Foreign Exchange Exposure and Risk Management

Foreign exchange exposure refers to the sensitivity of a firm's cash flows to changes in exchange rates. Firms may face transaction, economic and translation exposures as a result of their global activities. Firms with unbalanced revenue or cost streams, have to come to terms with larger foreign exchange exposure. Experts say that forward and options contracts, investing in local market, geographical diversification and so on, could be able to hedge the firms from such exposures. G. M. Bodnar & R. C. Marston (2000) are of the opinion that foreign exchange exposure is quite low for a majority of firms that have been able to match their foreign currency revenues and costs, leaving them with little net exposure, and that operational hedging, i.e. shifting of production and sourcing abroad to match revenues in foreign currency, succeeds in reducing exposure to a modest level. Read on…

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Companies enter into foreign transactions as it is in today's global world a company requires its raw materials, services, etc., from a foreign country. Other considerations for foreign exchange transactions by a company maybe cheap labour availability, cheaper raw material availability, etc. Any decision of investing capital in a project abroad is based upon considerations of expected risk and return, as it is applicable in other investment decisions. However, the nature of the investment decision in this case, is more complicated because of the disparities in currency exchange rates, tax structure, accounting policies and practices and other factors affecting the risk.

* *The author is grateful to the webpage,* INVESTOPEDIA – Educating the World about Finance, *for the text that appears within quotation marks in his article.*

Let us go through some basic terminologies:

Exchange rate

An exchange rate represents the price of one currency expressed in terms of another country's currency. In other words, the rate at which one currency can be exchanged for another. For example, the higher the exchange rate for one dollar in terms of rupee, the lower the relative value of the rupee. It is expressed as $1=₹45.

Spot Rate

Currencies can be bought and sold in the spot exchange market for immediate delivery, usually within two working days. The spot price reflects market expectations of future price movements for a security or non-perishable commodity, e.g. gold.

Forward Rate

The forward rate is the price used to determine the price of a futures contract. It accounts for holding costs, appreciation and demand for the good. Forward rate is the currency rate quoted now for delivery at some future date. Forward rate can be higher or lower than the spot rate. If the foreign currency shall be at forward premium, then future price is higher and if the foreign currency is at discount, then future price is lower than the spot price.

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Cross Rate

Cross rate is the price of any currency other than the home currency. It is a direct relationship between two non-home currencies in a foreign exchange market, concerned with or used in transactions in a country to which none of the currencies belong. For example, if an exchange rate between the Euro and the Japanese Yen was quoted in an American newspaper, this would be considered a cross rate in this context, because neither the euro or the yen is the standard currency of the U.S.

LIBOR (London Inter Bank Offered Rate)

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Hedging

To "make an investment to reduce the risk of adverse price movements in an asset is termed as hedging. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract." To hedge means to protect oneself against financial loss especially to make a transaction in futures market.

Foreign Exchange Rate Risk

Foreign exchange rate risk is defined as the difference between the real domestic currency value of assets, liabilities or operating income attributed to unanticipated changes in exchange rates. Hence, the risk related to uncertainty associated to the exchange rates between two currencies. This is also known as *currency fluctuation risk*.

For example, a loan has been borrowed by a Indian company in dollars to be repaid back in dollars after a period of one year. If at the end of a year, dollar becomes stronger against Indian rupee, the borrower will have to pay more in rupee terms to the lender. On the other hand, if a dollar gets weaker at the end of a year, the borrower will have to pay less in rupee

terms against dollar and he will have to save additional amount.

There are different exchange laws and restrictions in different countries and not every country has agreement with other countries in such regards. Hence, there are high chances that, in case of default of payment by a foreign borrower, it may not be easy to recover, as it may involve various complicated issues related to taxation of two countries, different laws of two countries and exchange restrictions imposed by the country.

Interest Rate Risk

Usually, the interest rate is fixed at the time of sanctioning of the debt and the same remains constant during the entire term of debt. Such debt instruments are known as *fixed rate debt instruments* (FXR). However, currently the practice of issuing *floating interest rate debt instrument* (FIR) carrying variable rates of interest has become popular. In such instruments, interest is linked to any other variable or benchmark instrument such as *LIBOR*. Interest rate exposes the firm to following risks:

1. Transaction Risk or Transaction Exposure:

"The exchange rate risk associated with the time delay between entering into a contract and settling it. The greater the time difference between the entrance and settlement of the contract, the greater the transaction risk, because there is more time for the two exchange rates to fluctuate."

"Transaction risk creates difficulties for individuals and corporations dealing in different currencies, as exchange rates can fluctuate significantly over a short period of time. This volatility is usually reduced, or hedged, by entering into currency swaps and other similar securities."

2. Translation Risk

"The exchange rate risk associated with companies that deal in foreign currencies or list foreign assets on their balance sheets. The greater the proportion of asset, liability and equity classes denominated in a foreign currency, the greater the translation risk."

"This poses a serious threat for companies conducting business in foreign markets. Exchange rates usually change between quarterly financial statements, causing significant variances between the reported figures. Companies attempt to minimise these transaction risks, by purchasing currency swaps or hedging through futures contracts."

For accounting purposes, on the date of which the balance sheet of the company is drawn up, the various assets and liabilities expressed in foreign currency have to be recast in the domestic currency. In India, it is done by following *Accounting Standard 11 Accounting for the effects of changes in Foreign Exchange Rates.*

For accounting purposes, on the date of which the balance sheet of the company is drawn up, the various assets and liabilities expressed in foreign currency have to be recast in the domestic currency. In India, it is done by following *Accounting Standard 11 Accounting for the effects of changes in Foreign Exchange Rates.* If the exchange rate that prevailed at the time when such asset or liability came into being came into being and at the date of their eventual recasting into domestic currency has changed, it shall give rise to translation gains or losses. In terms of AS 11, the translation gains or losses are recognised as income or expenses for the period in which they arise, except in respect of liabilities incurred for acquiring fixed assets, in which case, such difference shall be adjusted in the carrying amount of their respective fixed assets. However, the translation gains or losses are simply paper gains or losses, since they do not involve any actual cash inflow or outflow.

3. Economic Risk

Transaction risk relates to a specific transaction, while economic risk refers to the entire investment decision as a whole. The essence of the economic risk is that, significant fluctuations in exchange rates can alter the cost of the firm's inputs as well as the prices of its

outputs and thereby influence its competitive position. Economic risks exist where the inputs of the firm are imported as well as when the firm is exporting its products. On account of economic risks, not only the future cash inflows of the firm shall be distributed, but also its risk shall be adversely affected. This will cause distortions in the firm's capital budgeting analysis. Economic risks are also referred to as the operational risks.

Where efficient markets exist, translation risks are unlikely to affect the share prices of the firm for investor. However, the transaction and economic risks, as they are likely to affect the future profitability of the firm, will affect the share price of the firm and hence its valuations. The firm has to take adequate measures to protect itself against transaction and economic risks.

Techniques for Hedging Exchange Rate Risk

1. Forward Contract

A forward exchange contract is defined as a firm and binding agreement between bank and customer, to buy or sell an agreed amount of currency at a date of exchange, fixed at the time when the contract is made for performance by delivery of and payment for the stated amounts on or between two specified future dates.

Forward contracts are of two types:

- *Fixed forward contract:* When a fixed contract is entered, the performance of the contract will take place at future specified date.
- *Option forward contract:* In this type of contract, the performance of the contract will take place at the option of the customer, i.e. either at a specified final date decided at the time of contract or any time between two specified dates.

2. Swap

"If firms in separate countries have comparative advantages on interest rates, then a swap could benefit both firms. For example, one firm may have a lower fixed interest rate, while another has access to a lower floating interest rate. These firms could swap to take advantage of the lower rates."

Currency Swap

It is "a swap that involves the exchange of principal and interest in one currency for the same in another currency. It is considered to be a foreign exchange transaction and is not required by law to be shown on a company's balance sheet."

Currency swap allows a customer to redominate a loan from one currency to another currency. The redomination from one currency to another currency, is done to lower the borrowing cost for debt and to hedge the exchange risk. Loans of a particular currency can be swapped to another currency with the aid of currency swaps, on the basis of expectations of the future movement of currency and interest rates.

3. Cross Currency Rollover

"The foreign exchange fee arises from the difference in interest rates between the two currencies underlying a transaction. Sometimes, investors can earn a credit if they are purchasing the currency with the higher of the two interest rates. Investors are often required to maintain certain margin positions with their brokers to earn a credit from rollover."

The cross currency rollovers are entered into initially for a period of a six months period, but the same is further extendable to another six months. It is to cover the exchange rate risks on long-term liabilities.

4. Forward Rate Agreement (FRA)

"Typically, for agreements dealing with interest rates, the parties to the contract will exchange a fixed rate for a variable one. The party paying the fixed rate is usually referred to as the borrower, while the party receiving the fixed rate is referred to as the lender."

"For a basic example, assume Company A enters into an FRA with Company B in which Company A will receive a fixed rate of 5% for one year on a principal of $1 million in three years. In return, Company B will receive the one-year LIBOR rate, determined in three years' time, on the principal amount. The agreement will be settled in cash in three years."

"If, after three years' time, the LIBOR is at 5.5%, the settlement to the agreement will require that Company A pay Company B. This is because the LIBOR is higher than the fixed rate. Mathematically, $1 million at 5% generates $50,000 of interest for Company A, while $1 million at 5.5% generates $55,000 in interest for Company B. Ignoring present values, the net difference between the two amounts is $5,000, which is paid to Company B."

5. Interest Rate Swaps

"An agreement between two parties (known as counterparties), where one stream of future interest payments is exchanged for another based on a specified principal amount. Interest rate swaps often exchange a fixed payment for a floating payment, that is linked to

an interest rate (most often the LIBOR). A company will typically use interest rate swaps to limit or manage exposure to fluctuations in interest rates, or to obtain a marginally lower interest rate, than it would have been able to get without the swap."

"Interest rate swaps hedge against advance interest rate movements in future and also create new, low cost borrowing alternatives. This gives rise to arbitrage opportunities, as advantage can be taken of fixed/ floating rate disparities."

"Generally speaking, swaps are sought by firms that desire a type of interest rate structure that another firm can provide less expensively. For example, let's say A limited is seeking to loan funds at a fixed interest rate, but B Limited has access to marginally cheaper fixed-rate funds. B Limited can issue debt to investors at its low fixed rate and then trade the fixed-rate cash flow obligations to A Limited for floating-rate obligations issued by B Limited. Even though B Limited may have a higher floating rate than A Limited, by swapping the interest structures they are best able to obtain, their combined costs are decreased - a benefit that can be shared by both parties."

Internal Techniques of Hedging

1. Leads & Lags

It is "the alteration of normal payment or receipts in a foreign exchange transaction because of an expected change in exchange rates. An expected increase in exchange rates is likely to speed up payments, while an expected decrease in exchange rates will probably slow them down."

"Accelerating the transaction is known as *leads*, while slowing it down is known as *lags*. Leads will result when firms or individuals making payments expect an increase in the foreign-exchange rate, while lags arise when the exchange rate is expected to fall. Leads and lags are used in an attempt to improve profits."

2. Netting and Matching

It is "settling mutual obligations at the net value of a contract as opposed to its gross dollar value." Netting can be bilateral and multilateral.

According to an ICWAI publication on Management of Risk, Financial Management & International Finance, *netting is bilateral when two parties have trade relations with each other and do buying and selling reciprocally. For example, a parent company sells semi-finished goods to its foreign subsidiary and then repurchases the finished product from the latter.*

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When a group consists of many companies, netting can be multilateral. *Due to netting, volume of transactions can be reduced because, each company of the group will pay or will be paid only the net amount of its debit or credit.*

3. Price Adjustments

For protecting against the exchange rate risk, sometimes, several clauses of indexation are included by exporters and importers. For instance, a contract may contain a clause whereby, the prices are adjusted in such a manner that fluctuations of exchange rate are absorbed without any visible impact. For example, if the currency value of the exporting country appreciates, the prices of exports are increased to the same extent or vice-versa. Therefore, an exporter receives almost the same amount in local currency. In other words, the exchange rate risk is borne by the foreign buyer.

Sometimes, multi-currency clause is also used. As per this clause, invoicing is done in several currencies and only on maturity, the parties decide on the currency of settlement. For example, a French exporter may like to settle in US dollars if the rate is FFr5/US$, or in pound sterling if the dollar rate is FFr4.8/US$. ■