CHAPTER – VII

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FOREIGN EXCHANGE RISK MANAGEMENT

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Foreign Exchange Risk Management

Introduction:

All commercial banks dealing in foreign currencies are exposed to foreign exchange risk. Foreign exchange transactions involve Purchase of one currency against Sale of another/other currency & vice - versa. In these transactions, the delivery of one currency against another currency depends on the exchange rate. The exchange rate keeps changing due to several factors like demand and supply, trade deficit, Government borrowings, balance of payments, inflation, interest rates, political environment etc. These factors have played a vital role in enhancing the volatility in the world markets resulting in large variation in the profitability of banks dealing in foreign exchange. The fluctuations in the currency rates can be anticipated to a certain extent, but still the risk associated with the business in foreign exchange is always there. A commercial bank operating in multiple currencies, the uncertainties and the associated risks are always on the higher side.

At the outset a bank acquires position in currency as a consequence of being the counter-party to its customer. This position may be short or long in a given currency. Then, the treasury of the bank tries to square the position by taking the opposite position. The scope for squaring up by and large depends on the currency involved and the volume of the transaction. Generally the treasuries in the commercial banks reach their end of day (EOD) by having a near-square, position since it is practically difficult to square up several pipe-line & small volume transactions.

Foreign Exchange Risk

A Foreign exchange risk is defined as a measure by the variance of the domestic currency value of an asset, liability or operating income that is attributable to unanticipated changes in the exchange rates.

All assets and liabilities of banks denominated in foreign currency are exposed to exchange risk. Any appreciation or depreciation in the exchange rate therefore, leads to a change in the value of all these assets and liabilities which are denominated in foreign currency. An appreciation in the domestic currency will decrease the value of the assets and the liabilities, and vice-versa. This will further affect balance sheet of the commercial bank. However, the direction and quantum of change will depend on the proportion of its assets and liabilities which are denominated in foreign currency.Lastly, the exchange risk depends on the unexpected changes in exchange rates since anticipated changes are already incorporated by bank in the form of forward rates for forward transactions.

In view of the volatility in the exchange rates, management of foreign exchange risk becomes a challenging task. The risk levels may change as frequently as the changes in the exchange rates and therefore, it is very different for any bank to manage foreign exchange risk directly.

Exposure in Foreign Exchange

Foreign currency exposure arise whenever a bank has an income or expenditure or an asset or liability, in a currency other than the balance sheet currency. Banks dealing in multiple currencies therefore, set the exposure limits based on their own experiences of dealings in different currencies, in order to absorb risks arising due to exchange rate fluctuations. Foreign exchange exposure can thus be defined[1] as under:

Foreign exchange exposure is the sensitivity of changes in the real domestic currency value of assets, liabilities, or operating incomes to unanticipated changes in exchange rates. As per definition therefore, foreign exchange exposure and risk arise from assets, liabilities or operating income being denominated in foreign currency, and measures the sensitivity of the domestic currency value of the assets, liabilities and operating income to changes in exchange rates. It is not out of place to stress that while foreign exchange risk is the degree of variability, foreign exchange exposure is the absolute amount of money that is at risk.

The risk in foreign exchange is therefore, basically dependent on two factors; viz.

a) Exposure levels, and

b) Unexpected changes

It is only first factor that is under control of the bank & can broadly be classified into following three categories, depending on the nature of exposures. viz;

- Transaction exposures
- Translation exposures and;
- Operating exposures

The concepts of exposure and risk remain the same in respect of all of the above. However, distinction arises due to the causal factors which bring the exposure into existence & are explained as under.

Transaction Exposures:

The transaction exposures are the most common & arise due to normal business operations consequent to which value of all balances held in Nostro Account in home currency changes & vice - versa. The transaction exposure measures the risk involved due to change in foreign exchange rate between the time the transaction is executed and the time it is settled. We can define transaction exposure as follows:

This is a measure of the sensitivity of the home currency value of assets and liabilities which are denominated in a foreign currency, to unanticipated changes in exchange rates, when the assets or liabilities are liquidated.[2]

However, the transaction exposure does not normally occur due to the routine business operations of a bank. As in general, banks in India hold a square position at the end of each day by going long (short) corresponding to every transaction (merchant transaction) with the customer which is short (long). Hence, the transaction exposure in the case of a bank mostly remains an intra-day exposure.

Translation Exposure:

The translation exposure arise from the need to translate "foreign currency assets or liabilities into home currency for the purpose of finalising the accounts for any given period. The norms of translation are those given by Foreign Exchange Dealers

Association of India (FEDAI). Translation losses/gains or also known as accounting losses/gains are significant to the bank, since it affects the accounting profit and correspondingly the valuation of bank in the market. This assumes greater significance when it involves preparing of a consolidated balance sheet including all subsidiaries of bank some of which may be located in different countries and hence operate in different currencies.

Operating Exposure

From the above discussions it is clear that both Transaction & Translation exposures are accounting concepts and affect directly the current balance sheet value of foreign currencies held by bank in its Nostro account due to changes in the exchange rate. While an economic exposure or operating exposure is more management than accounting concept. The operating exposure is thus, a measure of the sensitivity of future cash flows and profits due to unanticipated exchange rate changes. Thus, the impact of operating exposure cannot be seen distinctly as is the case of transaction/translation exposure where losses/gains can be related to specific transactions. Measurement of operating exposure is relatively difficult as it is an attempt to assess the effect of exchange rate changes on future revenues, costs, cash flows and profits of the bank. Operating exposure is thus, the risk that a change in the real exchange rate affects the banks competitive position in the market. Finally, due to its nature, operating exposure is less significant for a bank in India considering the characteristic of controlled/regulated international banking activities under FEMA (Foregin Exchange Management Act,1999)

Managing Exposures:

We have so far seen the various types of exposures and the factors which cause them. We shall now see the alternatives available for managing these exposures. Managing an exposure refers to bringing the level of exposure to a targeted level or within the limit set by the bank management.

Banks acquire these exposures as part of their normal business operations & if they wish to eliminate the risk component to their exposure, they can do so by means of hedging* For this, various internal and external alternatives are available to a bank. These are mentioned as under,

Internal Techniques

Internal techniques of exposure management are part of bank's own foreign currency management. Following are the internal techniques that are normally adopted by banks:

1. Netting, and
2. Leads and lags

Netting:

Netting is a method adopted where in the asset in a foreign currency is used to pay up a liability in foreign currency so that there is no need for conversion.

Hence, netting presupposes a simultaneous occurrence of inflows and outflows in the same currency and for the same amount. However, these conditions are more likely of a chance and not necessary a reality. If a bank has a FCNR(B) deposit maturing along with a foreign currency denominated loan, then netting the loan can take place. A more frequent occurrence for a bank will be the one where it purchases an export bill and effects payments for the imports of equal value.

Leads and Lags:

Leads & Lags refer to timing of payments or of covering arrangements connected with foreign trade transactions, adjusted for the purpose of avoiding losses or securing profits through an anticipated change in exchange rate.[3] As noted earlier, it is not possible to ensure inflows and outflows materializing at the same time and in the same currency because all of them represent transactions which are subjected to different terms and conditions. If these transactions materialize according to their tenor., they occur at different points of time and if each of them is dealt separately it will involve as many conversions as the number of transactions. Now, each conversion provides scope for

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**Dr. Paul Einzing defines hedging as foreign exchange or foreign borrowing operations to safeguard against indefinite & indirect exchange risk arising from assets or liabilities whose value is apt to be affected by changes in exchange rates.*

exchange risk. If the intention is to avoid exchange risk then it is possible, at least in some cases, to delay, or to advance, a cash flow so that it matches with another cash flow in the opposite direction. The techniques of leading and lagging become handy for the purpose of such matching. Leading means making a flow occur earlier than the due date while lagging means delaying a flow beyond the due date. To the extent such matching is possible, the need for conversion is eliminated – and so, too, the exchange risks. This theory recognises that the timing of pressure on exchange rates depended very largely on the decision of counter-party whether to cover foreign exchange well in advance or to defer the payment as long as possible. The more important issue in this technique is that it requires the consent of counter – party which may not always be forthcoming.

External Techniques

Under these techniques bank dealing in foreign exchange undertakes a transaction consequent to which a part or whole of the exchange risk is transferred to others. There are many tools available that can be used, either independently or in combination, for effecting such a transfer. A few such tools used by banks are mentioned below:

1. Forward contract
2. Currency futures
3. Currency options and,
4. Currency swaps.

Forward Contract

A forward contract is an agreement to buy or sell foreign exchange for a pre-determined amount, at a predetermined rate, and on a predetermined date. These contracts are OTC products. The counter-party in these transactions happens to be a banker and hence a bank acquires transaction exposure through such contracts. The bank normally covers its position by, in turn, entering into a forward contract with another banker. This does not involve any cash flow at the time of entering a contract. The actual cash flows occur on the date of delivery. The forward rate of a currency can be at a premium or discount the term premium & discount are used to explain the commodity character of a foreign currency. The difference between the spot rate and forward rate normally reflects the interest rate differential of the respective currencies.

Currency Futures

Currency futures are similar to forward contracts to the extent that both provide for a delivery of foreign exchange by one party at a pre-determined price on a specified future date. The essential difference is that forward contracts are OTC products and there is no secondary market for the same and they cannot be transferred. The only way to exit from such a contract is to cancel. However, currency futures are traded on an exchange and hence have a standard size, standard maturity date, and a set of guidelines stipulated by the exchange concerned for settlement and payment which includes depositing of margin money with the exchange. The margin to be deposited will change on daily basis depending on the movement of the prices of the underlying futures. It is easier to exit from a futures contract because when you (bank) buys a futures contract can exit by simply selling it on the exchange at the prevailing prices.

For example, Bank which has entered into forward buy 3 months USD 1,50,000 can take a 3-month forward contract to sell these dollars. Alternatively, the bank may sell dollar futures on the exchange.

Currency Options

A currency option provides bank with an advantage which is not available under a forward contract. If, for instance, bank has taken a forward contract to sell dollar at Rs 44.40, it will receive only Rs 44.40 irrespective of whether the dollar is at Rs 44.30 or Rs 44.50 when it sells. It will be an advantage to the bank as dealer in foreign currency if it can get Rs 44.50 when the rate is Rs 44.30 and Rs 44.50 when the market rate is also Rs 44.50. It is this advantage which is available to bank when it uses option to hedge. However, this advantage comes with a price which is known as premium. A currency option contract gives the buyer of the option a right, without an obligation, to buy or sell foreign currency at a predetermined price on a specified future date. The contract which gives the right to buy is known as Call Option and the contract which gives the right to sell is known as Put Option. Correspondingly, the seller of an option (also known as, the writer of an option) acquires an obligation to sell (in case of a call option) or to buy (in case of a put option) for which the buyer of an option pays a premium to the seller. Options are also traded on exchanges and hence have standard sizes, standard maturity dates and guidelines stipulated by the exchange concerned for the settlement and payment. The exchange stipulates margin maintenance only for sellers since they have obligations unlike the buyers who have only rights.

These techniques are useful for managing the transaction exposure under the present RBI policies wherein banks are permitted to undertake forward transactions on behalf of their corporate customers for hedging their risks. Similarly, banks which have so far been maintaining a square or near-square position using forward contracts have the freedom to keep open positions depending on the capital adequacy.

Currency Swaps

Along with understanding the alternatives available for managing transaction exposure, it also becomes necessary for the dealing bank to look at the composition of foreign currency assets and liabilities of and take a view on whether there is a need to change the composition either in terms of volumes or in terms of currency depending on the future outlook the bank has about the currencies concerned. In this context, the financial swaps will be useful. As seen earlier, financial swaps are useful for hedging interest rate risk; they are also useful for hedging exchange risk. Such swaps are known as currency swaps. Banks need to consciously look at their foreign exchange portfolio/balance-sheet to identify both the need and opportunity for such financial swaps for management of exchange risk & enhancing profits.

Conclusion:

In conclusion, it is necessary to point out that foreign exchange risk management does not necessarily mean higher profits. Banks in India are permitted by RBI to deal in foreign exchange to enable to provide facility of foreign exchange to their commercial customer's genuine foreign exchange requirements by loading/extracting necessary charges into the rate of exchange. In the present days of competitive financial environment the rate quoted for taking transactions into exchange positions of Buy & Sale, at spot or forward delivery are based on market rates of acquring & disposing rates. Banks cover their front office transactions in foreign exchange market to their advantage using various internal & external exposure management techniques by maintaining foreign currency balance in Nostro Account abroad. Nostro Account is held with a minimum of risk & in amounts consistent with customers spot/forward needs & of course within the limits set by bank's management. This all is true not only for exchange risk management but also other types of risks like Liquidity risk, Interest rate risk, Credit risk etc. associated with the business of banking for prudent asset liability management.

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