

## A STUDY ON FOREIGN EXCHANGE MARKET IN INDIA

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### ABSTRACT

Indian economy in the post-liberalization era has witnessed increasing awareness of the need for introduction of various risk management products to enable hedging against market risk in a cost-effective way. This industry-wide, cross-sectional study concentrates on recent foreign exchange risk management practices and derivatives product usage by large non-banking Indian-based firms. The study is exploratory in nature and aims at an understanding the risk appetite and FERM (Foreign Exchange Risk Management) practices of Indian corporate enterprises. This study focuses on the activity of end-users of financial derivatives and is confined to 501 non-banking corporate enterprises. A combination of simple random and judgment sampling was used for selecting the corporate enterprises and the major statistical tools used were Correlation and Factor analysis. The study finds wide usage of derivative products for risk management and the prime reason of hedging is reduction in volatility of cash flows. VAR (Value-at-Risk) technique was found to be the preferred method of risk evaluation by maximum number of Indian corporate. Further, in terms of the external techniques for risk hedging, the preference is mostly in favor of forward contracts, followed by swaps and cross-currency options. This article throws light on various concerns of Indian firms regarding derivative usage and reasons for non-usage, apart from techniques of risk hedging, risk evaluation methods adopted, risk management policy and types of derivatives used.

**Keywords:** Foreign exchange, Forex market

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### INTRODUCTION TO FOREX MARKET

The world nations are increasingly becoming more interrelated global trade, and global investment. These international result in cross country flow of world nations. Countries hold currencies of other countries and that a market, dealing of foreign exchange results.

Foreign exchange means reserves of foreign currencies. More aptly, foreign exchange refers to claim to foreign money balances. Foreign exchange gives resident of one country a financial claim on other country or countries. All deposits, credits and balances payable in foreign currency and any drafts, travelers' cheques, letters of credit and bills of exchange payable in foreign currency constitute foreign exchange. Foreign exchange market is the market where money denominated in one currency is bought and sold with money denominated in another currency. Transactions in currencies of countries, parties to these transactions, rates at which one currency is exchanged for other or others, ratification in these rates, derivatives to the currencies and dealing in them and related aspects constitute the foreign exchange (in short, forex) market.

Foreign exchange transactions take place whenever a country imports goods and services, people of a country undertake visits to other countries, citizens of a country remit money abroad for whatever purpose, business units set up foreign subsidiaries and so on. In all these cases the nation concerned buys relevant and required foreign exchange, in exchange of its currency, or draws from foreign exchange reserves built. On the other hand, when a country exports goods and services to another country, when people of other countries visit the country, when citizens of the country settled abroad remit money homewards, when foreign citizens, firms and institutions invest in the country and when the country or its business community raises funds from abroad, the country's currency is bought by others, giving foreign exchange, in exchange.

Multinational firms operate in more than one country and their operations involve multiple foreign currencies. Their operations are influenced by politics and the laws of the countries where they operate. Thus, they face higher degree of risk as compared to domestic firms. A matter of great concern for the international firms is to analyze the implications of the changes in interest rates, inflation rates and exchange rates on their decisions and minimize the foreign exchange risk. The importance of the study is to know the features of foreign exchange and the factors creating risk in foreign exchange transactions and the techniques used for managing that risk.

### NEED OF THE STUDY

The importance of the study is to know the features of foreign exchange and the factors creating risk in foreign exchange transactions and the techniques used for managing that risk. The world nations are increasingly becoming more interrelated global trade, and global investment. These international result in cross country flow of world nations. Countries hold currencies of other countries and that a market, dealing of foreign exchange results.

### SCOPE OF THE STUDY

1. There is a further scope to carry out the research by focusing on single derivative tool and critically analyzing various facets thereof in managing the currency risk by corporate.
2. There is also scope to work on foreign exchange derivative market in developed nations in comparison with Indian foreign exchange derivative market.

### OBJECTIVES OF THE STUDY

- To study and understand the foreign exchange.
- To study and analyze the revenues of the company when the exchange rates fluctuate.
- To analyze income statement and find out the revenues when the dollars are converted into Indian rupees.
- To study the different types of foreign exchange exposure including risk and risk management techniques which the company is used to minimize the risk.

### RESEARCH METHODOLOGY

The data has been collected from various secondary sources like books and internet.

The data has been collected in line with the objectives of the study.

The presentation of study provides an insight in knowing the foreign exchange risk policies adopted by them. This data has been collected from the 2016-17 annual reports of the companies.

Conclusions have been drawn after the detailed study of the risk management policies of the company as to know what are the most widely used hedging instruments for minimizing foreign exchange risk.

- The total revenues of the income statements are converted from USA \$ to Indian rupee.
- The revenues of the companies are divided into 40:60.
- The rates which are used for the study are taken as mid value i.e., is Rs.61 and it is compared with minimum & maximum exchange rates.

## LITERATURE REVIEW

### Definition of International Trade:

International trade refers to trade between the residents of two different countries. Each country functions as a sovereign state with its own set of regulations and currency. The difference in the nationality of the export and the importer presents certain peculiar problem in the conduct of international trade and settlement of the transactions arising there from.

Important among such problems are:

- a) Different countries have different monetary units;
- b) Restrictions imposed by counties on import and export of goods;
- c) Restrictions imposed by nations on payments from and into their countries;
- d) Different in legal practices in different countries.

The existing of national monetary units poses a problem in the settlement of international transactions. The exporter would like to get the payment in the currency of own country. For instance, if American exporter of New York exports machinery to Indian rupee will not serve their purpose because Indian rupee cannot be used as currency in rupees. Thus the exporter requires payment in the importer's country. A need, therefore, arises for conversion of the currency of the importer's country into that of the exporter's country.

**Foreign exchange:** Foreign exchange is the mechanism by which the currency of one country gets converted into the currency of another country. The conversion is done by banks who deal in foreign exchange. These banks maintain stocks of foreign currencies in the form of balances with banks abroad. For instance, Indian Bank may maintain an account with Bank of America, New York, in which dollar are held. In the earlier example, if Indian importers pay the equivalent rupee to Indian bank, it would arrange to pay American export at New York in dollar from the dollar balances held by it with Bank of America.

### Exchange rate:

The rate at which one currency is converted into another currency is the rate of exchange between the currencies concerned. The rate of exchange for a currency is known from the quotation in the foreign exchange market.

In the illustration, if Indian bank exchanged us for Indian rupee at Rs.60 a dollar, the exchange rate between rupee and dollar can be expressed as

USD 1=Rs.60.

The banks operating at a financial center, and dealing in foreign exchange, constitute the foreign exchange market. As in any commodity or market, the rates in the foreign exchange market are determined by the interaction of the forces of demand and supply of the commodity dealt, viz., foreign exchange. Since the demand and supply are affected by a number of factors, both fundamental and transitory, the rates keep on changing frequently, and violently too.

### Some of the important factors which affect exchange rates are:

**Balance of payment:** It represents the demand for and supply of foreign exchange which ultimately determine the value of the currency. Exporters from the country demand for the currency of the country in the forex market. The exporters would offer to the market the foreign currencies have acquired and demand in exchange the local currency. Conversely, imports into the country will increase the supply of currency of the country in the forex market. When the BOP of a country is continuously at deficit, it implies that demand for the currency of the country is lesser than the supply. Therefore, its value in the market declines. If the BPO is surplus, continuously, it shows the demand for the currency is higher than its supply and therefore the currency gains in value.

**Inflation:** inflation in the country would increase the domestic prices of the commodities. With increase in prizes exports may dwindle because the price may not be competitive. With the decrease in export the

demand for the currency would also decline; this in turn would result in the decline of external value of the currency. It should be noted that it is the relative rate of inflation in the two countries that cause changes in the exchange rates.

**Interest rates:** The interest rate has a great influence on the short-term movement of capital. When the interest rate at a center rises, it attracts short term funds from other centers. This would increase the demand for the currency at the center and hence its value. Rising of interest rate may be adopted by a country due to money conditions or as a deliberate attempt to attract foreign investment.

**Money supply:** An increase in money supply in the country will affect the exchange rates through causing inflation in the country. It can also affect the exchange rate directly.

**National income:** An increase in national income reflects increase in the income of the residents of the country. The increase in the income increases the demand for goods in the country. If there is underutilized production capacity in the country, this would lead to increase in production. There is a change for growth in exports too. Where the production does not increase in sympathy with income rises, it leads to increased imports and increased supply of the currency of the country in the foreign exchange market. The result is similar to that of inflation viz., and decline in the value of the currency. Thus an increase in national income will lead to an increase in investment or in the consumption, and accordingly, its effect on the exchange rate will change.

**Resource discoveries:** When the country is able to discover key resources, its currency gains in value.

**Capital Movements:** There are many factors that influence movement of capital from one country to another. Short term movement of capital may be influenced by the offer of higher interest in a country. If interest rate in a country rises due to increase in bank rate or otherwise, there will be a flow of short-term funds into the country and the exchange rate of the country will rise. Reserves will happen in case of fall in interest rates.

Bright investment climate and political stability may encourage portfolio investment in the country. This leads to higher demand for the currency and upward trend in its rate. Poor economic outlook may mean repatriation of the investments leading to decreased demand and lower exchange value for the currency of the country.

Movement of capital is also caused by external borrowings and assistance. Large-scale external borrowings will increase the supply of foreign exchange in the market. This will have a favorable effect on the exchange rate of the currency of the country. When a repatriation of principal and interest starts the rate may be adversely affected.

**Other factors** include political factors, Psychological factors and Speculation, Technical and Market factors.

#### ADMINISTRATION FRAME WORK FOR FOREIGN EXCHANGE IN INDIA

The Central Government has been empowered under Section 46 of the Foreign Exchange Management Act to make rules to carry out the provisions of the Act. Similarly, Section 47 empowers the Reserve Bank to make regulations to carry out the provisions of the Act and the rules made there under.

The Foreign Contribution (Regulation) Act, 1976 is to regulate the acceptance and utilization of foreign contribution/ donation or foreign hospitality by certain persons or associations, with a view to ensuring that Parliamentary institutions, political associations and academic and other voluntary organizations as well as individuals working in the important areas of national life may function in a manner consistent with the values of a sovereign democratic republic.

It is basically an act to ensure that the integrity of Indian institutions and persons is maintained and that they are not unduly influenced by foreign donations to the prejudice of India's interests.

The Foreign Exchange Management Act (FEMA) is a law to replace the draconian Foreign Exchange Regulation Act, 1973. Any offense under FERA was a criminal offense liable to imprisonment. Unlike other laws where everything is permitted unless specifically prohibited, under FEMA nothing was

permitted unless specifically permitted. Hence the tenor and tone of the Act was very drastic. It provided for imprisonment of even a very minor offense. Under FERA, a person is presumed innocent unless he is proven guilty. With liberalization, a need was felt to remove the drastic measure of FERA and replace them by a set of liberal foreign exchange management regulations. Therefore FEMA was enacted to replace FERA.

FEMA extends to the whole of India. It applies to all Branches, offences and agencies outside India owned or controlled by a person resident in India and also to any contravention there under committed outside India by any person to whom this Act applies.

FEMA contains definitions of certain terms which have been used throughout the Act. The meaning of these terms may differ under other laws or common language. But for the purpose of FEMA, the terms will signify the meaning as defined there under.

#### **Authorized persons:**

With the Reserve Bank has the authority to administer foreign exchange in India, it is recognized that it cannot do so by itself. Foreign exchange is received or required by a large number of exports and imports in the country spread over a vast geographical area. It would be impossible for the reserve Bank to deal with them individually. Therefore, provisions has been made in the Act, enabling the Reserve Bank to authority any person to be known as authority person to deal in the foreign exchange or foreign securities, as an authorized dealer, money changer or off- shore banking unit or any other manner as it deems fit.

Authorized dealers:

A major portion of actual dealing in foreign exchange from the customers (importers, exporters and others receiving or making personal remittance) is dealt with by such of the banks in India which have been authorized by Reserve

Bank to deal in foreign exchange. Such of the banks and selected financial institutions who have been authorized Dealer

#### **FOREIGN EXCHANGE DEALER'S ASSOCIATION OF INDIA (FEDAI)**

FEDAI was establishing in 1958 as an association of all authorized dealers in India. The principal functions of FEDAI are:

- To make rules for the conduct of foreign exchange business in India. These rules cover various aspects like hours of business, charges for foreign exchange transactions, quotation of rates to customer, interbank dealings, etc. All authorized dealers have given undertaking to the Reserve Bank to abide these rules.
- To coordinate with Reserve Bank of India in Proper administration of exchange control
- To control information likely to be of interest to its members

Thus, FEDAI provides a vital link in the administrative set-up of foreign exchange in India.

#### **AUTHORIZED MONEY CHANGERS**

To provide facilities for encashment of foreign currency for tourists, etc., Reserve Bank has granted limited licenses to certain established firms, hotels and other organizations permitting them to deal in foreign currency notes, coins and travelers' cheques subject to directions issued to them from time to time. These firms and organizations are called 'Authorized Money Changers'. An authorized money changer may be a full fledged money changer or a restricted money changer. A full fledged money changer is authorized to undertake both purchase and sale transactions with the public. A restricted money changer is authorized only to purchase foreign currency notes, coins and travelers' cheques subject to the condition that all such collections are surrendered by him in turn to authorized dealer in foreign exchange. The current thinking of the Reserve Bank is to authorize more establishments as authorized money changers in order to facilitate easy conversion facilities.

### **THE FOREIGN EXCHANGE MARKET**

The Foreign exchange market is the market where in which currencies are bought and sold against each other. It is the largest market in the world. It is to be distinguished from a financial market where currencies are borrowed and lent.

Foreign exchange market facilitates the conversion of one currency to another for various purposes like trade, payment for services, development projects, speculation etc. Since the number of participants in the market s has increased over the years have become highly competitive and efficient.

With improvement in trade between countries, there was a pressing need to have some mechanism to facilitate easy conversion of currencies. This has been made possible by the foreign exchange markets.

Considering international trade, a country would prefer to import goods for which it does not have a competitive advantage, while exporting goods for which it has a competitive advantage over others.

Thus trade between countries is important for common good but nations are separated by distance, which that there is a lot of time between placing an order and its actual delivery. No supplier would be willing to wait until actual delivery for receiving payments. Hence, credit is very important at every stage of the transaction. The much needed credit servicing and conversion of the currency is facilitated by the foreign exchange market.

Also the exchange rates are subject to wide fluctuations. There is therefore, a constant risk associated exchange markets cover the arising out of the fluctuations in exchange rates through “hedging”.

Forex market is not exactly a place and that there is no physical meeting but meeting is affected by mail or over phone.

### **FOREIGN EXCHANGE TRANSACTIONS**

Foreign exchange transactions taking place in foreign exchange markets can be broadly classified into Interbank transactions and Merchant transactions. The foreign exchange transactions taking place among banks are known as interbank transactions and the rates quoted are known as interbank rates. The foreign exchange transactions that take place between a bank and its customer known as ' Merchant transactions' and the rates quoted are known as merchant rates.

Merchant transactions take place when as exporter approaches his bank to convert his sale proceeds to home currency or when an importer approaches his banker to convert domestic currency into foreign currency to pay his dues on import or when a resident approaches his bank to convert foreign currency received by him into home currency or vice versa. When a bank buys foreign exchange from a customer it sells the same in the interbank market at a higher rate and books profit. Similarly, when a bank sells foreign exchange to a customer, it buys from the interbank market, loads its margin and thus makes a profit in the deal.

The modes of foreign exchange remittances

Foreign exchange transactions involve flow of foreign exchange into the country or out of the country depending upon the nature of transactions. A purchase transaction results in inflow of foreign exchange while a sale transaction result in inflow of foreign exchange. The former is known as inward remittance and the latter is known as outward remittance.

**Remittance could take place through various modes. Some of them are:**

- Demand draft
- Mail transfer
- Telegraphic transfer



- Personal cheques

#### **Types of buying rates:**

- TT buying rate and
- Bill buying rate

TT buying rate is the rate applied when the transaction does not involve any delay in the realization of the foreign exchange by the bank. In other words, the Nostro account of the bank would already have been credited. This rate is calculated by deducting from the interbank buying rate the exchange margin as determined by the bank.

Bill buying rate: This is the rate to be applied when foreign bill is purchased. When a bill is purchased, the rupee equivalent of the bill values is paid to the exporter immediately.

However, the proceeds will be realized by the bank after the bill is presented at the overseas centre.

#### **Types of selling rates:**

- TT selling rates
- Bill selling rates

TT Selling rate: All sale transactions which do not handling documents are put through at TT selling rates.

Bill Selling rates: This is the rate applied for all sale transactions with public which involve handling of documents by the bank.

#### **Inter Bank transactions:**

The exchange rates quoted by banks to their customer are based on the rates prevalent in the Inter Bank market. The big banks in the market are known as market makers, as they are willing to pay or sell foreign currencies at the rates quoted by them up to any extent. Depending upon its resources, a bank may be a market in one or few major currencies. When a banker approaches the market maker, it would not reveal its intention to buy or sell the currency. This is done in order to get a fair price from the market maker.

#### **Two way quotations**

Typically, then quotation in the Inter Bank market is a two- way quotation. It means, the rate quoted by the market maker will indicate two prices, one which it is willing to buy the foreign currency and the other at which it is willing to sell the foreign currency.

#### **Direct quotation**

It will be obvious that the quotation bank will be to buy dollars at 41.1525 and sell dollars at Rs41.1650. if once dollar bought and sold, the bank makes a profit of 0.0125.

In a foreign exchange quotation, the foreign currency is the commodity that is being bought and sold. The exchange quotation which gives the price for the foreign \currency in term of the domestic currency is known as direct quotation. In a direct quotation, the quoting bank will apply the rule: “buy low’ sell high”.

#### **Indirect quotation**

There is another way of quoting in the foreign exchange market. The Mumbai bank quote the rate for dollar as:

Rs.100=USD 1.66/67

This type of quotation which gives the quality of foreign currency per unit of domestic currency is known as indirect quotation. In this case, the quoting bank will receive USD 1.67 per Rs.100 while buying dollars and give away USD 1.67 per Rs.100 while selling dollars In other words, “Buy high, sell low” is applied. This buying rate is also known as the ‘bid’ rate and the selling rate as the ‘offer’ rate. The difference between these rates is the gross profit for the bank and known as the ‘Spread’.

#### **Spot and forward transactions**

The transactions in the Inter Bank market May place for settlement-

- On the same day; or
- Two days later;
- Some day late; say after a month

Where the agreement to buy and sell is agreed upon and executed on the same date, the transaction is known as cash or ready transaction. It is also known as value today.

The transaction where the exchange of currencies takes place after the date of contract is known as the Spot Transaction. For instance if the contract is made on Monday, the delivery should take place on Wednesday. If Wednesday is a holiday, the delivery will take place on the next day, i.e., Thursday. Rupee payment is also made on the same day the foreign exchange is received.

The transaction in which the exchange of currencies takes place at a specified future date, subsequent to the spot rate, is known as a forward transaction. The forwards transaction can be for delivery one month or two months or three months, etc. A forward contract for delivery one month means the exchange of currencies will take place after one month from the date of contract. A forwards contract for delivery two months means the exchange of currencies will take place after two months and so on.

### Spot and Forwards rates

Spot rate of exchange is the rate for immediate delivery of foreign exchange. It is prevailing at a particular point of time. In a forward rate, the quoted is for delivery at a future date, which is usually 30, 60, 90 or 180 days later. The forward rate may be at premium or discount to the spot rate, Premium rate, i.e., forward rate is higher than the spot rate, implies that the foreign currency is to appreciate its value in the future. May be due to larger demand for goods and services of the country of that currency. The percentage of annualized discount or premium in a forward quote, in relation to the spot rate, is computed by the following.

$$\text{Forward Premium} = \frac{\text{Forward rate} - \text{spot rate}}{\text{Spot rate}} \times 12$$

$$\text{(Discount)} \quad \quad \quad \text{No. of months forward}$$

If the spot rate is higher than the forward rate, there is forward discount and if the forward rate higher than the spot rate there is forward premium rate.

### Forward margin/Swap points

Forward rate may be the same as the spot rate for the currency. Then it is said to be 'at par' with the spot rate. But this rarely happens. More often the forward rate for a currency may be costlier or cheaper than its spot rate. The difference between the forward rate and the spot rate is known as the 'Forward margin' or 'Swap Points'. The forward margin may be at a premium or at discount. If the forward margin is at premium, the foreign currency will be costlier under forward rate than under the spot rate. If the forward margin is at discount, the foreign currency will be cheaper for forward delivery than for spot delivery.

Under direct quotation, premium is added to the spot rate to arrive at the forward rate. This is done for both purchase and sale transactions. Discount is deducted from spot rate to arrive at the forward rates.

### Other rates

Buying rate and selling refers to the rate at which a dealer in forex is willing to buy the forex and sell the forex. In theory, there should not be difference in these rates. But in practices, the selling rate is higher than the buying rate. The forex dealer, while buying the forex pay less rupees, but gets more when he sells the forex. After adjusting for operating expenses, the dealer books a profit through the 'buy and sell' rates differences.



Transactions in exchange market consist of purchases and sales of currencies between dealers and customers and between dealers and dealers. The dealers buy forex in the form of bills, drafts and with foreign banks, from customer to enable them to receive payments from abroad.

The resulting accumulated currency balances with dealers are disposed of by selling instruments to customers who need forex to make payment to foreigners. The selling price for a currency quoted by the dealer (a bank) is slightly higher than the purchase price to give the bank small profit in the business. Each dealer gives a two-way quote in forex.

Single Rate refers to the practices of adopting just rate between the two currencies. A rate for exports, other for imports, other for transaction with preferred area, etc, if adopted by a country, that situation is known as multiple rates.

Fixed rate refers to that rate which is fixed in terms of gold or is pegged to another currency which has a fixed value in terms of gold. Flexible rate keeps the exchange rate fixed over a short period, but allows the same to vary in the long term in view of the changes and shifts in another as conditioned by the free of market forces. The rate is allowed to freely float at all times.

Current rate: Current rate of exchange between two currencies fluctuate from day to day or even minute to minute, due to changes in demand and supply. But these movements take place around a rate which may be called the 'normal rate' or the par of exchange or the true rate. International payments are made by different instruments, which differ in their time to maturity.

A Telegraphic Transfer (TT) is the quickest means of effecting payments. A T.T rate is therefore, higher than that of any other kind of bill. A sum can be transferred from a bank in one country to a bank in another part of the world by cable or telex. It is thus, the quickest method of transmitting funds from one center to another.

Slight rates applicable in the case of bill instrument with attending delay in maturity and possible loss of instrument in transit, are lower than most other rates.

Similarly, there are other clusters of rates, such as, one month's rate, 3month's rate. Longer the duration, lower the price (of the foreign currency in terms of domestic).

The exchange rate between two given currencies may be obtained from the rates of these two currencies in terms of a third currency. The resulting rate is called the Cross rate.

Arbitrage in the foreign exchange market refers to buying a foreign currency in a market where it is selling lower and selling the same in a market where it is bought higher. Arbitrage involves no risk as rates are known in advance. Further, there is no investment required, as the purchase of one currency is financed by the sale of other currency. Arbitrageurs gain in the process of arbitraging.

## **FOREIGN EXCHANGE EXPOSURE**

### **Exposure:**

Exposure is defined as the possibility of a change in the assets or liabilities or both of a company as a result in the exchange rate. Foreign exchange exposure thus refers to the possibility of loss or gain to a company that arises due to exchange rate fluctuations.

The value of a firm's assets, liabilities and operating income vary continually in response to changes in a myriad economic and financial variable such as exchange rates, interest rates, inflation rates, relative price and so forth. We can these uncertainties as macroeconomic environment risks. These risks affect all firms in the economy. However, the extent and nature of impact of even macroeconomic risks crucially depend upon the nature of firm's business. For instance, fluctuations of exchange rate will affect net importers and exporters quite differently. The impact of interest rate fluctuations will be very different from that on a manufacturing firm.

The nature of macroeconomic uncertainty can be illustrated by a number of commonly encountered situations. An appreciation of value of a foreign currency(or equivalently, a depreciation of the domestic

currency), increase the domestic currency value of a firm's assets and liabilities denominated in the foreign currency-foreign currency receivables and payables, banks deposits and loans, etc. It will also change domestic currency cash flows from exports and imports. An increase in interest rates reduces the market value of a portfolio of fixed-rate in the rate of inflation may increase value of unsold stocks, the revenue from future sales as well as the future costs of production. Thus the firms exposed to uncertain changes in a numbers of variable in its environment. These variables are sometimes called Risk Factors.

### **The nature of Exposure and Risk**

Exposure are a measure of the sensitivity of the value of a financial items (assets, liabilities or cash flow) to changes in the relevant risk factor while risk is a measurable of the variability of the item attributable to the risk factor.

Corporate treasurers have become increasingly concerned about exchange rate and interest rate exposure and risk during the last ten to fifteen years or so. In the case of exchange rate risk, The increased awareness is firstly due to tremendous increase in the volume of cross border financial transactions (which create exposure) and secondly due to the significant increase in the degree of volatility in exchange rates(which, given the exposure, creates risk)

Classification of foreign exchange exposure and risk

Since the advent of floating exchange rates in 1973, firms around the world have become acutely aware of the fact that fluctuations in exchange rates expose their revenues, costs, operating cash flows and thence their market value to substantial fluctuations. Firms which have cross-border transactions-exports and imports of goods and services, foreign borrowings and lending, foreign portfolio and direct investment etc, are directly exposed: but even purely domestic firms which have absolutely no cross border transactions are also exposed because their customers, suppliers and competition are exposed. Considerably effort has since been devoted to identifying and categorizing currency exposure and developing more and more sophisticated methods to quantify it.

**Foreign exchange exposure can be classified into three broad categories:**

- Transaction exposure
- Translation exposure
- Operating exposure

Of these, the first and third together are sometimes called "Cash Flow Exposure" while the second is referred to as "Accounting Exposure" or Balance sheet Exposure".

### **Transaction exposure**

When a firm has a payable or receivable denominated in a foreign currency, a change in the exchange rate will alter the amount of local currency receivable or paid. Such a risk or exposure is referred to as transaction exposure.

For example , if an Indian exporter has a receivable of \$100,100 due three months hence and if in the meanwhile the dollar depreciates relative to the rupee a cash loss occurs. Conversely, if the dollar appreciates relative to the rupee, a cash gain occurs. In the case of payable, the outcome is of an opposite kind: a depreciation of the dollar relative to the rupee results in a gain, where as an appreciation of the dollar relative to the rupee result in a loss.

### **Translation exposure**

Many multinational companies require that their accounts of foreign subsidiaries and branches get consolidated with those of it. For such consolidation, assets and liabilities expressed in foreign currencies have to be translated into domestic currencies at the exchange rate prevailing on the consolidation dates. If the values of foreign currencies change between a two or successive consolidation dates, translation exposure will arise.

### **Operating exposure**

Operating exposure, like translation exposure involve an actual or potential gain or loss. While the former is specific to the transaction, the latter relates to entire investment. The essence of this operating exposure is that exchange rate changes significantly and alter the cost of firm's inputs along with price of its output and thereby influence its competitive position substantially.

Eg: Volkswagen had a highly successful export market for its 'beetle' model in the US before 1970. With the breakdown of Bretton-woods of fixed exchanged rates, the Deutschmark appreciated significantly against the dollar. This created problem for Volkswagen as its expenses were mainly in Deutschmark but its revenue in dollars. However, in a highly price-sensitive US market, such an action caused a sharp decrease in sales volume-from 600,000 vehicles in 1968 to 200,000 in 1976. (Incidentally, Volkswagen's 1973 losses were the highest, as of that year, suffered by any company anywhere in the world.

### **TOOLS AND TECHNIQUES FOR THE MANAGEMENT OF FOREIGN EXCHANGE RISK**

Hedging exposures, sometimes called risk management, is widely resorted to by financial directors, corporate treasurers and portfolio managers.

The practice of covering exposure is designed to reduce the volatility of a firm's profits and/or cash management and it presumably follows that this will reduce the volatility of the value of the firm.

There are a wide range of methods available to minimize foreign exchange risk which are classified as internal and external techniques of exposure management.

#### **Internal techniques**

Internal techniques of exposure management help to resolve exposure risks through regulating the firm's financial position. Thereby, they ensure that the firm is not endangered through exposures. The fundamental stress minimizing of not complete elimination of exchange losses, that are likely to accrue as a result of exposure.

They use methods of exposure management which are a part of a firm's regulatory financial management and do not resort to special contractual relationship outside the group of companies concerned. They aim at reducing exposed position or preventing them from arising. They embrace netting, matching, leading and lagging, pricing policies and asset/liability management.

Internal techniques of exposure management do not rely on 3<sup>rd</sup> party contracts to manage exposed positions. Rather, it depends on internal financial management.

#### **External techniques**

These refer to the use of contractual relationship outside the group of companies so as to minimize the risk of foreign exchange losses. They insure against the possibility the exchange losses will result from an exposed position which internal measures have not been able to eliminate. They include forward contracts, borrowing short term, discounting bills receivable, factoring, Government exchange risk guarantees currency options.

External techniques of foreign exchange exposure management use contractual relationships outside the group to reduce risk of exchange rate changes. Several external techniques are available for foreign exchange management. The firm can make a choice of that technique which is most suitable to it.

### **TOOLS FOR FOREIGN EXCHANGE RISK MANAGEMENT**

#### **Forward exchange contract**

A forward exchange contract is a mechanism by which one can ensure the value of one currency against another by fixing the rate of exchange in advance for a transaction expected to take place at a future date.

Forward exchange rate is a tool to protect the exporters and importers against exchange risk under foreign exchange contract, two parties one being a banker compulsorily in India, enter into a contract to buy or sell

a fixed amount of foreign currency on a specific future date or future period at a predetermined rate. The forward exchange contracts are entered into between a banker and a customer or between two bankers. Indian exporter, for instance instead of guessing in the dark or making a wild guess about what the future rate would be, enter into a contract with his banker immediately. He agrees to sell foreign exchange of specified amount and currency at a specified future date. The banker on his part agrees to buy this at a specified rate of exchange is thus assured of his price in the local currency.

### **Date of delivery**

According to Rule 7 of FEDAI, a forward contract is deliverable at a future date, duration of the contract being computed from the spot value date of the transaction. Thus, if a 3 months forward contract is booked on 12<sup>th</sup> February, the period of two months should commence from 14<sup>th</sup> February and contract will fall on 14<sup>th</sup> April.

### **Fixed and option forward contracts**

The forward contract under which the delivery of foreign exchange should take place on a specified future date is known as 'Fixed Forward Contract'.

For instance, if on 5<sup>th</sup> March a customer enters into a three months forward contract with his bank to sell GBP 10,000, it means the customer would be presenting a bill or any other instrument on 7<sup>th</sup> June to the bank for GBP 10,000. He cannot deliver foreign exchange prior to or later than the determined date.

Forward exchange is a device by which the customer tries to cover the exchange risk. The purpose will be defeated if he is unable to deliver foreign exchange exactly on the due date. In real situations, it is not possible for any exporter to determine in advance the precise date. On which he is able to complete shipment and present document to the bank. At the most, the exporter can only estimate the probable date around which he would be able to complete his commitment.

With a view to eliminate the difficulty in fixing the exact date of delivery of foreign exchange, the customer may be given a choice of delivery the foreign exchange during a given period of days.

An arrangement whereby the customer can sell or buy from the bank foreign exchange on any day during a given period of time at a predetermined rate of exchange is known as 'Option Forward Contract'. The rate at which the deal takes place is the option forward sale contract with the bank with option over November. It means the customer can sell foreign exchange to the bank on any day between 1<sup>st</sup> to 30<sup>th</sup> November is known as the 'Option Period'.

Forward contract is an effective and easily available tool for covering exchange risk. New instruments like options, futures and swaps can also be used to cover exchange risks. These instruments are called financial derivatives as their value is derived from the value of some other financial contract or asset. When these instruments are bought or sold for covering exchange risk they are used for 'hedging' the exchange risk. When they are dealt in with a view to derive profit from unexpected movements in their prices or other changes in the exchange market, they are being used for speculative purposes. The scope of using these instruments for speculative purposes is very much limited in India.

Some other strategies may also be adapted to avoid exchange risk. These consist in deciding on the currency of invoicing, maintaining in foreign currency and deciding on the setting the debt.

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