CHAPTER 1
INTRODUCTION

Generally all businesses are open to risks from movements in prices of raw material, cost of capital, foreign exchange rates and interest rates etc. and need to be managed so as to minimize the risk and maximize the returns.

1.1 Foreign exchange (FX) exposure: FX exposure arises from many different activities, viz.
A visitor going to another country has the exchange rate risk that if that country’s currency appreciates against his country’s currency, the trip will be more expensive as he/she needs to spend more of his own currency.

An exporter who sells its products in foreign currency (FC) has the risk that if the value of that FC reduces then the revenues in local currency will be low.

An importer who buys goods priced in FC has the risk when it appreciates thereby making the local currency cost greater than budgeted.

Individuals, companies and fund managers who own foreign assets are exposed to fluctuations in the currencies movements and they may gain or lose depending on the appreciation or depreciation of the holding currency when repatriated.

In the competitive world where imports and exports are integral part of the business, companies have exposure to Foreign Exchange. The magnitude of the risk due to this exposure varies depending on cash flows, exchange rates and interest rates movements.

Eitman and Stonehill (1986) and Shapiro (1991) define the three types of foreign exchange exposure \(^1\)as:
(a) **Translation exposure:** occurs due to accounting based changes in consolidated financial statements caused by exchange rate changes.
(b) **Transactions exposure:** occurs when exchange rates change between the time that an obligation is incurred and the time it is settled, thus affecting actual cash flows.

\(^1\) Malindretos, John, Tsanacas, Domeni, Fall 1995, Hedging preferences and foreign exchange exposure management, Multinational Business Review
1 Economic exposure: reflects the change in the present value of the firm’s expected future cash flows as a result of an unexpected change in exchange rates.

1.2 Nature of FX transactions: These could be of capital or revenue in nature as shown

Table 1

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Nature of transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Foreign currency borrowing/loan – whether Floating or Fixed interest rates</td>
<td>• Interest related payments/ receipts</td>
</tr>
<tr>
<td>2. Exports/imports – Cash flows thereof</td>
<td>• Both Capital and Revenue in nature</td>
</tr>
<tr>
<td>3. FX bookings/cancellations &amp; Hedge Transactions cash flows</td>
<td>• FX deals &amp; hedge transactions</td>
</tr>
<tr>
<td>4. Any other payments or receivables or investments</td>
<td>• Both Capital and Revenue in nature</td>
</tr>
</tbody>
</table>

It is essential that the company has set up a team in the Corporate Finance/Treasury department to manage FX exposure and the risks thereof.

1.3 Analysis of exposures and the risk appraisal associated with it to be carried out indicated Table 2:

<table>
<thead>
<tr>
<th>FX Transaction</th>
<th>Major risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. FC Cash Flows/Schedules/ value dates</td>
<td>• Systemic risk</td>
</tr>
<tr>
<td>6. Inflow-Outflow Mismatches / Gaps</td>
<td>• Market and Transaction Risk</td>
</tr>
<tr>
<td>7. Floating / Fixed Interest Rate amounts</td>
<td>• Value at risk (VaR)</td>
</tr>
</tbody>
</table>

1.3.1. Systemic Risk
There is a need to have robust IT systems as to monitor the gaps with proper reports. The management should get timely data and information on the FX risks of the company periodically and take appropriate action required.

1.3.2. Market and Transaction Risk
This is linked to the rules and regulations of the central bank i.e. Reserve bank of India relating to FX transactions. And the exchange rate and interest rate movements. It is
required to develop various scenarios with underlying assumptions so that this risk can be mitigated. For example: US Dollar and Swiss Frank currency pair do not show wide variations where as USD/Euro and USD/INR have been showing high swings/variations.

1.3.3. Value at Risk (VaR)
It is a statistical tool to measure the probable loss when a particular variable, say exchange rate, moves adverse against the reference at a particular confidence level based on historical data. VaR gives broad indicator of profit/loss, company could make if the rate changes by a particular percentage. Systems should be put in place to monitor VaR.

1.3.4. Volatility Risk
Volatility risk\(^2\) reflects the speed at which asset prices fluctuate. The more rapidly prices changes, the more volatile the asset is said to be. Financial risk managers factor volatility variables into complex VaR formulas to predict price ranges of a derivative portfolio.

1.4 Hedging & Risk Management policies
The first step in implementing procedural best practices is to formulate an Enterprise-wide risk policy\(^3\), inter-alia for management of FX Exposure. Top management/Board should lay down policy guidelines and procedures to be followed by the risk management or treasury officials of the company from time to time with respect to Hedging strategies and techniques to be used with proper controls. A strong management information system should also be in place for active monitoring the positions and alert the top management for proper decision making. It is the responsibility of the senior management to be aware of the direction or trend in rates movement and expectations of such shifts and the effects of the changes on profitability and balance sheet size of the company. Risk Reporting & monitoring process must be put in place giving the pertinent information in various formats inter-

\(^3\) Ibid, page 21
alia with proper controls like Limits, stop loss limits and breach of any limits, etc. as
(a) To err is human and (b) A stitch in time saves nine.

Management should actively monitor the risk of loss and FX positions open and take
appropriate decision to minimize losses by taking counter positions using hedges.

1.4.1 The FX markets comprise four different markets which function separately but
closely interlinked\(^4\), viz. (a) the Spot market, (b) the Futures market, (c) the Options
market and (d) the Derivatives market.

Various instruments available in the FX market for management of FX exposure/risk
are:

(a) **Plain vanilla instruments**
   - Spot buy/sell of currencies
   - Forwards-FC/INR Forward Contracts & Cross currency forward contracts

(b) **Derivatives**
   - Interest Rate Swaps
   - FRAs
   - Currency Swaps
   - Currency Options
   - Interest Rate Options
   - Currency Futures
   - Others (Structured products)

1.5 **Summary:**
The objectives of the current research study are:
To find out the instruments available in India and understand the rules and regulations
governing the FX business in India.
To analyze and find out the correlation of different variables of foreign exchange
market vis-à-vis USD/INR exchange rates
To obtain the market feed back from select companies regarding FX management; compare with FX risk management practices followed in select advanced countries.
To develop a strategy for managing Indian companies' FX exposure in view of
dynamic and volatile nature of the forex market.