assets, there is absolutely no exchange risk to the parent company.

It may be concluded that the level of parent company investment in a subsidiary can be the chief determinant of the exposure of the parent in the currency of the country in which its subsidiary is located. If consolidated financial statements report fixed assets no matter where located at their historical dollar costs less dollar depreciation; and if the parent's investment does not exceed the value of the subsidiary's net fixed assets; and if the subsidiary's current assets and current liabilities are equal and, therefore, hedged, then the parent will incur neither gains nor losses as the local currency changes its dollar value. Thus the amount and form of parent company investment are key elements in the management of exchange risk.

### *Singer Experiences Currency Changes*

Between 1857, when The Singer Company opened its first overseas store in Glasgow, Scotland, and the

beginning of World War II, the company's international operations were heavily marketing-oriented. As early as 1900, household and industrial sewing machines were being sold through company-operated stores or by independent distributors in nearly every country of the world. Success depended heavily on installment selling. In nearly all countries, sewing machines could be sold in volume only if two- or three-year purchase terms were granted. By 1940, nearly 40% of the total assets of the company and its subsidiaries were in the form of installment accounts receivable, represented by contracts expressed in over 100 currencies.

Products for this worldwide marketing effort were supplied by six large and two smaller factories, three in the United States, one in Canada, and four in Europe. The financing of the far-flung retailing operations was simple: the parent company in New York purchased all the products of the factories for cash and resold them to the selling subsidiaries on extended terms. The terms were not only long, but flexible as well. The selling units remitted to New York only when they had sold the goods and had begun collecting from their customers under the installment contracts.

With the post-World War II breakdown of the colonial system, a great number of new nations came into being and, with rising nationalism, Singer was forced to build small plants in many countries to supply the local markets. Most governments instituted exchange controls of some sort to enable them to correct more effectively the economic dislocations caused by the war and to live more easily with the rules for the conduct of monetary affairs laid down by the new International Monetary Fund. These exchange controls not only made it impossible for The Singer Company to buy the products of the recently established factories and resell them to the local marketing organizations, but they also made it more difficult to move funds from one unit of the company to another. To accommodate these conditions, Singer adopted more customary, arm's-length arrangements between its operating subsidiaries. In addition to the new nationalism and exchange controls, there were two other significant developments: instead of allowing their currencies to fluctuate in accordance with market forces, governments began making sudden and arbitrary changes in conversion rates and carefully controlling these rates by intervention in the exchange markets.

Such were the fluid conditions that were faced early in 1958 by a new management team resolved to imbue the 107-year-old company with new vigor, and determined to strengthen it through diversification and growth. The new management's first two

years were hardly auspicious, with major devaluations occurring in seven countries in which the company had sizable operations: Argentina, Brazil, Chile, France, Peru, Spain, and Turkey. In 1958, when earnings from operations were only \$12 million, the marked reduction in the dollar value of installment accounts receivable expressed in the currencies of these countries resulted in an "extraordinary" loss that was shown in the company's financial statements as a \$4.5 million after-tax charge to earned surplus. In 1959, an after-tax exchange loss of \$3.4 million had to be reported for similar reasons.

In 1960, the company began giving concentrated attention to the problem of reducing its exposure to exchange risk in order that substantial losses might be avoided in the future. Progress was necessarily slow because there were over 150 subsidiaries and branches abroad; but the program proved successful from the very beginning. During the past ten years, the company has not reported a single "extraordinary" exchange loss (although there have been numerous small and moderate ones). Over the past two years, the sum of the exchange losses incurred and the extra expense associated with hedging has averaged less than 20% of the losses that would have been realized had no action been taken.

### *Appropriate Investment*

Singer management recognized at the outset that to lessen exchange risk, it would be necessary to reduce parent company investment and to increase significantly the amount of local currency borrowings. To accomplish the latter, the capital structure of each branch and subsidiary had to be attractive to local bankers.

Guided by the simple proposition that in any business an entrepreneur would be obliged to finance the assets that a bank or other lender would be unwilling to finance, a formula was worked out that provided a rough but reasonably satisfactory approximation of the amount of investment required in a given foreign subsidiary. The application of this formula is illustrated in Exhibit I, which shows the asset side of the balance sheets of three representative subsidiaries; one predominately a manufacturer, one a retail marketing organization selling on the installment plan, and the third a sales finance company.

It may be noted that 75% of the assets of the manufacturing subsidiary are supported by parent company investment. In this subsidiary the exchange

**Exhibit 1. Application of Appropriate Investment Formula to Assets  
of Representative Foreign Subsidiaries**

[Dollar values in thousands]

Assets	Manufacturer	Retailer	Sales Finance Co.
Cash	\$ 500	\$ 100	\$ 800
Trade receivables	1,600	\$ 50	—
Installment receivables	—	3,800	10,700
Inventory	2,800	1,500	—
Fixed assets (net)	2,200	550	30
Intangible assets	100	—	—
	<hr/>	<hr/>	<hr/>
	\$ 7,200	\$ 6,000	\$11,530
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<b>Appropriate Investment</b>			
Trade receivables	\$ 1,000	\$ 15	\$ —
Installment receivables	—	1,260	3,600
Inventory	2,100	1,000	—
Fixed assets	2,200	400	25
Intangible assets	100	—	—
	<hr/>	<hr/>	<hr/>
	\$ 5,400	\$ 2,675	\$ 3,625
<hr/>			
Investment as percent of assets	75%	45%	31%

risk is relatively low because of its high proportion of fixed assets and the substantial inventory component susceptible to upward price adjustment. The retailing subsidiary, with its installment account receivables that are fully exposed to exchange risk and its inventories of finished goods which are vulnerable because of potential pricing constraints, has only 45% of its assets financed by parent company investment. The finance company, with assets composed mainly of cash and receivables and, therefore, the riskiest of the three, receives the lowest percentage of parent company investment.

This appropriate investment formula, no matter how useful as a guide, was not applied rigorously. Since the objective was to produce a balance sheet that would appear properly structured in the eyes of local lenders, it was necessary to modify the formula's results to reflect local custom and practice. For example, if it was found that most sales finance companies in a given country had shareholder's equity ranging between 15% and 20% of assets, the formula was ignored and appropriate investment fixed at the lower level both to conform to local practice and to reduce exposure. On the other hand, if in making a new investment it was discovered that the government of the host country felt the proposed level of equity inappropriately low, the proportion would be raised during the initial stages of the project.

### *Form of Investment*

Parent company investment can assume several forms: capital stock, retained earnings, inter-company loans, merchandise debt, and, in the case of branches, home office account. Capital stock is the most permanent of these forms and can seldom be withdrawn except through partial liquidation or a major reorganization. Local custom is the chief criterion of the amount of share capital required. Most foreign standards of equity levels are lower than those prevailing in the United States. By adopting local standards, it is usually possible to keep share capital relatively low. In some countries, regulations require that the shareholders' investment in a firm under foreign control be at least as large as reported net fixed assets; and, in other countries, the remittance of dividends and profits is limited to a certain percentage of registered capital. Such provisions put an effective floor under the amount of share capital that must be supplied, but in very few cases do they lead to a level of capital stock that is inconsistent with the objective of minimizing exposure to exchange risk.

Quantitatively, the second most important form of parent financing, loans from the parent or an affiliated company, must be considered at the same time as the commitment of capital stock. A great

advantage of an inter-company loan is that it can be repaid from earnings as they accumulate and, therefore, the investment level can be held constant, thus avoiding an increase in exchange risk as the business grows. In addition, the currency of the loan can be so chosen and the lending source so selected as to produce the most favorable after-tax effect of any expected change in currency conversion rates. However, there are constraints on the proportion of loans to capital imposed both by tax considerations and by exchange control regulations. If the proportion of parent company loans is too high, the loans may be deemed to be an investment of capital with the result that repayments of principal will be taxed as dividends. In some countries all loans must be registered with exchange control authorities and repayments are permitted only in accordance with a predetermined schedule. This seriously limits the flexibility that otherwise is the single most important advantage of a loan as a form of investment. Other constraints on repayment may be imposed by local bankers who may want assurance that the inter-company loans will not be repaid until the net worth of the subsidiary reaches a predetermined level.

A third important form of investment is the inter-company open account resulting from the sale of merchandise or services to the subsidiary by the parent or affiliated companies. By adjusting the payment terms from time to time, this account can be made to expand or shrink.

A simplified example will illustrate the manner in which Singer pieced together these various elements. In 1963, it was decided to form a new subsidiary in Country X to take over the marketing operations of the local branch of Singer Sewing Machine Co., a U.S. corporation. The balance sheet of the branch was as follows:

#### Assets

Installment accounts receivable	\$ 3,500,000
Inventories	5,600,000
Fixed assets (net)	900,000
Other	100,000
	<u>\$10,100,000</u>

#### Liabilities

Accounts payable	\$ 2,000,000
Due parent and affiliates	8,100,000
	<u>\$10,100,000</u>

The \$8.1 million net assets of the branch formed a much larger investment than was needed for a business of this type and size; the appropriate investment formula indicated that \$4.5 million would have been adequate. Since existing exchange control regulations required that all of the capital funds for the formation of a company under foreign control had to come from a foreign source, it was obvious that, if the subsidiary acquired all the assets of the branch, the investment level would be higher than desired. The solution reached was to transfer to the new subsidiary all assets and liabilities other than the \$3.5 million receivables, i.e., \$4.6 million of net assets. The subsidiary issued in exchange for these net assets \$2.5 million in stock and \$2.1 million in 10-year U.S. dollar notes with prepayments permitted after 5 years. When the new company began selling on the installment plan, its receivables rose rapidly and were entirely financed by local bank borrowings. Today, the parent's investment in the subsidiary is still the desired \$4.6 million because the long-term loans have been partially repaid from retained earnings. The branch has been completely liquidated and the proceeds repatriated to the United States.

This change in structure drastically lowered Singer's exchange exposure. Formerly, the parent had \$7.2 million exposed (net assets of \$8.1 million less \$0.9 million of fixed assets). After the new subsidiary was formed and the branch had been liquidated, the exposure rose from an initial \$1.4 million (the value of the capital stock less the fixed assets) to \$4.0 million as the unexposed dollar debt was gradually replaced with exposed retained earnings. This favorable position was attained primarily because the most vulnerable asset, accounts receivable, could be financed wholly by local borrowings.

### Local Currency Borrowing

In order that the program for reducing Singer's exchange risk would begin to show immediate results, the countries in which its subsidiaries were doing business were ranked by rates of price inflation as a rough measure of the likelihood of devaluations of their currencies. This ranking, together with a listing of the value of assets in each country, yielded an approximation of vulnerability to loss, which not only established priorities for attention to reduction of exposure but also indicated in a general way the amount of credit needed.

If the exchange risk was high and the amount of receivables large in any country, efforts were made to borrow locally the total value of net receivables

Even though the interest rates incurred seemed exorbitant by American standards. If the exchange risk was low, it might be decided to borrow less in local currency thus avoiding high interest rates, and to finance the receivables with dollar or other hard currency loans, preferring to assume risk of some loss rather than incur continuing high interest expense.

Whether or not inventories were financed by local currency borrowing depended a great deal on whether selling prices could be raised freely. If it appeared that price controls were likely to be imposed, a substantial portion of the inventory was covered by local currency borrowing. If not, local currencies were borrowed only if interest rates were moderate.

It was seldom either necessary or desirable to borrow locally to finance fixed assets. These could usually be supported more cheaply by parent company investment in some form rather than by loans arranged in the host country.

### *Use of Forward Exchange Contracts*

Local currency borrowing to reduce exchange risk often can be supplemented by the judicious use of forward exchange contracts — i.e., the buying or selling of foreign currencies for future delivery. For example, if a factory in Argentina has purchased a milling machine in Great Britain and has been invoiced £2,000 payable in 90 days, it will have a liability expressed in pounds sterling. If it now enters into a contract to purchase, for a fixed peso amount, £2,000 to be delivered on the day the remittance is due the British supplier, it has a peso rather than a pound liability, and its exposure to a change in the value of the peso has been eliminated.

If the supplier in Britain happens to be an affiliate of the Argentine company, the effect of the forward contract from the viewpoint of the parent company is quite different. If one affiliate sells to another, the receivable of the first and the payable of the second cancel when their balance sheets are consolidated, and the parent's exposure is nil with respect to this transaction. If the Argentine subsidiary enters into a forward exchange contract to protect itself, upon consolidation the parent will find it now has exposed assets of £4,000 and a liability in pesos for the equivalent of £2,000.

It is clear that if a subsidiary is permitted to protect its local currency position, it may increase the overall exchange exposure of the parent. The Singer Company resolved this problem by issuing in its financial policy manual very precise rules as to

exactly when forward exchange contracts might be entered into by its subsidiaries.

It is also possible to enter into forward exchange contracts apart from any particular commercial transaction. There are well-developed markets for contracts in the major currencies. In The Singer Company, currency exposure reports for all field units are compiled monthly, and the overall position in each currency is determined. If it is concluded that there is an unwarranted position in a given currency, it may be offset by selling a certain amount forward, in effect anticipating a remittance from that country. On the other hand, if it is found that there are temporary net liabilities in a particular currency, it may be decided to purchase that currency for future delivery, anticipating the repayment of certain outstanding loans.

Each of these forward transactions has a cost that is indeterminate at the time it is entered into because, until the contract is settled, the exchange rate at which the offsetting purchase or sale can be made is unknown. For example, suppose that on September 14, when the Canadian dollar for immediate delivery is quoted at U.S. \$.993, a contract is entered into to sell Canadian dollars for U.S. dollars on December 14 at a rate of U.S. \$.995. The contract seems advantageous; but on December 14 when Canadian dollars must be purchased for delivery to the buyer the spot rate is U.S. \$.996. Thus a loss of U.S. \$.001 is incurred on each Canadian dollar sold. Such costs can hardly be incurred indiscriminately. It is the policy of The Singer Company that forward contracts unconnected with specific transactions may be made only by the treasurer or his delegate. They are expressly prohibited to field personnel.

### *Adjustment of Intra-Company Accounts*

In the early 1960's, when Singer's program for managing exchange risk first got under way, the primary concern was with protecting exposed assets in countries subject to devaluation, primarily developing countries. In the latter part of the decade, quite a different situation arose—the conversion values of major trading currencies began to shift. First the pound sterling and then the French franc devalued while the German deutsche mark revalued upward, culminating in the major break of August, 1971, when most of the European currencies and the Japanese yen began to float upward against the dollar.

These currencies are the ones in which the bulk of Singer's transactions are carried out. The significant shifts in their conversion rates required still

another technique to protect Singer's position—the adjustment of intracompany accounts. A simple example will show how this is accomplished. Suppose it is likely that the German mark will be revalued upward against the dollar in a few months and that the Italian lira will hold steady or perhaps weaken slightly. The Italian subsidiary purchases about \$1 million of goods each month from an affiliate in Germany. Normal payment terms are 90 days after shipment. The Italian company is now instructed to pay cash on delivery instead of at the end of 90 days. It borrows the equivalent of \$3 million in lire, converts it to marks, pays the German company which, in turn, reduces its borrowing by the full amount of the payment. The effect from the parent company's viewpoint is that its consolidated exposure in lire has been reduced by \$3 million and its net assets expressed in German marks are \$3 million higher. The move costs the company group virtually nothing, but can save several hundred thousand dollars in exchange costs if the predicted shifts in exchange rates occur.

The power of this technique cannot be overemphasized. Its use by corporate treasurers of multinational companies was undoubtedly an important contributing factor in the massive movement of dollars into German reserves in the spring of 1971.

## *Tax Considerations*

Before taking any of the steps that have been described, the tax effects of the proposed move and its possible alternatives must be carefully considered. Not only is each subsidiary subject to a different set of tax regulations and tax rates in the country in which it is located, but there is an overriding set of regulations governing the parent company. A single example, which follows, will show that tax implications are not always obvious:

A Swiss subsidiary having surplus cash makes a Swiss franc loan to a Mexican affiliate. Before the loan matures, the Swiss franc is revalued upward by 7% and the Mexican company incurs an exchange loss on repayment. This loss is deductible for Mexican income tax purposes. The Swiss company has no gain locally because the loan is in its own currency. On the parent company's consolidated books at the time of the revaluation there is an increase in the dollar value of the Swiss receivable exactly offset by a decrease in the dollar value of the Mexican payable; consequently, the net pre-tax gain is zero. However, the consolidated tax expense of the group of companies will be lower because of lower Mexican taxes resulting from the exchange loss. Therefore,

despite the absence of pre-tax gain, the parent's consolidated after-tax income will be higher than if the revaluation had not occurred.

Thus, it is essential that, before any course of action is decided on, each step be analyzed to determine the possible after-tax effects of each eventuality on the parent company's consolidated books.

## *Role of Treasurer*

The prime responsibility for designing the overall program of managing exchange risk and seeing that it is effectively carried out must rest with the treasurer (or chief financial officer) of the parent company. It is the treasurer who has primary responsibility for protecting the company's assets; protecting them from depreciation resulting from currency devaluations certainly is an important part of his duties. He is also responsible for assuring that the corporation and its subsidiaries have financial structures that are appropriate for their activities and their environment.

With his constant contact with banks, financial institutions, and advisory services, the treasurer is best equipped to assess the risk of investing in assets denominated in foreign currencies. These risks are seldom self-evident and there always is a wide variety of possible "scenarios" on the international monetary scene. Each of these must be carefully evaluated and positions taken that will avoid serious loss no matter which eventuates.

Even more importantly, the treasurer can see to it that each foreign entity has an appropriate level of parent company investment and that the investment is in the most suitable form. Making use of his regular banking contacts, he is able to arrange local currency borrowings from foreign banks and to deal in forward contracts for foreign exchange. Finally, with his ability to make policy determination applicable not only to the parent company but also its subsidiaries, he is in the vantage point to see that trading terms between entities are properly adjusted to meet the demands of any given currency situation.

Above all, the program requires coordination and the firm hand of an officer situated to protect the interests of the company rather than the interest of any one segment. Since it is frequently necessary to ask one subsidiary to incur incremental costs for the benefit of the corporate whole, it is only the chief financial officer of the company who has sufficient authority and influence to assure the program's success.

In times of severe monetary dislocations, managing exchange risk successfully is exceptionally difficult. Intuition and simple, two-currency, decision rules do not suffice when several currencies are fluctuating against each other. Much stronger techniques must be brought to bear. The Singer Company, foreseeing this eventuality, has been working on a computer-

ized hedging and financing model to assist in weighing the vast number of alternatives open to a large, diversified, multinational company. Although much remains to be done, the very process of developing the model has provided a greater understanding of the nature of the problem and the factors that are of the most importance to its solution.

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