MP-504

Vardhaman Mahaveer Open University, Kota

International Financial Management

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International Financial Management

Unit - 1: Conceptual Framework

Structure of Unit

1.0 Objectives

After completing this unit, you would be able to:

- Develop an understanding of the term "International Finance".
- Differentiate domestic finance from international finance;
- Describe the scope of international finance;
- Evaluate the regulatory environment of a country and compare it with other countries;
- Point out various functions that a global Chief Finance Officer performs;
- Appreciate the superiority of international finance;
- Present an organizational structure for a firm in globalized era.

1.1 Introduction

Cross-border businesses have been common since ages. Ever since man realized that he is not self-sufficient, he started socializing himself in order to satisfy his needs. Earlier man satisfied his needs by exchanging goods for goods. In order to make the exchange smoother, a medium of exchange was introduced. The art and science of managing the medium of exchange forms the basis for the modern financial and international financial management. Earlier days witnessed the use of metals as medium, then commodity backed currency was brought in, and today fiat money. This journey also saw a paradigm shift from state based economies to market based economies, restrictive to regulatory environments, closed to open economies. Seeing the success stories of countries that underwent this change, developing economies also started following them. India is no exception to this. India brought in the much needed changes during the year 1991. The changes brought in by liberalization have been on two major fronts. One is in the area of trade and the other is in finance. By making the environment regulatory from restrictive, bi-directional flow of trade and finance was permitted. This bi-directional flow brings in more opportunities in terms of new investment avenues and increased funding options for the firms, but with a new set of risks. A firm cannot remain isolated

from these factors. Although, the firm can try to remain passive by not internationalizing, it should be ready to face the competition put forth by foreign firms. With economies becoming more integrated, a minor shock in a country could affect a series of economies with which it has trade relations. Hence, a thorough knowledge of the opportunity sets along with the associated risks and the global economic environment would help the firms to remain competitive in the market. It thus became imperative for management graduates to master the concepts of International finance for optimizing financial decisions when they assume managerial positions. This unit presents the meaning, scope and functions of International finance.

1.2 International Finance

A firm that is into either exporting or importing alone operates in a lesser complex background when compared to a Multinational Company. A Multinational or Multi-domestic, as it is known, faces much more complexities as its production facilities are located in different countries. A transnational company, exhibits highest level of internationalization, as it procures raw material from different countries, assembles in one country and brands them in yet another place. The environments in which these firms operate are much more complex. For firms discussed first, a thorough knowledge of the market conditions of the importing and/or exporting country is very essential to discount the opportunity sets available there. While operating in a competitive environment, a firm like these should be very cost-conscious for protecting its profit margin. A competitive market does not permit a firm to increase its selling price easily. A Multinational or Transnational Company should be well versed with the market conditions of all the countries where it has operations in order to discount the opportunity sets. Basically International Finance presents the investment opportunities for investing firm and funding option for needy firm. It also discusses the regulatory framework within which these firms have to operate.

1.2.1 International Finance - Meaning

Let us recall the meaning of the term financial management. The term simply means managing the finance of a firm. The functions performed by a finance manager include sourcing of funds, investing optimally the funds procured and distributing the rewards to the people from whom he has procured funds. The process of procuring funds is known as financing function, investing activities are known as investment function and the distribution function is known as dividend function. The objective of managing finance was earlier to maximize profit. Gradually, firms felt the importance of value maximization and are functioning nowadays in order to achieve this objective.

The term International finance is simply understood as **finance across national borders**. It has synonyms like multinational finance, global finance etc. Though all the three are considered synonymous, they differ as they are defined contextually. It is named Multinational Finance or Multinational Financial Management when it deals with the financial management strategies of Multinationals. Similarly when the financial

strategies of firms operating at global level are discussed, it is named global finance. In other words, the word differs when the level of internationalization differs according to the operations of the firms involved.

1.2.2 Differences between Domestic and International Financial management

Since international finance is an extension of domestic finance, it differs from domestic in a subtle way. **Eun and Resnick** stated that International Finance is considered important than domestic finance due to three reasons: market imperfections, foreign exchange and political risks and expanded opportunity sets. International finance differs from domestic finance in its scope and outlook.

Table 1.1 Differences between International and Domestic Finance

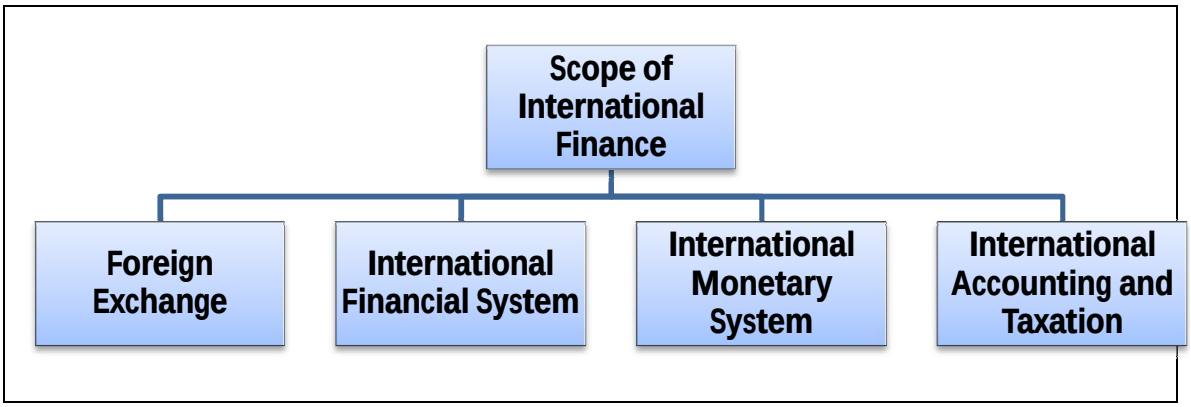
Concept	International	Domestic
Culture, history and institutions	Each foreign country is unique and not understood by MNE management.	Each country has a known base case.
Corporate governance	Foreign countries regulation and institutional practices are uniquely different.	Regulations and institutions are well known.
Foreign exchange risk	MNEs face foreign exchange risks due to their subsidiaries, as well as import/export and foreign competitors.	Foreign exchange risks from import/export and foreign exchange.
Political risk	MNEs face political risks because of their foreign subsidiaries and high profile.	Negligible political risk.
Modification of domestic finance theories	MNEs must modify finance theories like capital budgeting and cost of capital because of foreign complexities.	Traditional finance theories apply.
Modification of domestic finance instruments	MNE s use modified financial instruments such as options, swaps, futures and letter of credit.	Limited use of financial instruments and derivatives because of fewer foreign exchange and political risk.

Source: Multinational Business Finance by Eitman, Stonehill and Moffett

1.3 Scope of International Finance

As the previous discussions indicate, the scope of International finance is broader than the basic domestic finance. It includes all the financing and investment options available at the global level. A firm has limited access to funds when it operates within a country. When it extends its operations; it also gains access to many more options. A manager has to consider all the alternatives before selecting a particular or a set of source of finance. Similarly, the opportunities for investment available are also plenty at the global level. A firm, can select from an exhaustive list of alternatives like franchising, licensing, outsourcing etc. apart from direct investment. Thus, decisions on managing finance tend to be optimum, only when it is dealt with global perspective. For example, decisions on cost control normally end up with substituting the raw material or changing the supplier. But in the parlance of international finance, it extends to even shifting the production facility to other locations where the factors of production are cheaper. As International Finance discusses all these aspects, it is more global in its outlook.

Figure 1.1 Scope of International Finance



1.3.1 Foreign Exchange

The most important feature of International Finance is the use of different currencies for the transfer of funds between different countries. This involves the exchange of foreign currency for home currency and vice versa. These exchanges are affected by the exchange rate between the different currencies. Exchange rate is defined as the rate at which one currency is exchanged for the other. If 60 INR (Indian Rupee) is required to buy 1USD (US Dollar) then the exchange rate between INR and USD is Rs.60.

Foreign currencies are bought and sold at the foreign exchange market (forex market). The distinct feature of this market is that it does not have any physical setup and is an **over the counter market (OTC)**. Another feature of this market is that it operates 24*7 as it connects all countries i.e. when one market closes the other market elsewhere opens. This makes the exchange rates very dynamic.

Since there are only two currencies involved in the exchange it is not necessary that only two countries are involved. These currencies may also be traded in a third country and hence the third country perspective of the currency should also be dealt with. With the rising impact of globalization on all the markets in the world, the foreign exchange is very important and since international finance deals with all the nuances of the forex market.

International finance deals with exchange rate systems too. A country has a choice of either keeping its exchange rate with a foreign currency fixed or determined by the market forces. The former one is called as the fixed rate and the latter is called as the floating rate. Before fixing up an exchange rate system the authorities should analyse the economic condition of the world in comparison to that specific country. The rate of development of each country affects the position of the exchange rate. If the alignment of the exchange rate is not done with respect to the changing economic condition then it leads to an economic crisis. This can be witnessed in the Asian Crisis. The Asian crisis of 1997 started in Thailand and spread across other Asian countries like Indonesia and South Korea. This was because the Thai Bhatt was pegged to the US dollars and Thailand did not grow at the same rate as US. As they could not cope up their currency was over rated and thus leading to the crisis. An exhibit with the list of events that led to this crisis is presented at the end of this unit.

1.3.2 International Financial System

As discussed in the above paragraph it becomes imperative to understand the financial and economic conditions of other countries. The economic condition of a country can be understood by its macro and micro economic indicators like Gross Domestic Product (GDP), Inflation, Interest rates, Savings, Investment levels, Employment etc. The financial climate can be understood from the financial system, policies and the financial markets of a country. **Financial System is understood simply as a set of Individuals and institutions, both governmental and non-governmental which are governed by set of policies, rules, and regulations set by regulatory authorities**. When there are corporate, which are in need of funds for activities like expansion, R&D and other investments, there are households with surplus in the form of savings. The households have the option of either saving this money in the form of Savings; Fixed Deposits etc or invest them in financial markets. The term Investment means sacrificing a sum of money at present for a future benefit.

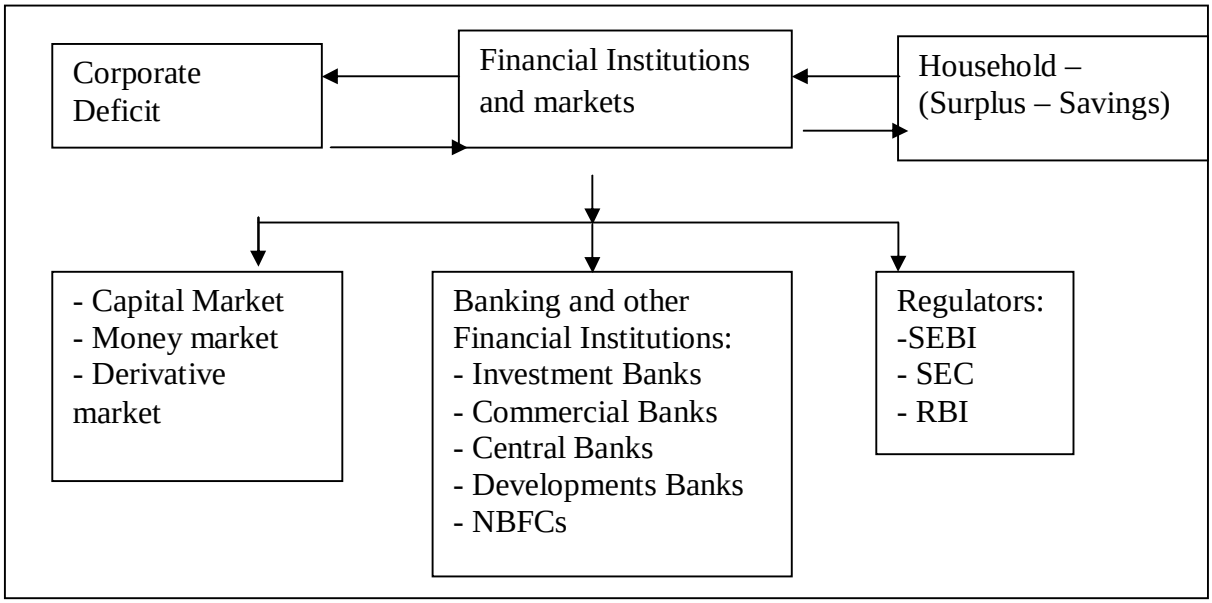
Savings: Regular Income (Interest)

Investment: Regular Income (Interest, Dividend) + Capital Gain

In the case of savings the investor gets only regular income in the form of interest whereas when the money is invested in the corporate they get an additional capital gain. Capital Gain is the difference in the prices of the investment like share; bond etc. at two different time periods. Financial markets have a galore of investment opportunities. But there is a risk factor involved when an investment is made in the corporate because of variation in prices of shares due to market conditions. With liberalization of trade and

finance, an investor has an array of investment alternatives across the globe. Thus risks can be minimized by investing in a portfolio of companies and countries. International Finance deals with all the investment alternatives in detail.

Figure 1.2 International Financial System



1.3.3 International Monetary System

International business transactions or trade creates an obligation between countries that are involved. Each country has a different currency and different settling procedure. A common payment system is necessary for the settling the obligations. According to Kevin (2009), an International monetary system is a payment system for settling international financial obligations, involving different currencies, needed for the smooth functioning of global economic system. Different systems were evolved in the past namely bimetallism Classical gold standard, Inter war period, Brettonwoods system and flexible exchange rate regime as classified by Resnick (2011). The main objective of establishing an international monetary system is to maintain stability in the exchange rates and to promote free flow of international business and trade.

International transactions by the residents of a country result in cash outflows to other countries as well as cash inflows from other countries. The foreign currency inflow adds to the foreign exchange reserves of the country. These cross border flow of currencies are recorded in a statement known as the Balance of Payments (BOP) statement. Different types of transactions such as current account transaction and capital account transaction are recorded. It also shows the change in the foreign exchange reserves of the country. The statement helps to know if there is a deficit or surplus of international receipts. The statement also depicts the demand and supply of foreign currency. Thus study of Balance of payment is an important part of International finance.

1.3.4 International Accounting and Taxation

MNC's have subsidiaries in a number of countries. They need to consolidate their subsidiaries accounts for financial reporting. This requirement makes it essential for these companies to decide upon a policy as to the different exchange rates that are to be applied to convert the various categories of foreign currency denominated assets, liabilities, earnings or expenses into the domestic currency, and for the treatment of any exchange gains or losses that arises out of such a conversion. The formation of policy becomes important to make financial statements more transparent. They need to abide by the accounting rules and procedures applicable. The translation also has tax implications. International accounting and taxation are very complex and extensive topics due to multiplicity of rules in different countries in the world.

1.4 Functions of International Finance

International finance performs certain special functions other than what domestic finance performs. The functions of International finance are:

1.4.1 Financing function

Through this function, the finance department is expected to look out for alternate methods of financing the firm. Simply speaking, Financing function is the sum total of the liability side of the Balance sheet. Traditionally, equity and debt were considered as the major sources of finance. By optimizing the mix of sources, the finance manager is expected to reduce the cost of capital. If finance, viewed from a single country perspective, it deals only with debt and equity. But international finance brings out the entire gamut of sources that are available in all the countries across the globe. Firms are permitted to borrow in other currencies as well. This decision is prudent only when it results in reducing the cost of capital.

1.4.2 Investment Function

The finance department is also responsible for allocating the funds procured for various activities of the firm. This is known as investment function. In other words, the asset side of the Balance Sheet represents the investment function. The conflicting alternatives here are fixed assets and Current Assets. Generally manufacturing concerns have more investments in current assets than trading firms. Apart from fixed assets, firms that are operating in Pharmaceutical and Informational Technology industries have to invest more in Intangible assets like patents etc. The decision is taken normally to maximize profit in the short run, and to maximize wealth of the investors in the long run.

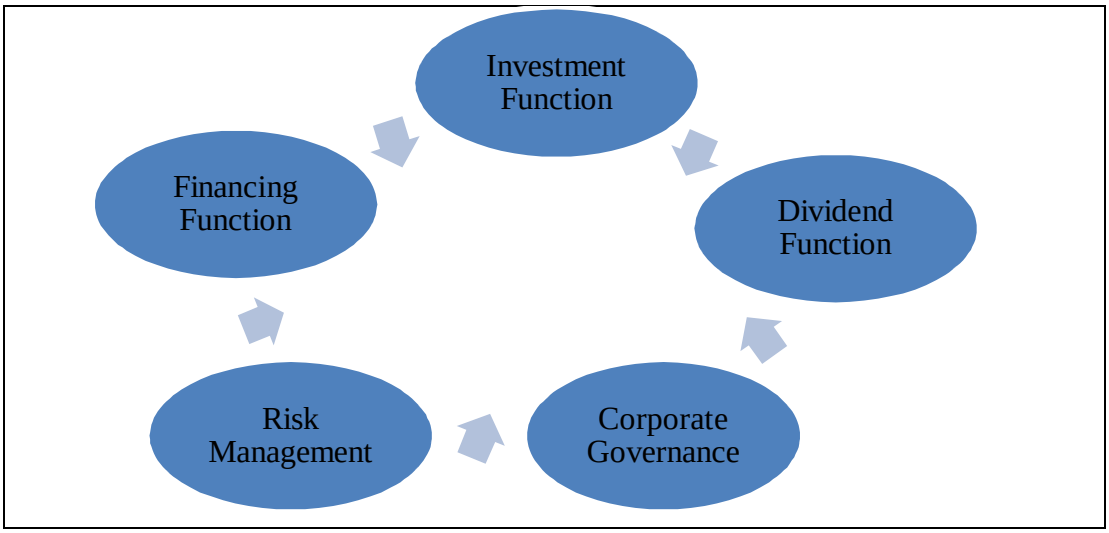
1.4.3 Dividend Function

This function deals with the distribution of rewards among the investors. The conflicting alternatives are to distribute or to reinvest in to the business. The firm has the choice of either distributing the profits as dividends, bonus shares etc. or to reinvest in to the business. By retaining the profits, the firm can save a lot of cost by not going for equity

issues for subsequent fund requirements. There are contradicting theories on the relevance and irrelevance of this decision on the value of the firm.

The functions of International Finance are depicted in the following figure:

Figure 1.3 International Financial Function



In the figure 1.3, the top three functions relate to basic financial management. The extended functions of risk management and corporate governance relate to International Finance. It is undoubtedly important to include corporate governance as a function under domestic, but it becomes all the more important when the firms expand geographically to other countries. The consequences of not adhering to the rules of the land are more severe in case of firms operating at the global level. In other words, corporate governance started receiving extended attention since countries started integrating themselves more in trade and finance.

1.4.4 Corporate Risk management

The term risk is understood as the probability of unexpected events. The money equivalent of the assets and liabilities, revenue etc. that are exposed to risk when quantified is come to be known as exposure. The art of managing the exposure from the risks is known as risk management. Risks are omnipresent as far as international business is concerned. Risks are defined depending on their origin or source. Every country has the right to issue and use currencies of its own. All of its transactions shall be, hence denominated in the same currency. The firm that is into trading relations with the host country shall be only in the host currency. But the transacting firm would be denominating all the transactions in its home currency. Since all the global markets have switched over to flexible exchange rate system, where the exchange rate between two currencies is determined by market conditions, the exchange rate keeps changing day to day. Any change in the exchange rate would impact the revenues and costs of the transacting firm**.** Variability in the revenues or position of a firm due to the change in the exchange rate is known as currency or foreign exchange risk.

Any change in the market conditions too will have an impact on the global firms. It would affect their revenues and position. Any variability in the earnings or financial position of a firm due to changes in the demand and supply conditions is known as market risk. Political risk arises due to the impact of change in the political system on the revenues and position of the firm. Country risk arises when the geographical and demographical set up of the country impacts the revenue and position of the firm.

Table 1.2 Forms and Sources of Risk

Type of Risk	Source of Risk
Foreign exchange risk / Currency risk	Volatility in exchange rates of currencies
Market risk	Demand and supply factors
Political risk	Political system
Country risk	Demographic profile of the country
Economy risk	Economic factors like interest rates, inflation rates, capital formation etc.

Economy risk arises due to the impact of the economic factors like inflation, interest rates etc on the firms revenue. Of all these foreign currency risk would be the major concern for a finance officer, as it directly affects the revenue. This is known as currency mismatch. Any mismatch has to be managed by converting the currency. Since the exchange rates change according to the demand and supply of that pair of currency, the realized amount on conversion too shall vary. This variation in revenue has to be managed both in long term as well as short term. In international finance parlance, foreign exchange risk thus becomes the major area of concern and focus.

1.4.5 Corporate Governance

According to **Eiteman, Moffett and Stonehill, "**Corporate governance is the process of maintaining a relationship among the stakeholders that is used to determine and control the strategic direction and performance of an organization". A private firm does not have to follow the mandatory requirement of disclosure and the objective of wealth maximization of shareholders. A privately held company does not go public to issue shares. A public company is widely owned ie, they are controlled by a group people who have invested in the company in the form of shares. These people are known as the shareholders. Apart from the shareholders, the firm has to network with its suppliers, customers, bankers and regulatory bodies. The second group of people is generally referred to as stakeholders. A publicly held firm has to strive to maximize the wealth of the shareholders.

Eun and Resnick has defined corporate governance as "the economic legal and institutional frame work in which corporate control and cash flow rights are distributed among shareholders, managers and stake holders of the company". The structure of

corporate governance varies a great deal across countries depending on the cultural, economic, political and legal set ups.

Dimensions of Corporate Governance

According to **Eiteman, Moffett and Stonehill,** Corporate Governance can be analyzed using three dimensions. They are Agency theory, Composition of Board of directors and a group of variables that distinguish one firm from the other.

The dimensions using which corporate governance can be analyzed are listed here:

1) The set of people who control and manage the organization;
2) The environment in which the organization operates.

The people who control the organization need not be the same who manage. Hence they have to be studied separately as two different dimensions. First let us explore as to why there arose a need for a separate study on Corporate Governance as an extended function of finance. The necessity for corporate governance, as an exclusive dimension was due to the following four factors. Eiteman *et al*. mentioned four important factors that led to the acceptance of corporate governance as an important function. These are as follows:

1. Dictum of separating ownership from management:

The roots of Agency theory are on the belief that separating ownership and management would result in accomplishing the objective of wealth management. The culture and practices of countries differ from each other; hence a representative would be a better person to handle. The executive is expected to understand the cultural, social and economic environment apart from political systems in order to perform his duties.

2. Developments in the financial markets:

Recent times have witnessed tremendous development in financial markets. Right from sourcing for funds till diversification, opportunities and avenues are plenty. These are scattered globally too. These developments expect the firms to discount these opportunities to minimize the cost of acquiring funds and aim for maximum diversification or risks. While exploiting opportunities, the executive conducting the business is expected to follow the rules and regulations of all the countries.

3. Disclosure and transparency being given due importance:

The more public the firm goes, the more important disclosure becomes. Once the firm goes public by issuing common equity stocks, the firm is responsible for disclosing its position and performance to its shareholders. The disclosure is to follow a set of prescribed accounting rules and regulations in which it operates. This started gaining importance in the wake of cases like Enron in the West and Sathyam in Indian contexts. The shareholders have the right to access to the accounts and information. When disclosure started gaining importance, governance also started gaining due importance.

4. Development in the legal system:

Along with the development of trade and finance, legal system too was refined. The developments that took place in the legal system were necessary as it had to be in tune with the changed trade and finance practices.

1.5 International Financial Management in Indian context

International business started witnessing a sudden spurt in its growth at the global level. This necessitated the development of a robust settlement system. Thus all countries that started globalizing themselves, laid lot of emphasis on improving their financial systems. India's history presents a glorious picture of its astounding presence in the global market as an export-surplus country. However, with its wealth plundered, it had to remain dependent on imports heavily during the pre and post-independence eras. The post independent India saw its economic planning in terms of five year plans. When all these initiatives did not yield the expected results, India went for liberalizing its economy during the year 1991. With liberalizing its policies, India started participating in the global business actively. Due to this, Indian financial system too was restructured. The major reforms were globalization and making the businesses work on a regulated environment from a restrictive one. India's disposition to international trade could be analyzed under the following categories.

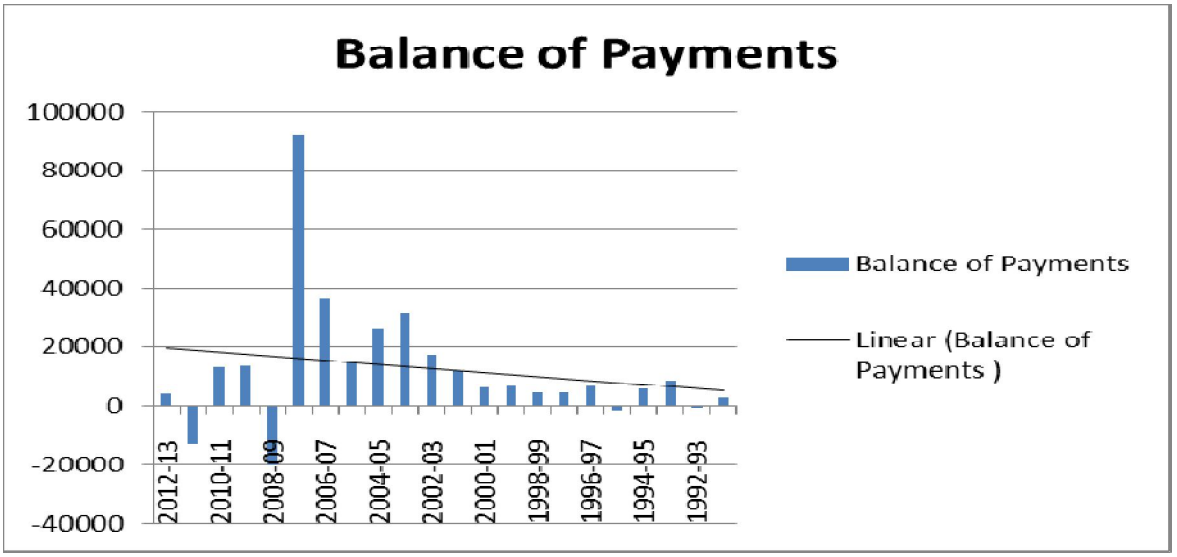
1.5.1 Foreign Exchange Market

A forex market becomes a significant factor for every country. India has an evolving foreign exchange market that caters to the needs of the participants. Though evolving, its presence is felt very much in the global arena as an active participant in all activities. Reserve Bank of India is the apex bank of India. The foreign exchange market operates in three tiers. The top tier consists of the RBI and its transactions with various commercial banks. These banks are the authorized dealers of forex market. The second tier consists of transactions across banks that are otherwise known as interbank deals. The third tier consists of transactions between commercial banks and other retailers. The money changers are of two types. Full-fledged money changers are given the powers to both buy and sell foreign exchange where as others are authorized only to buy. Indian export and import transactions are predominantly denominated in US Dollars. So the USD occupies more than 80% of the total foreign exchange transactions.

1.5.2. Balance of Payments

As already discussed, Balance of Payments is a summary of global transactions that have taken place during a particular period. The difference between receipts and payments is known as deficit. India has been witnessing continuous deficit.

Figure 1.4: Balance of Payments of India during the years 1992-2013



The above exhibit shows the balance of payment of India during the period of 1992-2013. The BOP trend line shows an increase in the amount from 1992 to 2013. During the periods 2008-09 and 2011-12 there has been negative BOP which shows that India has had more exports than imports during those particular periods.

1.5.3. Capital Flows

Any foreign individual or company has two options to invest in the Indian market. They can either invest in the company directly or they can invest in the shares of companies which are publicly listed. The former is called as FDI (Foreign Direct Investment or direct foreign investment) while the latter is called as FII (Foreign Institutional Investment or Portfolio Investment). These investors help in increasing the capital flow into the country and thus help in the growth of the country. However an increase in capital and growth of a country result in inflation and hence it is essential to formulate policies that would keep inflation at a check. Studies have shown that the entry of FDI and FII help in the growth of a country and hence it would be essential to have them with certain restrictions.

1.6 Summary

The term International finance is simply understood as finance across national borders. It has synonyms like Multinational finance, global finance etc. Though all the three are considered synonymous, they differ as they are defined contextually. The objective of basic finance is to minimize cost of acquiring funds in order to maximize shareholders wealth. International finance is an extension of basic financial management. International Finance deals with Foreign Exchange, International Financial System, International Monetary system, and International Accounting and Taxation systems.

International Finance concentrates more on the two extended functions of finance, namely, risk management and Corporate Governance. The term risk is understood as the probability of unexpected events. Variability in the revenues or position of a firm due to the change in the exchange rate is known as currency or foreign exchange risk. Any variability in the earnings or position of a firm due to changes in the demand and supply conditions is known as market risk. Corporate governance is the process of maintaining a relationship among the stakeholders that is used to determine and control the strategic direction and performance of an organization. India was put into the path of development by making the economy more open and making the business environment regulated from restrictive. Ever since, that change India has been witnessing steady inflow of capital into the country.

1.7 Self Assessment Questions

1. Define International finance.
2. Differences between Domestic and International financial management.
3. What are the functions of International finance?
4. Explain corporate risk management briefly with the forms and sources of risks.
5. Define corporate governance.
6. What are the dimensions using which corporate governance can be analyzed? Explain it in detail.
7. Briefly explain about international financial management in Indian context.
8. Explain the superiority of International finance over domestic finance.
9. "As the level of internationalization increases, the complexities within the business operates also increases" Substantiate your views on this statement with examples.

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Unit – 2: Global Financial Markets

Structure of Unit

2.0 Objectives

After completing this unit, you would be able to:

- Develop an understanding of the meaning, nature and significance of financial markets;
- Explore alternate forms of raising funds for an entity;
- Compare different financial markets;
- Assess the cost involved in raising funds from different markets;
- Measure the impact of recessionary pressure on the markets especially due to higher integration;
- Analyze each alternate for optimizing capital structure of a firm.

2.1 Introduction

The economic system of a country depicts the economic climate of a country. The economic climate and condition of a country is measured in terms of its Gross Domestic Product, investment rate, savings rate and employment rates. These are known as the macroeconomic indicators. These indicators are maneuvered in the financial system of a country. In other words, financial system comprises of individuals, institutions and organizations with the objective of transferring funds and resources from the surplus areas to the deficit areas. This ultimately results in the economic development of a country. Normally households save and these savings have to be channelized into proper avenues of investment. Though savings are considered as the vehicle to growth, investments are considered as drivers to growth. While savings give normal returns to your money, investments give compounded returns. Investments assure regular return and a capital gain at the time of liquidation. But the returns that we get from investments are not generally stable. The return depends upon the general business climate and economic conditions. With higher level of integration of global economies, if one country in the globe gets affected, it is passed on to the other. This makes the

investments riskier than savings. The financial system becomes complete, only when the investors are protected. They should be able to enjoy a premium for the risk taken. Thus a financial system shall attain its objective of developing the economy, only when it is able to optimize returns to investors for the risks that they have taken. Financial markets aid in optimizing returns to the investors as it has separate markets for investments and risk mitigation. The meaning, nature, components, types and significance of financial markets are discussed in the subsequent headings.

2.1.1 Meaning and Nature of Financial Markets

A financial market is a market in which people and entities can trade financial securities. These markets could be domestic or international. A global financial market represents a collection of all financial markets scattered across the globe. It deals with the buying of financial securities at the global level. The transactions become efficient only when the transaction costs and prices are kept at a minimum. These prices should be determined by the market forces. In other words, the efficiency of a market depends upon the demand and supply. The investors can invest in either securities like stocks and bonds or in commodities like agricultural products, gold etc. The present day markets have been a result of transformation from the previous markets due to increased competition and regulatory measures. International financial markets intermediate by transferring purchasing power from lenders and investors to parties who desire to acquire assets that they expect to yield future benefits. International financial transactions involve exchange of assets between residents of different financial centers across national boundaries. International financial centers are reservoirs of saving and transfer them to their most efficient use irrespective of where the savings are generated.

2.1.2 Significance of Financial Markets

Capital is an important requirement for any corporation or government to finance its operations and for long-term investments. They can do this by adopting either any one or a combination of the following alternatives. Procure funds by taking out a loan from a bank and repaying it with interest. If the fund required is large, then the loan is financed by the participation of more than one lending institution. This facility is known as consortium finance. The companies can otherwise, raise money through the sale of its stocks and bonds in its name. These are bought and sold to the investors, who have surplus, in the capital markets. Firms can raise their capital from the financial institutions and financial markets. Financial markets are present in every nation with varying number of participants. Some markets have limited number of participants while in exchanges like NYSE trading is done in trillions of dollars. Previously the markets were accessible only to private participants and some exclusively for professional investors but in the current scenario the markets are accessible by all investors and to a wide range of financial products.

2.1.3 Recent Trends in Financial Markets

Financial markets have seen a lot of changes in the recent years. These changes could be attributed to more economies being opened up. As economies have opened up, they have become more interdependent. The markets too have been more regulated and integrated due to this reason. The trends seen are as listed below.

1. **Accessibility**:

   Markets have become more accessible now a day because they can be reached through internet and mobile phones. The increases in the usage of information technology in finance have made this possible. Almost all markets are over the counter traded. Due to this, firms do have been able to mobilize funds quicker than earlier days.

2. **Transmission Effect:**

   All markets are inter-connected. Due to this, if any country witnesses financial disturbances, it shall have impact on all markets with which it is connected. The Japanese markets open up first and the Western Markets close last. The impact of the performance of the market that closed last the previous day could be felt on the markets that subsequently open up. In other words, if the US markets closes with a dip in the index the previous day, the Eastern markets open up in red. Subsequently the trade has to be pick up to make it otherwise.

3. **Highly Liquid Secondary Market:**

   These days, the investors have become exposed to a lot of sources for information regarding markets. They have become aware of various investment avenues. Due to this there exists a secondary market for every asset. This feature adds up to the liquidity of the market too.

4. **Increased Risk:**

   Due to the increased exposure of the markets to the movements of other markets, the investors are exposed to higher levels of risks. The investments have to be, therefore, protected from all risks. Though risks cannot be mitigated completely, it can be minimized through effective means.

5. **Regulated:**

   The shift of economies from restrictive to regulatory environment has made the markets more regulated. The markets are expected to work under a code of conduct and obey rules of the land which ever they are associated with. When markets extend beyond the territorial boundary of one country, it is expected to abide by the rules of both the countries. Market regulators such as the SEBI in India and SEC in the United States impose penalties if the code of conduct is violated by any of these participants.

6. Innovation:

Financial innovation has been recent phenomenon seen in financial markets. Innovation is seen not only on the products, but on the deliverables too. The products are more customized to a great extent for customers. The availability of various financial tools for managing risk has encouraged more investor- participation to the markets. Examples for innovation are Credit Default Swaps, Credit Default Obligations etc.

2.2 Financial Markets and Economic Functions

A financial market is where the financial instruments are traded between the buyers and sellers. The economic functions provided by the financial markets are, price discovery liquidity and reduction of transaction costs.

2.2.1 Price Discovery:

Price discovery is determining the price of the asset to be traded between the buyer and the seller in a financial market. The rate of return from the particular financial asset is determined by the market conditions. The rate of return obtained by the investors from those in need of funds is the motivating factor for the investors. These functions of the financial market determine how the funds from the investors are allocated to those in need of funds.

2.2.2 Liquidity:

Liquidity is the characteristic ability of an asset to be sold at a fair price in the market at any desired time. An asset which is not liquid would have to be held by the investor until favorable conditions arise to sell the asset or until the completion of the contract. Different financial markets have different level of liquidity. Equity is liquidated if the company calls back the shares or shuts down while debt is liquidated at maturity.

2.2.3 Reduction of Transaction Cost:

The trading of financial instruments by market participants' result in transaction costs. The financial institutions which have the lowest transaction costs are the most successful ones in the market.

2.3 Classification of Financial Markets

Investors have a wide variety of financial products that they can invest in through the financial markets. Major international banks and financial professionals were the main participants in the financial markets while certain other markets were mainly used by private investors. Financial markets can be classified in a number of ways.

2.3.1 Based on Nature

(1) Debt Market (2) Equity Market

1. Debt Market:

The debt market is the financial market for the fixed claims. It is also called as the bond market. A bond is a debt instrument which is issued by companies or governments for a fixed period of time and fixed interest rate to get capital for short term. Bonds are available in credit markets also called as debt or fixed income markets. The types of bonds available are corporate bonds, US Treasury bonds, municipal bonds, notes and bills. All of these together are termed as "Treasuries".

2. Equity Market:

The equity market is the financial market for residual claims. The equity market is the market in which the equity shares of a company are issued and purchased by the investors. These investors then trade these equity shares among themselves at the equity market. Equity is the cheapest source of fund as the company issuing equity does not have a permanent obligation to the investors. The equity market allows the investors to be partial owners of the company they hold the share in.

2.3.2 Based on Maturity

(1) Money Market (2) Capital Market

1. Money Market:

Instruments with short maturity and high liquidity are traded at the money market. The money market is used as a source for borrowing for a period of few days to less than one year. Money market instruments are also called cash instruments because of the short maturity period. The money market can be used for a number of reasons like companies selling commercial paper to loan money for short term to investors buying CDs to safeguard their money for a short period. The money market has risk in terms of default on commercial papers. Otherwise the risk involved in money markets is very low when compared to other markets hence the rate of return is low. The money market is seen as the safest place to invest as it has a short maturity period and high liquidity.

2. Capital Market:

Capital market is the market where securities are traded. In order to raise funds the organizations and governments sell their securities to raise capital for their needs. Capital markets consist of primary market and secondary market. The securities are issued, sold and purchased at the capital market.

2.3.3 Based on Tenure

Primary Markets vs. Secondary Markets:

The capital market consists of the primary market and the secondary market. The primary market is the market where the companies which are publically listed issue their shares to the general public on the exchange to raise capital. The primary market consists of the investment bankers who would set a price to the price range in the primary market and also ensure the sale of the securities to the investors. Once the investors have purchased the shares in the primary market they are then traded further in the secondary

market. The price of a share in a primary market is preset whereas it varies in the secondary market based on demand and supply.

2.3.4 Based on Delivery

1. Cash or Spot Market:

Investing in cash market is highly risky as it may result in high losses or high gains. Similar to a cash market where goods are delivered as soon as cash is paid, in the spot market the contracts bought and sold are effective immediately. The current market price is paid in cash. The cash market is complicated and suitable for experienced traders. The products traded are complicated and hence detailed analysis, high end information and macroeconomic analysis is necessary and hence it is dominated mainly by institutional market players.

2. Derivatives Market:

A derivative market consists of financial products whose value is derived from the underlying asset. A derivative is a contract and is used mainly in the case of risk management. This market is complex and hence its main participants are experienced traders. The derivative market needs the use of strategies and hence is not suitable for private investment.

2.3.5 Based on Physical Set up

1. Forex and the Interbank Market:

The trading of currencies among banks and financial institutions is called as interbank market. The interbank markets are mainly used for a bank's own purposes but in certain cases they also trade for large corporations. The Forex market is where currencies are traded where any country, company or individual can participate. There is no central market place where trading takes place, it is conducted over the counter. Forex market is one of the moat liquid markets and the highest amount of trading in terms of total value takes place in this market. With the widespread use of the internet now currencies can be traded through broking accounts.

2. The OTC Market:

The over-the-counter (OTC) market or dealer market is a kind of secondary market. The stocks that are traded at the OTC market are not traded in the stock exchanges. These stocks are traded on over-the-counter bulletin board (OTCBB) or pink sheets. OTCBB and pink sheet companies have few regulations to comply with than those that trade shares on a stock exchange and hence they are more susceptible to risk. The securities traded in this market are stocks of small companies.

2.4 Segments of International Financial Market

2.4.1 International Bond Market

The international bond market consists of two main markets namely the Euro Bonds and foreign bond. A foreign bond is offered by a foreign borrower to the investors in the national capital market and denominated in the nation's currency. An example is a Japanese MNC issuing a dollar denominated bond in the US market to the US investors. A Euro bond is the one denominated in one currency but sold in the capital markets of other countries. Example is a German borrower issuing a dollar denominated bond in the UK.

The international bond market has a number of instruments. Some of them are:

- Straight Fixed Rate Bonds
- Euro Medium Term Notes
- Floating Rate Notes (FRN)
- Convertible Bonds
- Zero Coupon Bonds
- Callable and Puttable Bonds
- Sinking Fund Bonds

Detail regarding these instruments has been given in unit 20.

2.4.2 International Equity Market

Equity capital is raised by issuing shares in the market which are then traded among investors in the secondary market on the stock exchanges of the country. MNCs would like to raise capital from different markets for a number of reasons. The local market may be too small to accept the vast number of shares that they issue. They may also issue shares in multiple markets to increase their prestige in the global market. These MNCs are registered and listed in the stock exchanges of all the countries in which they issue their shares.

Non US companies raise equity from the US markets through the issue of ADRs which are certificates representing bundle of shares. These ADRs are then traded in the US stock exchanges. GDRs are issued for trading equity outside the US market. The GDRs are traded in the stock exchanges where they are issued.

Many countries now allow non-resident investors especially institutional investors to buy and sell shares in their stock exchanges. Investors can now invest in the securities of different countries seeking risk reduction through international portfolio diversification.

2.4.3 International Money Market

Money market acts as a platform for market participants with need for short term funds to obtain them from agents (corporations, financial institutions, individuals, government) with excess funds. They play central role in the country's financial system, by

influencing it through the country's monetary authority. The money market allows financial institutions and to some extent to other non-financial companies' money for executing such functions as:

- Fund raising
- Cash management
- Risk management
- Speculation or position financing
- Signaling
- Providing access to information on price.

Money markets are wholesale markets with very large amounts of transactions. This is the most active financial market in terms of volumes of trading. From the start of emergence the traditional money markets performed the role of monetary policy. In order to influence the supply side, governments have employed methods of direct regulation and control of the savings and investment behavior of individuals and companies. However due to fast technological advances, internationalization and liberalization of financial markets, possibilities to carry out policy objectives through such measures have diminished. Current policy through market oriented measures is aimed primarily at demand side.

Thus money markets serve the interface between execution of monetary policy and the national economies another role of domestic money markets is to serve public policy objectives, i.e. financing public sector deficits and managing the accumulated government deficits. Government public debt policy is an important determinant of the money markets operations, since government debt typically forms a key part of the country's money markets (as well as debt markets). The scope and measures of monetary policy are also linked to the government's budget and fiscal policies.

The global capital markets became critical to development in an open economy. Developing countries, like all countries, must encourage productive investments to promote economic growth. Domestic savings could be used to make productive investments. If the foreign savings are invested wisely, the borrowing country will grow economically. Thus, foreign savings, which many people simply call foreign investment, can benefit developing countries.

2.4.4 International Credit Market

Short term funds for companies in terms of foreign currencies can be obtained from the international money market and the long term funds can be obtained from the international bond market. The medium term funds are exchanged between the borrowers and suppliers in the international credit market. The banks issue loans for a medium term which are mostly floating rate loans where the interest rate on the loans changes periodically based on market interest rate like LIBOR. This method is followed by banks in order to avoid the risk arising from asset- liability mismatch.

Another popular practice in the international credit market is syndicated loans. Banks join together less than one bank and issue loans together. This kind of loan helps in sharing the risks among the participating banks.

2.4.5 Foreign Exchange Market

Foreign exchange market is the market where there is an exchange of currencies. Borrowing or settling internationally requires the conversion between currencies. This is facilitated by the foreign exchange market. The foreign exchange market aids in the inter-conversion of home currency to foreign currency and vice versa.

2.5 Financial Intermediaries

Financial intermediaries are special financial entities who act help in dealing with allocation of funds of the investors to the borrowers of funds. Financial intermediaries include depository institutions, insurance companies, regulated investment companies, investment banks, and pension funds. The financial intermediaries ensure a smooth and efficient transaction of funds between the investor and the borrower. The fund that a financial intermediary gets becomes its asset that they invest in other companies making them the liability or any equity participants in the intermediary. Financial intermediaries are involved in converting financial assets, which are highly risky for investing in by the public into financial assets at their own liabilities which less risky and preferred by the investors.

2.6 Summary

The present chapter discusses about various aspects of financial markets. It first presents an overview, meaning and significance of financial markets. Due to the phenomena like globalization and liberalization, financial markets have undergone tremendous changes. Financial markets can be classified based on nature, timing, tenure, physical setup, maturity etc. Each of these markets caters to different needs of the investors. The international markets could be divided as equity, bond, money market, credit market and foreign exchange market. These cater to the needs of the companies that are in need of funds. Since the markets are highly integrated, the events happening in one market could have an impact on the other markets as well. The chapter ends with a small note on financial intermediaries. The global markets are now treading on a recovery path. With the recessionary pressures easing out the global investments has started growing up with large corporations both public and private, entering the financial markets for their capital requirements. However the leading research firm foresees a future with demand for capital surpassing supply. The article given at the end of the unit brings the entire gamete of changes that the market would see in future. The students are advised to read the passage given in the material and answer the questions in order to understand the nuances of financial markets with their practical implications.

2.7 Case Study

How does the growth of emerging markets strain global finance?

Short-term doldrums aside, the world's corporations would seem to be in a strong position to grow as the global economy recovers. They enjoy healthy cash balances, with $3.8 trillion in cash holdings at the end of 2009, and they have access to cheap capital, with real long-term interest rates languishing near 1.5 percent. Indeed, as developing economies continue to pick up the pace of urbanization, the prognosis for companies that can tap into that growth over the next decade looks promising.

Yet all those new roads, ports, water and power systems, and other kinds of public infrastructure—and the many companies building new plants and buying machinery—may put unexpected strains on the global financial system. A leading consultancy team finds that by 2030, the world's supply of capital—that is, its willingness to save—will fall short of its demand for capital, or the desired level of investment needed to finance all those projects. Indeed, household saving rates have generally declined in mature economies for nearly three decades, and an aging population seems unlikely to reverse that trend. China's efforts to rebalance its economy toward increased consumption will reduce global saving as well.

The gap between the world's supply of, and demand for, capital to invest could put upward pressure on real interest rates, crowd out some investment, and potentially act as a drag on growth. Moreover, as patterns of global saving and investment shift, capital flows between countries will likely change course, requiring new channels of financial intermediation and policy intervention. These findings have important implications for business executives, investors, government policy makers, and financial institutions alike.

Surging demand for capital

Several economic periods in history have required massive investment in physical assets such as infrastructure, factories, and housing. These eras include the industrial revolution and the post–World War II reconstruction of Europe and Japan. We are now at the beginning of another investment boom, this time fueled by rapid growth in emerging markets.

Across Africa, Asia, and Latin America, the demand for new homes, transport systems, water systems, factories, offices, hospitals, schools, and shopping centers has already caused investment to jump. The global investment rate increased from a recent low of 20.8 percent of GDP in 2002 to 23.7 percent in 2008 but then dipped again during the global recession of 2009. The increase from 2002 through 2008 resulted primarily from the very high investment rates in China and India but reflected higher rates in other emerging markets as well. Considering the very low levels of physical-capital stock these economies have accumulated, our analysis suggests that high investment rates could continue for decades.

In several scenarios of economic growth, we project that global investment demand could exceed 25 percent of GDP by 2030. To support growth in line with the forecasters' consensus, global investment will amount to $24 trillion in 2030, compared with about $11 trillion in 2008. When we examine alternative growth scenarios, we find that investment will still increase from current levels, though less so in the event of slower global GDP growth.

The mix of global investment will shift as emerging-market economies grow. When mature economies invest, they are largely upgrading their capital stock: factories replace old machinery with more efficient equipment, and people make home improvements. But the coming investment boom will involve relatively more investment in infrastructure and residential real estate. Consider the fact that emerging economies already invest in infrastructure at a rate more than two times higher than that of mature economies (5.7 percent of GDP versus 2.8 percent, respectively, in 2008). The gap exists in all categories of infrastructure but is particularly large in transportation (for instance, roads, airports, and railways), followed by power and water systems. We project global investment demand of about $4 trillion in infrastructure and $5 trillion in residential real estate in 2030, if the global economy grows in line with the consensus of forecasters.

Shifting investor strategies

Investors will want to rethink some of their strategies as real long-term interest rates rise. In the short term, any increase in interest rates will mean losses for current bondholders. But over the longer term, higher real rates will enable investors to earn better returns from fixed-income investments than they have in the years of cheap capital. This change could shift some investment portfolios back to traditional fixed-income instruments and deposits and away from equities and alternative investments.

For pension funds, insurers, endowments, and other institutional investors with multi decade liabilities, the world's growing infrastructure investment could be an attractive opportunity. Many of these institutions, however, will need to improve their governance and incentive structures, reducing pressure to meet quarterly or annual performance benchmarks based on mark-to-market accounting and allowing managers to focus on longer-term returns. This change would be required as institutions come to manage portfolios with a growing proportion of less liquid, long-term investments, since volatility in market prices may reflect market liquidity conditions rather than an investment's intrinsic, long-term value.

Emerging markets, though they may present attractive opportunities, also pose many risks and complexities, and returns could vary significantly across countries. As incomes in emerging markets rise and capital markets develop, nonfinancial businesses can expect healthy growth from investing in both physical and financial assets. Returns to financial investors are less certain, however, particularly in countries with low returns on capital or savings trapped in domestic markets by capital controls or a "home bias" among domestic savers and investors. These countries will remain susceptible to bubbles in equity, real-estate, and other asset markets, with valuations exceeding intrinsic levels.

Foreign investors will need to assess valuations carefully before committing their capital. They will also have to take a long-term perspective, since volatility in these bubble-prone markets may remain higher than it is in the developed world.

A call for government action

Governments will need to encourage the flow of capital from the world's savers to places where it can be invested in productive ways while minimizing the risks inherent in closely intertwined global capital markets. Governments in countries with mature markets should encourage more saving and domestic investment, rebalancing their economies so they depend less on consumption to fuel growth. Policy makers in these countries, particularly the United Kingdom and the United States, should start by putting in place mechanisms to sustain recent increases in household saving. They could, for instance, implement policies that encourage workers to increase their contributions to saving plans, enroll in pension plans, and work longer than the current retirement age. Further, governments can themselves contribute to gross national savings by cutting expenditures.

To replace consumption as an engine of economic growth, governments in these countries also should adopt measures aimed at boosting domestic investment. They could, for example, provide accelerated tax depreciation for corporations, as well as greater clarity on carbon pricing—the current uncertainty is holding back clean-tech investment. They should also address their own infrastructure-investment backlog, although this could require them to revise government accounting methods that treat investment and consumption in the same way. In emerging economies, governments should promote the continued development of deep and stable financial markets that can effectively gather national savings and channel funds to the most productive investments. Today, the financial systems in emerging markets generally have a limited capacity to allocate savings to users of capital. We see this in these countries' low level of financial depth—or the value of domestic equities, bonds, and bank deposits as a percentage of GDP. Policy makers should also create incentives to extend banking and other financial services to the entire population.

At the same time, policy makers around the world should create the conditions to promote long-term funding and avoid financial-protectionist measures that obstruct the flow of capital. This will require removing constraints on cross-border investing, whether through restrictions on pension funds and other investors or on capital accounts. Policy makers must also create the governance and incentives that enable managers of investment funds with long-term liabilities, such as pension funds, insurance companies, and sovereign-wealth funds, to focus on long-term returns and not on quarterly results that reflect market movements and can deviate from long-term valuations. At this writing, global investment already appears to be rebounding from the 2009 recession. The outlook for global saving is less certain. A climate of costlier credit will test the entire global economy and could dampen future growth. The challenge for leaders will be to address the current economic malaise and simultaneously create the conditions for robust long-term growth for years to come.

2.8 Self Assessment Questions

1. Briefly explain financial markets.
2. What is the difference between primary and secondary markets?
3. Compare various alternatives based on cost.
4. Explain financial markets and their economic functions.
5. What are financial intermediaries?
6. What are money markets?
7. What are the types of markets?
8. Explain different segments of markets.
9. Explain the significance of financial integration.
10. Explain the factors that aid in distinguishing one market from the other.
11. Critically assess the impact of globalization and liberalization on the efficiency of financial markets.
12. Explain the various instruments used in the bond market.

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Unit – 3: Cross Border Financial Flows

Structure of Unit

3.0 Objectives

After completing this unit, you would be able to:

- Develop an understanding of the importance of cross border capital flows;
- Analyze the behavioral pattern of such flows;
- Compare the flows across countries.

3.1 Introduction

A country cannot survive on its own. It is dependent on other countries for various requirements. The needs of a developing country are many. It requires financial and other material resources for its development. Ever since, countries started discovering the availability of resources in other countries, they tried either to acquire the resources by force or through trade relations. When the countries realized the negative consequences of a war, they started importing resources from other countries in an ethical manner. Since the resources are scarce and sometimes imports are too expensive, the countries analyzed alternate methods of acquiring or using the resources of other countries. In their quest for ways and means to utilize resources to the optimum, they discovered the technique of investing in other countries. The developed countries started investing in other countries and this practice, they understood would result in benefits to both the parties. But, in order to do this, both the countries should be ready to be open up its frontiers to financial flows. This necessitated the reforms by way of liberalization and globalization. The term globalization connotes adopting the entire globe as one market. Two parallel phenomena happen when an economy globalizes itself. One phenomenon is liberalization and the other is integration. Liberalization means adopting liberal policies in order to ease out financial and trade flows across borders. Integration means making the markets work closer to each other.

3.2 Background

3.2.1 Financial Market Integration - Meaning

The primary function of any financial system is to facilitate the transfer of resources from the area of surplus to the area where there is a deficit. Going in this direction, the purpose of establishing a financial system at the global level is to facilitate funds transfer across countries. That is, transferring resources from capital-rich countries to capital-starved countries. In order to efficiently perform this function, the financial markets across the globe have to be integrated. Financial integration is the process through which financial markets in an economy become more closely connected with those in other economies. This implies an increase in capital flows and a tendency for prices and returns on traded financial assets in different countries to equalize (De Brouwer 2005).

3.2.2 Advantages of Integration

Higher integration generally results in easier flow of funds from one country to the other. The purpose of transferring funds is to accelerate the growth of undeveloped, underdeveloped and developing economies. This, gradually, results in a balanced development across the globe. The capital-rich countries, at the same time, enjoy higher return on investment, which could be reinvested either in the host country or in the other economies. Similarly, the transfer need not be financial alone; it could be transfer of technology, human capital, raw material etc. Going by the theory of Comparative Advantage, no country shall be efficient in manufacturing everything. One country certainly enjoys an edge over its counterparts, in certain areas. Thus countries decide to invest or to procure based on their core competencies. But all these benefits could be realized only with greater levels of integration among financial markets. The importance of integration was felt due to three major developments in the financial markets. They are as follows:

1. Financial Innovation:

There has been a sudden spurt in the innovation of various financial instruments in the recent past. Financial markets are considered complete only when there is a parallel derivative market. Primary and secondary market leads to investments that are risky. Some are riskier compared to others. But no investment is risk-free. The existence of a derivative market functioning parallel helps an investor to mitigate risks that arise out of the basic investments. Though the evolution of derivatives could be traced to history, its widespread application is of recent origin. Various combinations of plain vanilla derivatives too are used extensively across globe. Financial markets of emerging economies do not have sophisticated derivative instruments; hence investors look up to the developed economies for derivatives. Hence there arose the need for integrating financial markets

2. Regulatory Environment (giving away restrictive environment):

Earlier the environment was restrictive in the case of many economies. Many of the business practices were restricted. But with the advent of globalization, economies had

to follow liberalization in order to open up the flow of trade and finance. Many firms have to follow the rules and regulations laid down by the regulatory authorities for the smooth conduct of their businesses. When a firm operates in more than one country, it has to follow the rules and regulations of multiple countries. This process is eased out, with greater level of integration.

3. Increase in Foreign Ownership:

With globalization, many developed countries started showing interest in investing in emerging economies. Firms had the choice between either investing directly into the businesses or invest in the stocks of companies. The former is known as Foreign Direct Investment and the latter is known as Foreign Institutional Investment in India. In certain countries, the latter is known as Portfolio investments. These types of cross border ownership are beneficial to both the countries. Hence a great integration of financial markets would help in maximizing the benefits that arise out of such transactions.

3.2.3 Challenges in Integrating Markets

There has been a lot of debate on how financial integration contributes to the financial stability of an economy. One half of the opinion favours integration and the other half is of the opinion that integration disrupts stability. The cause of the recent financial turmoil was also attributed to the policy makers for integrating the markets. Now that we have seen the advantages of integrating economies, we should also understand the constraints or the challenges that come while integrating. Challenges have to be redressed while integrating markets. Thus it has become imperative for policy makers to encourage integration only across economies that are fairly stable. Mr Benoît Cœuré, Member of the Executive Board of the ECB, at 3rd Pan-Asian Regulatory Summit organized by Thomson Reuters, Hong Kong, 28 November 2012, had put forth the following precautions for effective integration:

1. Appropriate policy tools to ensure that financial integration does not result in the development of opaque instruments and business activities which diminish transparency and undermine confidence in financial markets.
2. Since financial markets are prone to short-sightedness, herd behavior and sudden changes in market sentiment which may be detrimental to financial integration and stability, incentives of managers and employees should be aligned with the risks they are taking in order to ensure that the long-term viability of financial institutions is appropriately taken into account in business decisions.
3. Prevent financial integration from leading to an excessive concentration of risks and leverage in the balance sheets of financial institutions. This may pose a risk to systemic stability.
4. Tools to mitigate the risks of contagion across institutions and jurisdictions should be available.

As a final step, he stressed the importance of monitoring, assessing and supervising all types of risk and financial activity that may imperil financial stability. There are a

number of differences among countries in respect of various macroeconomic indicators. Macroeconomic indicators are certain general phenomena that pertain to economies and indicate the economic condition of the economy. Examples of macroeconomic indicators include Gross Domestic Product (GDP), Savings rate, Investment rates, Unemployment rate, Inflation, Interest rates etc. The pace at which two economies grow differs considerably making it difficult to integrate the economies. Thus for optimizing the results of integration, these areas have to be redressed first.

3.3 Cross Border Cash Flows – An Insight

3.3.1 Meaning

Cross border cash flows mean movement of money between countries with the objective of trade, and or investment. The flow is normally from capital-rich countries to the capital-starved countries. This is also, some times, used synonymously with cross border financing. When countries globalize, they liberalize their policies with respect to trade and finance. They open up their boundaries for other countries to invest and trade. This results in two types of activities, namely, financial globalization and trade globalization. Financial globalization connotes globalizing and liberalizing financial policies and trade globalization connote liberalizing and globalizing trade policies. Trade includes both merchandise and services. Businesses require uninterrupted supply of money for running effectively. Due to the continuous requirement for funds, firms to resort to various forms of financing. With the advent of economic reforms, every firm resorts to financing from other countries too. Now a days, financial globalization, has thus, over taken trade globalization in many developing countries. Capital flow could be inflow and outflow. Inflow indicates acquisition of assets of the host country by a non-resident. For example, if a non-resident Indian or a foreign company acquires the assets in India, it is considered as Inflow as money is flowing into the country. It is an outflow, if Indians invest in other countries as money is flowing out of the country. In India, the current scenario is the result of a gradual transition. During the post Independence period, the flow from other countries used to be predominantly subsidies and grants. The later periods saw insurgent funds in the form short term loans and deposits from Non Resident Indians. When the Indian subcontinent witnessed slow growth due to a huge current account deficit, a new set of reforms was initiated by the government during the year 1991.

3.3.2 Benefits

a. Availability of Capital:

In any economy it can observed that there are corporate which are in need for capital for their activities like expansion or purchase of new machinery or R&D etc, and there are households who have savings which can be invested for a short period of time for a rate of interest or capital gain. Similarly in the economy of the world, there are countries which have surplus of capital while there are countries which are deficit of capital. Cross border financial flows enables the countries which are deficit to borrow money from

countries which have surplus capital and thus helps in the growth and development of the deficit economy.

b. Proper Channelization of Funds:

The cross border capital flow helps in proper channelization of funds. It ensures that countries which are in need of capital are able to access the funds and provides a proper way of exchange of currencies.

c. Diversification:

The cross border capital flows also facilitates diversification opportunities to the investors. FDI and FII are the main ways for investors who get benefit. In case of FDI cross border capital flows help them to invest in different industries across countries. FIIs are also able to invest in capital markets of different countries. This is advantageous as it helps in hedging the risk that would be faced by investing in one economy. When there is a drop in the economy of one country, a portfolio consisting of other economies will help to reduce the losses due to the drop. This property is called as geographical diversification.

d. Greater Economic Integration:

All countries are integrated together in the global economy. Once capital restrictions are removed countries tend to become more integrated as financial markets are already integrated. More power to the markets and all decision making become decentralized and thus Beauracracy and redtapism can be eliminated.

3.4 Drivers to Increasing Flows

Certain factors have been acting as drivers to cross border flows. Let us discuss some of the important factors:

A. Increased Openness of Markets

The benefits and challenges listed in the previous paragraphs provide the costs and benefits of financial flows. It could be assimilated that benefits generally outweigh costs in the case of financial integration. This is the major reason for countries to make themselves open to trade and finance. This has acted as a major driver to enhance financial flows across the globe.

B. Lesser Capital Controls

Another major reason that has attributed to cross border flows has been the countries lifting capital restrictions. In case of India, full convertibility is permitted in current account. That also helps investing countries take their share of the profit without any difficulty. Full capital convertibility is a distant dream at present for the country. A country has to be more self-reliant to enable full convertibility. But, to a large extent, the investing country can easily invest in the businesses of the host country unlike earlier days, when restrictions were plenty.

C. Necessity for Capital in Emerging Economies

Developing economies are in constant need for finance. This makes them remove restrictions and in turn capital – rich countries transfer their financial resources to developing economies.

D. The Rise of Asian Economies

If we see the history of the world, the Second World War left many economies torn. They had spent huge amounts on wars. Countries like Japan had to pay a heavy penalty for their mistakes. Similar is the case of Germany. England was in a state of decolonizing its captive countries. The United States, being one among a few countries, were found capital-rich and ability to spend for the revival of the globe. Evers since, that, we can see a huge flow of financial resources from the West to the East. Asia has become the major destination. The Asian Crisis of 1997 acts as a proof. As a cost to attracting funds, countries had to face inflation and accelerated growth. These two after-effects became difficult for Asian economies including Malaysia, Thailand to manage and this led to a huge financial crisis in Asia.

E. Growing Importance to Services Sector

When we examine the trend in the financial flows, it is very obvious that the services sector is getting the major share. The services sector comprising of the Information Technology and Information Technology Enabled Services have seen a stupendous growth. The Portfolio investment too is seen more in IT and ITEs companies.

F. Emergence of Euro and Single European Act

Though war has separated many countries, the formation of European Union has been a major development. This acts as a blessing to investing countries as they do not have to convert currency across Europe, at least. Many major European countries have agreed to trade using a single currency Euro. Latest reports say that the number of countries have raised to about 28.

G. Trade Agreements

Many countries have come together to form free trade agreements to encourage and strengthen trade relations. NAFTA, SAARC, ASEAN, etc are examples for this. By setting up such agreements, many concessions and liberalizations are given to member countries, thus helping them reap more benefits and lower costs. Similarly tax havens too are set up that do not tax the income generated out of cross border investments. This has prompted countries to invest in member countries.

3.5 Factors affecting International Trade Flows

Many factors affect the flow of finance and trade from one country to the other. However, only the major factors are discussed in the following section.

A. Inflation

Inflation is a condition that witnesses accelerated supply of money in an economy. It is understood generally from an increase in the price levels of the economy. However, these two should not be taken as synonymous. When financial flows to an economy increase, the inflation level too rises. If it rises beyond a certain limit, countries resort to control measures like decreasing the interest rates. A decrease in the interest rates decreases the short term return on investment. This could impact the flows for some time till the economy stabilizes. The other way of understanding the impact of inflation is using the price levels. As price levels of a country increases, the consumers resort to substituting the home-made products with imported products. Adding to this, increasing price levels demand increase in finance.

B. Interest Rates

The combined effect of inflation and interest rate was discussed in the previous paragraph. The independent impact of interest rate is that higher interest rates make the investors demand higher returns. This is understood from the famous Capital Asset Pricing Model. The investors demand a premium for the additional risk taken by them for investing in the equity and or businesses of a country rather than investing in fixed income securities. Thus, higher interest rates increase expected rate of return. Unless the investors are compensated with higher yields, they shun away from direct and portfolio investments.

C. Widening Current Account Deficit

Current account deficit results when imports exceed exports. Higher inflation is reflected in increased price levels. This makes import less expensive than home-made goods. This results in increased current account deficit. Similarly, capital control measures encourage capital outflows when inflationary conditions become unmanageable. This also widens current account deficit.

D. Exchange Rates

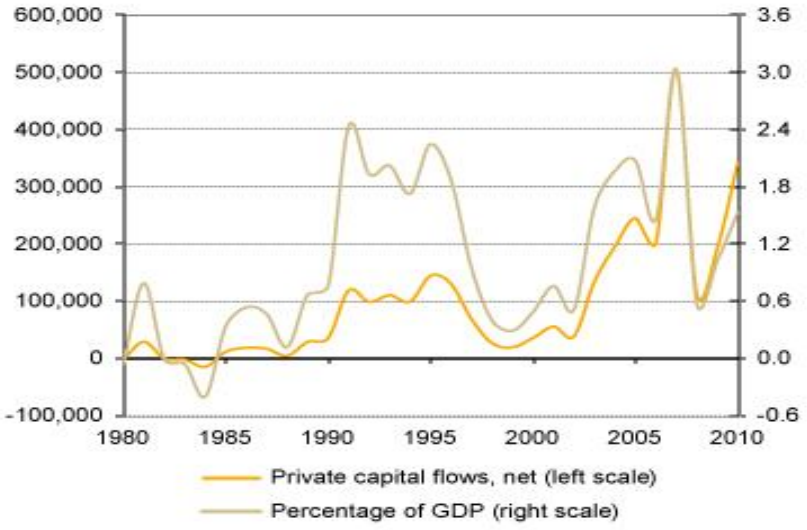
An increase in inflows results in higher Gross Domestic Product as the productivity levels of the country rises. This makes the economy grow stronger. This results in an appreciation of the host currency. An appreciated currency losses in export market as their products tend to become expensive in global markets. This negative impact on exchange rate is normally stalled by curbing the financial inflows by regulatory bodies of a country.

3.6 Trends in Cross Border investments

Though financial flows have been happening in the past, recently the trend has seen some specific patterns. It is important for a management professional to understand them. These trends are presented in this section of the unit.

The general pattern of the capital flows across countries is shown below:

Exhibit 3.1 Capital Flows

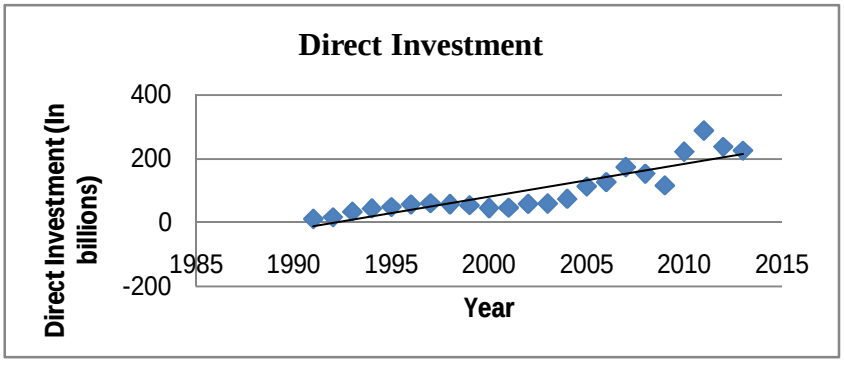


Source: UNCTAD secretariat calculations based on IMF, *WEO October 2011 www. http://dgff.unctad.org/*

3.6.1 Trend in Foreign Direct Investment

Foreign direct investment, commonly known as FDI, refers to an investment made to acquire lasting or long-term interest in enterprises operating outside of the economy of the investor. The investment is direct because the investor, which could be a foreign person, company or group of entities, is seeking to control, manage, or have significant influence over the foreign enterprise. A. Trend of FDI in Emerging markets is shown below:

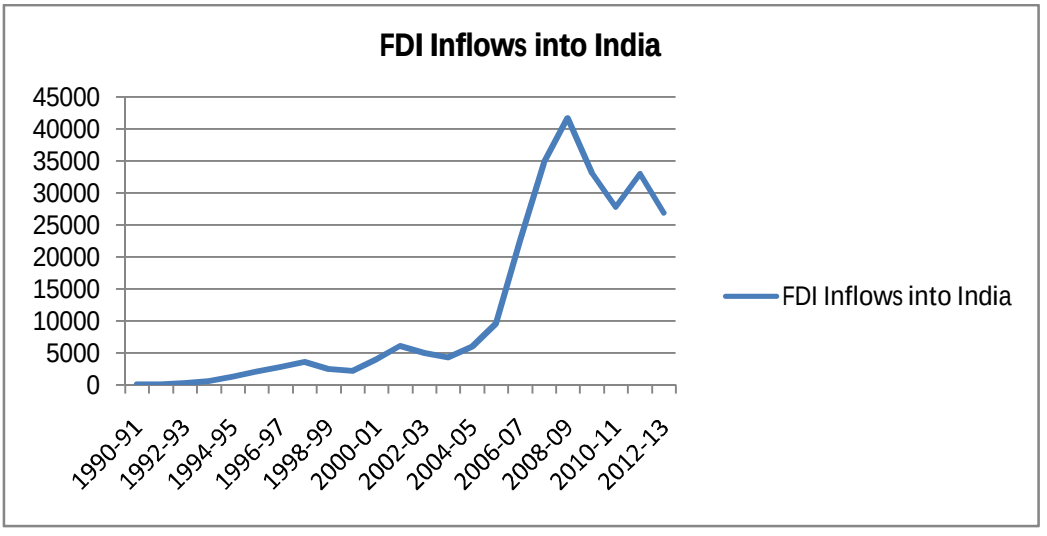
Exhibit 3.2 FDI in Emerging Markets



The above graph gives an insight into the direct investments that were made in Emerging markets in US Dollars for a period of 22 years from 1991 to 2013. The figure shows that there has been a linear increasing trend in the investment pattern. Post liberalization with all countries opening up their markets to the global players the amount of direct investment has increased considerably. Emerging markets like China and India in Asia attract a lot of FDI.

B. Trend in Foreign Direct Investments into India:

Exhibit 3.3 Foreign Direct Investments (Inflows) into India

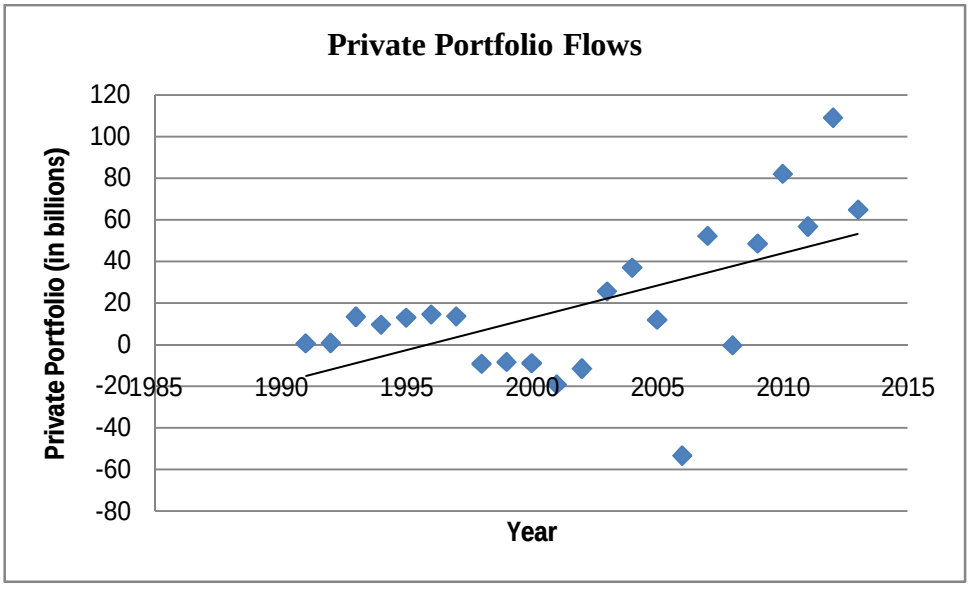


A deeper analysis of the figure 3.3 indicates the steep growth in direct investments from the year 1991. It can also be understood that the recession in the West was able to make a small dip in our inflows during the year 2008-2009 followed by recovery phase.

3.6.2 Trend in Foreign Institutional Investment

Foreign Institutional investments are when the foreign institutions pool in a large sum of money from individual investors and invest them in the home country's share market or other investments assets.FII in emerging markets is shown in the following figure:

Exhibit 3.4 FII in Emerging markets



This above graph gives the trend for the private portfolio flows in the emerging markets. There has been a dip during 2006 even though the overall movement is an upward trend in the private investments which includes FIIs.

Trend in FII in India: FII in India began in September 1992.Only 5% of the total capital issued by a company must be from FII. The funds invested by FII must have a minimum of 50 individual investors with no one holding more than 5%.NRI's are allowed to trade in the secondary market while foreign naturals are prohibited from investing in financial assets.

Table 3.1 Foreign Institutional Investment in India

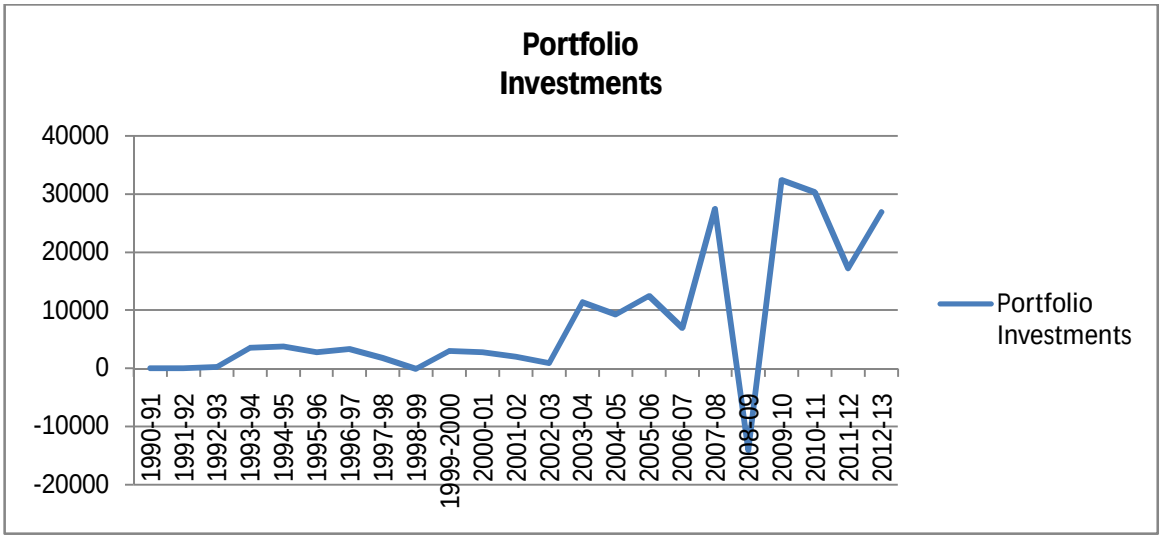
LAST 12 MONTHS	Equity (Rs. Crore)			Debt (Rs. Crore)		
	Gross Purchase	Gross Sales	Net Purchase/Sales	Gross Purchase	Gross Sales	Net Purchase/Sales
January 2014	65,817.20	65,958.50	-141.30 ▼	33,937.50	21,581.70	12,355.80 ▲
December 2013	59,185.00	43,759.40	15,425.60 ▲	15,384.00	9,877.40	5,506.60 ▲
November 2013	52,776.20	45,696.80	7,079.40 ▲	9,810.80	14,727.50	-4,916.70 ▼
October 2013	60,555.60	42,542.80	18,012.80 ▲	14,967.60	27,882.90	-12,915.30 ▼
September 2013	68,855.20	56,222.30	12,632.90 ▲	18,922.10	26,820.10	-7,898.00 ▼

August 2013	70,724.60	76,924.60	-6,200.00 ▼	18,975.00	27,633.90	-8,658.90 ▼
July 2013	59,869.30	66,989.50	-7,120.20 ▼	10,984.10	23,393.60	-12,409.50 ▼
June 2013	58,019.40	67,338.10	-9,318.70 ▼	12,241.20	43,825.00	-31,583.80 ▼
May 2013	78,529.40	57,261.70	21,267.70 ▲	26,949.40	24,309.60	2,639.80 ▲
April 2013	56,681.00	51,535.70	5,145.30 ▲	24,299.70	19,858.70	4,441.00 ▲
March 2013	67,654.30	55,993.80	11,660.50 ▲	27,096.00	19,570.20	7,525.80 ▲
February 2013	77,425.50	56,303.10	21,122.40 ▲	26,894.80	15,860.30	11,034.50 ▲
Total	**776,092.70**	**686,526.30**	**89,566.40**	**240,462.20**	**275,340.90**	**-34,878.70**

Note: The above report is compiled on the basis of reports submitted to SEBI by custodians and constitutes trades conducted by FIIs on and up to the previous trading day. Source: Money control.com

The following figure shows that the inflows into the country in the form of institutional investments too saw a spurt in the year 1993 and a dip during the recession in the west.

Exhibit 3.5: Portfolio Investments into India

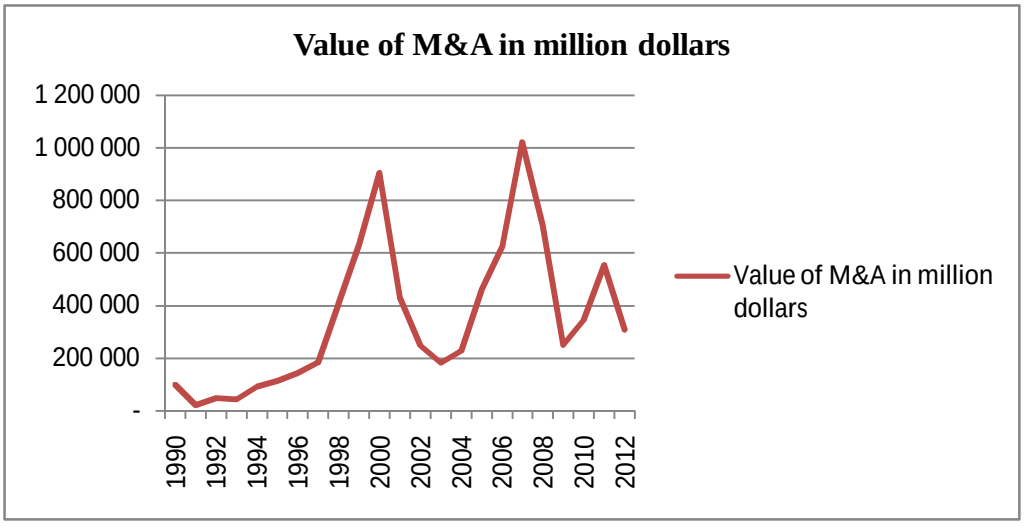


These exhibits (FDI and FII in India) also reveal the impact of economic crises on emerging economies like India. Though India remained insulated to a great extent from recession, the inflows decreased as other countries were forced to withdraw investments.

3.6.3 Trend in Mergers and Acquisitions:

Foreign (or cross-border) mergers occur when the assets and operation of two or more firms from different countries are integrated to establish a new legal entity. M&A don't give long term benefits to the local economy as the acquiring company is usually paid in stock. The general pattern of the mergers and acquisitions across countries is shown below:

Exhibit 3.6: Value of Mergers and Acquisitions



3.7 Summary

Emerging economies always look up to developed economies for various financial requirements. Developed economies always look out for investment opportunities. They find the emerging economies the best way to optimize their investments. So capital is always seen to flow from developed economies to emerging economies. There are many advantages for both the sets of countries involved. It also helps the globe attain a balanced development. The international intermediaries are set up with the objective of making the globe a level playing platform for all the countries. It also seeks to attain the objective of attaining balanced and sustainable growth. However, the preparedness of the emerging economies has to be tested before accepting funds. Recent past has shown economies becoming susceptible to financial shocks because of huge capital flows. This unit analyzed the trends in capital flows. It also presented the advantages and disadvantages of such capital flows.

3.8 Self Assessment Questions

1. Briefly explain the benefits and challenges of integrating financial markets.
2. What do you mean by the term "Market integration"?
3. What are the major types of Cross Border investment?
4. Differentiate Foreign Direct Investment from Foreign Institutional Investment.
5. What are the types of Foreign Direct Investments?
6. Enumerate the factors that drive cross border flows.
7. Describe the benefits and challenges that countries face because of augmented financial flows.

3.9 Reference Books

- Adrian Buckley, 'Multinational Finance', Sixth Edition, Prentice Hall.
- Stonehill, Eiteman et al, 'Multinational Financial Management', Pearson, 13th edition.
- Glen Arnold, 'The Financial Times Guide to Investing', Pearson, 2009.
- Laurel Copeland, 'Exchange Rates and International Finance', Pearson, 2014.
- Weber and Oberg, 'Managing the Critical Success Factors Across Every Stage of the M&A Process', 2014

Unit – 4: International Monetary System

Structure of Unit

4.0 Objectives

After reading this Unit you would be enabled to be conversant with:

- Meaning of International Monetary System.
- Various Monetary Systems – mainly the gold standard, the Brettonwoods system and the post Brettonwoods system.
- The current system of exchange rates prevailing in the world.
- Financial crisis in the Post Brettonwoods era.

4.1 Introduction

International Monetary system influences the entire world in some way or the other. It ensures smooth and orderly international payments, restricts unnecessary and speculative cross-border flow of funds and manages exchange rate fluctuations within reasonable limits. Not only this, it creates an atmosphere of mutual trust and faith among the nations of the world community so that economic and financial chaos could not develop which ultimately disrupts growth in world trade and hampers prosperity of nations. Looking towards the severe implication of international monetary system, we would discuss all important issues pertaining to it in this unit. The main focus in this unit will be to analyze the Brettonwoods system and the current international monetary system which have significant impact on international economics and economies.

4.2 Meaning of International Monetary System

The international monetary system may be defined as the institutional framework within which international payments are made, movements of capital are accommodated and exchange rates among currencies are determined. It is a complex range of agreements, rules, institutions, mechanisms and policies regarding exchange rates, international payments and the cross-border flow of capital. Thus, the international monetary system consists of the laws, rules, monetary standards, instruments and institutions that facilitate international trade, international payments and movement of capital across the world.

As various countries may have different monetary standards, an international monetary standard is required to define a common standard of value for various currencies so that par values of currencies of different countries may be fixed and maintained at certain level for exchange of goods and services among different nations of the world.

4.3 Evolution of International Monetary System

The international monetary system has evolved over time and will continue to do so in the future as the fundamental economic and political conditions underlying the world economy continue to change. The international monetary standard has gone through the several changes over the years or it went through the several distinct stages of evolution. These stages are as follows:

4.3.1 Bimetallism

The international monetary system before 1970s can be characterized as 'Bimetallism' in the sense that both gold and silver were used as international means of payment and that the exchange rates among countries were determined by either gold or silver contents of currencies. Around 1870s, for instance, the exchange rate between the British pound, which was fully on a gold standard and the French franc, which was officially a bimetallic standard, was determined by the gold content of the currencies. On the other hand, the exchange rate between the French franc and the German mark was determined by their exchange rates against the franc. It is also worth mentioning that due to various reasons, some major countries such as U.S., Russia, Austria and Hungary had irredeemable currencies at one time or another during the period 1848-79. Thus, one might conclude that the international monetary system was not fully systematic until the 1870s.

Salient Features of Bimetallism:

1. Coins of two metals (gold and silver) are simultaneously in circulation.
2. Coins of both metals are standard coins.
3. Coins of both metals are full bodied money and there exist a free coinage of both.
4. Coins of both metals are unlimited legal tender.
5. No restriction on import - export of both metals.
6. Coins of both metals are convertible in each other at the predetermined rate by the Government.

Bimetallism, for the first time, was adopted by U.S. in 1792 and France adopted it in 1803. The International conference on monetary union was held in 1872 and 1878, in which the emphasis was placed on the adoption of bimetallism at international level. But due to strong opposition by England, it could not be accepted. Besides that, bimetallism had so many drawbacks – among many, the most important were the operation of '**Grasham's Law'**, costly system, encouragement to speculation and operational difficulties. **A. D. Gayer** has rightly mentioned that the bimetallism in practice takes the shape of Monometallism (either gold standard or silver standard remain in operation).

4.3.2 Monometallism

If the monetary unit of a country's currencies is made of only one metal, the system is known as Monometallism. For instance, for a long time, the United Kingdom was on the gold standard and India was on the silver standard.

4.4 The Gold Standard

The gold standard deserves special mention because it remained in vogue for almost a century and two decades before its breakdown in nineteen thirties. England was the first country to adopt the gold standard in 1816. Germany adopted the gold standard in 1871; while USA adopted it in 1893 when the silver dollar was abolished. In the beginning of the 20th century gold standard had become the principal monetary standard of the world. It was prevalent in almost all major countries of the world except India, Spain and China.

According to **Coulborn,** "The gold standard is an arrangement whereby the chief piece of money of a country is exchangeable with the fixed quantity of gold of a specific quality". According to the rules of gold standard, the value of the monetary unit of country (e.g. paper money) was fixed in terms of a specified quantity and fitness of gold. Government were committed to a policy of converting gold into paper currency and paper currency into gold, by buying and selling gold at specified rates. The issue / circulation of money in a country were backed by its gold reserves at a specified ratio. Thus, the stock of money in a country would increase or decrease with changes in its gold reserves. The exchange rate between any two currencies was determined by the ratio of the price of a unit of gold, in terms of the respective units of each currency. For example, during 1821-1914, the United Kingdom had maintained a fixed price of gold at GBP 3.17 per ounce, while the United States maintained it at USD 20.67 per ounce of gold. Accordingly, the US dollar and British pound exchange rate was fixed at GBP/ USD 6.5205, which was considered to be the par exchange rate. In essence, pegging currencies to gold and guaranteeing convertibility of currency into gold is known as gold standard.

When the value of currency of each country is fixed in terms of specified quantity of gold, the exchange rate is automatically fixed by the mint parity or gold parity. In reality, the exchange rate may be different from the mint parity, but it may not fluctuate beyond the lower and upper gold points due to complete freedom of export and import of gold.

The lower and upper gold points were determined by the actual transportation cost of import and export of gold. If exchange rate in reality fluctuates beyond the gold points, the import- export of gold takes place which stabilizes the exchange rate.

Under the gold standard, any disequilibrium in balance of payments (BOPs) of a country is adjusted through a mechanism called the 'price-specie automatic adjustment mechanism'. Suppose, a country is having surplus in its BOPs, will receive gold from other countries because its total receipts are greater than its total payment liabilities. The inflow of gold will increase the monetary reserves of the country, which, in turn, leads to an increase in money supply. Accordingly to quantity theory of money, other things remaining unchanged, an increase in money supply implies rise in price level. Higher prices would make the country's goods and services relatively more costly in international markets. This would result into fall in exports, leading to reduction and ultimately disappearance in surplus. Thus, surplus in BOPs would be automatically corrected. The reverse process would occur with a BOPs deficit and outflow of gold.

The gold standard was widely appreciated because of certain inherent characteristics. Under the gold standard, any disequilibrium in BOPs of a country gets corrected automatically. As gold is the base for the creation of money in the economy, politicians do not have discretionary powers of money creation. It provides the gold standard countries with an international medium of exchange and standard of value. Thus, it gives practical shape to the idea of international money. The most important advantage of international gold standard is the stability of exchange rate as stated earlier. Countries adopting gold standard can also maintain stability in their internal price levels through the free mechanism of gold movements.

Notwithstanding these merits, the gold standard is criticized mainly because of its inflexibility. The rules of the gold standard do not allow the government to increase the money supply in the country without increasing gold reserves, even when the expansion of money supply is necessary to tide over serious situations. Besides, the gold standard cannot bring automatic correction of disequilibrium in BOPs, unless all countries follow the **"golden rules"** of the gold standard.

The gold standard that existed till 1914 was called the "classical gold standard" and it was embraced by most nations during the period 1880-1914. During this period, there was rapid expansion of international trade with stable domestic prices and exchange rates. Along with free flow of goods, there was also a free flow of labour and capital across the world. With breakout of World War I in 1914, the classical gold standard came to an end mainly because of high rate of inflation and non adherence to the rules of the gold standard.

The Gold Exchange Standard

During the post war period, countries followed their own exchange rate system keeping in view of their domestic compulsions. It was a period of flexible exchange rates that lasted until 1926. France devalued its currency to stimulate exports. Many countries followed a policy of sterilization of gold by neutralizing the effects of gold flows on

domestic money supply. It was against this backdrop that some major countries including the U.K. and U.S., made efforts to restore the gold standard, which later came to be known as gold exchange standard. According to gold exchange standard, only U.S. and U.K. could hold gold reserves, while other countries could hold both gold and U.S. dollars or British pounds as reserves. These reserves were meant for managing BOPs and foreign exchange situations. Further, countries on gold exchange standard had to relate the value of their paper currency to the value of the currency which was operating gold standard (i.e. the U.S. or the U.K.). For instance, if a country had U.S. dollar as its reserve, its currency was convertible into U.S. dollars, which, in turn, was convertible into gold.

With the onset of the great depression in 1929, countries failed to follow the rules of gold exchange standard. Many countries resorted to the competitive devaluation,, as a result exchange rates fluctuated widely. The U.S. pulled out from the gold exchange standard in 1933, and many other countries followed suit. Finally, the France abandoned the gold exchange standard in 1936.

4.5 The Brettonwoods System

In 1944 representatives of 44 countries met at Brettonwoods, New Hampshire (U.S.) to design new international monetary system and to bring international financial order back on rails as it collapsed due to breakdown of gold standard and great depression of 1930s. Due to the competitive devaluation policy followed by many countries the need for such a system was felt which could provide stable exchange rate under the surveillance of an independent international body. The main purpose of the meeting at Brettonwoods was to overcome the situation of financial instability and chaos and to establish world economic order.

After a series of deliberations and negotiations, the representatives of 44 nations agreed to adopt the **Article of Agreement** which envisaged the creation of following two new institutions at international level:

1. The International Monetary Fund (IMF); and the
2. International Bank for Reconstruction and Development (IBRD), popularly known as the World Bank.

The main objective of the IMF is to promote international monetary co-operation among member countries and facilitate the balanced growth of international trade. The IMF is also expected to enforce set of rules governing the international monetary system with the purpose to keep check on volatile fluctuations in exchange rates. In case of BOPs difficulty, IMF provides the financial assistance to the suffering member country/s for shortening the duration and lessening the degree of disequilibrium in BOPs. The **Article of Agreement** contained the following pertaining to international monetary system:

1. The IMF embodied an explicit set of rules about the conduct of international monetary policies and is responsible for enforcing these rules.

2. An adjustable peg exchange rate system was adopted. According to the agreement signed by the representatives, each country has to fix a par value of its currency in relation to U.S. dollar, which was pegged to gold at USD 35 per ounce and member countries were expected to maintain their exchange rates within a margin of 1 per cent on either side of the par value. The exchange rates thus were allowed to fluctuate only within **± 1 per cent band** of the stated par value. Whenever the market conditions cause exchange rates to fluctuate outside the permissible limits, countries would buy or sale U.S. dollars in the market in order to keep the exchange rates within the prescribed margins.
   For example, the British pound was set at GBP 12.0 per ounce of gold, which means the exchange rate between U.S. dollar and British pound was set at GBP/USD 2.92. The upper and lower support points that the United Kingdom needed to maintain were USD 2.949 and 2.891 respectively.

   The U.S. dollar was the only currency that was freely convertible into gold. As there was guarantee of the U.S. dollar of convertibility into gold, other countries could hold reserves in U.S dollars as well as in gold. The U.S. dollar thus became the world's reserves currency and international liquidity came to be governed by the U.S. monetary policy.

3. A commitment by member countries not to use devaluation as a weapon of competitive trade policy. However, if a country's currency become too weak to defend, devaluation up to 10% is permissible without any formal approval of IMF.

   If a country wanted to effect changes larger than 10% in the exchange rate, it had to obtain prior approval from the IMF. However, this facility was not available to the United States of America, which did not enjoy the privilege of changing the parity of its currency against gold or any other currency. On the contrary, U.S. has the responsibility of maintaining the gold value of the U.S. dollar and price stability around the world. Whenever other nations wanted to convert their U.S. dollar balances into gold, the U.S. had to facilitate such conversion. For this, it was required to maintain enough gold reserves to facilitate conversions of dollars into gold at any time. As a reward for shouldering such onerous responsibility, the U.S. was permitted to print more dollars and thereby derive seignior age gains.

   In order to alleviate the pressure on U.S. dollars as the central reserve currency, the IMF created **Special Drawing Rights (SDRs),** which represented a basket of major currencies. SDRs were allocated to member countries which, in turn, would use them for transactions among themselves or with the IMF. These SDRs could also be used as reserve assets.

The Role of IMF: The aim of the Brettonwoods agreement, of which IMF was the main custodian, was to avoid of repetition of that chaos which took place during and after the great depression of 1930 and during Second World War, through a combination of discipline and flexibility.

Discipline

(i) The need to maintain a fixed exchange rate puts a break on competitive devaluations and brings stability to the world trade environment.

(ii) A fixed exchange rate regime imposes monetary discipline on countries, thereby curtailing price inflation.

Flexibility

(i) Lending facilities: The IMF was ready to lend foreign currencies to member countries tide them over their deficit in BOPs. A pool of gold and currencies with IMF member's fund would buy time for countries to bring down inflation and reduce their deficit in BOPs. The idea was that assistance from IMF would reduce pressure for devaluation and allow for a more orderly and less painful adjustment.

(ii) Adjustable parities: The system of adjustable parities allowed for the devaluation of a country's currency by more than 10% if the IMF agreed that a country's BOPs was in fundamental disequilibrium. The term fundamental disequilibrium was not defined in IMF's Articles of Agreement, but it was intended to apply to countries that had suffered permanent adverse shift in the demand for their products. The new adjustable peg system of IMF came to be popularly known as Brettonwoods System.

4.6 Failure of Brettonwoods System

The Brettonwoods system worked almost smoothly till 1960s. There was stability in exchange rates which promoted international trade and investment. The system also brought about some sort of discipline on the part of member countries as far as their economic policies were concerned. In the early 1970s, however, it was realized that Brettonwoods system was not working well. Because of spiraling prices, many countries devalued their currencies by more than 30% against U.S. dollar. A few countries revalued their currencies. Many countries were unable to maintain their par values against U.S. dollar. Since gold production was almost stagnant, world reserves could be increased only if nations increase their dollar holdings. Increase in international trade necessitated increase in official reserves held by various countries in order to facilitate payment for the trade.

To get around the problems, countries started holding dollar reserves. They held reserves in the form of interest bearing securities issued by the U.S. government. This was encouraged by the U.S., since US could pay its increased imports just by printing dollars, without suffering reduction in its gold reserves. This created a paradox in the system known as '**Triffen Paradox or Triffen Dilemma'**, after a Yale University Professor, Rober Triffen, who first spoke about it in 1960. According to him, it was necessary for US to run a BOPs deficit strategy to supply the world with the additional dollar reserves needed for increased international trade. As a result of this, the deficit of

US increased and the volume of dollar reserves held by other countries grew without a simultaneous increase in US gold reserves, its ability to honour its commitment (converting dollars into gold) diminished. This created the crisis of confidence about the ability of US to convert the dollar holdings with other nations into gold and ultimately led to the breakdown of Brettonwoods system.

In the beginning of August 1971, France needed gold to repurchase francs from the IMF, which it had sold earlier in harder times. It fulfilled this need by converting its dollar holdings into gold. As gold reserves of US fell and rumours spread about Britain to follow the same route as that of France, panic spread in international markets about the US ability to honour its commitment. This caused a run on its gold reserves as all countries rushed to get their dollar holdings converted into gold. This precipitated matters so much that the US decided to stop converting dollars into gold and let its currency float on August 15, 1971 and also imposed 10% tariffs on imports.

The intention of US behind all these steps was not to shift from a pegged exchange rate system to a floating rate system, but to seek realignment of exchange rates. Therefore, a meeting of group-10 countries of IMF was called in December, 1971 at the Smithsonian institute in Washington to consider the issue of realignment of exchange rates and signed an agreement, known as the **Smithsonian Agreement**. According to the terms of agreement, the par value of gold was raised to USD 38 per ounce and thus the dollar was devalued. Other countries were allowed to revalue their currencies against dollar by up to 10% and the band within which exchange rates were allowed to fluctuate was broadened from 1% to 2.25% in either direction.

A few months after the Smithsonian agreement, the foreign exchange rates of major currencies including the dollar, became volatile. The U.S. dollar was devalued for a second time and the par value was reduced by 10%, i.e; from USD 38 to USD 42.22 per ounce gold. But such measures were not sufficient to stabilize the exchange rates. US trade deficit still continued to rise. The US dollar and British pound became weak. A a result, there was a massive flow of capital towards countries with strong currencies, such as Germany, Switzerland, Netherlands, France and Japan. Therefore, in March 1973, the group of 10 nations announced that they would allow their currencies to float.

4.7 Post Brettonwoods System

As the Brettonwoods system was abandoned, most countries shifted to floating exchange rate system. This fact was finally recognized by the IMF and it convened a monetary summit in Jamaica in January 1976 to approve the following broad options suggested by a committee constituted to evolve an exchange rate system :

1. Floating regimes ;
2. Pegging of currencies ;
- to a single currency
- to a basket of currencies
- to SDRs ; and
3. Crawling pegs.

The IMF Articles of Agreement were amended on April 1, 1978 to allow each member nation to choose an exchange rate system best suited to its needs, subject to firm surveillance of member's policies by the IMF. This was the second amendment to the IMF's articles. Member countries individually or in groups, have thus adopted different exchange rates approach as mentioned above within broad framework given by the IMF. They pegged their currency exchange rates either to the US dollar, the France franc, some other currency or to some basket of currencies or to composite currency such as SDRs. Some countries like the US have allowed their currencies to float independently. The crawling was also adopted by a few developing countries. Some countries that had initially opted for a particular exchange rate system subsequently switched over to floating exchange rate system. The flexible exchange rate system gradually became widely acceptable.

Since 1978, the exchange rate system of various countries has gone through the several modifications. However, the trend has been towards the adoption of more flexible exchange rate system. Further, with the introduction of Euro, development of emerging markets, evolution of transnational economies through globalization, many changes have taken place in international financial markets.

While countries were free to determine their exchange rate policies under the Article IV of the Agreement, they were required to ensure that the economic and financial policies, followed by them were such as to foster orderly economic growth and reasonable price stability. They had to follow the principles of exchange rate management adopted by the IMF in April 1979. According to these principles :

1. A member country neither should manipulate the exchange rates in such a way as to prevent a correction in BOPs situation, nor should it use the exchange rates to gain competitive advantage in international markets.
2. A member country is required to prevent short-term movements in the exchange rates, which could prove disruptive to international transactions, by intervening in the exchange markets.
3. While intervening in Forex markets, a member country is required to keep other countries interests in mind, especially the country whose currency it chooses to intervene in.

   These principles attempted to bring some stability in the Forex markets and to prevent another bout of competitive devaluations.

4.8 Financial Crisis in Post Brettonwoods Era

A number of financial crisis have emerged in post Brettonwoods era, many of which had IMF interference and involvement. The following are the types of crisis :

1. **Currency Crisis:** It occurs when a speculative attack on the exchange value of currency forces authorities to spend large amounts of international currency reserves and sharply increase rates to defend the prevailing exchange rate.

2. **Banking Crisis**: It refers to the loss of confidence in the banking system that leads to run on banks, as companies and individual withdraw their deposits.
3. **Foreign Debt Crisis:** It is a situation in which a country is unable to service its foreign debt burden.

These crisis tend to have common micro-economic (domestic) causes :

- High relative inflation rates.
- High and widening current account deficit
- Excessive expansion of domestic borrowings
- Asset prices bubble - such a sharp rise in stock and property prices.

The following crisis have been of particular significance in terms of IMF involvement and their larger impact :

1. Third world debt crisis of 1980s.
2. Argentina crisis of 1980s.
3. Mexican currency crisis of 1994.
4. Brazilian crisis of 1992-97.
5. Asian currency crisis of 1997.

4.9 Summary

International monetary system is a complex range of agreements, rules, institutions, mechanism and policies regarding exchange rates, international payments and cross-border flow of capital. International monetary standard can be defined as a common standard of value for various currencies so that par values of currencies of different countries may be fixed and maintained at certain level for exchange of goods and services among nations of the world. The international monetary system has evolved over time and will continue to do so in future also. The main stages of evolution are bimetallism, gold standard, Brettonwoods system and post Brettonwoods system. In bimetallism two metals (gold and silver) were used and the exchange rate among countries was determined by either gold or silver contents of currencies. In case of monometallism, the country's currency is made only of one metal. The gold standard which prevailed over many years was a fine example of monometallism. In the gold standard, the currency of the country is exchangeable with the fixed quantity of gold of a specific quality and the par value of currency is automatically fixed by the gold parity of currencies.

After collapse of the gold standard during great depression of 1930s and Second World War period, the chaotic conditions were created due to many reasons. Therefore to design new international monetary system, 44 countries met at Brettonwoods (US) and they agreed to create IMF and the World Bank. The member countries of IMF adopted an adjustable peg exchange rate system, under which each member country was required to fix a par value of its currency either in gold or in dollar, which was pegged to gold at

USD 35 per ounce. The par values were allowed to move within ± 1% band. The dollar holdings with other nations were convertible into gold and thus dollar became the world's reserve currency. The Brettonwoods system worked well till 1960s, but in 1970s it suffered rough weathers due to many reasons. On 15th August 1971, US declared that the dollar holdings with other countries are no longer convertible into gold and allowed the dollar to float. As a result of G-10 meeting, Smithsonian Agreement took place in December, 1971 by which the par value of gold was raised to USD 38 per ounce and dollar was devalued. Later the dollar was devalued second time and in March 1973, G-10 nations decided their currencies to float. The current floating exchange system was formally adopted from April 1st, 1978. Different countries adopted different kinds of floating exchange rate system. The present system is being monitored by the IMF. In the post-Brettonwoods era, the world suffered currency crisis, banking crisis and foreign debt crisis.

4.10 Self Assessment Questions

1. What do you understand by international monetary system? Also explain its evolution.
2. Explain the mechanism of gold standard. What were the main reasons of its collapse?
3. Critically examine the Brettonwoods system.
4. Make your observations about the post Brettonwoods system.
5. "IMF has lost its relevance in the present day context of international monetary system". Elucidate.

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Unit – 5: Balance of Payments

Structure of Unit

5.0 Objectives

After studying this unit, you should be able to –

- Understand the concept and functions of Balance of Payments.
- Make distinction between Balance of Trade and Balance of Payments.
- Know the accounts and items in BOPs.
- Trace out the disequilibrium in BOPs.
- Understand various types of disequilibrium in BOPs.
- Know the causes of disequilibrium in BOPs.
- Grasp the measures for correcting disequilibrium in BOPs.

5.1 Introduction

However developed a country may be, it has to depend on other countries for something or the other, as no country can produce all that is required for its people. The economies of the world are necessarily interdependent, especially in the present era of globalization. Specifically, international trade and inter-national flow of capital have assumed greater importance. In order to analyze and understand the monetary aspects of country's international interactions, a statement of international economic transactions is prepared by every country. Such a statement is called the Balance of Payments (BOPs). Indeed, BOPs of any country is the barometer of its economic position as it presents a bird's eye view of the economy. **Prof. Jevens** has rightly said that "What the periodic table of elements is for the chemist, the BOPs is to the international economist". In this chapter, we shall discuss the concept and other related aspects of BOPs.

5.2 The Concept of Balance of Payments

According to the Balance of Payments Manual (1993) of International Monetary Fund (IMF), "The BOPs is a statistical statement that systematically summarizes, for specific time period, the economic transactions of an economy with the rest of the world". The transactions between the residents of a country and the rest of the world involve:

- Goods, services and incomes;
- Financial claims on the rest of the world (foreign assets) and liabilities to the rest of the world; and
- Transfers.

The BOPs is thus an accounting statement that reflects all international economic transactions during a given period, usually a year, between the residents of one country and residents of other countries. Some important definitions of BOPs are given below just to make the concept clearer.

"The BOPs of a country is a systematic record of all economic transactions completed between its residents and the residents of the rest of the world during a given period of time, usually a year". (**Walter Krause).** "The BOPs shows the relationship between a country's receipts from other countries and its payments to the rest of the world. It is thus, in effect, a country's balance sheet on international account". (**J.L. Hanson).** "The term BOPs is used in the sense that the whole demand and supply situation (of foreign currency) and it is this sense that the concept of BOPs is most used in international trade discussions". (**G. Haberler).**

Different economist have used the term BOPs in different sense. In one sense, it is used to show the amount of total receipts by one country from rest of the world and amount of total payments to be paid by it to rest of the world in a given period of time. In second sense, it shows the balance of payments in income account. In this sense, it is called balance of account. In third sense, BOPs explains the payments of international debts. Hence, it is also known as balance of international indebtedness. But, the most prevalent sense of BOPs is the position of total demand and supply of foreign currency of any particular country.

Prof. Haberler says that BOPs is used in following five senses:

1. Quantity of purchase and sale of foreign currency by a country, during a given period of time. In this sense, BOPs is always in equilibrium.
2. Payments made to and payments received by a country from foreign countries, during a given period of time. In this sense, BOPs may be in equilibrium in the long run.
3. BOPs on income account are used in narrow sense which expresses the income related to foreign trade of the country. It also includes the balance of interest and balance of trade and services.

4. Balance of international indebtedness. In this sense, BOPs is the statement of liabilities and the claims of the country.
5. Position of total demand and supply of foreign currency– in this sense, BOPs is related to all those effects of economic transactions of a country which influence the exchange rate. This sense of BOPs is most prevalent, comprehensive and important in international parlance.

Major Characteristics of BOPs

Following are the major characteristics of BOPs:

1. It is a **systematic record of all economic transactions** of a country with rest of the world.
2. It is prepared in a **statement form,** which has two sides namely receipts and payments sides.
3. It is **prepared for a given period of time,** usually a year.
4. It **includes both visible and invisible items** (exports and imports of goods and services). Beside trade items, it also includes capital and monetary transactions.
5. The term **Residents** in BOPs has been used **in a comprehensive sense**. It includes individuals, government, government institutions, private non-profit bodies and enterprises. Thus, it includes all government and non-government transactions.
6. BOPs **always balance in accounting sense**, but in actual sense, it may depict disequilibrium (deficit or surplus).

Balance of payments can be explained in statistical / mathematical sense with the help of following formula:

BOPs = Total Foreign Receipts (R) – Total Foreign Payments (P)

If R > P, BOPs is favourable (+) or showing surplus- means good situation for the economy.

If R < P, BOPs is unfavourable (-) or showing deficit- means bad situation for the economy.

If R = P, BOPs is in equilibrium, i.e.; total receipts are equal to total payments and so-so situation for the economy.

Functions of BOPs

The main functions of a country's BOPs are as follows:

1. It helps in understanding how various economic transactions are brought into balance in a given period. These transactions include trade in goods and services, purchase and sale of assets including securities and transfer of funds through grants, aids and repatriations.

2. An analysis of BOPs reveals how a country is paying for its imports and other transactions, the extent of export earnings in total credits and the adequacy of foreign exchange reserves.
3. It also indicates the extent of international indebtedness of a country along with its cushion of foreign assets. This enables the government to make appropriate decisions with regard to monetary and fiscal policies, foreign trade and international payments. In other words, BOPs acts as a lamp posts to monetary, fiscal, trade and exchange rate policies of the government.
4. BOPs statistics are also used extensively by business enterprises and others who engage in international economic transactions.
5. BOPs data are also useful to estimate and plan for the savings gap, foreign exchange gap and investment outlays.

5.3 Distinction between Balance of Trade & Balance of Payments

The difference between BOT and BOPs may be explained on the basis of following differences:

1. **Nature of Items :** BOT includes only visible items (only export, import of goods), while BOPs includes both visible and non-visible items, i.e. all types of items.
2. **Scope :** The scope of BOT is limited as it includes only visible export, imports, while the scope of BOPs is wide as it includes visible and non-visible exports – imports.
3. **Comprehensive :** BOT is narrow concept because it is a part of BOPs, while BOPs is more comprehensive concept because it includes BOT along with other items.
4. **Equilibrium :** BOT may not necessarily be in equilibrium, but BOPs is always in equilibrium in accounting sense.
5. **Analysis :** BOT is a partial analysis; while BOPs is complete analysis.
6. **Effects on Economic Position :** BOT has only limited effect on the economic position of the country, while BOPs has wide and deep effects on the economic position of the country.
7. **Comparative Importance** : BOT has less importance as compared to BOPs.
8. **Determination of Exchange Rate :** BOT does not determine the exchange rate, but BOPs helps in determining the exchange rate as it shows the total demand and supply of foreign currencies of a country.
9. **Correcting Disequilibrium**: Special efforts and concerns are required for correcting disequilibrium in BOPs as compared to BOT.

In nutshell, it can be concluded that computation of BOPs is not only comprehensive, but more important for a nation's economy as compared to the BOT.

5.4 Principles and Accounting of BOPs

A. Principles of BOPs

The BOPs is based on the principles of double entry system of bookkeeping, according to which two entries (credits and debit) are made for every transaction, so that total credits exactly match the total debits. All economic transactions which lead to payment from foreigners to the residents of a country are recorded as credit entries. The corresponding entries are the payments themselves. Conversely, all transactions which lead to payment by residents of a country to foreigners are recorded as debit entries and the corresponding payments are recorded as credits.

Assume that an Indian firm sells product worth INR 1 million to a firm in U.S. and the U.S. buyer pays for it in Indian currency. The sale of product is recorded as a credit entry and the payment made by the U.S. firm is recorded as debit entry. Conversely, consider an Indian firm purchases INR 5 million worth of machinery from US. The import of machinery is recorded as a debit entry and the corresponding payment is recorded as a credit entry.

The following are the rules for credit and debit entries in BOPs:

1. International transactions that leads to a demand for domestic currency in foreign exchange market or a transaction that is a source of foreign currency to the residents of a country is to be recorded as **credit entry** in BOPs.
2. An international transaction that results in the supply of home currency in the foreign exchange market or a transaction that uses foreign currency is to be recorded as **debit entry**.

The IMF has suggested some principles for the valuation of transactions that enter BOPs accounting in order to ensure uniformity in BOPs accounts of different countries, which facilitates comparisons across countries and over time. It specifies that all transactions be valued at market prices. Both imports and exports should be valued on Free-on-Board (FOB) basis. The transactions denominated in a foreign currency should be converted into the home currency at the exchange rate prevailing in the market at the time the transaction takes place.

B. BOPs Accounting

The debit and credit items are shown vertically in BOPs of the country by the rules of double entry system of book-keeping. Any economic transaction that gives rise to a payment to foreigners is recorded as a debit with negative arithmetic sign (-), and any economic transaction that gives rise to a receipt from the rest of the world is recorded as a credit with positive arithmetic sign Thus, every credit in the account is balanced by a corresponding debit and vice-versa. In an accounting sense, the BOPs always balances, since every economic transaction recorded in BOPs is represented by two entries with equal values.

5.5 Types of Accounts in BOPs

The BOPs broadly consists of current account, capital account and reserves account. This classification has been in use for a long time. However in recent past, IMF has switched to a different classification, according to which all transactions are classified into two categories: **Current account** and the **Capital and Financial Account**. The BOPs capital account is re-designated in the fifth edition of the manual as the capital and financial account. Nevertheless, many countries with exception of U.S. and a few others have been using the old classification.

- **The Current Account:**

The current account records all exports and imports of merchandise and invisibles. Merchandise includes agricultural commodities and industrial components and products. Invisibles include (a) services (b) income flows and (c) unilateral transfers.

Thus, all commercial transactions (exports and imports of goods and services), private remittances and transfer of goods and services from the Government of the home country to foreign governments constitute the current account. When the sum of all debits and credits are calculated, a country may have a deficit or surplus on the merchandise side or trade. The Balance of Trade (BOT) measures whether a country is a net exporter or net importer of trade or a country has trade surplus or trade deficit or BOT is favourable or unfavourable. The invisible items along with merchandise determine the actual current account position, i.e., surplus or deficit.

When the country gives away more than it receives from abroad, it is said to have a **Current Account Deficit (CAD)** as India is suffering presently from this problem. On the contrary, when the country earns more than it spends or gives away to abroad, it has a **Current Account Surplus (CAS).** The CAD indicates how much the country will have borrow from abroad by issuing certain financial securities like bonds, stocks and bills to finance its CAD. The country may also sell its foreign investments (e.g. bonds, stocks, bills and real assets) to finance its CAD. On the other hand, CAS shows how much the country will have to lend or invest abroad.

- **The Capital Account:**

The capital account reflects the capital inflows and outflows of the country. The purchase of real assets (physical assets like land, buildings and equipments) located abroad and financial securities (stocks and bonds) issued by the foreign governments or foreign companies are called capital transactions. Thus, capital account includes foreign equity investments, loans and other foreign investments of short-term and long-term duration. Foreign equity investment may take the form of either portfolio investment or direct investment. The difference between purchases of capital transactions made of capital assets by the residents of one country (say, India) in all other countries and such purchases of residents of all other countries in India is called the balance on capital account.

- **The Official Reserve Account:**

The official reserve account measures a country's official reserves, which are in the form of liquid assets like the central bank's holding of gold. These reserves also include foreign exchange in the form of balances with foreign banks and the IMF and the government's holding of SDRs. While an increase in foreign currency reserves by the country's Central Bank (say RBI of India) is debited to the official reserve accounts, a decrease in holding of foreign currency reserves by the country's central bank is credited to the reserve account. The official reserve account is used to maintain the exchange rate of the country at a desired level. Another important fact in this regard is that the surplus or deficit on current account and capital account are reflected in changes in official reserves. Increase and decrease in official reserves are affected for the purpose of maintaining equilibrium in BOPs.

- **Errors and Omissions:**

Sometimes, transactions may be totally omitted or incorrectly recorded may lead to discrepancy in BOPs accounts. In all such cases, the accounting entry of errors and omissions may be used as a balancing item in the BOPs so that the total credits and debits of above mentioned of three accounts shall equal to zero.

5.6 Items Related with BOPs

BOPs have several items. These items can be explained with help of three accounts in BOPs. A brief outline of items in BOPs is given below on the basis of three types of accounts.

A. Items of Current Account

The current account in BOPs includes the following items:

1. **Import and Exports of Commodities:** This is the most important item of BOPs which is known as visible trade or merchandise. Visible trade includes those imports and exports, for which record is maintained at the ports and harbours of the country. The difference between exports and imports is called Balance of Trade. This can be traced with the help of following formula:

$$\mathbf{BOT = (X\text{-}M)}$$

Here, BOT is Balance of Trade,

X is visible exports; and

M is visible Imports.

If X > M, BOT is favourable (Surplus)

If X < M, BOT is unfavourable (Deficit)

If X = M, BOT is in equilibrium

2. **Import and Export of Services:** Also known as invisible trade records thereof are not kept at ports and harbours of the country. The main items of this category includes:
   (i) Services provided by the business companies and institutions such as insurance, banking, transport companies and other business and financial institutions ;
   (ii) Services of specialists such as doctors, engineers, lawyers, professors, film stars, players etc

3. **Expenditure on Tourists and Delegations**.

4. **Returns on Investments**

5. **Govt. Expenditure on embassies and other offices**.

6. **Payments without consideration :** Such as remittances by NRIs, gifts by friends and relatives living abroad, assistance and subsidies provided by foreign governments etc.

7. **Miscellaneous Payments** : Transactions not included in any of above categories are written under this heading.

B. Items of Capital Account

This account includes the following items:

1. **Long -term Investment :** Investments for more than one year such as assets and securities purchased, by the residents of a country in other countries of the world. Besides these, long term loans are also included under this category.

2. **Short-term Investment** : Investments up to one year period such as deposits in foreign banks, Govt. securities, treasury bills, bonds and other securities – such investments is usually for six months or even for more shorter period.

3. **Gold Movements** : Gold import and export as monetary phenomena is an induced item in capital account. But import – export of gold as a commodity is shown in current account under the category of import and export of commodities as an autonomous item.

4. **Errors and Omissions:** Even after making all entries of items, if any discrepancy arises due to any reason, the difference amount is shown under the omission head.

Statement of BOPs is generally presented in the following format:

Statement of Balance of Payments

Items	Receipts / Receivables (+)	Payments / Liabilities (-)
I Current Account 1.Visible Imports , Exports (i) Private (ii) Government 2. Invisible Imports, Exports (i) Travel (ii) Transportation (iii) Insurance & Banking (iv) Interest & Dividends (v) Transfer Payments (vi) Miscellaneous (vii) Omissions **II Capital Account :** 1. Capital Investments (i) Long- term (ii) Short- term 2. Banking Sector- advance exchange 3. Govt. Sector (i) Loans (ii) Repayment of loans 4. Gold : Capital & Monetary 5. Omissions		
Total		

The BOPs Always Balances

It is said that the "**BOPs always balances**". This statement is totally correct from the view point of accounting principles as BOPs statement is based on double entry system of book-keeping, in which each transaction is entered in the credit and debit sides and both sides are always equal to each other as explained earlier also. Hence, in the form of an account, BOPs always balances from accounting point of view. BOPs of a country is like a balance sheet of a business undertaking. Just as, both sides of balance sheet (assets and liabilities) are always equal, similarly the receipts side and payments side of BOPs are also always equal.

5.7 Disequilibrium in BOPs

As has been explained above, the BOPs always remains balanced. Then, why and how the question arises of existence of disequilibrium in it? Here, it should be clearly understood that 'equilibrium in BOPs' and balance in BOPS are altogether two different situations. It is true that the BOPs always remains balanced, i.e. its receipt side and payments side are always equal. But it is not necessary that the BOPs may always in equilibrium. Therefore disequilibrium (Surplus or deficit) may exist in BOPs. In other words, BOPs is always balanced in the form of an account (R=P). If we take all items in BOPs together, it can never have imbalance. But when we talk of disequilibrium of BOPs, we do not consider all items of BOPs together. Rather we consider the balance of certain specified items (autonomous items) only. **Walter Krause** has beautifully explained it. According to him, "Deficit or surplus in BOPs expresses the relationship between total receipts and liabilities, leaving aside, those transactions which have been carried out, with the only object of balancing the BOPs account. Thus, it becomes clear that in spite of being balanced the BOPs cannot be in the state of equilibrium".

For making clearer, we need to properly understand the transactions of BOPs. From this point of view, the transactions of BOPs may be classified into:

Autonomous Transactions:

Autonomous transactions are those transactions which are carried out without keeping in view the size of other items in BOPs, or which are done independently. These transactions are automatic in nature and are carried out due to normal business dealings and exchange of capital. These transactions are self-motivated and carried out for earning profits. All items of current account and long -term investments and long-term loans in the capital account are the examples of autonomous items / transactions.

Induced / Accommodating Transactions:

Induced transactions are those which are not self motivated and not carried out for profit motive. Rather, these are carried out due to compulsions of circumstances, hence not carried out as normal business dealings. As a matter of fact, these transactions are carried out to correct the disequilibrium of autonomous items. Therefore, these are called as settlement / accommodating / compensatory / deliberate / induced items. Short-term investments or loans and monetary gold flows in the capital account are the examples of induced items. However, if short-term investment is in the form of normal business transaction aiming to earn profit, it will not be an induced item. The main feature of induced items is that these are carried out with the sole purpose of correcting disequilibrium in BOPs. Thus, the size of induced items is equal to the size of disequilibrium in BOPs. Another example of such item is the government grants/aid provided to developing countries by the developed world for correcting disequilibrium in BOPs.

How to trace disequilibrium in BOPs?

The answer of this question lies in ascertaining the nature / type of items in BOPs. If all items in BOPs are autonomous and the total of its receipts side is equal to its payments side, the BOPs is in equilibrium. But, if there are some induced items in BOPs, the BOPs is not in equilibrium, in spite of being balanced from accounting point of view (R=P). In this connection, following points are important:

1. When there are no induced items or all are autonomous items in BOPs, it is in equilibrium.
2. BOPs will be in disequilibrium (deficit or surplus) only when it has one or more induced item/s.
3. Induced items are carried out deliberately for the sole purpose of correcting disequilibrium in BOPs.
4. Autonomous items are in both current account and capital account.
5. Induced items are only in capital account such as short-term investments and loans (capital flows) and movement of monetary gold.
6. Disequilibrium in BOPs is only by the difference of autonomous items of receipts and payments side.

5.7.1 Types of Disequilibrium

Prof. Snider has mentioned the following two types of disequilibrium in BOPs:

According to **Prof. Kindleberger,** disequilibrium in BOPs is of following three types:

1. **Structural Disequilibrium:**

   When disequilibrium in BOPs of any country is created by fundamental changes in the demand or supply or in both of its imports and exports, it is termed as structural disequilibrium. It may be created by the changes in the pattern of production, changes in the pattern of demand, changes in the pattern of trade, changes in terms of trade, changes in long term capital flows, institutional changes and loss of capital.

2. **Cyclical / Monetary Disequilibrium:**
   This type of disequilibrium in BOPs is created due to occurrence of business cycles. Ups and downs in the economic activities take place frequently which result into changes in price level and they in turn also influence the imports and exports of countries. Inflation and deflation in an economy also affect the imports and exports by creating the conditions of upswing and downswing. Cyclical / monetary disequilibrium arises due to changes in price level, changes in monetary income and changes in exchange rate. For instance, the disequilibrium caused in different economies of the world in 1930s was due to great depression of 1930s.

3. **Secular Disequilibrium:**
   This type of disequilibrium in BOPs is caused by changes in the stage of development due to long-term changes. Following factors are mainly responsible for long-term changes in the economy: addition in capital formation, addition in

industrialization, population growth, changes in available quantity of resources, improvement in technology and production techniques, changes and improvement in business organization and expansion of market.

Prof. Kindleberger, who propounded the concept of secular disequilibrium, says that this type of disequilibrium is the outcome of economic development. According to him, economic development has six stages. In first two stages of development BOPs remains unfavourable and in last two stages, it becomes favourable. In between these stages, it is in the state of equilibrium.

5.7.2 Causes of Disequilibrium

Disequilibrium in BOPs may be either favourable (surplus) or unfavourable (deficit). Developed countries generally have favourable disequilibrium, while developing countries suffer from unfavourable disequilibrium in their BOPs. Favourable disequilibrium in BOPs is not that dangerous and harmful, rather it is useful to some extent, as is the unfavourable disequilibrium.

Unfavourable disequilibrium in BOPs of developing countries arises mainly due to following reasons:

1. **High Growth in Imports:** The rate of growth in imports is generally high in developing countries due to :

(i) Growing demand for food grains and other essential commodities due to rapid population growth.

(ii) Rising demand for industrial raw materials, capital goods, fuel and technical know-how due to industrialization.

(iii) High level of inflation due to high fiscal deficit encourages imports.

(iv) Demand for goods and services increases due to rising disposable income of the people as a result of huge investment on development programmes.

2. **Slow Growth in Exports :** The rate of growth in exports is comparatively low in developing countries due to the following reasons :

(i) Primary goods such as agricultural products and minerals constitute the major part in total exports, which are having relatively inelastic demand in foreign markets.

(ii) Rising demand for raw materials, fuel and capital goods for industrial development and rising demand for consumer goods due to increase in income and population, exportable surplus of different goods is reduced substantially .

(iii) The goods and services produced by developing countries are not only costly, but inferior also as compared to developed countries. Rigid regulatory framework, delay in delivery of goods and lack of export promotion measures, are other factors responsible for poor growth in exports.

3. **Huge Development Programmes:** The government of developing countries spends heavily on various developmental programme for enhancing their economic growth. This causes dual negative effect on BOPs as mentioned below :

(i) Requirement of imports of raw materials, capital goods, technological knowledge etc. increases substantially for implementing developmental activities as envisaged in plans.

(ii) Exportable surplus of raw materials and other domestic goods decreases due to their increased utilization at home for development programmes.

Development programmes indirectly influence the BOPs through the operation of price effect and income effect. Increasing disposable income, on the one hand, increases the imports and decreases the exportable surplus on the other hand. Government spends beyond its means through the deficit financing which in its own turn causes galloping inflation at home. Rising price level at home reduces exports and encourages imports.

4. **Weak Terms of Trade:** The terms of trade of developing countries are generally unfavourable to them as they mainly export primary goods and import capital goods, raw materials and technology. The income elasticity of demand for primary goods is relatively low for developed countries; while the income elasticity of demand for industrial goods is relatively high for developing countries.

5. **Heavy and Increasing Debt Servicing Burden:** Developing countries are confronted with the problem of investment and saving gap**.** This gap is generally bridged by borrowings from abroad. This creates huge burden of repayment of principal and interest amount of loans. A major part of their export earnings is spent on servicing the debt burden. If the debt servicing burden of a country increases beyond 20% of its total export earnings, it falls in danger zone.

6. **Protectionism in Developed Countries:** Inclination of developed countries towards protectionism is a big hurdle in the way of exports from developing countries. Due to this reason, developing countries do not get sufficient opportunities in promoting exports in the market of developed countries. Frequent use of super 301, 302 and 303 against India and China by U.S. is a glaring example of protection.

7. **Rising Inflation:** One of the biggest problems of developing world is mounting pressure of inflation. Such countries face cost-push inflation as well as demand-pull inflation. The rising inflation leads to increase in cost of production on the one hand and increase the demand for foreign goods, on the other hand. It reduces the competitiveness of exportable goods and increases imports of foreign goods as they become comparatively cheaper.

8. **Lack of Optimum Utilization of Forex:** Developing countries are lacking in optimum utilization of Forex because of wrong priorities. Many times, they spend their scarce foreign exchange reserves on non-priority areas and on the other, several development projects remain pending due to shortage of foreign exchange. It is also

observed sometimes that huge amount of Forex remain lying idle as was the case of India before the melt down of 2008.

9. **Lack of Import Substitution:** Due to several reasons, developing countries are unable to produce imported goods at home; therefore they are dependent on imports. Lack of capital, raw materials, technology, education, managerial skills and entrepreneurship are some of the important reasons for not being capable of developing import substitutes.

10. **Other Reasons :**

(i) The problem of under-invoicing and over-invoicing;
(ii) Explosive population growth;
(iii) Less and tied foreign aid;
(iv) Lack of proper planning and poor implementation;
(v) Increasing unproductive expenditure of government;
(vi) Increasing expenditures on social welfare schemes.

5.7.3 Measures for Correcting Disequilibrium

Chronic and continuing disequilibrium in BOPs of any country particularly the deficit is a matter of grave concern, because it is ultimately harmful to nation's economy. It reduces international trade and prosperity and has adverse impact on foreign exchange rate of the country. Therefore, corrective measures are required to reduce or eliminate the disequilibrium in BOPs. The measures adopted to correct unfavourable disequilibrium (deficit) in BOPs may be classified into following two categories: (A) Non-Monetary measures; and (B) Monetary measures.

(A) Non-Monetary Measures: Following non-monetary measures may be used for correcting disequilibrium in BOPs:

1. Export Promotion:

Export promotion is the most important and appropriate measure to correct the disequilibrium. Following steps may be taken to promote exports:

(i) Reducing production costs;
(ii) Improving quality of goods and services;
(iii) Reducing export duties;
(iv) Providing economic assistance and other facilities to export – oriented production units;
(v) Organizing fairs and exhibitions in foreign countries for publicity of goods;
(vi) Arranging imports of raw materials and machineries for export-oriented industries on priority basis and at concessional rates;
(vii) Conducting marketing research at abroad for expansion of markets.

2. Import Control:

Another important measure for correcting unfavourable disequilibrium in BOPs is to control imports without affecting growth. Following steps may be taken to check imports:

(i) To put ban on imports of non-essential items;
(ii) To increase import duties;
(iii) To introduce quota system for imports;
(iv) To make import credit tight;
(v) To encourage the use of swadeshi goods.

3. Encouraging Import Substitution:

The policy of import substitution should be encouraged so that imported goods could be produced at home, thereby imports could be reduced.

2. Promotion to Foreign Capital Investment :

Foreign capital investment should be encouraged by framing suitable and attractive policy. Procedural hurdles should also be removed by simplifying them. Various kinds of concessions should also be extended to attract the inflow of funds in the country for correcting disequilibrium.

3. Development of Tourism Industry :

The tourism policy of the country should be such so that it is able to attract a large number of foreign tourists. The tourists' destinations should be made more attractive, comfortable and economical. Historical, heritage and natural aspects of tourists' places should remain undisturbed and undiluted. All kinds of facilities be made available to tourist so that good image may be created. There should be enough publicity of tourist places through the electronic and print media. A separate website for tourist destination should be launched, to have a special focus on it. Religious tourism, medical tourism, wildlife tourism, education tourism should also be promoted to earn foreign exchange.

4. Effective Exchange Control:

The Central Bank of the country can impose restrictions on extravagant spending of scare foreign exchange and can ensure its rational and optimum utilization in the national interest through the well planned and prudent exchange control system. The main objective of exchange controls is to make use of available foreign exchange only for very important purposes and to check its wasteful spending on non-essential purposes. That way, efforts may be made to keep imports within the limit of foreign exchange earned from exports. Misuse of foreign exchange for smuggling purpose should be also checked effectively.

5. Loans from Abroad:

In adverse disequilibrium situation, a country may borrow loans in foreign currencies from governments of other countries and international financial institutions and foreign banks. IMF provides financial assistance to its member countries for correcting disequilibrium in BOPs.

6. Encouraging Non-Residents to Remit Funds :

The government of the country may encourage its non-residents to remit more and more foreign currency by providing various incentives and concessions. Such remittances by non residents, increases the Forex of the country which helps in correcting in disequilibrium in BOPs.

7. Postponement of Debt Payment :

If unfavourable disequilibrium cannot be corrected by any measures, the government of the country concerned may postpone the payment of foreign debt, know as **debt moratorium.** This step should be used only as a measure of last resort.

(B) Monetary Measures: Along with above mentioned non-monetary measures, following monetary measures may also be used to correct disequilibrium in BOPs:

1. To Adopt the Policy of Deflation:

By resorting to the policy of deflation, Central Bank of the country can deliberately reduce the quantity of money and credit in the economy. This step will reduce the domestic price level thereby making foreign goods comparatively costly. Hence, imports will be reduced and exports will be promoted. The policy of deflation be used only for short period otherwise it may ultimately push the economy into depression, which is a worst situation.

2. Check on Inflation:

For promoting exports and reducing imports, arresting the inflation and keeping it at a creeping level is most desirable monetary measure. The cost-push and demand-pull inflation ought to be controlled rigorously to establish equilibrium in BOPs.

3. Devaluation of Currency:

The currency of the country may be devalued if no option is left to correct the deficit in BOPs. In case of devaluation, the value of currency of the country is officially reduced in relation to the value of foreign currencies. The devaluation of currency increases exports and reduces imports. But the devaluation of currency is a double-edged sword, therefore it should be used only when there is no fear of competitive devaluation, inflation is under control and there is sufficient exportable surplus with the country. Generally, the developed countries have favourable disequilibrium (surplus) in their BOPs, which may be corrected by adopting just opposite measures.

5.8 Summary

Balance of payments (BOPs) is an accounting statement that summarizes the international transactions of a country for a particular period of time, usually a year. Balance of Trade (BOT) is a narrow concept, while BOPs is a broad concept as BOT is an integral part of BOPs. In BOT only visible exports and imports are included, while in BOPs both visible and non-visible items are included. A complete and correct picture of a country's economy is presented by the BOPs, but not by the BOT. BOPs has three accounts which are current account, capital account and official reserves account. BOPs accounting statement depicts receipts side and payments side. In receipt side, inflow of foreign funds are shown, while in payment side outflow of funds are shown. The BOPs is based on the principle of double- entry system of book-keeping, hence it is always balances in an accounting sense. But, it may have disequilibrium (deficit or surplus) in real sense. If all transactions in BOPs are of autonomous nature, it is balanced in accounting as well as in real sense both. But, if some of the items in it are induced, then it has disequilibrium in reality. The current account records all exports and imports of merchandise and invisibles. All items in current account are autonomous. The difference between receipts and payments in current account is known as current account deficit (CAD), if R<P and current account surplus (CAS), if R>P. The capital account reflects the capital inflows and outflows of the country. The capital account may have both autonomous and induced items. The official reserve account measures the official reserves of the country. If receipts are greater than payments (R>P) in BOPs, it is having surplus and contrary to it, if R<P, BOPs is in deficit. Disequilibrium in BOPs may be of following type: (i) Structural; (ii) Cyclical/ Monetary; and (iii) Secular. Disequilibrium in BOPs may arise due to high growth in imports, slow growth in exports, huge development programmes, weak terms of trade, huge foreign debt servicing burden, protectionism, inflation etc. The unfavourable disequilibrium can be corrected by adopting several monetary and non-monetary measures. Among them few important are export promotion, import control, import substitution, promotion to foreign capital investment and tourism, remittances by non-residents, deflation and devaluation of currency.

5.9 Self Assessment Questions

1. What do you mean by the Balance of Payments? Also explain its characteristics and functions.
2. Distinguish between Balance of Trade and Balance of Payments. Also explain their relationship.
3. Prepare a statement of Balance of Payments and also explain the items included in it.
4. "Balance of Payments always balances, even than it may depict disequilibrium". Elucidate this statement and also explain how the disequilibrium is traced in BOPs?
5. Throw light on the types of accounts in Balance of Payments and items included in different accounts of BOPs.
6. What are the main causes of disequilibrium in Balance of Payments of developing countries? What measures would you suggest to correct the disequilibrium?
7. Write short note on the following:
   a. Types of disequilibrium in BOPs.
   b. Principles and accounting of BOPs.
   c. Distinction between autonomous and induced transactions.

5.10 Reference Books

- Siddaiah Thummuluri, 'International Financial Management', Pearson.
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- Vaish & Singh, 'International Trade'.
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Unit - 6: Global Foreign Exchange Market

Structure of Unit

6.0 Objectives

After completing this unit, you would be able to:

- Describe the meaning, definition and characteristics of foreign exchange market;
- Explain recent trends, global market size, trading characteristics and liquidity in global foreign exchange market;
- Identify the market participants in global foreign exchange market;
- Illustrate financial instruments in global foreign exchange market;
- Describe functions of foreign exchange market;
- Explain the operation of foreign exchange market;
- Describe foreign exchange market in India.

6.1 Introduction

The foreign exchange market is larger, in terms of trading volume, than any other market, financial or otherwise. In fact, it dwarfs all other markets. It is also the most liquid of all markets. Every transaction arising from international trade or investment must pass through the foreign exchange market, since these transactions involve the exchange of currencies. Furthermore, developments in the foreign exchange market determine the levels of and changes in exchange rates, which have significant implications for businesses and economies. This chapter provides a general overview of the institutional aspects of the foreign exchange market and exchange rate concepts.

6.2 Definition and Characteristics

6.2.1 Meaning and Definition

Foreign exchange is the largest market in the world, with volume that exceeds commodities, financial futures and stocks by far. The Euro currency volume alone is more than 5 times the entire NYSE (New York Stock Exchange). The industry estimates that about $3.2 trillion of turnover occurs daily, on average, in global OTC (Over the Counter) foreign currency trading.

The foreign exchange market provides the physical and institutional structure through which the money of one country is exchanged for that of another country, the rate of exchange between currencies is determined, and foreign exchange transactions are physically completed. A foreign exchange transaction is an agreement between a buyer and a seller that a given amount of one currency is to be delivered at a specified rate for some other currency.

The **foreign exchange market** (**Forex**, **FX**, or **currency market**) is a global decentralized market for the trading of currencies. The main participants in this market are the larger international banks. Financial centers around the world function as anchors of trading between a wide range of multiple types of buyers and sellers round the clock, with the exception of weekends. The foreign exchange market determines the relative values of different currencies.

The foreign exchange market works through financial institutions, and it operates on several levels. Behind the scenes banks turn to a smaller number of financial firms known as “dealers,” who are actively involved in large quantities of foreign exchange trading. Most foreign exchange dealers are banks, so this behind-the-scenes market is sometimes called the “interbank market”, although a few insurance companies and other kinds of financial firms are involved. Trades between foreign exchange dealers can be very large, involving hundreds of millions of dollars. Because of the sovereignty issue when involving two currencies, Forex has little (if any) supervisory entity regulating its actions.

The foreign exchange market assists international trade and investments by enabling currency conversion. For example, it permits a business in the United States to import goods from the European Union member states, especially Euro zone members, and pay Euros even though its income is in United States dollars. It also supports direct speculation and evaluation relative to the value of currencies, and the carry trade, speculation based on the interest rate differential between two currencies.

In a typical foreign exchange transaction, a party purchases some quantity of one currency by paying for some quantity of another currency. The modern foreign exchange market began forming during the 1970s after three decades of government restrictions on foreign exchange transactions (the Bretton Woods system of monetary management established the rules for commercial and financial relations among the world's major

industrial states after World War II), when countries gradually switched to floating exchange rates from the previous exchange rate regime, which remained fixed as per the Bretton Woods system.

6.2.2 How are Currencies Quoted?

Each currency is given a three-letter code which is used in forex quotes. Currencies trade in pairs and that is how they are quoted, for example, the Euro versus the U.S. dollar (EUR/USD). Or the U.S. dollar versus the Japanese yen (USD/JPY). A currency can never be traded by itself; it must be compared with another currency. In example, to "go long" (or, to buy) the Euro versus the U.S. dollar, the trader simultaneously buys the Euro (EUR) and sells the dollar (USD). The first currency referred to in the pair is the base currency, while the second is the counter (or "quote") currency.

The pair is quoted in units of the counter currency needed to get one unit of the base currency. So, if the quote EUR/USD is 1.285, it means that 1.285 U.S. dollars are needed to purchase one Euro. Currency rates are carried out 4 decimal places in most cases. The last decimal place is called a "pip" or a "point".

In trading terms, currency pairs are often quoted as bid-ask spreads. This first part of the quote is the amount of the quote currency you will get in exchange for one unit of the base currency – the bid price. The second part of the quote is the amount of the quote currency you must spend for one unit of the base currency – the "ask" or "offer" – price. In the sample above, if the pair was quoted as a EUR/USD spread of 1.2850/1.2852, it means you can sell one Euro for $1.2850 and buy one Euro for $1.2852.

The full exchange rate might not be quoted for both sides of the spread – it would generally be quoted as 1.2850/52. The only number that is not the same for both sides of the spread is the last number. Unlike in the stock market, there is no restriction on short selling in the forex market (no "uptick rule") when the market happens to be moving lower. Since forex trading involves buying one currency and selling another, traders have the same ability to trade in a rising market as in a falling market.

6.2.3 Characteristics of Global Foreign Exchange Market

The foreign exchange market is unique because of

- its huge trading volume representing the largest asset class in the world leading to high liquidity;
- its geographical dispersion;
- its continuous operation: 24 hours a day except weekends, i.e., trading from 22:00 GMT on Sunday (Sydney) until 22:00 GMT Friday (New York);
- the variety of factors that affect exchange rates;
- the low margins of relative profit compared with other markets of fixed income;
- the use of leverage to enhance profit and loss margins and with respect to account size.

As such, it has been referred to as the market closest to the ideal of perfect competition, notwithstanding currency intervention by central banks.

According to the Bank for International Settlements, the preliminary global results from the 2013 Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Markets Activity show that trading in foreign exchange markets averaged $5.3 trillion per day in April 2013. This is up from $4.0 trillion in April 2010 and $3.3 trillion in April 2007. Foreign exchange swaps were the most actively traded instruments in April 2013, at $2.2 trillion per day, followed by spot trading at $2.0 trillion.

According to the Bank for International Settlements, as of April 2010, average daily turnover in global foreign exchange markets is estimated at $3.98 trillion, a growth of approximately 20% over the $3.21 trillion daily volume as of April 2007. Some firms specializing on foreign exchange market had put the average daily turnover in excess of US$4 trillion.

The $3.98 trillion break-down is as follows:

- $1.490 trillion in spot transactions
- $475 billion in outright forwards
- $1.765 trillion in foreign exchange swaps
- $43 billion currency swaps
- $207 billion in options and other products.

6.3 Recent Trends, Global Market Size and Liquidity

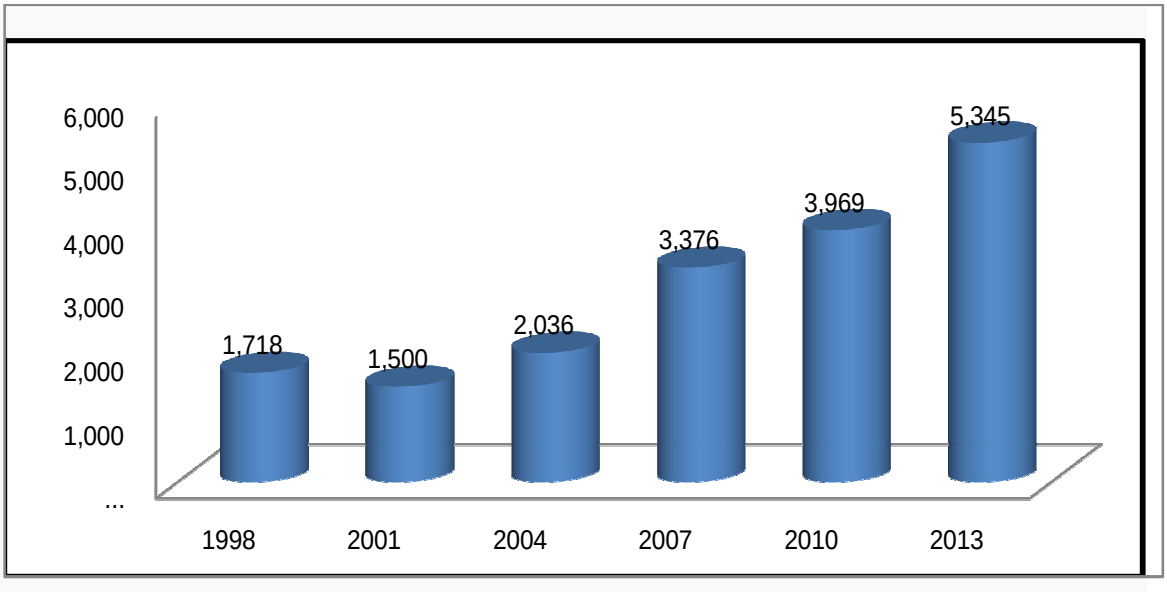

Figure: 6.1 - Worldwide main foreign exchange market turnover, 1998–2013, measured in billions of USD.

The foreign exchange market is the most liquid financial market in the world. Traders include large banks, central banks, institutional investor's currency speculators, corporations, governments, other financial institutions, and retail investors. The average daily turnover in the global foreign exchange and related markets is continuously growing. According to the 2013 Triennial Central Bank Survey, coordinated by the Bank for International Settlements, average daily turnover was US$5.35 trillion in April 2010 (vs. $1.7 trillion in 1998). Of this $3.98 trillion, $1.5 trillion was spot transactions and $2.5 trillion was traded in outright forwards, swaps and other derivatives.

Table -6.1: Global Foreign Exchange Market Turnover (Net-net basis,[1] daily averages in April, in billions of US dollars)

Instrument	1998	2001	2004	2007	2010	2013
Foreign exchange instruments	1,527	1,239	1,934	3,324	3,971	5,345
Spot transactions	568	386	631	1,005	1,488	2,046
Outright forwards	128	130	209	362	475	680
Foreign exchange swaps	734	656	954	1,714	1,759	2,228
Currency swaps	10	7	21	31	43	54
Options and other products[2]	87	60	119	212	207	337
Memo:						
Turnover at April 2013 exchange rates[3]	***1,718***	***1,500***	***2,036***	***3,376***	***3,969***	***5,345***
Exchange-traded derivatives[4]	*11*	*12*	*26*	*80*	*155*	*160*

[1] Adjusted for local and cross-border inter-dealer double-counting (i.e. "net-net" basis). [2] The category "other FX products" covers highly leveraged transactions and/or trades whose notional amount is variable and where decomposition into individual plain vanilla components was impractical or impossible. [3] Non-US dollar legs of foreign currency transactions were converted into original currency amounts at average exchange rates for April of each survey year and then reconverted into US dollar amounts at average April 2013 exchange rates. [4] Sources: FOW TRADE data; Futures Industry Association; various futures and options exchanges. Foreign exchange futures and options traded worldwide.

In April 2010, trading in the United Kingdom accounted for 36.7% of the total, making it by far the most important centre for foreign exchange trading. Trading in the United States accounted for 17.9% and Japan accounted for 6.2%.

Table – 6.2: Geographical Distribution of Global Foreign Exchange Market Turnover[1] (Net-gross basis,[2] daily averages in April, in billions of US dollars and percentages)

Country	1998		2001		2004		2007		2010		2013	
	Amt.	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%
Argentina	2	0.1	...	...	1	0.0	1	0.0	2	0.0	1	0.0
Australia	48	2.3	54	0.2	107	0.1	176	4.1	192	0.8	182	2.7
Austria	12	0.6	8	0.5	15	0.6	19	0.4	20	0.4	17	0.3
Bahrain	3	0.1	3	0.2	3	0.1	3	0.1	5	0.1	9	0.1
Belgium	27	1.3	10	0.6	21	0.8	50	1.2	33	0.6	22	0.3
Brazil	5	0.2	6	0.3	4	0.1	6	0.1	14	0.3	17	0.3
Bulgaria	...	...	...	...	...	...	1	0.0	1	0.0	2	0.0
Canada	38	1.8	44	2.6	59	2.3	64	1.5	62	1.2	65	1.0
Chile	1	0.1	2	0.1	2	0.1	4	0.1	6	0.1	12	0.2
China	0	0.0	...	...	1	0.0	9	0.2	20	0.4	44	0.7
Chinese Taipei	5	0.2	5	0.3	9	0.4	16	0.4	18	0.4	26	0.4
Colombia	...	...	0	0.0	1	0.0	2	0.0	3	0.1	3	0.1
Czech Republic	5	0.2	2	0.1	2	0.1	5	0.1	5	0.1	5	0.1
Denmark	28	1.3	24	1.4	42	1.6	88	2.1	120	2.4	103	1.5
Estonia	...	...	...	...	0	0.0	1	0.0	1	0.0	0	0.0
Finland	4	0.2	2	0.1	2	0.1	8	0.2	31	0.6	15	0.2
France	77	3.7	50	2.9	67	2.6	127	3.0	152	3.0	190	2.8
Germany	100	4.7	91	5.4	120	4.6	101	2.4	109	2.2	111	1.7
Greece	7	0.3	5	0.3	4	0.2	5	0.1	5	0.1	3	0.0
Hong Kong SAR	80	3.8	68	4.0	106	4.1	181	4.2	238	4.7	275	4.1
Hungary	1	0.1	1	0.0	3	0.1	7	0.2	4	0.1	4	0.1
India	2	0.1	3	0.2	7	0.3	38	0.9	27	0.5	31	0.5
Indonesia	2	0.1	4	0.2	2	0.1	3	0.1	3	0.1	5	0.1
Ireland	11	0.5	9	0.5	7	0.3	11	0.3	15	0.3	11	0.2

Country	1998		2001		2004		2007		2010		2013	
	Amt.	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%
Israel	...	...	1	0.1	5	0.2	8	0.2	10	0.2	8	0.1
Italy	29	1.4	18	1.0	23	0.9	38	0.9	29	0.6	24	0.4
Japan	146	7.0	153	9.0	207	8.0	250	5.8	312	6.2	374	5.6
Korea	4	0.2	10	0.6	21	0.8	35	0.8	44	0.9	48	0.7
Latvia	...	...	...	...	2	0.1	3	0.1	2	0.0	2	0.0
Lithuania	...	...	...	...	1	0.0	1	0.0	1	0.0	1	0.0
Luxembourg	23	1.1	13	0.8	15	0.6	44	1.0	33	0.7	51	0.8
Malaysia	1	0.1	1	0.1	2	0.1	3	0.1	7	0.1	11	0.2
Mexico	9	0.4	9	0.5	15	0.6	15	0.4	17	0.3	32	0.5
Netherlands	43	2.0	31	1.8	52	2.0	25	0.6	18	0.4	112	1.7
New Zealand	7	0.3	4	0.2	7	0.3	13	0.3	9	0.2	12	0.2
Norway	9	0.4	13	0.8	14	0.6	32	0.7	22	0.4	21	0.3
Peru	...	...	0	0.0	0	0.0	1	0.0	1	0.0	2	0.0
Philippines	1	0.0	1	0.1	1	0.0	2	0.1	5	0.1	4	0.1
Poland	3	0.1	5	0.3	7	0.3	9	0.2	8	0.2	8	0.1
Portugal	4	0.2	2	0.1	2	0.1	4	0.1	4	0.1	4	0.1
Romania	...	...	...	...	...	...	3	0.1	3	0.1	3	0.1
Russia	7	0.3	10	0.6	30	1.1	50	1.2	42	0.8	61	0.9
Saudi Arabia	2	0.1	2	0.1	2	0.1	4	0.1	5	0.1	5	0.1
Singapore	145	6.9	104	6.1	134	5.1	242	5.6	266	5.3	383	5.7
Slovakia	...	...	1	0.0	2	0.1	3	0.1	0	0.0	1	0.0
Slovenia	...	...	0	0.0	0	0.0	0	0.0	...	...	...	...
South Africa	9	0.4	10	0.6	10	0.4	14	0.3	14	0.3	21	0.3
Spain	20	1.0	8	0.5	14	0.5	17	0.4	29	0.6	43	0.6
Sweden	16	0.8	25	1.5	32	1.2	44	1.0	45	0.9	44	0.7
Switzerland	92	4.4	76	4.5	85	3.3	254	5.9	249	4.9	216	3.2
Thailand	3	0.1	2	0.1	3	0.1	6	0.1	7	0.1	13	0.2
Turkey	...	...	1	0.1	3	0.1	4	0.1	17	0.3	27	0.4
United Kingdom	685	32.6	542	31.8	835	32.0	1,483	34.6	1,854	36.8	2,726	40.9
United States	383	18.3	273	16.0	499	19.1	745	17.4	904	17.9	1,263	18.9
Total	**2,099**	**100**	**1,705**	**100**	**2,608**	**100**	**4,281**	**100**	**5,043**	**100**	**6,671**	**100**

[1] Data may differ slightly from national survey data owing to differences in aggregation procedures and rounding. The data for the Netherlands are not fully comparable over time due to reporting improvements in 2013. [2] Adjusted for local inter-dealer double-counting (ie "net-gross" basis).

In April 2013, for the first time, Singapore surpassed Japan in average daily foreign-exchange trading volume with $383 billion per day. So the rank became: the United Kingdom (41%), the United States (19%), Singapore (5.7%), Japan (5.6%) and Hong Kong (4.1%).

Turnover of exchange-traded foreign exchange futures and options have grown rapidly in recent years, reaching $166 billion in April 2010 (double the turnover recorded in April 2007). Exchange-traded currency derivatives represent 4% of OTC foreign exchange turnover. Foreign exchange futures contracts were introduced in 1972 at the Chicago Mercantile Exchange and are actively traded relative to most other futures contracts. Most developed countries permit the trading of derivative products (like futures and options on futures) on their exchanges. All these developed countries already have fully convertible capital accounts. Some governments of emerging economies do not allow foreign exchange derivative products on their exchanges because they have capital controls. The use of derivatives is growing in many emerging economies. Countries such as Korea, South Africa, and India have established currency futures exchanges, despite having some capital controls.

Table – 6.3: Top 10 Currency Traders (% of overall volume, May 2013)

Rank	Name	Market Share
1	Deutsche Bank	15.18%
2	Citi	14.90%
3	Barclays Investment Bank	10.24%
4	UBS AG	10.11%
5	HSBC	6.93%
6	JPMorgan	6.07%
7	Royal Bank of Scotland	5.62%
8	Credit Suisse	3.70%
9	Morgan Stanley	3.15%
10	Bank of America Merrill Lynch	3.08%

Foreign exchange trading increased by 20% between April 2007 and April 2010 and has more than doubled since 2004. The increase in turnover is due to a number of factors: the growing importance of foreign exchange as an asset class, the increased trading activity of high-frequency traders, and the emergence of retail investors as an important market segment. The growth of electronic execution and the diverse selection of execution venues have lowered transaction costs, increased market liquidity, and attracted greater participation from many customer types. In particular, electronic trading via online portals has made it easier for retail traders to trade in the foreign exchange market. By 2010, retail trading is estimated to account for up to 10% of spot turnover, or $150 billion per day.

Foreign exchange is an over-the-counter market where brokers/dealers negotiate directly with one another, so there is no central exchange or clearing house. The biggest geographic trading center is the United Kingdom, primarily London, which according to The City UK estimates has increased its share of global turnover in traditional transactions from 34.6% in April 2007 to 36.7% in April 2010. Due to London's dominance in the market, a particular currency's quoted price is usually the London market price. For instance, when the International Monetary Fund calculates the value of its special drawing rights every day, they use the London market prices at noon that day.

6.4 Global Foreign Exchange Market Participants

Market participants are foreign exchange traders who, directly or indirectly, buy and sell currencies. These classes of participants enter the market as commercial companies, central banks, foreign exchange companies, hedge funds as speculators, investment management firms, retail foreign exchange traders, non-bank foreign exchange companies and money transfer/remittance companies.

A. Commercial Companies

An important part of the foreign exchange market comes from the financial activities of companies seeking foreign exchange to pay for goods or services. Commercial companies often trade fairly small amounts compared to those of banks or speculators, and their trades often have little short term impact on market rates. Nevertheless, trade flows are an important factor in the long-term direction of a currency's exchange rate. Some multinational companies can have an unpredictable impact when very large positions are covered due to exposures that are not widely known by other market participants.

B. Central Banks

National central banks play an important role in the foreign exchange markets. They try to control the money supply, inflation, and/or interest rates and often have official or unofficial target rates for their currencies. They can use their often substantial foreign exchange reserves to stabilize the market. Nevertheless, the effectiveness of central bank "stabilizing speculation" is doubtful because central banks do not go bankrupt if they make large losses, like other traders would, and there is no convincing evidence that they do make a profit trading.

C. Foreign Exchange Fixing

Foreign exchange fixing is the daily monetary exchange rate fixed by the national bank of each country. The idea is that central banks use the fixing time and exchange rate to evaluate behavior of their currency. Fixing exchange rates reflects the real value of equilibrium in the market. Banks, dealers and traders use fixing rates as a trend indicator.

The mere expectation or rumor of a central bank foreign exchange intervention might be enough to stabilize a currency, but aggressive intervention might be used several times each year in countries with a dirty float currency regime. Central banks do not always

achieve their objectives. The combined resources of the market can easily overwhelm any central bank. Several scenarios of this nature were seen in the 1992–93 when European Exchange Rate Mechanism collapsed and in more recent times in Asia.

D. Hedge Funds as Speculators

About 70% to 90% of the foreign exchange transactions conducted are speculative. This means the person or institution that bought or sold the currency has no plan to actually take delivery of the currency in the end; rather, they were solely speculating on the movement of that particular currency. Since 1996, Hedge funds have gained a reputation for aggressive currency speculation. They control billions of dollars of equity and may borrow billions more, and thus may overwhelm intervention by central banks to support almost any currency, if the economic fundamentals are in the hedge funds' favor.

E. Investment Management Firms

Investment management firms (who typically manage large accounts on behalf of customers such as pension funds and endowments) use the foreign exchange market to facilitate transactions in foreign securities. For example, an investment manager bearing an international equity portfolio needs to purchase and sell several pairs of foreign currencies to pay for foreign securities purchases.

Some investment management firms also have more speculative specialist currency overlay operations, which manage client's currency exposures with the aim of generating profits as well as limiting risk. While the number of this type of specialist firms is quite small, many have a large value of assets under management and, hence, can generate large trades.

F. Retail Foreign Exchange Traders

Individual retail speculative traders constitute a growing segment of this market with the advent of retail foreign exchange platforms, both in size and importance. Currently, they participate indirectly through brokers or banks. Retail brokers, while largely controlled and regulated in the USA by the Commodity Futures Trading Commission and National Futures Association, have in the past been subjected to periodic foreign exchange fraud. To deal with the issue, in 2010 the NFA required its members that deal in the Forex markets to register as such (i.e., Forex CTA instead of a CTA). Those NFA members that would traditionally be subject to minimum net capital requirements, FCMs and IBs, are subject to greater minimum net capital requirements if they deal in Forex. A number of the foreign exchange brokers operate from the UK under Financial Services Authority regulations where foreign exchange trading using margin is part of the wider over-the-counter derivatives trading industry that includes Contract for differences and financial spread betting.

There are two main types of retail FX brokers offering the opportunity for speculative currency trading: brokers and dealers or market makers.

Brokers serve as an agent of the customer in the broader FX market, by seeking the best price in the market for a retail order and dealing on behalf of the retail customer. They charge a commission or mark-up in addition to the price obtained in the market.

Dealers or market makers, by contrast, typically act as principal in the transaction versus the retail customer, and quote a price they are willing to deal at.

G. Non-bank Foreign Exchange Companies

Non-bank foreign exchange companies offer currency exchange and international payments to private individuals and companies. These are also known as foreign exchange brokers but are distinct in that they do not offer speculative trading but rather currency exchange with payments (i.e., there is usually a physical delivery of currency to a bank account).

It is estimated that in the UK, 14% of currency transfers/payments are made via Foreign Exchange Companies. These companies' selling point is usually that they will offer better exchange rates or cheaper payments than the customer's bank. These companies differ from Money Transfer/Remittance Companies in that they generally offer higher-value services.

H. Money Transfer/Remittance Companies and Bureaux de change

Money transfer companies/remittance companies perform high-volume low-value transfers generally by economic migrants back to their home country. In 2007, the Aite Group estimated that there were $369 billion of remittances (an increase of 8% on the previous year). The four largest markets (India, China, Mexico and the Philippines) receive $95 billion. The largest and best known provider is Western Union with 345,000 agents globally followed by UAE Exchange Bureaux de change or currency transfer companies provide low value foreign exchange services for travelers. These are typically located at airports and stations or at tourist locations and allow physical notes to be exchanged from one currency to another. They access the foreign exchange markets via banks or non bank foreign exchange companies.

6.5 Foreign Exchange Trading and SWIFT

In an interbank forex transaction, no real money changes hand. All transactions are done electronically through SWIFT. Banks undertaking forex transactions simply transfer bank deposits through SWIFT to settle a transaction.

SWIFT (Society for Worldwide Interbank Financial Telecommunication) is a cooperative organization headquartered at Belgium. The Swift network connects around 8300 banks, financial institutions and companies operating 208 countries. Swift provides a standardized messaging service to these members. As and when two counterparties undertake a transaction, SWIFT transports the message to both financial parties in a standard form. As the forex market is mainly an OTC market, SWIFT message provides some kind of legitimacy to the transactions. The following line captures summarizes the activities at SWIFT.

"SWIFT is solely a carrier of messages. It does not hold funds nor does it manage accounts on behalf of customers, nor does it store financial information on an ongoing basis. As a data carrier, SWIFT transports messages between two financial institutions. This activity involves the secure exchange of proprietary data while ensuring its confidentiality and integrity". For every participating member, SWIFT assigns a unique code. This code is used to transport messages.

6.6 Robots & Forex Trading

Computers and internet have become the must have requirement for anybody undertaking forex trading. Many companies are selling software packages guaranteeing unthinkable profit by installing these packages. These packages are popularly known as forex robots.

These are not robots in real sense of the word, but these are software which would automate trades based some setting given by the trader. The trader need not physically remain present when the trade is placed and executed.

The variety of such packages available runs into hundreds if not thousands. A typical forex robot would entice traders with tagline like "Our 100% no loss robot will automatically enter and exit profitable trades for you. Imagine always being in the market and making profitable trades while you are free to spend time with the family, go to work, and live life ……"

6.7 Trading Characteristics

Table – 6.4: Currency Distribution of Global Foreign Exchange Market Turnover (Net-net basis,[1] percentage shares of average daily turnover in April[2])

Currency	1998		2001		2004		2007		2010		2013	
	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank
USD	86.8	1	89.9	1	88.0	1	85.6	1	84.9	1	87.0	1
EUR	...	32	37.9	2	37.4	2	37.0	2	39.1	2	33.4	2
JPY	21.7	2	23.5	3	20.8	3	17.2	3	19.0	3	23.0	3
GBP	11.0	3	13.0	4	16.5	4	14.9	4	12.9	4	11.8	4
AUD	3.0	6	4.3	7	6.0	6	6.6	6	7.6	5	8.6	5
CHF	7.1	4	6.0	5	6.0	5	6.8	5	6.3	6	5.2	6
CAD	3.5	5	4.5	6	4.2	7	4.3	7	5.3	7	4.6	7
MXN[3]	0.5	9	0.8	14	1.1	12	1.3	12	1.3	14	2.5	8
CNY[3]	0.0	30	0.0	35	0.1	29	0.5	20	0.9	17	2.2	9
NZD[3]	0.2	17	0.6	16	1.1	13	1.9	11	1.6	10	2.0	10

Currency	1998		2001		2004		2007		2010		2013	
	Share	**Rank**	**Share**	**Rank**	**Share**	**Rank**	**Share**	**Rank**	**Share**	**Rank**	**Share**	**Rank**
SEK	0.3	11	2.5	8	2.2	8	2.7	9	2.2	9	1.8	11
RUB[3]	0.3	12	0.3	19	0.6	17	0.7	18	0.9	16	1.6	12
HKD[3]	1.0	8	2.2	9	1.8	9	2.7	8	2.4	8	1.4	13
NOK[3]	0.2	15	1.5	10	1.4	10	2.1	10	1.3	13	1.4	14
SGD[3]	1.1	7	1.1	12	0.9	14	1.2	13	1.4	12	1.4	15
TRY[3]	...	33	0.0	30	0.1	28	0.2	26	0.7	19	1.3	16
KRW[3]	0.2	18	0.8	15	1.1	11	1.2	14	1.5	11	1.2	17
ZAR[3]	0.4	10	0.9	13	0.7	16	0.9	15	0.7	20	1.1	18
BRL[3]	0.2	16	0.5	17	0.3	21	0.4	21	0.7	21	1.1	19
INR[3]	0.1	22	0.2	21	0.3	20	0.7	19	1.0	15	1.0	20
DKK[3]	0.3	14	1.2	11	0.9	15	0.8	16	0.6	22	0.8	21
PLN[3]	0.1	26	0.5	18	0.4	19	0.8	17	0.8	18	0.7	22
TWD[3]	0.1	21	0.3	20	0.4	18	0.4	22	0.5	23	0.5	23
HUF[3]	0.0	28	0.0	33	0.2	23	0.3	23	0.4	24	0.4	24
MYR[4]	0.0	27	0.1	26	0.1	30	0.1	28	0.3	25	0.4	25
CZK[4]	0.3	13	0.2	22	0.2	24	0.2	24	0.2	27	0.4	26
THB[4]	0.1	19	0.2	24	0.2	22	0.2	25	0.2	26	0.3	27
CLP[4]	0.1	24	0.2	23	0.1	25	0.1	30	0.2	29	0.3	28
ILS[4]	...	34	0.1	25	0.1	26	0.2	27	0.2	31	0.2	29
IDR[4]	0.1	25	0.0	28	0.1	27	0.1	29	0.2	30	0.2	30
PHP[4]	0.0	29	0.0	29	0.0	31	0.1	31	0.2	28	0.1	31
RON[4]	...	35	...	37	...	40	0.0	34	0.1	33	0.1	32
COP[4]	...	36	0.0	31	0.0	33	0.1	33	0.1	32	0.1	33
SAR[4]	0.1	23	0.1	27	0.0	32	0.1	32	0.1	34	0.1	34
PEN[4]	...	37	0.0	32	0.0	35	0.0	36	0.0	36	0.1	35
OTH	…		6.6		6.6		7.7		4.7		1.6	
Total	**200.0**		**200.0**		**200.0**		**200.0**		**200.0**		**200.0**	

[1] Adjusted for local and cross-border inter-dealer double-counting (ie "net-net" basis). [2] Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200% instead of 100%. [3] Turnover for years prior to 2013 may be underestimated owing to incomplete reporting of offshore trading in previous surveys. Methodological changes in the 2013 survey ensured more complete coverage of activity in emerging market and other currencies. [4] Turnover may be underestimated owing to incomplete reporting of offshore trading.

Table – 6.5: Most Traded Currencies by Value (Currency distribution of global foreign exchange market turnover)

Rank	Currency	ISO 4217 code (Symbol)	% daily share (April 2013)
1	United States dollar	USD ($)	87.0%
2	Euro	EUR (€)	33.4%
3	Japanese yen	JPY (¥)	23.0%
4	Pound sterling	GBP (£)	11.8%
5	Australian dollar	AUD ($)	8.6%
6	Swiss franc	CHF (Fr)	5.2%
7	Canadian dollar	CAD ($)	4.6%
8	Mexican peso	MXN ($)	2.5%
9	Chinese yuan	CNY (¥)	2.2%
10	New Zealand dollar	NZD ($)	2.0%
11	Swedish krona	SEK (kr)	1.8%
12	Russian ruble	RUB (□)	1.6%
13	Hong Kong dollar	HKD ($)	1.4%
14	Singapore dollar	SGD ($)	1.4%
15	Turkish lira	TRY (₺)	1.3%
		Other	12.2%
		Total	**200%**

The US currency was involved in 87.0% of transactions, followed by the euro (33.4%), the yen (23.0%), and sterling (11.8%). Volume percentages for all individual currencies should add up to 200%, as each transaction involves two currencies.

There is no unified or centrally cleared market for the majority of trades, and there is very little cross-border regulation. Due to the over-the-counter (OTC) nature of currency markets, there are rather a number of interconnected marketplaces, where different

currencies instruments are traded. This implies that there is not a single exchange rate but rather a number of different rates (prices), depending on what bank or market maker is trading, and where it is. In practice the rates are quite close due to arbitrage. Due to London's dominance in the market, a particular currency's quoted price is usually the London market price. Major trading exchanges include Electronic Broking Services (EBS) and Thomson Reuters Dealing, while major banks also offer trading systems. A joint venture of the Chicago Mercantile Exchange and Reuters, called Fx market space opened in 2007 and aspired but failed to the role of a central market clearing mechanism.

The main trading centers are New York and London, though Tokyo, Hong Kong and Singapore are all important centers as well. Banks throughout the world participate. Currency trading happens continuously throughout the day; as the Asian trading session ends, the European session begins, followed by the North American session and then back to the Asian session, excluding weekends.

On the spot market, according to the 2013 Triennial Survey, the most heavily traded bilateral currency pairs were:

Table – 6.6: Global Foreign Exchange Market Turnover by Currency Pair (Net-net basis,[1] daily averages in April, in billions of US dollars and percentages)

Currency pair	2001		2004		2007		2010		2013	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
USD / EUR	372	30.0	541	28.0	892	26.8	1,098	27.7	1,289	24.1
USD / JPY	250	20.2	328	17.0	438	13.2	567	14.3	978	18.3
USD / GBP	129	10.4	259	13.4	384	11.6	360	9.1	472	8.8
USD / AUD	51	4.1	107	5.5	185	5.6	248	6.3	364	6.8
USD / CAD	54	4.3	77	4.0	126	3.8	182	4.6	200	3.7
USD / CHF	59	4.8	83	4.3	151	4.5	166	4.2	184	3.4
USD / MXN	...	...	...	...	...	...	...	...	128	2.4
USD / CNY	...	...	...	...	...	...	31	0.8	113	2.1
USD / NZD	...	...	...	...	...	...	...	...	82	1.5
USD / RUB	...	...	...	...	...	...	...	...	79	1.5
USD / HKD	...	...	...	...	...	...	85	2.1	69	1.3
USD / SGD	...	...	...	...	...	...	...	...	65	1.2
USD / TRY	...	...	...	...	...	...	...	...	63	1.2
USD / KRW	...	...	...	...	...	...	58	1.5	60	1.1
USD / SEK	...	...	...	...	57	1.7	45	1.1	55	1.0
USD / ZAR	...	...	...	...	...	...	24	0.6	51	1.0
USD / INR	...	...	...	...	...	...	36	0.9	50	0.9
USD / NOK	...	...	...	...	...	...	...	...	48	0.9

Currency pair	2001		2004		2007		2010		2013	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
USD / BRL	...	...	...	...	...	...	25	0.6	48	0.9
USD / PLN	...	...	...	...	...	...	...	...	22	0.4
USD / TWD	...	...	...	...	...	...	...	...	22	0.4
USD / OTH	199	16.0	307	15.9	612	18.4	445	11.2	213	4.0
EUR / JPY	36	2.9	61	3.2	86	2.6	111	2.8	147	2.8
EUR / GBP	27	2.1	47	2.4	69	2.1	109	2.7	102	1.9
EUR / CHF	13	1.1	30	1.6	62	1.9	71	1.8	71	1.3
EUR / SEK	...	...	...	...	24	0.7	35	0.9	28	0.5
EUR / AUD	1	0.1	4	0.2	9	0.3	12	0.3	21	0.4
EUR / NOK	...	...	...	...	...	...	...	...	20	0.4
EUR / CAD	1	0.1	2	0.1	7	0.2	14	0.3	15	0.3
EUR / PLN	...	...	...	...	...	...	...	...	14	0.3
EUR / DKK	...	...	...	...	...	...	...	...	13	0.2
EUR / HUF	...	...	...	...	...	...	...	...	9	0.2
EUR / TRY	...	...	...	...	...	...	...	...	6	0.1
EUR / CNY	...	...	...	...	...	...	...	...	1	0.0
EUR / OTH	20	1.6	38	1.9	83	2.5	102	2.6	52	1.0
JPY / AUD	...	...	...	...	...	...	24	0.6	45	0.8
JPY / CAD	...	...	...	...	...	...	...	...	6	0.1
JPY / NZD	...	...	...	...	...	...	4	0.1	5	0.1
JPY / ZAR	...	...	...	...	...	...	...	...	4	0.1
JPY / BRL	...	...	...	...	...	...	...	...	3	0.1
JPY / TRY	...	...	...	...	...	...	...	...	1	0.0
JPY / OTH	5	0.4	14	0.7	49	1.5	49	1.2	42	0.8
Other currency pairs	23	1.8	36	1.9	90	2.7	72	1.8	89	1.7
All currency pairs	1,239	100.0	1,934	100.0	3,324	100.0	3,971	100.0	5,345	100.0

[1] Adjusted for local and cross-border inter-dealer double-counting (ie “net-net” basis).

Trading in the euro has grown considerably since the currency's creation in January 1999, and how long the foreign exchange market will remain dollar-centered is open to debate. Until recently, trading the euro versus a non-European currency ZZZ would have usually involved two trades: EURUSD and USDZZZ. The exception to this is EURJPY, which is an established traded currency pair in the interbank spot market. As the dollar's value has eroded during 2008, interest in using the euro as reference currency for prices in commodities (such as oil), as well as a larger component of foreign reserves by banks,

has increased dramatically. Transactions in the currencies of commodity-producing countries, such as AUD, NZD, CAD, have also increased.

6.8 Financial Instruments in Global Foreign Exchange Market

a. Spot

A spot transaction is a two-day delivery transaction (except in the case of trades between the US Dollar, Canadian Dollar, Turkish Lira, Euro and Russian Ruble, which settle the next business day), as opposed to the futures contracts, which are usually three months. This trade represents a “direct exchange” between two currencies, has the shortest time frame, involves cash rather than a contract; and interest is not included in the agreed-upon transaction. Spot trading is one of the most common types of Forex Trading. Often, a forex broker will charge a small fee to the client to roll-over the expiring transaction into a new identical transaction for a continuum of the trade. This roll-over fee is known as the "Swap" fee.

b. Forward

One way to deal with the foreign exchange risk is to engage in a forward transaction. In this transaction, money does not actually change hands until some agreed upon future date. A buyer and seller agree on an exchange rate for any date in the future, and the transaction occurs on that date, regardless of what the market rates are then. The duration of the trade can be one day, a few days, months or years. Usually the date is decided by both parties. Then the forward contract is negotiated and agreed upon by both parties.

c. Swap

The most common type of forward transaction is the foreign exchange swap. In a swap, two parties exchange currencies for a certain length of time and agree to reverse the transaction at a later date. These are not standardized contracts and are not traded through an exchange. A deposit is often required in order to hold the position open until the transaction is completed.

d. Futures

Futures are standardized forward contracts and are usually traded on an exchange created for this purpose. The average contract length is roughly 3 months. Futures contracts are usually inclusive of any interest amounts.

Currency futures contracts are contracts specifying a standard volume of a particular currency to be exchanged on a specific settlement date. Thus the currency futures contracts are similar to forward contracts in terms of their obligation, but differ from forward contracts in the way they are traded. They are commonly used by MNCs to hedge their currency positions. In addition they are traded by speculators who hope to capitalize on their expectations of exchange rate movements.

e. Option

A foreign exchange option (commonly shortened to just FX option) is a derivative where the owner has the right but not the obligation to exchange money denominated in one currency into another currency at a pre-agreed exchange rate on a specified date. The options market is the deepest, largest and most liquid market for options of any kind in the world.

Detailed study for these instruments can be done from unit 8 and 9.

6.9 Functions of the Foreign Exchange Market

The foreign exchange market performs the following important functions:

- ✓ transfer of purchasing power between countries- transfer function;
- ✓ provide credit for foreign trade - credit function; and
- ✓ furnish facilities for hedging foreign exchange risks - hedging function.

A. Transfer Function:

The basic function of the foreign exchange market is to facilitate the conversion of one currency into another, i.e., to accomplish transfers of purchasing power between two countries. This transfer of purchasing power is affected through a variety of credit instruments, such as telegraphic transfers, bank drafts and foreign bills.

In performing the transfer function, the foreign exchange market carries out payments internationally by clearing debts in both directions simultaneously, analogous to domestic clearings.

B. Credit Function:

Another function of the foreign exchange market is to provide credit, both national and international, to promote foreign trade. Obviously, when foreign bills of exchange are used in international payments, a credit for about 3 months, till their maturity, is required.

C. Hedging Function:

A third function of the foreign exchange market is to hedge foreign exchange risks. In a free exchange market when exchange rates, i.e., the price of one currency in terms of another currency, change, there may be a gain or loss to the party concerned. Under this condition, a person or a firm undertakes a great exchange risk if there are huge amounts of net claims or net liabilities which are to be met in foreign money.

Exchange risk as such should be avoided or reduced. For this the exchange market provides facilities for hedging anticipated or actual claims or liabilities through forward contracts in exchange. A forward contract which is normally for three months is a contract to buy or sell foreign exchange against another currency at some fixed date in the future at a price agreed upon now. No money passes at the time of the contract. But the contract makes it possible to ignore any likely changes in exchange rate. The existence of a forward market thus makes it possible to hedge an exchange position.

6.10 The Operation of the Foreign Exchange Market

The FX market is a global market operating 24 hours a day. It consists of a vast, highly sophisticated global network of telecommunication systems that provide current buy/sell rates for various currencies in dealing rooms located around the globe. It comprises all financial transactions denominated in foreign currency. FX is usually part of a banks treasury operation (dealing room).

- **Spot and Forward Transactions**

Table – 6.7: Timeline of Tod, Tom, Spot and Forward FX Transactions

Value Day	Today	Today+1	Today+2	Today+3 and beyond
Transaction	Tod	Tom	Spot	Forward

The Value Date (delivery or maturity date) refers to the FX contract date at which delivery of a currency & financial settlement occur. Spot transactions have a maturity date 2 days after the contract is entered into, whilst forward transactions have value date in excess of 2 days. If it's the 13th Aug, the spot delivery date is the 15th & the 1 month forwards delivery date is Sept 15th.

1. Spot Market Operations

a. Asking for a Quotations

The price of a currency must be expressed in terms of another currency. The 1st currency is the 'base currency' (unit of quotation or price being sought) & the 2nd is the 'terms currency'. USD/AUD (USD – Base, AUD – Terms, this is the price of 1 USD in terms of AUD).

2 Way Quotations

EUR/AUD 1.6755-65. The lower number is the dealers buy (bid) price & the higher number is the dealers sell (offer) price.

$$\%Spread = \frac{Offer\ Price - Bid\ Price}{Bid\ Price} \times 100$$

$\rightarrow$ *will only be a few points* (*the final decimal place in a FX quotation*

b. Transposing Quotations

EUR/AUD 1.6755-65

1. **Reverse** the bid & offer prices - EUR/AUD 1.6765-55
2. **Invert** - AUD/EURO 0.5965-68

Originally, the dealer would give (**sell**) 1.6755 AUD to buy 1 EURO. Thus 1.6755 AUD is the 'offer' for 1 EUR. Hence, if the dealer was to buy AUD (AUD/EUR) the offer is 0.5968 EUR for 1 AUD. Originally, the dealer would sell 1 EUR to get (**buy**) 1.6765

AUD. Thus 1.6765 AUD is what the dealer gets (**buys**) for 1 EURO. The dealer bids 1.6765 for 1 EURO which is AUD/EUR 0.5965.

To put it simply, the original bid refers to the rate at which the dealer would buy the base currency and sell the terms currency. Thus the original bid is the offer rate when the original terms currency is transposed to become the base currency.

c. Calculating Cross Rates

All currencies are quoted against the USD. Direct quotes are when the USD is the base currency & indirect quotes are when the USD is the terms currency. When FX transactions take place between 2 currencies, with neither being USD, a cross rate is calculated i.e. can calculate EUR/JPY with EUR/USD & JPY/USD.

i. Crossing 2 Direct Foreign Exchange Quotations

- **Book Method**

Crossing 2 Direct FX Quotations:

1. Place the currency that is to become the unit of quotation 1st
2. Divide opposite bid & offer rates
   - Dividing the base currency offer into the terms currency bid = bid rate
   - Divide base currency bid into terms currency offer = offer rate

- **Personal Method**

  Transpose one of the direct quotations (whilst aligning the correct base currency to what is required) to get a direct and an indirect quotation. Then you can simply multiply bid with bid and offer with offer. This can be seen in the below example.

$$E.g\ \frac{USD}{EUR}.6450-55, \frac{USD}{JPY}107.40-50\ than\ \frac{EUR}{JPY} = \frac{1}{\frac{USD}{EUR}}(transpose) \times \frac{USD}{JPY}$$

$$= 166.38-67$$

ii. Crossing a Direct and Indirect Quotations

Multiple bid with bid and offer with offer:

$$E.g\ \frac{GBP}{USD}1.9770-75, \frac{USD}{NZD}1.3760-70\ than\ \frac{GBP}{NZD} = \frac{GBP}{USD} \times \frac{USD}{NZD} = 2.7204-30$$

iii. Crossing 2 Indirect Foreign Exchange Quotations

- **Book Method**

1. Place the currency that is to become the unit of quotation 1st
2. Divide opposite bid & offer rates
   - Divide the terms currency offer rate into the base currency bid rate = bid rate

- Divide the terms currency bid rate into the base currency offer rate = offer rate

- **Personal Method**

Transpose one of the indirect quotations (the exact one depends on the question - you must make sure the base currency is first). Then multiply bid with bid and offer with offer. This can be seen in the below example.

$$E.g\ \frac{AUD}{USD}.9262-69,\frac{GBP}{USD}1.9770-75\ than\ \frac{AUD}{GBP}=\frac{AUD}{USD}(transpose)$$
$$=0.4684-88$$

2. Forward Market Operations

Foreign currencies may be bought or sold at a price determined today, but with delivery occurring at a specific date beyond spot.

- **Forward Points and Forward Exchange Rates**

The forward exchange rate varies from the spot rate owing to interest rate parity. Interest rate parity is the principle that exchange rates will adjust to reflect interest rate differentials between countries. Forward exchange rates are quoted as forward points either above or below the spot rate. Forward points represent the forward exchange rate variation to a spot rate base.

- **If forward points are rising, add them to the spot rate:**

  The base currency is at a forward premium as its interest rate is lower.

- **If forward points are falling, deduct them from the spot rate:**

  The base currency is at a forward discount as its interest rate is higher.

- **Forward Exchange Rate Contracts**

Forward exchange rate contracts lock in an exchange rate today for delivery at a specified future date. FX dealers quote forward points on standard delivery dates, (usually monthly, out to 12 months) of a specified amount of currency against another.

- **Forward Market Complications**

- **2 Way Quotations :** FX quotes show what the buyer will pay for the base currency & the rate at which they will sell. Dealers must be careful in selecting appropriate bid/offer rates for forward points, cross rates, transposing etc.

- **Different Interest Rate Year Conventions :** Dealers need to convert interest rates based on 360 days to 365 (or vice versa).
- **Borrowing and Lending Interest Rates :** FX dealers need to recognize borrowing & lending interest rate margins.
- **Compound Interest Rates :** The effective value of deposits & cost of borrowings should be calculated by using the effective rate of interest.

6.11 Foreign Exchange Market in India

Traditionally Indian forex market has been a highly regulated one. Till about 1992-93, government exercised absolute control on the exchange rate, export-import policy, FDI (Foreign Direct Investment) policy. The **Foreign Exchange Regulation Act (FERA)** enacted in 1973, strictly controlled any activities in any remote way related to foreign exchange. FERA was introduced during 1973, when foreign exchange was a scarce commodity. Post independence, union government's socialistic way of managing business and the license raj made the Indian companies noncompetitive in the international market, leading to decline in export. Simultaneously India import bill because of capital goods, crude oil & petrol products increased the forex outgo leading to sever scarcity of foreign exchange. FERA was enacted so that all forex earnings by companies and residents have to reported and surrendered (immediately after receiving) to RBI (Reserve Bank of India) at a rate which was mandated by RBI.

FERA was given the real power by making "any violation of FERA was a criminal offense liable to imprisonment". It a professed a policy of "a person is guilty of forex violations unless he proves that he has not violated any norms of FERA". To sum up, FERA prescribed a policy – "nothing (forex transactions) is permitted unless specifically mentioned in the act".

Post liberalization, the Government of India, felt the necessity to liberalize the foreign exchange policy. Hence, **Foreign Exchange Management Act (FEMA) 2000** was introduced. FEMA expanded the list of activities in which a person/company can undertake forex transactions. Through FEMA, government liberalized the export-import policy, limits of FDI (Foreign Direct Investment) & FII (Foreign Institutional Investors) investments and repatriations, cross-border M&A and fund raising activities.

Prior to 1992, Government of India strictly controlled the exchange rate. After 1992, Government of India slowly started relaxing the control and exchange rate became more and more market determined. **Foreign Exchange Dealers association of India (FEDAI),** set up in 1958, helped the government of India in framing rules and regulation to conduct forex exchange trading and developing forex market In India.

A major step in development of Indian forex market happened in 2008, when currency futures (Indian Rupee and US Dollar) started trading at National Stock Exchange (NSE). Since the introduction, the turnover in futures has increased leaps and bound. Though banks and authorized dealers were undertaking forex derivatives contracts, but the introduction of exchange traded currency futures marked a new beginning as the retail investors were able to participate in forex derivatives trading.

6.11.1 Foreign Exchange Market in India: Historical Perspective

Indian forex market since independence can be grouped in three distinct phases.

A. 1947 to1977: During 1947 to 1971, India exchange rate system followed the par value system. RBI fixed rupee's external par value at 4.15 grains of fine gold. 15.432grains of gold is equivalent to 1 gram of gold. RBI allowed the par value to fluctuate within the permitted margin of ±1 percent. With the breakdown of the Bretton Woods System in 1971 and the floatation of major currencies, the rupee was linked with Pound-Sterling. Since Pound-Sterling was fixed in terms of US dollar under the Smithsonian Agreement of 1971, the rupee also remained stable against dollar.

B. 1978-1992: During this period, exchange rate of the rupee was officially determined in terms of a weighted basket of currencies of India's major trading partners. During this period, RBI set the rate by daily announcing the buying and selling rates to authorized dealers. In other words, RBI instructed authorized dealers to buy and sell foreign currency at the rate given by the RBI on daily basis. Hence exchange rate fluctuated but within a certain range. RBI managed the exchange rate in such a manner so that it primarily facilitates imports to India. As mentioned in Section 5.1, the FERA Act was part of the exchange rate regulation practices followed by RBI.

India's perennial trade deficit widened during this period. By the beginning of 1991, Indian foreign exchange reserve had dwindled down to such a level that it could barely be sufficient for three-week's worth of imports. During June 1991, India airlifted 67 tonnes of gold, pledged these with Union Bank of Switzerland and Bank of England, and raised US$ 605 million to shore up its precarious forex reserve. At the height of the crisis, between 2nd and 4th June 1991, rupee was officially devalued by 19.5% from 20.5 to 24.5 to 1 US$. This crisis paved the path to the famed "liberalization program" of government of India to make rules and regulations pertaining to foreign trade, investment, public finance and exchange rate encompassing a broad gamut of economic activities more market oriented.

C. 1992 onwards: 1992 marked a watershed in India's economic condition. During this period, it was felt that India needs to have an integrated policy combining various aspects of trade, industry, foreign investment, exchange rate, public finance and the financial sector to create a market-oriented environment. Many policy changes were brought in covering different aspects of import-export, FDI, Foreign Portfolio Investment etc.

One important policy change pertinent to India's forex exchange system was brought in when rupees made convertible in current account. This paved to the path of foreign exchange payments/receipts to be converted at market-determined exchange rate. However, it is worthwhile to mention here that changes brought in by government of India to make the exchange rate market oriented have not happened in one big bang. This process has been gradual.

Convertibility in current account means that individuals and companies have the freedom to buy or sell foreign currency on specific activities like foreign travel, medical expenses, college fees, as well as for payment/receipt related to export-import, interest payment/receipt, investment in foreign securities, business expenses etc. A related concept to this is the "convertibility in capital account". **Convertibility in capital account** indicates that Indian people and business houses can freely convert rupee to any other currency to any extent and can invest in foreign assets like shares, real estate in foreign countries. Most importantly Indian banks can accept deposit in any currency. Even though the exchange rate has been market determined, from time to time RBI intervenes in spot and forward market, if it feels exchange rate has deviated too much.

6.11.2 Foreign Exchange Turnover

According to the RBI report (September 2009) by Goyal, Nair & Samataray titled 'Monetary Policy, Forex Markets, and Feedback under Uncertainty in an Opening Economy', "Indian FX market has grown many times over the last several years. The average daily turnover, which was in the vicinity of US $ 3.0 billion in 1998-99, grew to US $ 18 billion during 2005-06. The turnover rose considerably to US $ 48 billion during 2007-08 with the monthly turnover crossing US $ 65 billion in February 2007.

The inter-bank to merchant turnover ratio halved from 5.2 during 1997-98 to 2.3 during 2007-08 reflecting the growing participation in the merchant segment of the foreign exchange market.

The spot market remains the most important FX market segment accounting for 51 per cent of the total turnover. Its share has declined marginally in recent years due to a pick up in the turnover in derivative segment. Even so, Indian derivative trading remains a small fraction of that in other developing countries such as Mexico or South Korea. Short-term instruments with maturities of less than one year dominate, and activity is concentrated among a few banks (IMF 2008)".

Box 6.1: Interesting facts about Indian Rupee

India has been one of the earliest issuers of coins in the world (6th Century BC). The origin of the word "rupee" is found in the word rup or rupa, which means "silver" in many Indo-Aryan languages such as Hindi. The Sanskrit word rupyakam means coin of silver. The derivative word Rupaya was used to denote the coin introduced by Sher Shah Suri during his reign from 1540 to 1545 CE. The original Rupaya was a silver coin weighing 175 grains troy (about 11.34 grams) . The coin has been used since then, even during the times of British India. Formerly the rupee was divided into 16 annas, 64 paise, or 192 pies. In India decimalization occurred India in 1957.

Source: http://www.lonympics.co.uk/new/rupee.htm

6.11.3 Pre-Liberalization Exchange Rate Regime in India and Hawala Market:

At this juncture, it is pertinent to discuss **"Hawala market"** operating in India before liberalization. Before 1992, RBI was strictly controlling the exchange rate. This created a parallel foreign exchange market – a black market in foreign exchange popularly known as "Hawala Market". Hawala market is nothing but illegal foreign exchange market where forex trading happen at rates different than the rate mandated by the RBI. When the official rate "overvalues" the home currency, Hawala market starts operating.

Example of a Hawala Transaction: a NRI working in USA wants to send 20,000 US$ to his family member. If he send this money through bank, he receives rupees at prevailing exchange rate of INR 35/US$. But in the black market, the exchange rate is INR 40/US$. In other words, RBI puts a value of INR.35 per US$, when it should have been Rs.40/US$. Hence INR is overvalued at the official rate.

The NRI contacts a hawala operator in USA and gives $20,000 to him. The USA hawala operators counterparty in India, pays Rs. 40/US$ to the family members of NRI here in India. The transaction between hawala dealer in USA and his counterparty India are done through smugglers.

During the heyday of hawala transactions in 1990's, it was a common knowledge that exporters **under invoice** their export earnings and importers **over invoice** their imports goods (so as to increase the cost of import denominated in foreign currency) and the differences are kept abroad and later repatriated back through Hawala route. Even after 23 years of liberalization and even though exchange rate is market determined by supply & demand forces, Hawala market still operates, though at a smaller scale. According to a news report in Hindu (March 2005), many people working in the Gulf countries opt for the `pipe' or 'Hawala' transactions for obvious reasons of convenience and speedy transactions. No bank can beat these operators in delivering the money so fast, and that too at the receiver's doorstep! The ramifications of Hawala market operations are manifold. In fact, through Hawala market, the money laundering is undertaken.

6.12 Summary

The foreign exchange market is the market where currencies are bought and sold. It is the largest and most perfect market. The FX market is the largest and most active financial market in the world. It is open somewhere in the world 24 hours a day, 365 days a year. The FX market is divided into two tiers: the retail or client market and the wholesale or interbank market. The retail market is where international banks service their customers who need foreign exchange to conduct international commerce or trade in international financial assets. The great majority of FX trading takes place in the interbank market among international banks that are adjusting inventory positions or conducting speculative and arbitrage trades. The FX market participants include international banks, bank customers, nonbank FX dealers, FX brokers, and central banks.

In the spot market for FX, nearly immediate purchase and sale of currencies takes place. In the chapter, notation for defining a spot rate quotation was developed. Additionally, the concept of a cross-exchange rate was developed. It was determined that non dollar currency transactions must satisfy the bid-ask spread determined from the cross-rate formula or a triangular arbitrage opportunity exists. The US dollar is the most heavily traded currency, followed by the euro, the yen and the pound. In the real world, quotations include a bid-ask spread. A bid is the exchange rate in one currency at which a dealer will buy another currency. An ask is the exchange rate at which a dealer will sell the other currency. The spread is the difference between the bid price and the ask price. This spread reflects the existence of commissions and transaction costs. In the forward market, buyers and sellers can transact today at the forward price for the future purchase and sale of foreign exchange. Notation for forward exchange rate quotations was developed. The use of forward points as a shorthand method for expressing forward quotes from spot rate quotations was presented.

6.13 Self Assessment Questions

1. What is the meaning of 'foreign exchange'?
2. Describe the major categories of participants in the foreign exchange market
3. Why is the US dollar the most heavily traded currency on the foreign exchange market?
4. Explain the functions of foreign exchange market.
5. What are the various determinants of foreign exchange market?
6. Describe in detail the operation of foreign exchange market.
7. Write a detail note on "Foreign exchange market in India"

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Unit-7 Foreign Exchange Rate

Structure of Unit

7.0 Objectives

After studying this unit, you should be able to:

- Explain the meaning of exchange rate;
- Understand the various types of exchange rates;
- Explain merits and demerits of various exchange rates;
- Understand the factors influencing the exchange rate.

7.1 Introduction

The knowledge of exchange rates are important not only for business organizations, but also for individuals and governments. Any change in exchange rate in either direction influences its cash flows and profitability. By linking together the currencies of different countries, foreign exchange rates render the comparison of international costs and prices. Consequently, they play a dominant role in determining the volume, composition and direction of international trade. Therefore, we all should know the concept of exchange rate, its implications and factors responsible for changes in it. We shall study the concept, types and determinants of exchange rate in this unit.

7.2 Meaning of Foreign Exchange Rate

Foreign exchange rate between currencies of two countries means the number of units of a nation's currency which are needed to buy one unit of other nation's currency. In other words, the exchange ratio of the currencies of two countries is defined as foreign exchange rate. Some definitions of foreign exchange rate given by renowned economists are presented below:

"The price of one currency unit in terms of another currency at any particular time is called the rate of exchange between two currencies". - **S.E. Thomos**

"It (rate of exchange) measures the number of units of one currency which will exchange, in the foreign exchange market, for another". **- Crowther**

"The price of currencies in terms of each other is called foreign exchange rate". **- Sayers**

On the basis of the definitions given above, it may be concluded that the foreign exchange rate is the mutual exchange ratio of the two currencies at which they may be converted with each other. Either country's currency unit may be used as the unit for expressing the price of other country's currency. Thus, the foreign exchange rate of any country unit can be expressed in following two ways:

1. **Direct Exchange Rate:** When the currency units of other countries are expressed in lieu of one unit of home currency, it is called as direct exchange rate. For example, one Indian rupee is equivalent to three American cents or 4 pence of England.
2. **Indirect Exchange Rate:** When units of home currency are expressed in exchange of one unit of a foreign currency, it is called as indirect exchange rate. For instance, one American dollar is equal to 60 Indian rupees ($1 = Rs. 60) or one pound of England is equal to 100 Indian rupees.

Indian rupee can be expressed either as a fall in the exchange rate on the American dollar relative to the Indian rupee or as a rise in the exchange rate on the Indian rupee relative to the American dollar.

7.3 Types of Foreign Exchange Rate

Foreign exchange rate may be of following types:

7.3.1 Fixed Exchange Rate

When the government of a country announces or fixes an exchange rate and keeps it stable, it is called as fixed exchange rate. It is also known as stable exchange rate. To maintain the exchange rate stable, the government or the monetary authority of the country is always ready to buy or sell unlimited quantities of foreign currency at a fixed rate. Although the fixed exchange rate is conceptually stable, but in practice, it may changes within specified limits. The gold standard and the gold exchange standard are two classical examples of fixed exchange rate system. Fixed exchange rate system under the Brettonwoods system was also prevalent. In case of gold standard, exchange rates could fluctuate within the limits of upper and lower gold points, while in case of Brettonwoods system, these were allowed to fluctuate $\pm$ 1% in the beginning and $\pm$ 2.25% latter on. This system was termed as adjustable peg system.

Forms of Fixed Exchange Rate System:

(i) Currency Boards: This is a country's monetary authority that issues its base money (notes and coins) and fixes the exchange rate. Under this system, the domestic currency is anchored to a foreign currency, which is also known as the reserve currency. Although it is possible to fix the exchange rate in terms of basket of currencies, the currency board may fix the exchange rate in terms of a

single currency. The board selects a foreign currency, which is strong, and this currency is internationally traded as the anchor currency. The value and stability the local currency is directly linked to the value and stability of the anchor currency. The exchange rate in currency board system is strictly fixed. For example, the Hong Kong dollar has been officially fixed at USD / HKD 7.80 since the currency board was established in 1983. Countries such as Lithuania, Estonia and Bosnia have their local currencies anchored to the euro. Argentina had a currency board system (anchored to the US dollar) until 2002.

(ii) **Dollarization:** It is a generic term that refers to the use of any currency (dollar or any currency) in place of domestic currency as the legal tender. Some countries abandon their domestic currency and use one of the major reserve currencies. Panama has been using the US dollar as legal tender since 1904. Ecquador and E1 Salvador dollarized in 1999.

(iii) **Currency Unions**: When a group of countries realize that multiple currencies and exchange rate fluctuations are seriously affecting their trade, they may adopt an exchange rate regime known as currency union. In such a regime, some countries decide to adopt a common currency so that exchange rates between member countries of the union disappear. The largest currency union in the world has been formed by the European Union, using the Euro as its common currency.

(iv) **Currency Baskets:** Pegging a currency to another single currency might be risky at times. So, a country might peg its currency to a basket of foreign currencies. A basket of currencies is likely to be less risky than a single currency. If the currencies for a basket are chosen correctly, the resulting peg will be more stable.

Advantages or Arguments in Favour of Fixed Exchange Rate System

Following are the main advantages of fixed exchange rate system:

(i) It ensures stability and certainty in exchange rates and keeps check on speculation.

(ii) It creates confidence in the currency, which promotes international trade and investments.

(iii) It facilitates domestic stabilization.

(iv) It promotes international economic integration by establishing a stable link between world's currencies.

(v) It serves as an anchor imposing a discipline on government not to pursue the inflation by policies.

(vi) It promotes orderly growth of international money and capital markets which are vital for smooth international capital flows.

Deficiencies or Arguments against Fixed Exchange Rate System

Following are the main disadvantages of fixed exchange rate system:

(i) The system is inflexible therefore leads to slow growth of international trade and creates obstacles in economic development of the country.

(ii) Exchange rates are determined by the monetary authorities without considering the demand for and supply of currencies. Therefore exchange rates are discretionary and arbitrary without consideration of ground realities.

(iii) Exchange rates determined at the discretion of the monetary authorities cause uncertainty in future exchange rates and may also lead to smuggling of goods.

(iv) Sometimes, the exchange rates are determined by the monetary authorities on the basis of certain extraneous considerations, leading to trade war in internal markets.

(v) It is very hard to keep the exchange rate stable because of so many operational difficulties. It requires wide preventive measures and fully controlled system.

(vi) Countries adopting fixed exchange rate system are, many times, under pressure to devalue their currencies as had been with India and US.

7.3.2 Floating Exchange Rate:

It is also known as flexible or fluctuating exchange rate. It is that rate which is determined by the free forces of demand and supply of foreign exchange in market. The change in exchange rate takes place continuously and automatically according to the changes in demand and supply of foreign exchange in the market.

Forms of Floating Exchange Rate

(i) **The Free Float**: When the rate of exchange is determined without government intervention jointly by the free forces of demand and supply of a currency, it is known as free float. Thus determined exchange rate keeps changing in response to the changes in demand and supply of a currency. It is also known as the pure float or the clean float.

(ii) **The Managed Float**: The managed float is primarily aimed at eliminating excess validity and reducing uncertainty. Under a managed float system, the government intervenes in the foreign exchange market whenever it intends the exchange rate to move in a particular direction or to stabilize at a target level. When there is a light intervention by the monetary authority in the foreign exchange market to moderate excessive fluctuations, the float is a lightly managed one and in such cases the exchange rate is essentially determined by the market forces.

(iii) **Currency Pegging:** It involves fixing the value of a currency in relation to the value of another currency or to a basket of currencies or to SDRs. A country with a pegged exchange rate establishes a fixed exchange rate with another currency or a basket of currencies. So the values of pegged currencies move together over

time. Generally, a country may peg its currency to the currency of its major trading partner in order to stabilize its trade receipts and payments. A currency may also be pegged to the SDR, which itself is pegged to a basket of four currencies.

The pegging of a currency may be in form of hard pegging, adjustable pegging or soft pegging. In case of hard pegging, exchange rate is fixed and government has no plans to change it. Currency boards and dollarization are examples of hard pegging. The adjustable pegging system allows the government to adjust exchange rates periodically. The Brettonwoods system is a fine example of it. Soft pegging involves frequent adjustment in exchange rates. Soft pegging may be high-frequency pegging (day-to-day or week–to week) or low-frequency pegging (month–to month or quarter – to quarter pegging).

(iv) **Crawling Peg**: It is a hybrid system with some features of the floating exchange rate system and some features of fixed exchange rate system. It involves fixing a par value of a currency and allowing the exchange rate to move within certain limits. A country which adopts the crawling peg is committed to maintaining its exchange rate within a certain margin / band at any point in time. Under this system, however, government is at liberty to revise the par value as well as the limits of fluctuations as and when required. Thus, crawling peg system avoids violent fluctuations in exchange rates without being inflexible. Mexico adopted this system in 1990s.

A crawling peg may be in the form of a crawling broad band or a crawling narrow band. In a crawling broad band, the limits around the central parity are wide enough (Say, $\pm$ 20%) to provide more flexibility. It provides more flexibility and is closer to a floating system. On the other hand, the crawling narrow band is almost equivalent to the fixed exchange rate regime of Brettonwoods system.

Advantages / Arguments in Favour of Floating Exchange Rate System

The Following arguments may be advanced in favour of floating exchange rate system:

(i) It allows the foreign exchange market to determine a currency's worth or allows the foreign exchange rate to find its natural level. In the long-run, it keeps the balance of payments of all countries in equilibrium through an automatic adjustment mechanism. For instance, if a country has a deficit in its balance of payments, the exchange rate of its currency will depreciate and this will promote the exports and reduce the imports. Ultimately, the balance of payments will be in equilibrium.

(ii) A country is able to improve its economic image and attract foreign investments by adopting flexible exchange rate systems.

(iii) It keeps government away from unnecessary intervention as there is no need to bother about tariffs, quotas, subsidies and other controls as they are automatically taken care of by market forces and, consequently, by the exchange rate.

(iv) It reflects the true cost- price relationship between two countries – different countries pursue different economic policies due to which different cost-price relationships exist between them.

(v) It allows countries to pursue their own and independent economic policies and also to maintain their economic sovereignty.

(vi) It adjusts the external balances and prevents the recurring balance of payments crisis more effectively compared with fixed exchange rate system. Consequently, its effect on international lending is likely to be more beneficial.

Disadvantages / Arguments against Floating Exchange Rate System

The following exchange rate system suffers from the following limitations:

(i) It cannot ensure stability in exchange rates, which results in uncertainty and speculation, which despite of foreign exchange control, can endanger the stability of a currency. Once the currency falls under the suspicion of impending devaluation, it becomes practically very difficult to check it. The story of devaluation of British pound in 1949 and Indian rupee in 1966 and 1991 and the U.S. dollar in 1971 and 1973 supports this fear.

(ii) Fluctuating exchange rates are incompatible with the stability of domestic economy. Unbridled fluctuations in exchange rates cause unwarranted fluctuations in the prices of exports and imports. This not leads to disruption in smooth flow and development of international trade, but also in the inter-industry allocation of resources and factors of production in the economy.

(iii) Freely floating exchange rates induce unwarranted capital movements. The massive capital outflows that take place in anticipation of depreciation / devaluation of currency may cause havoc to the economies. Different currency crisis in the world are the glaring examples of this fact.

(iv) Countries following floating exchange rate system may face high rate of inflation. In times of continuing inflation, floating exchange rates cause **v**icious circle of devaluation and inflation to emerge.

(v) The instability and uncertainty in exchange rates throws business planning out of gear, leading to economic instability, adverse impact on investments and slow growth of the world economy.

Both fixed and floating exchange rate systems have some merits and demerits. But it could be concluded that the some degree of foreign exchange rate stability is essential for the smooth functioning of the global economy. Perhaps the best position is neither continuously fluctuating exchange rate nor a rigid fixed exchange rate, but an exchange rate which gives freedom to a country to alter it when needed with certain well defined limits.

7.3.3 Spot Exchange Rate

Spot exchange rate is that rate at which the exchange of currency takes place on the spot when it is quoted. It is used for the spot transactions in foreign exchange market. In the spot transactions, the seller of foreign exchange has to deliver the foreign exchange sold by him 'on the spot' (within two days). In actual practice, more than one spot exchange rate exists. For instance, one spot rate is for telegraphic transfer and another different spot exchange rate for cheques and commercial bills.

7.3.4 Forward Exchange Rate

Forward exchange rate is that rate, which is decided at present for some specified time in future. The chief characteristic of this rate is that the exchange rate for some particular time in future is decided at present. In other words, the settlement of transactions is done in future on a particular pre-decided date on the basis of exchange rate decided at present. According to Paul Enzing, "Forward exchange rate is that actual rate for foreign exchange bought and sold for future delivery".

In the forward foreign exchange market the seller agrees to sell and the buyer agrees to buy a certain stated amount of foreign exchange at some specified future date at the exchange rate agreed upon in advance / present. Usually, the forward foreign exchange contracts are made on the three month basis.

Importance / Advantages of Forward Exchange Rate

a. Forward exchange rate protects exporters and importers against the risks of fluctuations in exchange rates by providing hedging / covering. This rate enables the exporters and importers of goods to know the price of their goods which they are about to export or import.

b. Forward exchange rate enables the investors to know the actual amount of investment well in advance. Similarly, they can execute advance transactions for profit.

c. Forward exchange rate also benefits the debtors and creditors both by ascertaining the actual amount to be paid and to be received well in advance. It also saves them from the risks of excess payment to be made or less payment to be received due the changes in exchange rate in future.

d. Forward exchange rate helps in promoting internal trade, and increasing the pace of development.

e. Forward exchange rate helps in bringing stability in exchange rates of different currencies.

Problems of Forward Exchange Rate

a. Determination of forward exchange rate is a tedious task as forward exchange market is influenced by numerous factors.

b. Froward exchange rates stimulate speculative activities in foreign exchange markets, which is detrimental to business and growth as well as to the stability of exchanges rates.

c. Forward exchange transactions take place only in few important currencies of the world.

d. There are several other practical difficulties like exchange control and in determining the rate of payment owing to some reason or the other.

7.3.5 Official and Unofficial Exchange Rate

Official exchange rate is that rate which is determined and declared by the government or monetary authority of the country. Authorized dealers execute the transactions of foreign exchange only at the rates declared by the government. But in practice, many foreign exchange transactions are done at the rates lower or higher than the official rates. Such rates are termed as Unofficial Exchange rates. Foreign exchange transactions done at the official exchange rates have legal validity, while transactions executed at the unofficial exchange rates have no legal validity. Generally, illegal transactions take place at unofficial rates.

7.3.6 Buying and Selling Exchange Rate

The rate, at which foreign currency is purchased by banks and dealers of foreign exchange, is termed as buying exchange rates. Likewise, the rate at which foreign currency is sold by the banks and dealers of foreign exchange is called the selling exchange rate. Generally, buying rates are lower than the selling rates. The margin between the buying and selling rate is the profit of foreign exchange dealers- the intermediaries of foreign exchange markets.

7.3.7 Favourable and Unfavourable Exchange Rate

When the exchange value of a country's currency appreciates in relation to the other country's currency, the exchange rate becomes favourable to the former country. In other words, when a country gets more foreign currency in exchange of one unit of home currency than earlier, the exchange rate of home currency is said to becoming favourable. Contrary to it, if the exchange value of home currency is declining in relation to the foreign currency, the home currency is said to be turning unfavourable. For example, earlier $1= Rs. 50 and now $1= Rs. 62. In this case, the exchange rate of Indian rupee has become unfavourable and the exchange rate of U.S. dollar has become favourable in relation to each other. Generally, favourable exchange rate is presumed to be good and unfavourable exchange rate is presumed to be bad for a country.

7.3.8 Nominal and Real Exchange Rate

The nominal exchange rate is that rate of exchange which is determined by the free forces of demand and supply of foreign exchange without adjusting for inflation differential between two countries. It is also known as actual exchange rate.

The real exchange rate is the nominal exchange rate adjusted for inflation differential between the two countries. In other words, it is a measure of change in the relative purchasing power of the two currencies concerned. The real exchange rate between two currencies, say INR and USD, can be defined as:

$$= Rt\,(USD / INR) = St\,(USD / INR) \times \frac{(1+ i_f)^t}{(1+ih)^t}$$

Here, Rt= Real exchange rate between two countries at time t.
St= Nominal exchange rate between two countries at time t.
if= Rate of inflation in foreign country during period t.
ih= Rate of inflation in the home country during period t.

Changes in real exchange rate have implications for the competitiveness of a country's international trade.

7.4 Determinants of Exchange Rate

Like the determination of price of a commodity in a free market, the foreign exchange rate is also determined in the free foreign exchange market by the demand for and supply of foreign currency. Thus, it the demand for and supply of foreign currency which mainly influence the exchange rate determination and changes in it. It is the general sense that if the demand for some currency is greater than its supply, obviously its exchange rate will increase and contrary to it, if the supply of some currency exceeds its demand, than the exchange rate will definitely decline.

There are several factors that influence the exchange rate through their effects on the currency demand and supply; the important among them are as follows:

A. Inflation Rates: Inflation influences exchange rates by affecting the competitiveness of the country's goods and services in the international market. Due to inflation, a country's exports become costlier and thus fail to compete in the international market. As a result, the country's exports would decline, leading to a decline in the supply of foreign currency. The competitiveness of exports of two countries depends on the relative rate of inflation in two countries. For instance, if inflation rate in India is higher than the US, obviously, it will reduce exports from India to the US and will increase exports from US to India. It will ultimately appreciate the exchange rate of dollar against rupee.

B. Economic Growth: The country's economic growth rate also influences the demand and supply of foreign currency. The higher the economic growth rate, the more economic transactions both within the country and across countries (exports and imports) will take place. This will cause outflow and inflow of foreign currencies and thus influencing their demand and supply.

C. Interest Rates: The interest rate in the economy also influences the exchange rate through supply and demand for foreign exchange. When interest rate in an economy increases, foreign investors pump in more funds, which increases the supply of foreign currency and fall in the value against the home currency. Similarly, if the interest rates in other countries rise, there will be a shift of invisible funds to them, leading to an increase in the exchange rate of other currencies. Thus, the increase and decrease in interest rates in the economy results an increase or decrease in the supply and demand for foreign currency. However, the increase or decrease in interest rates would be effective only if the relative change in interest rate is more than that in other countries.

D. Speculation: Speculators in foreign exchange market may also influence the demand and supply of foreign currency. When the speculators purchase more foreign currency, the value of foreign currency will go up as a result of increased demand. The reverse effect will be seen when the speculators sell more foreign currency. The purchase and sell of foreign currency depend on the activities in forward exchange market. The matter of the fact is that the forward rates influence the spot exchange rates.

E. Money and Credit Policy: The inflation rates and interest rates to a great extent are also governed by the monetary policy of the country. If a country adopts tight monetary policy, the money supply will be comparatively less. This will lead to less inflation and more exports from the country and appreciation in exchange rate. The tight monetary policy not only reduces inflation, but also keeps high interest rate to control inflation, which in its turn invite more foreign funds into the country. Cheap money policy has reverse effects.

F. Political Factors: Political stability in the country may attract a large amount of investments from foreign institutions, as investors find the country to be less risky and more rewarding for their investments. On the contrary, political instability in a country may drive away investors from the country and cause the outflow of funds. The policies / ideology of the ruling party in a country also influence the exchange rate. Some political decisions and activities also influence the exports and imports of the country, thereby influencing the exchange rate.

G. Government Controls: supply of foreign exchange. The Governments may also directly intervene in Governments may impose several controls and restrictions on the exports and imports, remittances of funds and investments. All such controls influence the demand and the foreign exchange market to influence the exchange rate as per the need of economy. Therefore, exchange rates are highly susceptible to government controls, interventions and policies.

H. Productivity of an Economy: Increasing productivity in an economy should positively influence the value of its currency. Its effects are more prominent if the increase is in the traded sector.

I. **Balance of Trade Levels and Trends:** The trade flow between countries illustrates the demand for goods and services, which in turn indicates demand for a country's currency to conduct trade. Surpluses and deficits in trade of goods and services reflect the competitiveness of a nation's economy. For example, trade deficits may have a negative impact on a nation's currency.

J. **Market Psychology:** Market psychology and trader perceptions influence the foreign exchange market in a variety of ways:

- **Flights to quality:** Unsettling international events can lead to a "flight to quality", a type of capital flight whereby investors move their assets to a perceived "safe haven". There will be a greater demand, thus a higher price, for currencies perceived as stronger over their relatively weaker counterparts. The U.S. dollar, Swiss franc and gold have been traditional safe havens during times of political or economic uncertainty.
- **Long-term trends:** Currency markets often move in visible long-term trends. Although currencies do not have an annual growing season like physical commodities, business cycles do make themselves felt. Cycle analysis looks at longer-term price trends that may rise from economic or political trends.
- **"Buy the rumor, sell the fact":** This market truism can apply to many currency situations. It is the tendency for the price of a currency to reflect the impact of a particular action before it occurs and, when the anticipated event comes to pass, react in exactly the opposite direction. This may also be referred to as a market being "oversold" or "overbought". To buy the rumor or sell the fact can also be an example of the cognitive bias known as anchoring, when investors focus too much on the relevance of outside events to currency prices.
- **Economic numbers:** While economic numbers can certainly reflect economic policy, some reports and numbers take on a talisman-like effect: the number becomes important to market psychology and may have an immediate impact on short-term market moves. "What to watch" can change over time. In recent years, for example, money supply, employment, trade balance figures and inflation numbers have all taken turns in the spotlight.
- **Technical trading considerations:** As in other markets, the accumulated price movements in a currency pair such as EUR/USD can form apparent patterns that traders may attempt to use. Many traders study price charts in order to identify such patterns.

Thus, it is evident that the demand and supply of foreign exchange are influenced by several interrelated and interactive factors. Some of these factors have long-term effect, while others have short-term effect.

7.5 Summary

Foreign exchange rate is the exchange ratio of the two currencies at which they may be converted with each other. Either country's currency unit may be used as the unit for expressing the value of other country's currency. Exchange rates can be classified into the following categories : (i) Fixed and Floating exchange rate; (ii) Spot and Forward exchange rate; (iii) Official and Unofficial exchange rate ; (iv) Buying and Selling exchange rate ; (v) Favourable and Unfavourable exchange rate ; (vi) Nominal and Real exchange rate.

Foreign exchange rate is influenced mainly by the demand for and supply of foreign currency. But the demand and supply of foreign exchange may be influenced by the interest rates, inflation rates, economic growth, speculative and psychological factors, monetary policy, political factors and government control and regulations.

7.6 Self Assessment Questions

1. What is meant by foreign exchange rate? Also explain its importance.
2. Advance arguments in favour and against the fixed and floating exchange rates.
3. Distinguish between fixed and flexible exchange rates. In your opinion, which one is superior and why?
4. Differentiate between spot and forward exchange rates. Also explain the merits and demerits of forward exchange rate.
5. Explain the factors influencing the exchange rates.

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Unit – 8: Exchange Rate Determination

Structure of Unit

8.0 Objectives

After studying this unit, you should be able to:

- Explain the Exchange rate mechanism;
- Examine different theories of the exchange rate behavior;
- Explain how exchange rates are quoted in spot and forward market;
- Describe how inflation rate and interest rate influence the exchange rate;
- Explain how the interest rate differential influence the forward exchange rate and to evaluate the interest rate parity theory in this context;
- Present how demand and supply forces determine the exchange rate in spot market;
- Present how balance of payment, modern theory, monetary approach and portfolio balance theory determines the exchange rates.

8.1 Introduction

An exchange rate is the relative price of one currency in terms of another. It is one of the important financial variables in a country's macroeconomic scenario and policy agenda along with variables like interest rate and money supply. For companies, individuals, financial institutions and for other stakeholders it is very essential to know the variables which put effect on exchange rates of countries. With this background, this chapter has a modest goal. This chapter provides theories of exchange rate determination and their empirical hypothetical examples.

8.2 Exchange Rate Mechanism

A foreign exchange rate is the price of one currency expressed in terms of another currency or an exchange rate is the amount of a currency that one needs in order to buy one unit of another currency, or it is the amount of a currency that one receives when selling one unit of another currency. By definition, the Foreign Exchange Market is a

market in which different currencies can be exchanged at a specific rate called the foreign exchange rate. There are two types of rates prevalent in the market. These are spot exchange rates and forward exchange rates.

1. Spot Exchange Rate:

Spot exchange rate or spot rate is also known as FX spot between two currencies is the rate at which one currency will be exchanged for another on spot. It is also regarded as the value of one country's currency in terms of another currency. It is that exchange rate which applies to those sale/purchase transactions in foreign exchange for which payments and receipts are to be effected on the spot.

The methods of quoting exchange rates are both direct and indirect.

A **direct quote** gives the home-currency price of a certain amount of foreign currency, usually one or 100 units. It indicates the number of units of domestic currency required to buy one unit of foreign currency.

Example:- If India quotes the exchange rate between the rupee and the US dollar in a direct way, the quotation will be written as Rs. 62/US $.

An **indirect quote** indicates the number of units of domestic currency required to buy one unit of the domestic currency.

Example: - If India adopts indirect quotation, the banks in India will quote the exchange rate as US $ 0.01587/Rs.

Thus, indirect quote = $\frac{1}{\text{Direct Quote}}$

Illustration 1

If direct quote is Rs. 62/ US $, how can this exchange rate be presented under indirect quote?

Solution

$\frac{1}{Direct\ Quote} = \frac{1}{62}$ = US $ 0.016129/Rs.

In the spot exchange market, two types of spot rates are present which are called Ask Price and Bid Price.

a. The **Ask Price** is the rate at which the foreign currency can be purchased from the dealer. It is the selling rate or offer rate.
b. The **Bid Price** is the rate at which the dealer is ready to pay in domestic currency in exchange of the foreign currency. It is the buying rate from the point of dealer.

At any given point in time Bid (buy) quote for a foreign currency will be less than it's Ask (sell) quote.

The bid rate is always given first, followed by the ask rate quote. If the rupees-US dollar rate is Rs. 62.9634/62.7102/US $, then the former is the buying rate and the latter the selling rate. In other words, the buying rate is the rate at which the banks purchase a foreign currency from the customer. Suppose, in India, a customer exchange the US dollar for the rupee, the bank will buy the US dollar at the buying rate, which is at Rs. 62.9634 a dollar. On the other side, the selling rate is the rate at which the banks sell foreign currency to their customers. For example, a bank in India selling one US dollar to a customer, the bank will charge the selling rate that is Rs. 61.7102 per US dollar.

Spread: It is the difference between ask price and bid price. The dealer is always interested to have higher spread, so that he could get higher compensation.

Spread (%) (Based on ask price) = $\frac{Ask\ Price - Bid\ Price}{Ask\ Price} \times 100$

Spread (%) (Based on bid price) = $\frac{Ask\ Price - Bid\ Price}{Bid\ price} \times 100$

In the above example the spread is (62.9634-62.7102) = 0.2532

Spread % based on ask price will be = $\frac{62.9634 - 62.7102}{62.9634} \times 100$ = 0.4021%

Spread % based on bid price will be = $\frac{62.9634 - 62.7102}{62.7102} \times 100$ = 0.4037%

Illustration 2

Consider the following bid-ask prices: Rs. 60.1353/61.2231/US $. Find the bid ask spread.

Solution

Spread % based on ask price will be = $\frac{61.2231 - 60.1353}{61.2231} \times 100$ = 1.7767%

2. Forward Exchange Rates:

Forward rate is the rate which is fixed today but the settlement of transaction takes place at some specified future date. Both the buyer and the seller of exchange in the forward market agree that the forward rate will sell a stated amount of the 'foreign' currency at an agreed exchange rate to the buyer on a specified future date (say one month hence) irrespective of the actual exchange rate that may prevail on the said future date.

With reference to its relationship with the spot rate, the forward rate may be at par, at a discount or at a premium:

(i) **At Par**: It means forward exchange rate quoted is exactly equivalent to the spot rate at the time of making the contract.

(ii) **At Premium:** It means forward rate for a currency is said to be at a premium with respect to the spot rate.

(iii) **At Discount:** It means forward rate for a currency is said to be at a discount with respect to the spot rate.

8.2.1 Relationship between Spot and Forward Exchange Rates

Forward rate premium: Foreign currency at premium when its forward rate is higher than spot rate.

Forward rate discount: Foreign currency is at discount when its spot rate is higher than the forward rate.

$$\text{Forward Premium} = \frac{Forward\ rate - Spot\ rate}{Spot\ rate} \times \frac{12\ months}{Forward\ Contract\ length\ in\ months} \times 100$$

$$\text{Forward Discount} = \frac{Spot\ rate - Forward\ rate}{Spot\ rate} \times \frac{12\ months}{Forward\ Contract\ length\ in\ months} \times 100$$

Illustration 3

From the data given below calculate forward premium or discount, as the case may be, of the US $ is relation to Rs.

	Spot	1 month forward	3 months forward	6 months forward
Rs/US $	Rs. 76.9542/77.1255	Rs. 77.2111/77.4000	Rs. 76.6055/76.7555	Rs. 77.8550/77.9650

Solution:

1. Premium with respect to **Bid price**

1 month = $\frac{77.2111-76.9542}{76.9542} \times \frac{12}{1} \times 100$ = 4 percent per annum

6 months = $\frac{77.8550-76.9542}{76.9542} \times \frac{12}{6} \times 100$ = 2.34 percent per annum

2. Premium with respect to **Ask price**

1 month = $\frac{77.4000-77.1255}{77.1255} \times \frac{12}{1} \times 100$ = 4.27 percent per annum

6 months = $\frac{77.9650-77.1255}{77.1255} \times \frac{12}{6} \times 100$ = 2.18 percent per annum

In case of 3 month forward, spot rates are higher than the forward rates, signaling that forward rates are at a discount.

3. Discount with respect to **Bid price**

3 months = $\frac{76.9542-76.6055}{76.9542} \times \frac{12}{3} \times 100$ = 1.81 percent per annum

4. Discount with respect to **Ask price**

3 months = $\frac{77.1255-76.7555}{77.1255} \times \frac{12}{3} \times 100$ = 1.92 percent per annum

Illustration 4

The following rates appear in the foreign exchange market:

	Spot Rate	2 Months forward
Rs/1Us $	Rs. 59.80/60.05	Rs. 60.50/61.00

(i) How many dollars should a firm sell to get Rs. 60.50 million after 2 months?

(ii) How many rupees does the firm require to pay to obtain US $ 500000 in the spot market

(iii) Assume the firm has US$ 50000. How many rupees does the firm obtain in exchange for the US $?

(iv) Are forward rates at premium or discount?

Solution:

(i) After 2 months, to get Rs. 60.50 million, the firm has to sell the US $. In other words, the dealer is buying dollars. As rates are always quoted from the point of view of the dealer, the dealer buying of $ at Rs. 60.50 is relevant. Accordingly, the firm is required to pay US $ 1 million i.e. (Rs. 60.50 million/ Rs. 60.50)

(ii) The firm is buying US $. To put it differently, the dealer is selling dollars as per the spot rate quotation, the dollar selling rate is Rs. 60.05. Accordingly, the firm is to pay Rs. 30,02,500 (US $ 500000 × Rs. 60.05)

(iii) The firm is selling US $. The relevant spot exchange rate will be the buying rate from the point of view of the dealer, this rate is Rs. 59.80. Accordingly, the firm will receive Rs. 29,90,000 (US 50000 × Rs. 59.80)

(iv) Forward rates are at a premium as these rates are higher than the spot rate. The premium amount is determined separately both for the period for the bid price and the ask price.

8.2.2 Cross Rates

Sometimes the value of a currency in terms of another one is not known directly. A cross rate is an exchange rate between the currencies of two countries that are not quoted against each other, but are quoted against one common currency. Currencies of many countries are not freely traded in the foreign exchange market. Therefore, all currencies are not quoted against each other. Most currencies are however, quoted against the US Dollar. The cross rates of currencies that are not quoted against each other can be quoted in terms of the US dollar.

Suppose, a news paper quotes Rs. 65.00-65.20/Us $; and at the same time, it quotes Canadian $ 0.76-0.78/ US $ but does not quote the exchange rate between the rupee and the Canadian dollar. Thus the rate of exchange between the rupees and the Canadian dollar will be found through the common currency, the US dollar. The technique is similar for both spot and forward cross rates.

Spot Cross Rates

The selling rate of the Canadian dollar in India can be worked out by selling the rupees for the US dollar at Rs. 65.20/ US $ and then buying Canadian dollars with the US dollar at C$ 0.76/US $. This means

Rs. 65.20/US $ 1 × US $ 1/C$ 0.76 = Rs. 85.79/C$

The buying rate of the Canadian dollar in Indian can be found through buying the Indian rupee for the US dollar at Rs. 65.00/US $ and selling the Canadian dollar for US dollar at C$ 0.78/US $. This means that

Rs. 65.00/US $ 1 × US $ 1/C$ 0.78 = Rs. 83.33/C$

Combining the two, we get

Rs. 83.33-85.79/C$

I. Cross rate in case of three countries

If there are three country A, B and C and rate between country A and B as well as A and C, is given, rate between B and C will be

Formula:

(B/C) Bid price = (B/A) Bid × (A/C) Bid

Where (A/C) Bid = $\frac{1}{\left(\frac{C}{A}\right)Ask}$

(B/C) Ask Price = (B/A) Ask × (A/C) Ask

Where (A/C) Ask = $\frac{1}{\left(\frac{C}{A}\right)Bid}$

Illustration 5

An importer is to make payment of 1 million Thai Baht to its trading partner in Bangkok. The currency quotes available are:

For dollar in India: Rs.60.0843/60.0996

For dollar in Thailand: Thai Baht 50.9400/50.9600

What is the amount of bill payable in terms of Indian rupees?

Solution:

As a direct quote of Rs/Thai baht is not available, the cross rate will be used by the importer to buy Thai baht:

Rs/US $: Rs. 60.0843/60.0996

Thai Baht/US $: 50.9400/50.9600

For cross rates, (Rs/Thai Baht) bid = (Rs/US$) bid × (US $/Thai Baht) bid

= 60.0843×1/50.9600

= 1.17904

And, (Rs/Thai Baht) ask = (Rs/US $) ask × (US $/Thai Baht) ask

= 60.0996 × 1/50.9400

= 1.17980

So the cross rate of Rs./Thai Baht : 1.17904-1.17980

As the importer is to buy 1 million Thai baht; his payment in rupees will be as follows:

10,00,000 × 1.17980 = Rs. 11,79,800

II. Cross rate in case of four countries

Formula: (C/D) bid = (C/A) bid × (A/B) bid × (B/D) bid

(C/D) ask = (C/A) ask × (A/B) ask × (B/D) ask

Illustration 6

Calculate cross currency rate between €/£ (bid as well as ask), given the following spot exchange rates of three pair of currencies.

Rs. /US $: Rs. 60.35-60.90

Rs. / € : Rs. 62.90-63.30

US $/£ : US $ 1.59-1.60

Solution

a. Determination of €/£ exchange rate (bid quote)

(€/£) bid = (€/Rs) bid × (Rs/$) bid × ($/£) bid

Where: (€/Rs) bid = 1/(Rs/€) Ask

(€/£) bid = 0.01579 × 60.35 × 1.59 = 1.5151

b. Determination of €/£ exchange rate (ask quote)

(€/£) ask = (€/Rs) ask × (Rs/$) ask × ($/£) ask

Where: (€/Rs) ask = 1/(Rs/€) Bid

(€/£) bid = 0.01589 × 60.90 × 1.60 = 1.5483

8.3 Exchange Rate: Theories of Determination

Many theories have been written in respect to the main determinant of future exchange rates. Although the majority of these theories give adequate reasons in order to explain what actually determines the rates between the currencies, we can argue that there are many factors that may cause a currency fluctuation. Consequently, there is little that can be alleged in respect to the theory that better answers the question of what finally determines the exchange rates.

Here below, main theories regarding the determinants of the exchange rates are given:

8.3.1 Supply and Demand

The exchange rate between two currencies in a floating rate regime is determined by the interplay of demand and supply forces. The exchange rate between, say, the rupee and the US dollar depends upon the demand for the US dollar and its availability or supply in the Indian foreign exchange market. The demand for foreign currency comes from individuals and firms who have to make payments in foreign currency mostly on account of import of goods and services and purchase of securities. The supply of foreign exchange results from the receipt of foreign currency normally on account of export or sale of financial securities to foreign entities.

The exchange rate, just like commodities, determines its price responding to the forces of supply and demand Therefore, if for some reason people increase their demand (shift of the curve from D to D1) for a specific currency, then the price will rise from A to B, provided the supply remains stable. On the contrary, if the supply is increased (shift of the curve from S to S1), the price will decline from A to C, provided the demand remains stable (figure 6.1).

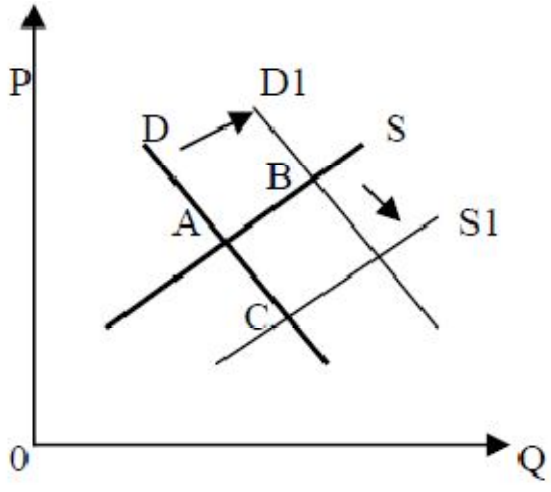

Figure 8.1 - Supply and Demand for foreign currency

OP: shows the exchange rate, OQ: shows the mount of currency demanded and supplied

A, B, C: Shows the equilibrium exchange rate

Any excess supply (above the equilibrium point) or excess demand (below the equilibrium point) will increase or decrease temporarily foreign currency reserves accordingly. Finally, such disequilibrium situations will be eliminated through the pricing, e.g. the market itself.

8.3.2 Purchasing Power Parity Theory

Purchasing power parity is used to explain how exchange rates react to changes in inflation rates of countries. It defines the relationship between exchange rate and inflation of two countries.

Meaning: When one country's inflation rate rises relative to another, the demand for its currency declines as its exports decline (due to higher price). In addition, consumers and firms in the country with higher inflation tend to increase their importing. Both of these forces downward pressure on the currency of the high-inflation country. This is called purchasing power parity.

Forms of Purchasing Power Parity

There are two forms of PPP theory:

1. **Absolute Form:** It is also called "Law of one price" which means prices of similar products of two different countries should be equal, when measured in a common currency. For instance, if the exchange rate is Rs. 4/US $, the price of a particular commodity, if it is Rs. 100 in India, must be US $ 25 in the USA.

   If a commodity is produced in India and USA and the price in India is lower, when measured in common currency, the demand for that product should increase in India while it declines in USA. Due to increase in demand in India its export increases while import decreases which put upward pressure on Indian currency and results in increase in exchange rate. This causes the prices of the products to be similar, when measured in a common currency.

   However, this version of theory holds good if the same commodities are included in the same proportion in the domestic market basket and the world market basket. PPP theory will not hold good despite the law of one price holding good. Moreover, this theory does not cover the non-traded goods and services where transaction cost is significant.

Illustration 7

Explain on the basis of the following data: whether

(a) Absolute version of PPP theory holds good

(b) Law of one price holds good

USA			India		
Unit	**Goods**	**US $ Price/Unit**	**Unit**	**Goods**	**US $ Price/Unit**
4	Rice	1	20	Rice	40
20	Wheat	2	10	Wheat	80

Exchange rate Rs. 40/US $

Solution

The law of one price holds good because:

Rs. 40/US $ = Rs 80/US $ 2 =Rs. 40/US $ 1

But the absolute version of PPP theory does not hold good as the weight of the two commodities in total consumption basket in the two countries is different. For PPP theory, one has to weight the price of each commodity by its share in the total consumption basket in the country. The dollar value of goods in USA is:

$4 \times 1 + 20 \times 2 = 44$

Now the share of rice in US consumption basket is: $(4 \times 1)/44 = 0.0909$, and the share of wheat in USA is $(20 \times 2)/44 = 0.9091$

Thus the price level in USA is: $1 \times 0.909 + 2 \times 0.9091 =$ $ 1.9091

Similarly in India:

The share of price is $(20 \times 40)/1600 = 0.5$ and the share of wheat is $(10 \times 80)/1600 = 0.5$. And on this basis, the price level in India will be:

$40 \times 0.5 + 80 \times 0.5 =$ Rs. 60

As a result, the exchange rate will be Rs. 60/US $ 1.9091 = Rs. 31.43/US $ which is not equal to Rs. 40/US $. Hence the absolute version of PPP theory does not hold good.

2. **Relative Form:** According to relative form of PPP, price of similar products of different countries will not necessarily be the same when measured in a common currency. However, it states that the rate of change in the price of products should be somewhat similar when measured in a common currency, as long as the transportation costs and trade barriers are unchanged.

   It further states that the exchange rate between currencies of any two countries would be a constant multiple of the general price indices prevailing in them. In other words, percentage change in exchange rate should equal the percentage change in the ratio of price indices in the two countries.

   To illustrate the relative form of PPP, assume that two countries initially have zero inflation. Also, assume that the current exchange rate between the two country's currencies is in equilibrium. As time passes, both countries may experience inflation for PPP to hold, the exchange rate should adjust to offset the differential in the inflation rates of the two countries. If this occurs, the price of goods in either country should appear similar to consumers. Assume that the price indexes of home country (h) and the foreign country (f) are equal. Assume that after some time home country experience an inflation rate I_h and foreign country experiences an inflation rate of I_f.

   Due to inflation, Price index of goods in home country (P_h) becomes – $P_h(1+I_h)$

   Price index of foreign country – $P_f(1+I_f)$

According to PPP theory, exchange rate would adjust to maintain parity in purchasing power. Thus, due to inflation, exchange rate of foreign currency changes.

Thus, the foreign price index from the home consumer's perspective becomes:

$P_f(1 + I_f)\ (\ 1 + e_f)$

e_f = percentage change in the value of foreign currency

According to PPP theory = $P_f(1 + I_f)\ (\ 1 + e_f) = P_h(1+I_h)$

$\mathbf{e_f} = \frac{Ph\ (1+Ih)}{Pf\ (1+If)} - 1$

We have assumed that Ph=Pf (because price indexes were initially assumed equal in both countries.

PPP is numerically expressed as under:

PPP = $\left(\frac{\mathbf{1+Ih}}{\mathbf{1+If}}\right)^{\boldsymbol{t}} \times Current\ Spot\ rate$

Here, PPP = Purchasing power rate/expected spot rate a year from now

Ih = Expected rates of inflation in home country

If = Expected rates of inflation in foreign country

t= Time period/Maturity period

Illustration 8

The inflation rate in US is expected to be 2.5% and that of India is expected to be 6%. The current spot rate of US $ in India is Rs. 46/US $. Find the expected rate of US $ in India after one year and after three years from now: (Assume India is home country).

Solution:

Forward rate = $\left(\frac{\mathbf{1+Ih}}{\mathbf{1+If}}\right)^{\boldsymbol{t}} \times Current\ Spot\ rate$

Spot rate after one year:

Forward rate= Rs. 46 × $\left(\frac{\mathbf{1+0.06}}{\mathbf{1+0.025}}\right)^{\mathbf{1}}$

Spot rate after one year = Rs. 47.57073/ US $

Spot rate after three years = Rs. 46 × $\left(\frac{\mathbf{1+0.06}}{\mathbf{1+0.025}}\right)^{\mathbf{3}}$ = Rs. 50.87493/ US $

Illustration 9

The US inflation rate is expected to be 4 percent annually and that of India is expected to 6 percent annually. The current spot rate of US $ in India is Rs. 50.4050/US $.

Find the expected rate of US $ in India after one year and after three years from now, using purchasing power theory of exchange rate.

Solution:

According to Purchasing Power Parity

Forward rate = $\left(\frac{1+Ih}{1+If}\right)^{t} \times Current\ Spot\ rate$

Where, i_h : is the rate of inflation in the home country

I_f : is the rate of inflation in a foreign country during the year

Spot rate after one year = Rs. 50.4050 × $\left(\frac{1+0.06}{1+0.04}\right)^{1}$ = Rs. 51.3743/US $

Spot rate after three year = Rs. 50.4050 × $\left(\frac{1+0.06}{1+0.04}\right)^{3}$ =Rs. 53.3692/US $

Illustration 10

A Computer in USA is costing $1000. The same computer is costing €1500 in Germany. What is the spot rate between euro and dollar?

Solution:

By law of one price (Applying PPP), we have

Price in home country = Price in foreign country × SR

$ 1000 = € 1500 × SR

1000/1500 = SR

SR = $ 0.66666

1 euro = $ 0.66666 or

$ 1 = 1.50 Euros

Illustration 11

An exchange forecasts expects that dollar to trade at 250 pound from now. If the spot rate in pound 242/$ and US inflation rate is 2%, what is the expected inflation rate in UK?

Solution

Using PPP

Inflation in UK be i

Then $\left(\frac{1+i}{1+0.02}\right)^{t} * 242 = 250$

i = 0.0537

Hence expected inflation rate in UK = 5.37%

Graphical Analysis of PPP

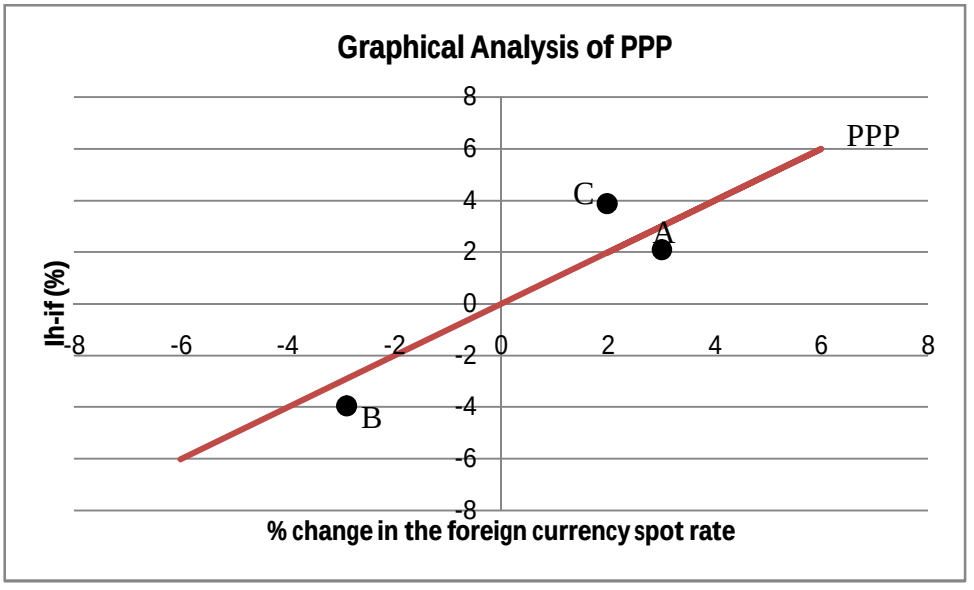

Figure 8.2 – Graphical analysis of Purchasing Power Parity

The points on PPP line suggest that if the inflation differential between the home and the foreign country is X percent, then the foreign currency should adjust by X percent to maintain purchasing power parity.

Point A represents that when difference between home country inflation and foreign country inflation is 2% then the foreign currency will appreciate by 2% to offset the amount of inflation rate differential.

Similarly, point B shows that if foreign country inflation is 4% more than home country inflation then the foreign currency should depreciate by 4%.

Purchasing Power Disparity

Point C shows the purchasing power disparity. It represents home inflation in excess of foreign inflation by 4 percent. Yet, the foreign currency appreciated only by one percent in response to this inflation differential. Consequently, purchasing power disparity exists.

Illustration 12

Assume that the exchange rate is in equilibrium initially. Then, the home currency experiences a 6% inflation rate. While the foreign country experiences a 4% inflation rate. Find the change in exchange rate of foreign currency.

Solution:

$$e_f = \frac{(1+Ih)}{(1+If)} - 1$$

$= \frac{(1+.06)}{(1+.04)} - 1$

= 0.0192 or 1.92%

8.3.3 Interest Rate Parity Theory

The IRP theory states that equilibrium can be achieved when the forward rate differential is approximately equal to the interest rate differential. In other words interest rate parity shows relationship between interest rate and exchange rate. Once market forces cause the interest rates and exchange rates to be such that covered interest arbitrage is not longer feasible, this state is called equilibrium state and referred to as Interest Rate Parity (IRP).

On the basis of IRP theory, the forward exchange rate can easily be determined. One has simply to find out the value of forward rate (F). The equation can be rewritten as

$F=\frac{S}{A}\left\{\frac{(1+Ih)}{(1+If)} - 1\right\} + S$

Here:

S= Spot rate

A= 360/no. of days or 12/no. of months

Ih=Interest rate in home country

If=Interest rate in foreign country

Suppose interest rate in India and the USA are respectively 10% percent and 7%. The spot rate is Rs. 40/US $. The 90-day forward rate can be calculated as:

$F=\frac{40}{360/90}\left\{\frac{(1+0.10)}{(1+0.07)} - 1\right\} + 40$

F= Rs. 40.28/US $

Illustration 13

Calculate the 3-month forward rate, if spot rate is Rs. 60/US $; interest rate in India and USA is respectively 6 percent and 2 percent.

Solution:

Formula = $F=\frac{S}{A}\left\{\frac{(1+Ih)}{(1+If)} - 1\right\} + S$

Applying the interest rate parity theorem,

3-month forward rate = $\frac{60}{12/3}\left\{\frac{(1+0.06)}{(1+0.02)} - 1\right\} + 60$

= Rs. 60.5882/US $

Forward Interest Rate Equilibrium

The IRP theory states that equilibrium is achieved, when the forward rate differential is approximately equal to the interest rate differential. In other words, the forward rate differs from the spot rate by an amount that represents the interest rate differential.

Consider a US investor who attempts covered interest arbitrage. The return to a US investor from using covered interest arbitrage can be determined as follows:

$A_n = \left(\frac{Ah}{Sj}\right)(1 + ij)Sj\ (1 + P)$

Where:

$P = \frac{(1+Ih)}{(1+If)} - 1$

A_n = Amount of the home currency received at the end of the deposit period

A_h = Amount of the home currency initially invested

S_j = Spot rate when foreign currency was purchased

i_j = Interest rate on the foreign deposit

F_j = Forward rate at which the foreign currency will be converted back into the home currency.

Illustration 14

From the following information find out: - (1) if an investor invest his money in foreign country what return he would get; (2) How foreign country's return differ from home country?

Initial Investment = Rs. 1,00,000

i_h (home interest rate) = 8%

i_j (foreign interest rate) = 10%

S_j (spot rate) = Rs. 50

1 dollar = Rs. 50

Solution:

$P = \frac{(1+Ih)}{(1+If)} - 1$

$P = \frac{(1+0.08)}{(1+0.10)} - 1$

P= -0.01818

$A_n = \left(\frac{Ah}{Sj}\right)(1 + ij)Sj\ (1 + P)$

$A_n = \left(\frac{1,00,000}{50}\right)(1 + 0.10)50\ (1 - 0.01818)$

= Rs. 1,08,000

Result: If investor invests his money in home country, then return generated by investor is 8% which is same, if investor invests the money in foreign country.

Graphical Representation of Interest Rate Parity

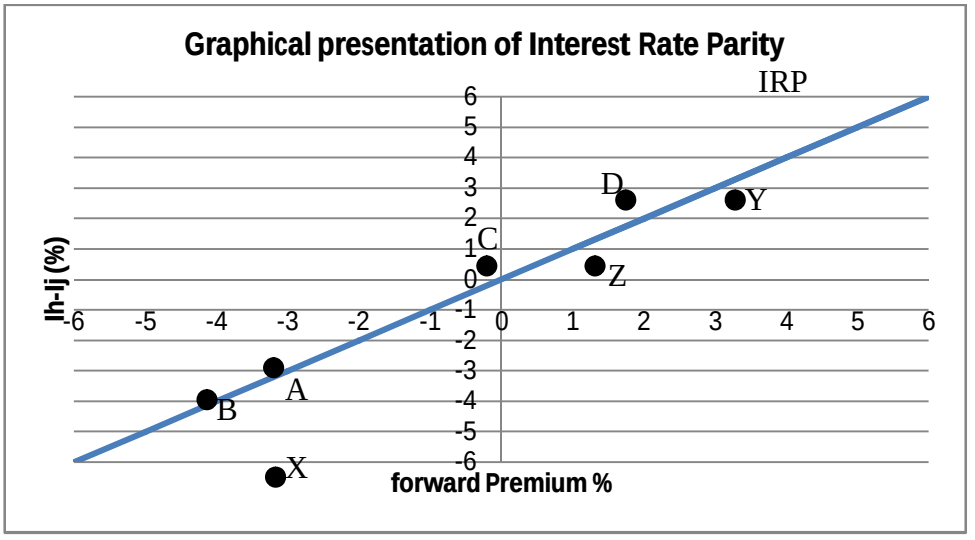

Figure: 8.3 – Graphical Presentation of Interest Rate Parity

If the foreign interest rate (Ij) exceeds the home interest rate (Ih) by two percent, then the forward rate should exhibit a discount of two percent. This is represented by (A) point on the graph. For example, if the interest rate in the home country is 10% and in foreign country it is 13 %, the investor will invest the money in foreign country to get the benefit of 3%. If interest rate parity exist the currency of foreign country will depreciated by 3%, as shown in the point (B) on the graph.

Interest Rate Disparity

Interest rate disparity can be shown by the point X, Y and on the graph. For example, if the interest rate of home country is 10% and interest rate of foreign country is 15%. So, the investor invests the money in foreign country to get the benefit of 5%. When the investor will withdraw these investment (converting foreign currency into home currency), because of this, the foreign currency will depreciated by 20% as shown in point on the graph. This disparity will exist for a short period. If this process will continue for future period the foreign currency will depreciate further 3% (2+3 = 5%). Therefore, point X shifted on IRP line. Thus, Interest Rate Parity exists.

Real Interest Rate Parity (International Fisher Effect)

Real interest rate parity shows relationship between Inflation, Interest rate and Exchange rate. This is known as **International Fisher Effect**. International fisher effect theory uses interest rate rather than inflation rate differentials to explain why exchange rates changes over time, but it is closely related to the purchasing power parity theory because

interest rates are often highly correlated with inflation rates. Therefore, interest rate differentials between countries may be the result of inflation rate differentials.

8.3.4 Balance of Payments (BOP) Approach

The balance of payments approach is another method that explains the factors which determine the supply and demand curves of a country's currency.

As it is known from macroeconomics, the balance of payments is a method of recording all the international monetary transactions of a country during a specific period of time. The transactions recorded are divided into three categories: the current account transactions, the capital account transactions, and the central bank transactions.

The aforementioned categories can show a deficit or a surplus, but theoretically the overall payments (the BOP as a whole) should be zero – which rarely happens.

Balance of payments approach suggests that an increase in domestic price level over the foreign price level makes foreign goods cheaper. It decreases export earnings and boosts the import bill. Lower export reduces the supply of foreign exchange, and at the same time, greater import increases the demand for foreign exchange and domestic currency depreciates as a result. Similarly, growth in real national income causes larger imports if marginal propensity to import is positive. Larger import will cause greater demand for foreign currency and thereby depreciate value of domestic currency.

8.3.5 Monetary Approach

In this approach attention is given to the stock of currencies in comparison to the willingness of people to hold these stocks. According to the monetary theory, exchange rates adjust to ensure that the quantity of money in each currency supplied is equal to the quantity demanded.

Both **Quantity Theory of Money** (QTM) and **Purchasing Power Parity** (PPP) have been used in support of the aforementioned theory. The **QTM** states that there is a direct relationship between the quantity of money and the level of prices of goods and services sold (Investopedia.com). In other words, more money equals more inflation.

In a domestic framework, the following equation has been formulated.

MV = PY

M: Money supply/demand

V: Velocity of circulation (the number of times money change hands)

P: Average price levels

Y: GDP

Finally, we can conclude that an increase in the money supply leads to inflation, which in turn results in the decrease in the value of money or purchasing power.

Consequently, if we also consider this in an international context, we will appreciate the following implications:

Firstly, a rapid increase in the money supply (in the home currency), which as stated earlier means inflation, will put into effect the **PPP** resulting in the depreciation of the currency's exchange rate.

Secondly, a higher interest rate will also result in the currency's depreciation because of the positive relationship between interest rates and money circulation.

Finally, if the GDP grows faster than overseas GDP, the demand for money will increase. Assuming there is a given supply of money, the exchanged rate will decrease, which is in direct contrast to the PPP approach.

8.3.6 Portfolio Balance Approach

The portfolio balance approach takes into consideration the diversification of investors' portfolio assets. Diversification is a technique that attempts to reduce risk by investing both among various financial instruments and across national borders.

For example, here below we consider a combination of domestic and foreign money and domestic and foreign bonds, the implications of which are illustrated in the following figure 8.4.

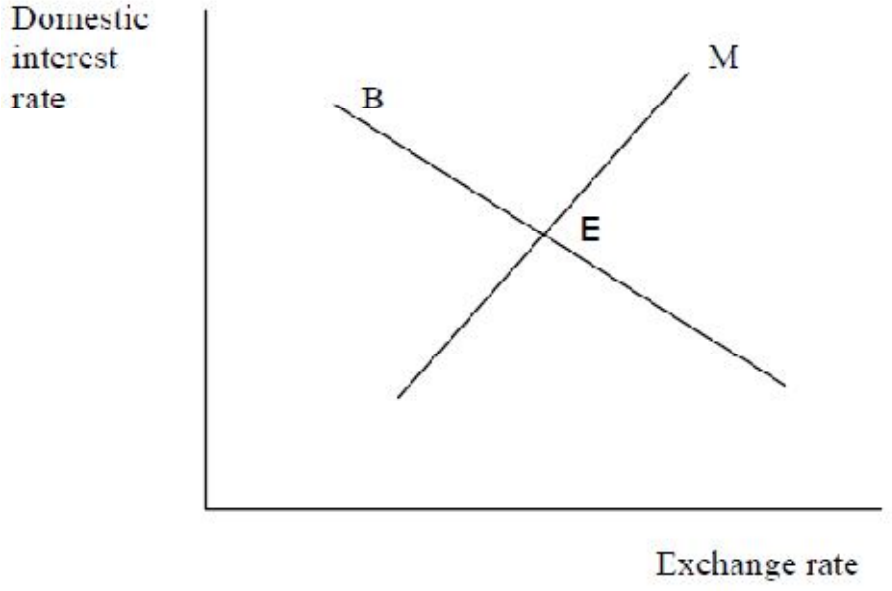

Figure 8.4: Portfolio Balance Approach

Both the M and the B lines show combinations of domestic interest rates and exchange rates. The upward line M is in agreement with the equilibrium in the money market and the downward line B is in agreement with the equilibrium in the bond market. Point E, which is the intersection of M with B, represents the combination of interest rate with the exchange rate that gives equilibrium to both the money and bond markets.

What the theory argues is that an increase in the money supply will lead to a depreciation of the exchange rate. The extent of the depreciation depends upon the slope of the curves M and B. For example, if we consider an increase in the domestic money supply, we will anticipate that a lower interest rate and /or a higher exchange rate can only absorb the excess supply, which in turn will result in the reduction of bonds. To this end, line M will move to the right and line B will move to the left.

8.4 Summary

This chapter addresses the issues related to theories of exchange rate determination. Exchange rate denotes the ratio between the values of two currencies. The quote shows buying (bid) and selling (ask) rate. The difference between the two rates (ask and bid) is known as spread, forms the bank's income. The quote also shows the spot quote and the forward quote. The difference between two is either forward premium or forward discount. The cross rate between two currencies is established through a common currency. There are various theories, which determine the exchange rate behaviors. These are: Demand and supply of foreign currency in international market, Purchasing power parity theory, Interest rate parity theory, Balance of payment approach, Monetary approach and Portfolio balance approach. The PPP theory suggests that the higher the inflation rate, the lower is the value of currency. IRP theory tells us the interest rate differential equals the forward rate differential. The balance of payment approach links exchange rate behavior with the changes in capital and current account of the balance of payments. The monetary theory lays emphasize on the demand for and supply of money as a factor influencing the exchange rate. However, the sticky-price version of the monetary approach gives a more detailed explanation of interest rate differential. The portfolio approach includes holding of financial assets – domestic and foreign bonds – that influences the exchange rate.

8.6 Self Assessment Questions

1. Explain the concept of Interest rate parity. Provide a rationale for why interest rate parity may exist?
2. Provide reasons, why purchasing power parity does not hold?
3. Explain Purchasing Power Parity (PPP). Explain how you could determine whether purchasing power parity exists.
4. Explain the various determinants of Exchange rate behavior.
5. A Forex dealer in India gives a quote for the US dollar as Rs. 50.9450-50.9550.
(A) An importer is looking to buy dollars to pay his import bill of US $ 10,000. How many rupees will be required to be paid to have US $ 10,000?
(B) An exporter receiving his export income in US $, will receive how many rupees?
[Answer: (a) 509550 (b) 509450]
6. What are cross rates? How are they determined?

7. An Indian importer receives the following quotes of dollar from its banker

Spot	:	Rs. 50.8750
1 month forward	:	Rs. 50.9300
6 month forward	:	Rs. 51.1050

What is the discount/premium of the dollar forward prices?

[Answer: 1 month forward premium: 1.297%; 6 months forward Premium: 0.904%]

8. What are spot and forward exchange rates? How do they differ from each other?

9. The US inflation rate is expected to be 2 % annually and that of India is expected to be 4.5% annually. The current spot rate of US $ in India is Rs. 50.4050/US $

Find the expected spot rate of US $ in India after one year and after three years from now, using purchase power theory of exchange rate.

(Answer: Spot rate after one year = Rs. 51.640/US$; Spot rate after three years = Rs. 54.27/US$]

10. Calculate cross currency Rate between €/£ (bid as well as ask), given the following spot exchange rates of 3 pairs of currencies.

Rs./US $	:	Rs. 50.35-50.90
Rs./€	:	Rs. 52.90-53.30
$/£	:	$ 1.49-1.50

11. Consider the following bid-ask prices Rs. 40.00-40.50/US $. Find the bid-ask spread.

(Answer: 1.23%)

12. An importer is to make payment of 1 million Thai Baht to its trading partner in Bangkok. The currency quotes available are:

For dollar in India	:	Rs. 50.0843/50.0996
For dollar in Thailand	:	Thai Baht 40.9400/40.9600

What is the amount of bill payable in terms of Indian rupees?

8.7 Reference Books

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Unit- 9: Currency Derivatives

Structure of Unit

9.0 Objectives

After completing this unit, you would be able to:

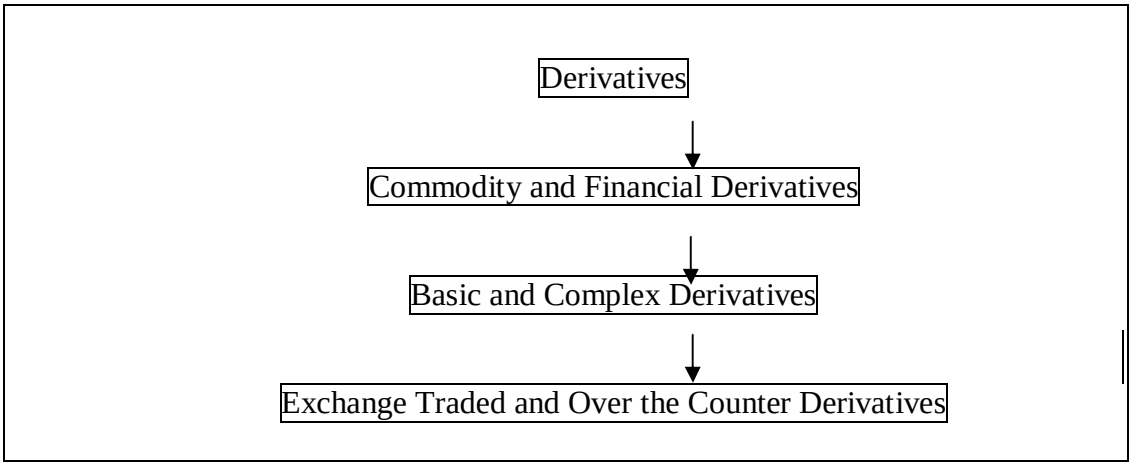
- Understand the meaning of Derivatives;
- Give types and classification of Derivatives;
- Explain meaning, features, standardized, types, advantages and disadvantages of Futures and Currency Futures;
- Explain meaning, features, types and process of Options;
- Know the meaning, types and process for Swaps;
- Grasp the methods of Exchange Rate Forecasting.

9.1 Introduction

Derivatives are simply the latest risk- management tool adopted by mass number of investors for speculation purpose in spite of hedging the risk. A derivative security is a financial contract whose value is derived from the value of something else, such as an equity price, a commodity price, an exchange rate, an interest rate, or even an index of prices. According to **John C. - Hull**, "A Derivative can be defined as a financial instrument whose value depends on (or derives from) the value of other, more basic underlying variables." According to **Robert L. McDonald**, "A Derivative is simply a financial instrument (or even more simply an agreement between two people) which has a value determined by the price of something else." Thus, derivatives are financial contracts whose price is dependent on the price of one or more underlying assets (often known as the underlying).

9.2 Classification of Derivatives

The types of the derivatives depend on the type of underlying asset. The derivatives may be based on physical commodities such as agriculture products, metals etc. or may be based on financial assets such as shares etc. Derivatives can be classified into different types and it can be made as follows:-



A. Commodity Derivative and Financial Derivatives:

(a) Commodity Derivative: Derivative contract are made into the different types of commodities such as jute, sugar, tea, coffee, oil, soya beans etc. These derivative contracts are traded into commodity exchanges. The major commodity exchanges in India are three:

(a) National Commodity & Derivatives Exchange Limited (NCDEX).
(b) Multi- Commodity Exchange of India Limited (MCX).
(c) National Multi- Commodity Exchange of India Limited (NMCEIL).

(b) Financial Derivatives: On the other hand, the derivative in currencies, gilt- edged debt securities, shares; shares indices, etc. are known as financial derivatives. In India, Currency Futures, Stock Futures, Stock Index Futures, Stock Options and Stock Index Options are traded at BSE or NSE.

B. Basic Derivatives and Complex Derivatives:

These are as under:

(a) Basic Derivatives: Those financial assets under which underlying assets are binding in an agreement by any one of the contract mentioned here i.e. forwards, future, options, warrants etc.

(b) Complex Derivatives: Those financial assets under which underlying assets are binding in an agreement by any one of the contract mentioned here i.e. swaps etc.

In Indian commodity market only basic derivatives are available i.e. forward contracts and future contracts only.

C. Exchange Traded and OTC Derivatives:

(a) Exchange Traded Derivatives: Derivatives which are made and regulated by some market mechanism and trade on an exchange are called exchange traded derivatives.

(b) Over the Counter Contracts: Derivative contracts if traded outside the exchange market and privately negotiated are called over the counter contracts. They are not bounded by rules and regulations of exchange markets.

9.3 Future Contracts

9.3.1 Meaning

A futures contract is one by which one party agrees to buy/ sell to the other party at a specified future time, a specified asset at a price agreed at the time of the contract and payable on maturity date. The agreed price is known as the strike price. The underlying asset can be a currency, commodity, debt, or equity security etc. unlike forward contracts; futures are usually performed by the payment of difference between the strike price and the market price on the fixed future date, and not by the physical delivery and the payment in full on that date.

Money lost and gained by each party on a futures contract are equal and opposite. In other words, futures trading are a zero- sum game. These are basically forward contracts, meaning they represent a pledge to make a certain transaction at a future date. The exchange of assets occurs on the date specified in the contract. These are regulated by overseeing agencies and are guaranteed by clearing houses.

9.3.2 Features

The main features of futures contract are presented below:

1) Futures are traded only in organized exchanges.
2) Futures contracts required to have standard contract terms.
3) Futures exchanges have associated with clearing house.
4) Futures trading required margin payment and daily settlement.
5) Futures positions can be closed easily.
6) Futures markets are regulated by regulatory authorities like SEBI.

9.3.3 Standardized

The standardized items in any futures contract are:

1) Quantity of the underlying.
2) Quality of the underlying (not required in financial futures).
3) The date and month of delivery.
4) The units of price quotation (not the price itself) and minimum change in price (tick-size).
5) Location of settlement.

9.3.4 Types

The futures contracts can be discussed depending upon the nature of underlying assets. It can be divided into mainly two types:

1) Commodity Futures
2) Financial Futures: Currency Futures, Stock Futures, Options, Swaps etc.

9.3.5 Advantages

1) It is a universally regulated agreement to buy or sell a product at particular date in the future at a pre- determined price.
2) Futures Contracts provide investors a wide range of equities hedge portfolio.
3) Futures Contracts are made on margin money only; therefore, initial investment is low in these futures contracts.
4) It reduces the price risk involves in currency, stock, index, interest rate or commodity.
5) It gives high liquidity to investors.
6) It is highly standardized in nature and well secured as it is traded on OTC floor only.
7) If a particular future is not settled by the party himself then it will be settled by the exchange at a specified price and the difference is payable by or to the party.

9.3.6 Disadvantages

1) It is subjected to margin calls.
2) Quantity and initial exposures in future contracts are very high and small investors can't hedge their risk.
3) When volatility is high, required more margin money to secure Futures Contracts.

9.3.7 Currency Futures

As world economy becomes more and more complex, a finance manager is required to make critical decisions with respect to strategic issues such as currency of borrowing, impact of globalization on capital structure, and tactical issues such as currency of invoicing. Dealing in foreign currency adds to risk called exchange rate risk. To understand the exchange rate risk it is essential to understand foreign exchange markets, their terminology, and practices. The amount of foreign currency outstanding, either as payable or receivable, is referred to as foreign currency exposure. If the rate of exchange moves in the unfavourable direction, the impact on the balance sheet or on the income statement is termed as exchange rate risk. For example, if an exporter firm has sold goods worth $ 2,000 on credit of 30 days, the transaction would be completed only after 30 days upon receipt of the payment of $ 2,000. If from the date of invoicing to the date of collection the dollar has depreciated, the exporter would realize lesser sum in Indian rupees than what he envisaged at the time of invoicing. However, appreciation of dollar would be favourable to the exporter as the realization is more than expected. Similarly, importer would welcome depreciation of the foreign currency to which he is exported.

Foreign exchange markets are operative round the clock. There is no specific time of opening or closing. The foreign exchange rates fluctuate all the time. Banks and foreign exchange dealers quote exchange rates depending upon demand and supply position with them. Banking house govern the trading in foreign exchange. Foreign exchange markets

are OTC markets with various quoting rates in pairs of bid and ask- one for buying and another for selling the foreign currency. Bid rate and ask rate are defined as follows:

Bid Rate is the rate at which bank buys foreign currency and Ask Rate is the rate at which bank sells foreign currency. To make profit in the foreign exchange transactions, the banks must buy the currency at lower rate and sell it at higher rate. Therefore, ask rate is always higher than the bid rate. While quoting, the convention is to profit for the bank in doing a round transaction of buying and selling the foreign currency, and is known as spread.

(1) Foreign Exchange Rate transactions may be settled now or at later date. Spot transactions settled within two business days between two parties (two countries or currencies).
(2) Foreign currency can be quoted such as, rupees 62 per dollar in India. It means the cost of one dollar is equal to 62 rupees.
(3) Other way to quote foreign exchange rate is premium or discount rate which shows that in future on specified date foreign currency will be available either on discount or premium from spot rate (Present rate). Suppose Spot rate of one dollar is equal to Rs 62.If Future rate after one month is 5 percent on premium which means after one month to buy one dollar we have to pay 5 percent of 62 rupees extra. Therefore,
Future Price= Spot Price+ Premium, or
Future Price= Spot Price- Discount

In India, there were no futures exchanges till recently, National Stock Exchange (NSE) introduced the futures contract on US dollar on 28 August 2008 and Multi Commodity Exchange Stock Exchange (MCX-SX) did so on 7 October 2008.Described below are the features of the futures contract on US dollar as available in India.
The contract on US dollar features at MCX-SX is specified below in Table 9.1.

Table 9.1

Unit of trading	1 (1 unit denotes 1000 USD)
Underlying	The exchange rate in Indian rupees for a US dollar
Tick Size	Re 0.25 paisa or INR 0.0025
Last Trading Day	Two working days prior to the last business date of the expiry month at 12 noon.
Final Settlement Day	Last working day (excluding Saturdays) of the expiry month. The last working day will be the same as that for Interbank settlements in Mumbai.
Quantity Freeze	Above 10, 000
Mode of Settlement	Daily settlement: T+ 1; Final settlement: T+ 2
Final Settlement Price (FSP)	RBI reference rate

In contrast with the currency futures at NSE or MCX-SX, CME deals in various currencies with different lot sizes in several currencies.

9.4 Options

9.4.1 Meaning

An option is a contract whereby one party (the holder or buyer) has the right, but not the obligation, to exercise the contract (the option) on or before a future date (the exercise date or expiry). The other party (the writer or seller) has the obligation to honour the specified features of the contract. Since the option gives the buyer a right and the seller an obligation, the buyer has received something of value. The amount the buyer pays the seller for the option is called the option premium.

For example, you come across a house that you'd love to purchase. Unfortunately, you won't have the cash to buy it for another two months, you talk to the owner and negotiate a deal that gives you an option to buy the house in two months for a price of Rs. 30 lacs. The owner agrees, but for this option, you pay a price of Rs. 2, 00,000 (option premium).

Now, consider two theoretical situations that might be faced by you:

1. While visiting the house, you find not only that a ghost haunts the master bedroom; furthermore, a family of super- intelligent rats has built a fortress in the basement. Though you originally thought you had found the house of your dreams, but now you consider it worthless. On the upside, because you bought an option in Rs. 2, 00, 000. You are under no obligation to go through with the buy of the house. Of course, you loss the Rs. 2 lacs price of the option if not buy the house.
2. It's discovered that the house is actually the true birthplace of a great man. As a result, the market value of the house skyrockets to Rs. 1 crore. Because the owner sold you the option, he is obligated to sell you the house for Rs. 30 lacs. In the end, you stand to make a profit of Rs. 68, 00, 000 (Rs. 1 crore - Rs. 30, 000, 000- Rs. 2, 00, 000).

Point to be noted here,

i. When you buy an option, you have a right but not obligation to do something.
ii. Options became valid up to expiry date, after expiry date it is invalid.

If up to expiry date anytime, investor finds that option is worthy they can exercise it otherwise not.

9.4.2 Features

The following are the features of options:

1. The option is exercisable only by the option holder namely the buyer of the option.
2. Owners of options have no voting and divided rights.
3. The option holder has limited liability.
4. Options have high degree of risk to the option writers.
5. It gives flexibility in investors needs.

9.4.3 Types

Following types of options are available:

(1) Exercise Style:

a. American Options: American options can be exercised at any time between the date of purchase and the expiration date.

b. European Options: European options can only be exercised at the end of their lives, which is fixed in nature.

(2) Structure Style:

a. Call Option: A call, which is the right to buy shares under a negotiable contract and which does not carry any obligation. The buyers have the right to receive the delivery of assets are known as "call option".

b. Put Option: In this option the owner is the right to sell the underlying asset under a negotiable contract. Put option holder has the right to receive the payment by surrendering the asset.

The writer of an option is a stock broker, member or a security dealer. The buyer of an option pays a price depending on the risk of underlying security and he as an investor or a dealer or trader.

(3) Standard Style:

a. Traded Options (also called "Exchange Traded Options" or "Listed Options"):

These are exchange traded derivatives which have standardized contracts; quick systematic pricing; and are settled through a clearing house. These are stock options; bond options; interest rate options; and swap option.

b. Exotic Option (Over the Counter Options):

Besides trading options on the exchanges, it is also possible to enter into "private" option arrangements with brokerage firms or other dealers. Institutions sometimes do this when they need a product with characteristics that are not available in an exchange-traded market. The strike price life of the option and premium are tailor made in nature. This is called an Over- the Counter option (OTC).

9.4.4 Process/ Working of Options

In order to understand the working of options, an assumed firm by the name TULEAP, is taken let's say that on January 1, the stock price of TULEAP was Rs. 78 and the premium (cost) was Rs. 2 for a January 78 Call, which indicated that the expiration was the last Friday of January and the strike price was Rs. 78. The total price of the contract was Rs. 2X100= Rs. 200. You paid Rs. 200 to buy this contract. The strike price of Rs. 78 means that the stock price must rise above Rs. 78 before the call option is worth anything; furthermore, because the contract is Rs. 2 per share, the break- even price would be Rs. 80.

When the stock price is less than the Rs. 78 strike price, than the option is worthless. But don't forget that you've paid Rs. 200 for the option as option premium, so you are currently down by this amount.

After some times, the stock price is Rs. 82. The options contract has increased along with the stock price and is now worth Rs. 4x100= Rs. 400. Subtract what you paid for the contract, and your profit is Rs. 2x100= Rs. 200. You almost doubled the money in just few days. You could sell your options, which are called "closing your position" and take your profits. By the expiration date, the price drops to Rs. 60. Because this is less than our Rs. 78 strike price therefore option contract is worthless. We are now down to the original investment of Rs. 200. Payoffs shown in table form as following for call:

Table 9.2

Date	January 1	January 15	On Expiry Date
Stock Price	Rs. 78	Rs. 82	Rs. 60
Option Price	Rs.2	Rs.4	Rs.0
Contract Value	Rs.200	Rs.400	Rs.0
Paper Gain/ Loss (Payoffs)	-	Rs.200(Gain) (Rs.400-Rs.200)	200 loss

When stock price falls below the strike price, the call option holder makes a loss up to option premium paid. Vice versa is a case for put option holder. You make a profit of Rs. 400 and deducting Rs. 200 paid as option premium, your net profit is Rs. 200 on investment of Rs. 200 or 100% returns. If stock price falls, the most you will loss the premium of Rs. 200 you have paid denoting a loss of Rs. 200, or 100% losses.

9.5 Swaps

9.5.1 Meaning

The swap emerged in London in 1979 in the form of currency swap & in 1990 market of swap grew over 3 trillion. Swaps are used in industrial & financial corporation, banks, insurance company's etc. Swaps are used to reduce the cost of capital, manage risks and even by swaps financial intermediaries can earn additional income in the form of brokerage.

Swaps are agreements on the lines of "I will pay for you if you will pay for me". In swaps two parties called counter parties agreed to one another to exchange specific quantities of underlying assets which are foreign currency, interest rates or both according to types of swaps.

9.5.2 Types

(1) Interest Rate Swaps:

An interest rate swaps involve the exchange of difference in the payment streams of two different assets or liabilities calculated on the basis of a notional principle sum. Basically it is a difference between fixed or floating rate interest streams. They are used to manage interest rate risk. In other words it involves a floating rate borrowing exchange in to fixed rate borrowing exchange vice versa in this transaction no exchange of principle repayment obligation.

(2) Currency Swaps:

A currency swap is an agreement to exchange fixed or floating rate payments in one currency for fixed or floating payments in a second plus an exchange of the principle currency amounts. Currency swap allow a customer to redenominated a loan from one currency to one another. The redenomination from one currency to another currency is done to lower the borrowing cost for debt and to hedge exchange risk. The concept behind is to match the difference between the spot and forward rate of any currency over a specified period of time. Suppose company A borrows in Dollars and company B in rupees. They enter into a Currency Swap.

9.5.3 Process

A typical currency swap involves three distinct steps:

(1) Once an equal but opposing need for different currencies has been identified for two counter parties, the principle amounts are exchanged.

(2) Interest payments are exchanged periodically throughout the lifetime of the swap.

(3) The principle amounts are re- exchanged at the end of the swap.

When the swap finishes, both parties inter change their liabilities.

9.6 Foreign Exchange Rate Forecasting

9.6.1 Meaning

Different currencies are in circulation in different countries and value of currency of one country is different from value of currency of other country. Therefore if the price of one country's currency expressed in price of another country's currency than that is known as exchange rates between currencies. Presently the price of one dollar is expressed if in Indian rupees that it would be equal to suppose Rs 63 Rs it means the value of one dollar is equals to the value of Rs. 63 in India.

9.6.2 Forecasting Methods

Exchange rate can be forecasted by two methods:

(1) Purchasing Power Parity:

The purchasing power parity (PPP) is perhaps the most popular method. The PPP forecasting approach is based off of the theoretical Law of One Price, which states that identical goods in different countries should have identical prices.

For example, this law argues that a pencil in U.S. should be the same price as a pencil in the India after taking into account the exchange rate and excluding transaction and shipping costs. In other words, there should be no arbitrage opportunity for someone to buy pencils cheap in one country and sell them in another for a profit.

Based on this underlying principle, the PPP approach forecasts that the exchange rate will change to offset price changes due to inflation. For example, suppose that price in the India are expected to increase by 4% over the next year while prices in U.S. expected to rise by only 2%. The inflation differential between the two countries is:

4% - 2% = 2%

This means that prices in the India are expected to rise faster relative to price in U.S. in this situation; the purchasing power parity approach would forecast that the Indian rupees would have to depreciate by approximately 2% to keep prices between both countries relatively equal. So, if the current exchange rate is 60 Rupees in India per one U.S. dollar, than the PPP would forecast an exchange rate of:

(1+ .02) x (Rupees 60 per US $ 1) = Rupees 60.12 per US $ 1

It shows that next year US dollar will cost Indian Rs 60.12.

(2) Relative Economic Strength Approach:

As the name may suggest, the relative economic strength approach looks at the strength of economic growth in different countries in order to forecast the direction of exchange rates. The rationale behind this approach is based on the idea that a strong economic environment and potentially high growth is more likely to attract investments from foreign investors. And, in order to purchase investments in the desired country, an investor would have to purchase the country's currency - creating increased demand that should cause the currency to appreciate. This approach doesn't just look at the relative economic strength between countries. It takes a more general view and looks at all investment flows. For instance, another factor that can draw investors to a certain country is interest rates. High interest rates will attract investors to increase, which again would result in an appreciation of the currency. Conversely, low interest rates can also sometimes induce investors to avoid investing in a particular country or even borrow that country's currency at low interest rates to fund other investments. Many investors did this with the Japanese yen when the interest rates in Japan were at extreme lows.

Unlike the PPP approach, the relative economic strength approach doesn't forecast what the exchange rate should be. Rather, this approach gives the investor a general sense of whether a currency is going to appreciate or depreciate.

9.7 Summary

A derivative security is a financial contract whose value is derived from the value of something else, such as an equity price, a commodity price, an exchange rate, an interest rate, or even an index of prices. The types of the derivatives depend on the type of underlying asset. The underlying asset can be a currency, commodity, debt, or equity security etc. unlike forward contracts; futures are usually performed by the payment of difference between the strike price and the market price on the fixed future date, and not by the physical delivery and the payment in full on that date. Dealing in foreign currency adds to risk called exchange rate risk. The amount of foreign currency outstanding, either as payable or receivable, is referred to as foreign currency exposure. Foreign exchange markets are operative round the clock. There is no specific time of opening or closing. Bid Rate is the rate at which bank buys foreign currency and Ask Rate is the rate at which bank sells foreign currency. To make profit in the foreign exchange transactions, the banks must buy the currency at lower rate and sell it at higher rate.

An option is a contract whereby one party (the holder or buyer) has the right, but not the obligation, to the exercise the contract (the option) on or before a future date (the exercise date or expiry). The amount the buyer pays the seller for the option is called the option premium. If up to expiry date anytime, investor finds that option is worthy they can exercise it otherwise not. The swap emerged in London in 1979 in the form of currency swap & in 1990 market of swap grew over 3 trillion. Swaps are used in industrial & financial corporation, banks, insurance Company's etc. Swaps are used to reduce the cost of capital, manage risks and even by swaps financial intermediaries can earn additional income in the form of brokerage. Swaps are agreements on the lines of "I will pay for you if you will pay for me". Different currencies are in circulation in different countries and value of currency of one country is different from value of currency of other country. Exchange rate can be forecasted by two methods. The purchasing power parity (PPP) is perhaps the most popular method. The PPP forecasting approach is based off of the theoretical Law of One Price, which states that identical goods in different countries should have identical prices. The relative economic strength approach looks at the strength of economic growth in different countries in order to forecast the direction of exchange rates. The rationale behind this approach is based on the idea that a strong economic environment and potentially high growth is more likely to attract investments from foreign investors. Unlike the PPP approach, the relative economic strength approach doesn't forecast what the exchange rate should be. Rather, this approach gives the investor a general sense of whether a currency is going to appreciate or depreciate.

9.8 Self Assessment Questions

1 Define Derivatives.

2 Explain various types of Derivatives.

3 What is meant by future contracts? Explain.

4 Write a brief notes on Currency Futures.

5 Explain the process of working futures.

6 What is "SWAP"? Explain.

7 Explain the methods or theories of Foreign Exchange Rate Forecasting.

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Unit - 10: Foreign Exchange Control

Structure of Unit

10.0 Objectives

After studying this unit, you should be able to:

- Understand the meaning and objectives / importance of exchange control.
- Distinguish between government interference and exchange control.
- Understand the various direct and indirect methods of exchange control.

10.1 Introduction

Exchange control is required in times of economic crisis especially when a country is suffering from the shortage of foreign exchange. The crisis of foreign exchange mainly arises due to unfavorable balance of payments. In such a situation, a country's total receipts are far less than its total payment liabilities. The resources to finance foreign trade known as international liquidity, becomes scarce and due to that import of goods become extremely difficult. The glaring example is of India in 1991 when it was having foreign exchange reserves only for three weeks imports.

Germany was the first country to apply exchange control methods during the First World War period when its currency mark began to depreciate rapidly. During the great depression of 1930's, there had been abrupt fluctuations in exchange rates and many countries resorted to competitive devaluation due to the breakdown of gold standard and wide spread depression. All this necessitated the use of exchange control methods. Exchange control methods were openly used by many countries during the Second World War period to check the shortage of foreign exchange.

One of the main purposes of Brettonwoods agreement in 1944, through which International Monetary Fund (IMF) and World Bank were established, was to bring stability in foreign exchange rates of member countries and thereby to promote international trade and monetary co-operation. At present, all countries of the world are having non-convertible paper currency monetary standard and have opted for free floating exchange rate system. In this system the exchange rates may fluctuate freely.

Therefore, to control fluctuations in exchange rates it has become all the more important in spite of this fact that in a globalised world there should be least restrictions and control. The currency crisis in Asian countries in recent past and global melt-down in 2008 and again in 2011 have re-emphasized the need and importance of exchange control. In this chapter, we shall discuss all related issues and methods of exchange control.

10.2 Meaning of Exchange Control

In common parlance, exchange control means direct or indirect intervention by the central bank or government of the country in foreign exchange markets. The 'foreign exchange control' is used in following two senses:

1. **Exchange Control in Narrow Sense:**

   In narrow sense, foreign exchange control means those regulations and controls, which are imposed only to keep the foreign exchange rate within the specified limit. During the gold standard regime, the exchange rates were allowed to fluctuate within the limit of upper and lower gold points. According to **Paul Enzing,** "Exchange control means all those restrictions by the monetary authorities, which aim at affecting the exchange rate or the rates related to them". Exchange control in narrow sense is not much prevalent or widely accepted by the foreign exchange experts.

2. **Exchange Control in Broad Sense:**

   In this sense, exchange control means all those restrictions, methods and systems through which a country regulates and controls its aggregate demand and supply of foreign currency keeping in view the national interest. In other words, exchange control means all types of intervention by the government or the central bank of the country in foreign exchange market, which do not allow the demand and supply of foreign currency to function freely. Some important definitions of exchange control of prominent economists are given below:

   "Exchange control is the state regulation for excluding the free play of economic forces from the foreign exchange market". **Haberler**
   "Exchange control is such a means to solve the difficulties of balance of payments, which ignores the open market and replaces it by the decisions of the government officials." **P.T. Elseworth**

In nutshell, we can say that the exchange control is deliberate intervention by the monetary authority or by the government of a country to establish equilibrium between the demand and supply of foreign currency. Eminent monetary economist **George Halm** has emphasized on all those measures which are used in foreign exchange market, aiming at establishment of equilibrium for defining exchange control.

10.3 Characteristics of Exchange Control

Following are the main features of exchange control:

1. The monetary authority (Central Bank) or the government of the country intervenes in the foreign exchange market deliberately to regulate the demand and supply of foreign exchange and to establish equilibrium between them.
2. The intervention of the Central Bank or the government may be partial or full depending upon the purpose and need of exchange control.
3. Only the institutions or persons authorized by the regulatory authorities are permitted to do foreign exchange dealings.
4. The monetary authority provides foreign currency in lieu of local currency at the specified rate for making foreign payments.
5. The foreign exchange is provided by the monetary authority of the country according to national priority for attaining specified objectives.
6. The foreign exchange received by the institutions and / or residents of the country has to surrender to the monetary authority either partially or fully as per the direction of the Central Bank of the country.
7. The government of the country regulates and controls the foreign trade and imposes several restrictions on imports to save the scarce foreign exchange.
8. The government or the Central Bank of the country is responsible to maintain the stability in exchange rate with in specified bands and for that it purchases and sell the foreign currencies in foreign exchange market.
9. Determination of foreign exchange rate and change therein is done by the government or Central Bank of the country.
10. In freely floating exchange rate regime, (as in the present case), the central bank intervenes only when exchange rate fluctuates beyond a reasonable limits. The decision to intervene entirely depends on the discretion of the central bank or on the government of the country.

10.4 Government Interference and Exchange Control

In practice, government interference and exchange control are considered to be synonymous. However, both are not the same. When the government purchases and sells the foreign currencies with the sole purpose to fix certain exchange rate or to maintain stability of it is known as government interference. In interference, the government declares the rates of purchases and sells of foreign currencies and also purchases and sells foreign currencies at these declared rates. Under this system, private dealers are given full freedom to purchase and sell the foreign currencies. Such arrangement was

made by the British Government in 1830 and for this purpose; **Foreign Exchange Equalization Fund** was established.

Under the exchange control, the government has full control over the foreign exchange market. Private dealers are not allowed to operate in the market. They cannot buy and sell foreign currencies. Exchange control may be partial or full / complete. Under full or complete control, the government has the monopoly over foreign exchange market and restrictions are imposed on purchase and sale of all foreign currencies. But under partial control, the restriction is confined only on purchase and sale of hard currencies.

10.5 Objectives of Exchange Control

At the time of introducing exchange control, the only objective was maintaining stability in exchange rates. But with passage of time and change in circumstances, the objectives of exchange control have increased too many. Following may be the objectives of exchange control:

1. **To Maintain Exchange Rate Stability:** Frequent and abrupt fluctuation in exchange rate not only encourages speculative activities in foreign exchange market but also dampens foreign trade and economic growth of the country/s. Therefore, the first and foremost objective of exchange control is to maintain stability in exchange rates. Imposition of exchange control helps in preventing undesirable and unanticipated fluctuations in exchange rates.
2. **To Keep Different Exchange Rate:** Many countries may fix different exchange rate than the market rate, which is determined by the free forces of demand and supply of foreign exchange in open market. The purpose of keeping different exchange rate than the market rate is to keep the exchange rate either low or high as compared to the market rate. Renowned monetary economist **Crowther** has stated that "The main objective of control over exchange market is to keep the exchange rate different than the exchange rate determined without any control". It is worth mentioning here that it is done through over valuation and under valuation.

   a. Over Valuation: When a country deliberately keeps its exchange rate higher than its equilibrium exchange rate, it is known as over valuation. Over valuation of currency is done due to the following reasons:

   (i) When the burden of external debt on a country is high;

   (ii) To encourage import of raw material, capital goods for development purpose; and

   (iii) To control inflation and discourage exports.

   Over valuation of currency may be useful only in short-term, but in long run, it may have adverse impact on balance of payments.

b. Under Valuation: When any country internally maintains its exchange rate at a level, lower than its equilibrium exchange rate, it is called under valuation. The policy of under valuation may be followed for achieving following objectives :

(i) To discourage imports;

(ii) To encourage exports; and

(iii) To raise internal price level.

The policy of under valuation may be useful only to those developed countries whose economy is mainly dependent on exports. **Prof. George Halm** considered this policy dangerous.

3. **To Correct Adverse Balance of Payments:** By resorting to exchange controls, a country is able to save foreign exchange. Exchange control also helps in applying the policy of import substitution which enables the country in reducing imports in the long-run.

4. **To Prevent Capital Outflow:** Exchange control helps in preventing outflow of capital. The government may check the outflow of foreign capital by imposing several restrictions **Paul Enzing** has pointed out that the socialist and fascist governments had adopted the policy of exchange control with the purpose of establishing control over international movement of capital for safeguarding there socio-economic interest.

5. **To Make Protection Policy Successful**: One of the important purposes of imposing exchange control, many times, is to protect the domestic industries from the threat of foreign competition by applying several methods of exchange control.

6. **To Maintain Foreign Exchange Reserves :** A country can maintain its foreign exchange reserves at adequate and reasonable level by putting restrictions on non-essential imports and also by encouraging exports so that it can safeguard its economic interest and face any economic crisis easily.

7. **To Follow Discriminating Trade Policy:** Exchange control allows a country to follow discriminating trade policy. Under this policy, a country may have different exchange rates for different countries. It may encourage imports from some countries and contrary to it, it may restrict imports from others.

8. **To Restrict Imports:** The Government may put blanket ban on imports of luxury items and may reduce imports of other items through the policy of exchange control.

9. **To Allocate Forex Rationally:** Generally developing countries have less amount of forex as compared to their demand. Therefore rational allocation of forex as per national priorities is of utmost importance. This can easily be ensured through the policy of exchange control.

10. **To Maintain Price Stability:** The Government may ensure internal price stability by making necessary adjustments in imports-exports of several goods according to domestic demand. This is ensured by exercising controls over the supply and distribution of foreign exchange.

11. To Maintain Fixed Relation of Domestic Currency with Important Currencies: Many a times, a country follows the policy of exchange control for achieving this objective. For instance, **sterling countries** applied exchange controls for keeping their exchange rate fixed with pound after abandoning of gold standard and by Britain in 1931.

12. Others :

(i) Confiscation of assets of the residents of enemy countries;
(ii) Payment and recovery of foreign loans;
(iii) Protection from adverse effects of global economic crisis;
(iv) Enhancing government revenues;
(v) Ensuring success of economic planning;
(vi) Maintaining faith of people in the monetary system of the country.

Exchange control may have more than one objective according to the circumstances and requirements of a country. The objectives of exchange control mentioned above are also classified into '**piece time objectives'** and **'war time objectives'.**

10.6 Methods of Exchange Control

The Policy of exchange control is implemented through the methods of exchange control. Therefore, knowledge of various methods of exchange control is of vital importance. **Paul Enzing** has mentioned 41 methods of exchange control. For sake of convenience, various methods of exchange control may be classified into following two categories :

10.6.1 Direct Methods of Exchange Control:

These are the methods through which the government of any country maintains the foreign exchange rate either below or above the equilibrium rate. In other words, the government fixes the exchange rate which is different than the exchange rate to be determined by the free forces of demand and supply of foreign exchange in market. Following are included under the direct methods.

(i) Policy of Interference : Through this policy, the government of a country influences the demand and supply of foreign exchange in such a way that foreign exchange rate may be kept stable at a certain level. This method of government interference is called Exchange Pegging. The pegging of exchange rate may be :

a. **Pegging Up**: Under this, the exchange rate of the country is fixed at a level higher than its equilibrium exchange rate which is known as the 'Pegging up of Exchange Rate'.

b. **Pegging Down:** Under this, the exchange rate of the country is fixed at a level lower than its equilibrium exchange rate, known as the pegging down of exchange rate.

After pegging the exchange rate up or down as per the need of hour, the government tries to keep it stable through the buying and selling of foreign exchange. The central bank of the country is responsible to maintain the exchange rate at the pegged level. England was the first country to use this method during the First World War period. India also followed this policy twice-first during the First World War period and second in 1927.

(ii) Exchange Control: Under this policy, the government of a country makes efforts to keep its foreign exchange rate either high or low than the equilibrium rate by effecting changes in the supply of domestic currency in foreign exchange market. The basic difference between the policy of interference and exchange control is that under the former policy, there is no restriction on entry in foreign exchange market, while under the later policy, there is restriction on free entry in foreign exchange market. Under the policy of exchange control:

a. The government centralises all foreign exchange transactions and power of their operation vests with the central bank; and

b. The individuals and the institutions have to obtain prior permission from the government for doing foreign exchange transactions.

Germany and Austria were the first to use exchange control method. Following are the prominent exchange control methods:

a. **Blocked Accounts:** Under this arrangement, the government of the country imposes complete restriction on outflow of foreign capital especially during the war period and / or in times of severe economic crises. The amount invested by foreigners in the country along with their bank deposits are kept in a special account for a certain time period. The amount kept in this account cannot be used by foreigners for a certain time period for which the account has been blocked. However, a limited relaxation may be given to the foreigners to use their funds within the country. The purpose of blocked accounts is to prevent further decline in exchange rate of the country. Many times, this arrangement of exchange control is used to block the funds of belligerent country so that it may not use the funds. Through this system, the payment to foreigners is deferred by the country with the purpose to arrest the falling exchange rate.

b. **Quota System:** Under this system, the quantity of imports of various commodities is fixed and the permission for imports exceeding the limit of quota fixed is not granted except in emergency situations. Import quota of various commodities is fixed on the basis of their relative importance for a nation. The main purpose of quota system is to restrict the demand for foreign currency to overcome the foreign exchange crisis, to arrest the declining exchange rate and to correct disequilibrium in balance of payments.

c. **Rationing of Foreign Exchange:** It is an effective measure of demand management of foreign currency. Under this system, all individuals and institutions are required to deposit compulsorily foreign currency received by

them either with the central bank or with the government of the country. The foreign currency is made available by the central bank / government for the essential imports and other payments on the basis of national priorities. This method of exchange control is helpful in effectively checking the misuse of foreign exchange. In this system, the monetary authority of the country has monopoly over the foreign exchange dealings and free buying and selling of foreign exchange is totally banned. India has used this method during the war period.

d. **Multiple Exchange Rates:** Under this method, different exchange rates are determined for imports and exports of different commodities with the purpose to enhance export earnings and to reduce payment liabilities of imports. Generally, exchange rates are kept high for export goods and low for import goods. Multiple exchange rates system may also to introduce even for capital transfers.

e. **Clearing Agreements:** Under this method, two or more countries make arrangements for clearing accounts through mutual agreements on the pattern of bank clearing houses. Under the clearing agreements, the importing nation deposits the amount in domestic currency in the central bank of the country equal to the price of imports and the exporting country gets payment of exports from the central bank in its own currency. Thus, direct transfer or foreign exchange does not take place under this method. The entire payments are adjusted through book entries in importing-exporting country's central bank, if the value of imports and exports of two nations are equal. If there is a difference between the value of imports and exports, the adjustment is made through the mutually agreed and predetermined method. Here the point worth mentioning is that adjustment of payments is made at the government determined exchange rate. Germany and Switzerland were the first countries to use this method in 1930. Clearing agreements were also took place between Italy and Argentina in 1962. The most important advantage of clearing agreements is that trade between two countries may take place even without or with the minimum foreign exchange reserves, but the biggest drawback of this system is that it encourages bilateral trade and payment system, which is an obstacle in the rapid growth of internal trade.

f. **Transfer Moratorium:** Under this method, a country defers its foreign payments liabilities for some time period due to acute foreign exchange crisis. In other words, the country makes payments to other countries after lapse of some time. The importers and debtors are required to deposit the full amount of their payment liabilities in domestic currency with the central bank of the country and the central bank makes the payments to the foreign exporters and creditors after a certain period of time. Some time, the foreigners are allowed to use their funds for particular purposes with in the country who has resorted to payment moratorium. The biggest advantage of this method is that the country suffering from foreign exchange crisis gets sufficient time to settle its foreign payment liabilities.

g. Payments Agreements: These agreements are made when a country is not in a position to repay its loans to some other country or countries. Under these agreements, the creditor country promises not to impose restrictions on the debtor country and the debtor country makes all efforts to keep the imports from creditors country at the minimum possible level to reduce its foreign exchange requirements. Through these agreements, balance of trade of debtor country is deliberately kept favourable with the creditor country, so that payment could be made easily to creditor country. Many countries had used these methods during the Second World War period to control the fluctuations in exchange rate.

10.6.2 Indirect Methods of Exchange Control:

These methods do not affect the exchange rate directly, but effect indirectly through the changes in different economic variables. The important indirect methods of foreign exchange control have been explained below :

(i) Changes in Bank Rate / Rediscount Rate: The central bank of the country regulates the inflow and outflow of foreign exchange through the changes in bank rate. The bank rate is increased to attract foreign capital in the country. As a result of increase in bank rate, foreigners make more investment therefore the demand of home currency increases and thus exchange rate of country appreciates as compared to currencies of other countries. On the contrary, reduction in bank rate results into outflow of funds from the country, which in its own turn exert influence on exchange rate and depreciates it as compared to other currencies. Many countries including India have increased their bank rates for attracting foreign funds and arresting their falling exchange rates in the past.

(ii) Stand Still Agreements: These agreements are also known as "as usual and as were" agreements. These agreements are between a creditor and a debtor country. The peculiarity of these agreements is that these provide sufficient time to a debtor country to keep its economic position stand still. Under these agreements, restrictions are imposed on movement of capital between two countries and short term loans of debtor country are converted into long term loans. The facility of making payment of loans in installments is also provided to the debtor country. Thus, the debtor country gets some time to get rid of its immediate foreign exchange crisis. Germany used these agreements during the great depression of thirties.

(iii) Regulation of Foreign Trade: Fluctuations in exchange rate may be controlled through the regulation of foreign trade. Through this method, a country can have favourable balance of trade or may reduce its disequilibrium in it thereby becomes able to effect its exchange rate favourably. Foreign trade may be regulated by the following two measures:

a. Export Promotion: Export promotion is the best way to have favourable balance of trade and favourable exchange rate. Exports may be promoted through several ways such as exemption or reduction in export duties and by providing economic

assistance/concessions and other facilities to the exporters. Export promotion is not only the best way of earning foreign exchange, but also the ultimate way of making payments for imports of a country. It has been rightly said that 'Ultimately exports pay for the imports'.

b. Compensatory Agreements: Under this method two countries make an agreement for import – export of each other's goods of equal value based on the principle of barter trade system. A nation will import from another country exactly equal to the value of its exports to the same country. As a result of this, the need for foreign exchange for payment does not arise to both countries. The main demerit of this method is that this is against the principles of international division of labour and specialization. It means, it deprives of the benefits of multilateral trade system.

(iv) Import Control: Import Control is another way to have favourable balance of trade and exchange rate both. Imports may be reduced through several measures such as imposing and / or increasing import duties, fixing import quotas for different goods, putting restriction on imports etc. under the policy of protection. However, the import control policy is not as good as the policy of export promotion, because of several reasons. Among them, the most important is that imports controls may retard the economic growth of the country. If the same policy is followed by other countries as a measure of retaliation, then it may prove to be self- damaging and suicidal.

The methods of exchange control as mentioned above may also be classified as follows:

1. **Unilateral Methods:** Under this category, those methods of exchange control are put which may be adopted independently by any country on its own. These methods are :

a) Bank rate;
b) Regulation of foreign trade;
c) Blocked Account;
d) Rationing of foreign exchange;
e) Exchange Pegging;
f) Foreign Exchange Equalization; and
g) Multiple Exchange Rates.

2. **Bilateral or Multilateral Methods:** This category includes those methods of exchange control which are adapted by two or more countries mutually / collectively to control / regulate the exchange rate and foreign payments. These methods cannot be adopted independently by any single country and their effects spread on two or more countries, therefore these are known as bilateral or multilateral methods. Following methods are included under this category :

a) Clearing Agreements;
b) Payment Agreements;
c) Compensatory Agreements**;**
d) Stand Still Agreements; and
e) Transfer Moratorium.

10.7 Summary

In narrow sense, exchange control means those regulations / controls which are imposed to keep the foreign exchange rate within the specified limit. In broad sense, exchange control means all types of interventions by the government or the central bank of the country in foreign exchange market, which do not allow the demand and supply of foreign exchange to function freely. In practice, government interference and exchange control are used synonymously, but they are not the same. The methods of exchange control may be classified into two categories. Direct methods include policy of interference and exchange control (blocked accounts, quota system, rationing of foreign exchange, multiple exchange rate, clearing agreements, transfer moratorium and payment agreements). Indirect methods include changes in bank rate, compensatory agreements, standstill agreements, and regulation of foreign trade.

10.9 Self Assessment Questions

1. What do you mean by foreign exchange control? Also explain the objectives of exchange control.
2. Define foreign exchange control and explain its characteristics.
3. Distinguish between government interference and exchange control.
4. Explain the various methods of exchange control.
5. Write short note on the following:
   (a) Direct methods of Exchange Control.
   (b) Indirect methods of Exchange Control
   (c) Necessity of Exchange Control.
   (d) Features of Exchange Control.
   (e) Difference between unilateral methods and bilateral / multilateral methods.

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Unit - 11: Foreign Exchange Exposure and Risk

Structure of Unit

11.0 Objectives

After studying this unit, you should be able to:

- Understand the concept of foreign exchange exposure and foreign exchange risk.
- Know the difference between real exchange rate and nominal exchange rate.
- Classify foreign exchange exposure into economic and translation exposure.
- Grasp the types of economic exposure.
- Analyse the management of various types of exposure.

11.1 Introduction

Foreign exchange rates in real life never remain stable. At times, they may change widely and violently. However hard a currency is, its value is subject to change relative to other currencies. For instance, dollar had been devalued twice and its value is constantly fluctuating in foreign exchange market every day. Further, economies in the world is becoming more and more integrated, therefore a significant change in the par value of any one currency will definitely affect the business the world over.

It is important to note that the changes in foreign exchange rates may affect not only firms engaged in international business, but also those engaged in domestic business. Even if domestic firms buy raw materials and other things in the domestic market and sell their products exclusively in the domestic market, they may face competition from goods imported from abroad. Further, any change in exports caused by a change in the exchange rate would influence domestic sales as well. In other words, any change in the foreign exchange rate would influence both exports and imports, which in turn will affect the domestic market. Thus, it is evident that the firms engaged in international business would be exposed to exchange rate movements and the assets, liabilities and operating incomes of business enterprises are all subject to foreign exchange rate fluctuations. Not only this, foreign exchange rates and fluctuations there in and stock market returns are also significantly correlated.

In nutshell, it can be said that fluctuations in exchange rates affect all, especially the business corporations. Therefore, it is all the necessary to study the changes in foreign exchange rates for adopting appropriate and suitable strategies to manage the risk emanating from such changes.

11.2 Concept of Foreign Exchange Exposure

It is well acknowledged fact that the changes in foreign exchange rates affect not only international business, but also the domestic business. The economic consequences of changes in foreign exchange rates may be direct and / or indirect. Changes in exchange rates not only affect firms or corporations engaged in different types of businesses, but also the governments and individuals in many ways. The changes in exchange rates are always not predictable, rather they are often unanticipated. Therefore, these unanticipated changes in exchange rates also affect the real domestic currency value of assets, liabilities, or operating incomes. The concept of foreign exchange exposure is really useful in assessing the sensitivity of changes in real domestic value of assets, liabilities or operating incomes which may cause due to unanticipated changes in foreign exchange rates.

According to **Michael Adler and Bernard Dumes,** "Foreign exchange exposure is the measure of sensitivity of changes in the real domestic currency value of assets, liabilities, or operating incomes to unanticipated changes in exchange rates".

The sensitivity can be expressed by the regression line given below:

□RV= □□□□(□S) + □

Here,

□RV = Changes in real domestic value of a particular item (assets, liabilities or operating incomes) or change in the real value of a group of assets, liabilities or operating incomes.

□S = Unanticipated changes in exchange rate between domestic currency and foreign currency.

□□□□□□□□□□= Slops of the regression line (i.e. regression coefficient) measuring the sensitivity of the value of the item to unanticipated changes in foreign exchange rate.

□□□□□□□□□= Constant

□□□□□□□□□= Random Error

The beta coefficient measures the exposure of the item with respect to the corresponding exchange rate. In other words, the □□value represents the value of the item in foreign currency that is at risk due to unanticipated exchange rate changes. The regression equation can be statistically estimated by using the **least square method** with historical data on □RV and □S. The regression line can also be obtained graphically by plotting the values of □RV and □S, and fitting a line to the scatter of point. The slope of the regression line gives the measure of exposure.

In terms of domestic currency, the values of assets, liabilities and operating incomes of the firm are exposed to not only the effects of exchange rate fluctuations, but also to the effects of changes in the value of other factors. These factors may operate at either the macro level or the micro level, and cause uncertainty in the realized value of various business items. As these factor change, so the values of various assets, liabilities, or operating incomes of firm. For instance, interest rates, inflation rates, foreign exchange rates, technological progress, raw material and other input supplies hence direct or indirect impact on the business operations, as well as the values of assets and liabilities of firms. As these variables by themselves are subject to various uncertainties, the business operations as well as the values of assets and liabilities of firm are always at a risk.

The regression equation implicitly assumes the values of assets, liabilities or operating incomes are influenced by several factors, including changes in exchange rate. If it is assumed that the value of receivables, payables, deposits and loans are influenced by changes in exchange rate alone, the value of □□and □□in equation becomes zero. Then, the equation will be reduced to:

□RV = □ (□S)

□□□□□□□□= □RV / (□S)

If □□is zero with respect to the domestic currency value of any asset, liability or operating income, such items are considered to be unexposed to currency risk. They may be either independent of foreign exchange rate fluctuations or the change in exchange rate exactly offsets the change in the foreign currency value of the item. □□will have a non-zero value for items whose values are fixed in monetary terms (foreign currency), but not in terms of domestic currency where they are subject to change in the exchange rate. For example, receivables of, say, USD 1 million will remain the same in USD terms over time irrespective of changes in exchange rate between USD and INR. But in terms of value in INR, the value of these receivables changes with changes in exchange rate between the USD and INR. It may be noted that the values of monetary items are always subject to foreign exchange exposure. The positive value of □□is known as a long exposure and the negative value of □□ is known as short exposure. It is also worth mentioning here that the □□ value is always expressed in units of the foreign currency.

Let us understand with the help of an example. Suppose the spot rate of USD / INR was INR 43.75 a month ago, and is INR 44 at present. In this scenario, an Indian firm which has 30 day receivables of USD 60 million will find that their value has increased from INR 2,625 million to INR 2,640 million. For a change of INR 0.25 /USD, there is a change of INR 15 million in the value of the receivables. Thus, the □□of receivables can be calculated as:

INR 15 million = □□□ INR 0.25 / USD

Or

□□= USD 60 million

The receivable have a foreign exchange exposure of USD 60 million, and this is the amount that is at risk to unexpected changes in foreign exchange rates.

Conversely, a firm which has 60 days payables of USD 60 million will experience a downward sloping relationship between the INR value of payables and the foreign exchange rate. The unexpected change in the foreign exchange rate from USD / INR 43.75 to USD/INR 44 will result in an extra INR amount of payables. The beta value for payables is calculated as:

□□= (-) INR 15 million / INR 0.25

= (-) USD 60 million

Thus, the exposure on the receivables or payables is USD 60 million. This is the amount that is at risk due to unanticipated changes in the exchange rate between the Indian rupee and the US dollar. Note that the amount of exposure is as much as the value of receivables or payables.

An unexpected appreciation of the Indian rupee will bring down the INR value of receivables denominated in the US dollar. At the same time, the burden of payables in US dollars will be reduced, as the appreciation of INR results in lower INR amount of the liability. In this situation also, the amount of exposure is as much as the value of receivables or payables.

Take another example. A firm in India has made an investment in the US, the market value of which is USD 5 million when the exchange rate is USD / INR 45. The investment subsequently increased to USD 5.5 million, and the exchange rate also changed to USD / INR 46.5. Then,

□RV = (INR 46.5 □ USD 5.5 million) – (INR 45 □ USD 5 million)

= INR 30.75 million

Assuming the random error (□□is zero, the exposure (□) can be calculated as follows :

INR 30.75 million = □ (INR 1.5 / USD)

□□=20.5 million

Here the exposure on the investment of USD 5 million is larger than the value of the investment itself.

Suppose, the market value of the investment has decreased to USD 4.75 million with the exchange rate changing from USD / INR 44.5. Then,

□RV = (INR 44.5 □ USD 4.75 million) – (INR 45 □ USD 5 million)

= (-) INR 13.62 million

In this case, the exposure is:

(-) INR 13.62 million = □ (- INR 0.5 / USD)

□□= USD 27.24 million

That is, the exposure on the USD 5 million investment is USD 27.24 million.

Further, suppose the investment value increases from USD 5 million to USD 5.05 million with change in the exchange rate from USD / INR 45 to USD / INR 43.75. Then,

□RV = (INR 43.75 □ USD 5.05 million) – (INR 45 □ USD 5 million)

= (-) INR 4.06 million

The exposure (□) would be:

(-) INR 4.06 million = □ (-INR 1.25 / USD)

□□ = USD 3.25 million

In this case, the exposure on the investment is less than the market value.

Thus, it is clear from the examples given above, that the amount of exposure of any item may be zero, equal to, less than or more than the value of item itself.

By definition, foreign exchange exposure exists only if the change in exchange rate is unpredictable. That is, foreign exchange exposure arises only if the actual change in exchange rate is different from the anticipated change. Suppose a firm has fixed the price of its product to be exported on a 30 day credit by taking into account the anticipated changes in its home currency value relative to a foreign currency. In this case, the exporter is free from foreign exchange exposure. However, if the foreign exchange rate changes from what had been expected, then the exporter will have to face foreign exchange exposure. The management of a firm will deal with unanticipated changes in the exchange rate while assuming that anticipated changes have already been discounted by the market. That is, the markets compensate for changes in exchange rates which are expected.

As the forward rate is unbiased estimate of the future spot rate, the forward rate is used to calculate the unexpected change in the exchange rate. That is, the forward rate of a particular duration can be compared to the actual spot rate on the date of maturity of the forward contract, and the difference, if any, is taken as unexpected change in the exchange rate.

Unanticipated exchange rate fluctuations can affect not only domestic assets, liabilities and operating incomes of firms, but also their foreign assets, liabilities and operating incomes. For instance, a firm's domestic borrowings are affected by domestic interest rate changes, which, in term, are influenced by unanticipated exchange rate changes. Even though there is no conversion from foreign currency into domestic currency, the domestic liability is exposed to exchange rate movements. The foreign exchange exposure of suppliers may also influence the exposure of a firm even if it does not have any cross border transactions.

11.3 Concept of Foreign Exchange Risk

The concept of foreign exchange exposure and foreign exchange risk are often used inter changeably, but they are different. Foreign exchange risk has been defined by **Maurice D. Levi** as "The variance of the domestic currency value of assets, liabilities or operating incomes that is attributable to unanticipated changes in foreign exchange rates".

By definition, foreign exchange risk depends on the exposure, as well as the variability of unanticipated changes in the relevant exchange rate. Foreign exchange risk can be expressed as:

$$\text{Var.}(\Delta RV) = \beta^2 \text{ Var.}(\Delta S)$$

Here,

Var. (ΔRV) = Variance of the change in value of a business item caused by unanticipated changes in the foreign exchange rate.

β = Regression coefficient which describes the systematic relationship between (ΔRV) and (ΔS)

Var. (ΔS) = Variance of unanticipated changes in the foreign exchange rate.

The equation mentioned above implies that foreign exchange rate risk is a function of the exposure and variance of exchange rates. The exposure or unpredictable nature of exchange rates alone cannot result in foreign exchange risk. For instance, suppose the operating cash flows of a US firm are highly sensitive to the exchange rate between USD and INR. In this case, the US firm has a very high foreign exchange exposure. However, it is predictable that the exchange rate of INR / USD during a particular period would be almost steady. In view of the predictability of exchange rates, the foreign exchange risk of the firm's operating cash flows is minimal.

11.4 Effect of Real & Nominal Exchange Rates

As already discussed, the real exchange rate is the nominal (actual) exchange rate adjusted for the inflation differential between the two countries. While assessing the impact of exchange rate changes on the value of the firm, it is necessary to consider the underlying relative rates of inflation associated with each currency. In other words, a distinction should be made between the effects of nominal exchange rate changes and the effects of real exchange rate changes on the cash flows of a firm. Such distinction has significant implications for foreign exchange risk management. For instance, if a change in relative inflation rates is accompanied by an equal change in nominal exchange rate, the real cash flows of a firm will not be affected. Alternatively, if the real exchange rate changes, then the real cash flows of the firm will be affected. This is because changes in real exchange rate affect the relative competitiveness of the firm. The nominal exchange rate, however, affects the assets, liabilities or cash flows fixed in terms of foreign currency.

The foreign exchange exposure is defined with reference to the real values of assets, liabilities or operating cash flows. In other words, the exposure is assessed with reference to the values adjusted for inflation or deflation as the case may be. But when inflation or deflation is difficult to measure, the nominal values of assets, liabilities or cash flows are considered.

11.5 Types of Foreign Exchange Exposure

Foreign exchange exposure is broadly of following two types:

A. Economic Exposure:

It refers to potential changes in all future cash flows of a firm that result due to unanticipated changes in exchange rates. The changes in foreign exchange rates would impact monetary assets and liabilities as well as future cash flows.

Economic exposure may be classified into the following types:

(i) **Transaction Exposure:** It refers to potential changes in the value of contractual future cash flows or monetary assets and liabilities resulting from changes in the exchange rate. It arises when the firm's contractual obligations (monetary assets and liabilities) are exposed to unanticipated changes in exchange rates.

(ii) **Operating Exposure:** It represents the potential changes in the value of non-monetary (real) assets and liabilities due to unanticipated changes in exchange rate. Operating exposure arises when the firm's real assets or operating cash flows are exposed to unanticipated changes in exchange rates.

Thus economic exposure is a broad concept which refers to the impact of unexpected changes in exchange rates on future cash flows arising out of foreign currency denominated contractual transactions (monetary) as well as on the future cash flows to be generated by the real assets (non-monetary) of a firm.

Although the value of a firm is exposed to both real and nominal changes in exchange rate, but changes in real exchange rate that have significant economic implications for the relative competitiveness of exporters and importers. For example, a real depreciation of Indian rupee against Japanese yen reduces the prices of domestic goods and services in Japan. As a result of it, the demand for Indian goods in Japan will go up. Exports invoiced in yen and yen denominated remittances, including interest and dividends income, also increases cash flow in terms of Indian rupees. However, depreciation of home currency makes imports costlier. In other words, more home currency is needed to buy the same amount of foreign currency which increases the payment burden. Thus, for business firms, the depreciation of the real value of home currency may cause in both cash inflows (on exports) and cash outflows (on imports) in home currency.

Conversely, a real appreciation of home currency against a foreign currency have impact on opposite direction on cash inflows and cash outflows as that of real depreciation of home currency stated above.

It should be clearly understood that purely domestic firms (not engaged in any international transaction) may also face economic exposure. In reality, the domestic firms also face competition from foreign firms in local market. Any change in exchange rate affects the competitiveness of all firms in domestic market. Customers of products shift from foreign firms to local firms and vice-versa depending on the price difference between the competitive firms. This shift in customer's preference will affect the cash flows of the domestic firms.

(B) Translation Exposure:

It is also known as **accounting exposure.** It results from a restatement of the values of the items of financial statements of a multinational corporation (MNC). In other words, translation exposure arises when items of financial statements that are stated in foreign currencies are restated in the domestic currency of MNC. Depending on the fluctuations of relevant foreign exchange rates, such restatement may result in exchange gains and losses.

An MNC may have subsidiaries located in different countries, with each subsidiary preparing its financial statements in its local currency. These financial statements need to be consolidated with that of the parent company in order to present the overall performance of the MNC. It is also necessary to bring the financial statements of subsidiaries that are denominated in different currencies into consolidated statements denominated in a common currency for uniformity and inter-unit comparison. The process begins with the translation of various items of financial statements into home currency of the parent company. The translation of assets, liabilities, cash flows etc. is done according to the principles / standards prescribed by the Financial Accounting Standard Board or other such authorities in the country of parent company. Nevertheless, the restatement of financial statements will result in gains or losses with changes in exchange rates since the previous reporting period.

The magnitude of translation exposure is determined by the extent of changes in the exchange rates between the home currency of the parent company and the local currencies in which the accounts are prepared by the subsidiaries. If a subsidiary is in a country with unstable currency, translation of the financial items of that subsidiary may result in a large magnitude of translation exposure. The extent of translation gains or losses depends on the volume of business conducted by each subsidiary, the location (country) of the subsidiary and the accounting methods used by the subsidiary company as well as the parent company.

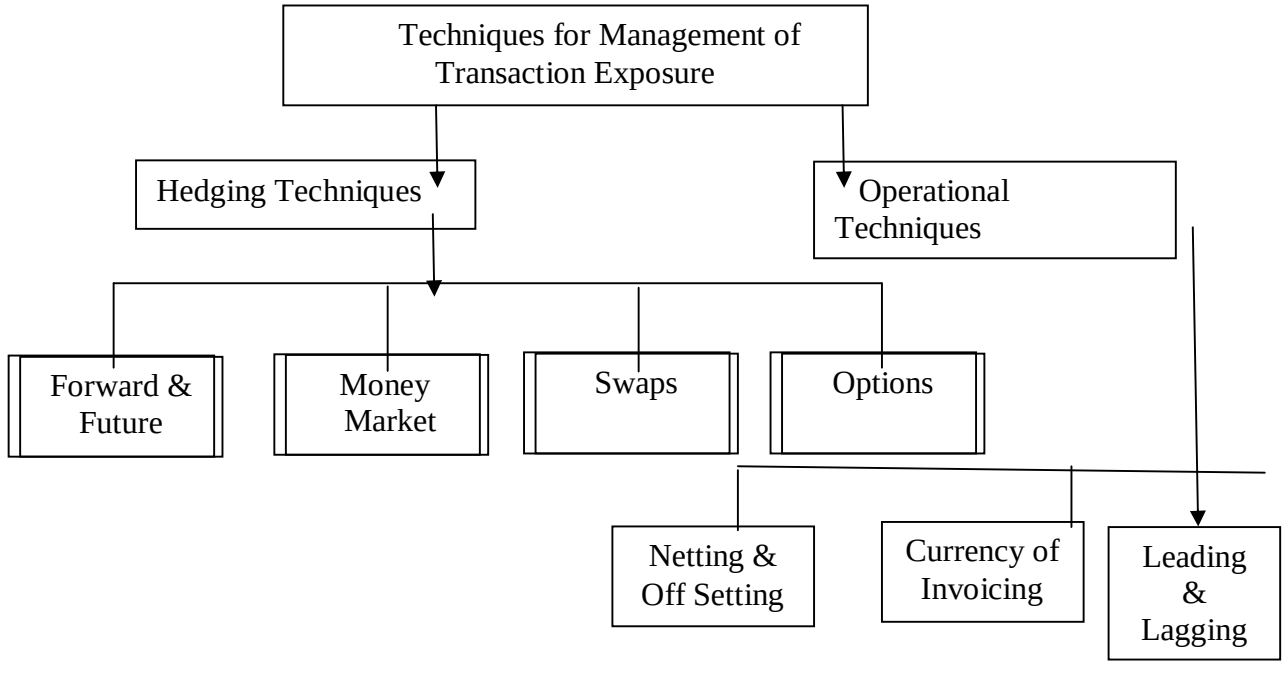
MNCs adopt several methods to translate the financial statements of their subsidiaries. The adoption of a particular method depends on the policy of the company selected by the accounting authority of the country in which the parent company is located. The following main methods are used:

1. **Current / Non-current Method :** According to this method, the values of all current assets and liabilities of a foreign subsidiary are translated into the home currency of the parent company at the current spot exchange rate. However, the non-current assets and liabilities are translated at the historical exchange rate. (i.e., the spot rate at the time a particular asset was acquired or liability incurred).
2. **Monetary / Non-Monetary Method:** Under this method, monetary items are translated at the current spot exchange rate and non-monetary items are translated at historical rates. The average exchange rate during the reference period is applied to translate the monetary items.
3. **Temporal Method:** In this method, the choice of exchange rate is based on whether the balance sheet item is originally evaluated at historical cost or market value. If the item is originally stated at the historical cost, its translation is carried out at historical spot rate and conversely, if the item is originally stated at its market value, the translation is carried out at the current spot rate of exchange.
4. **Current Rate Method:** Under this method, all items of financial statements are translated at the current spot exchange rate.

11.6 Management of Foreign Exchange Exposure

11.6.1 Management of Transaction Exposure :

Transaction exposure can be managed through many techniques. It can be managed by hedging techniques as well as operational techniques. These two techniques include so many techniques as depicted in the figure given below :



Let us now discuss different techniques used for managing the transaction exposure:

1. Hedging with Forwards and Futures :

A forward contract is a legally enforceable agreement to buy or sell a certain amount of foreign currency on a specified date and an exchange rate fixed at the time of entering the contract. Firms may hedge their transaction exposure by entering into forward contracts; i.e., a firm may buy or sell the foreign currency forward and thereby avoid fluctuations in the home currency value of the foreign currency- denominated fixed future cash flows. Take an example to understand clearly. Assume an Indian trader has three months receivables of USD 1 million. In order to eliminate the currency risk, the trader signs a forward contract with a bank which agrees to buy that amount in three months at a forward rate of USD / INR 60. The current spot rate is USD / INR 59.75. By entering the forward contract, the Indian trader has fixed the INR value of his three months receivables. Regardless of what happens to the exchange rate in the future, the trader would get INR 60 million on the realization of his receivables. In other words, the Indian trader has effectively transformed the foreign currency- denominated asset (receivables) into home currency- denominated assets. In fact, the forward rate typically reflects the current spot rate plus the interest differential between the two currencies involved.

Suppose an Indian firm has imported goods from US firm for USD 5 million on three month credit. To hedge this transaction exposure, the firm enters a forward contract to buy USD 5 million at a forward rate of USD / INR 60 on the date of maturity of forward contract, the firm will deliver INR 300 to the counter party and in return receive USD 5 million. This happens regardless of the spot rate on the date of maturity of forward contract. Thus, the USD payable is exactly offset by the USD receivables, and the Indian firm's transaction exposure is hedged by a forward contract.

A firm's decision for hedging or not hedging depends on the following three considerations:

(i) The real cost of hedging ;

(ii) The anticipated gains and losses that are most likely to arise from hedging ; and

(iii) The expected transactions costs.

The real cost of hedging can be computed by the following equation:

$$\text{Real cost of hedging} = (F_t - S_t) / S_t$$

Here,

Ft = Forward rate of exchange

St = Future Spot rate of exchange

Absolute gains and losses that are most likely to arise from forward hedging can be computed from the following formula:

$$\text{Gain / Loss} = (F_n - S_t) \times \text{amount involved in the transaction}$$

Here,

Fn = Forward rate for period n (contract maturing at time t)

St = Future spot rate at time t

2. Money Market Hedging:

A firm can lock in the home currency value of future cash flows in foreign currency through a money market hedge. Money market hedging involves simultaneous borrowing and lending / investment in the money market with a purpose to avoid or reduce foreign exchange exposure with regard to receivables or payables. A firm that wants to hedge foreign exchange exposure on receivable / payables may borrow or lend foreign currency in the money market, so that its assets and liabilities in the same currency will match. Only firms that have access to the international money market can use this type of hedging effectively.

Any restrictions on the borrowing or lending in the foreign currency may limit the use of this technique. Nevertheless, money market hedging is particularly used for cash flows in currencies for which there are no forward markets.

Money market hedging involves taking a money market position to hedge exposure on foreign currency receivables or payables. An exporter who wants to hedge receivables in a foreign currency may borrow a certain amount in the currency denominated the receivables, get that foreign currency – denominated amount converted into home currency in the spot market, and then invest it for a period considering with the period of receivables. Then the exporter pays off the foreign currency loan with the receivables amount.

3. Hedging with Currency Options :

The main problem with the forward contract and money market hedging is that they insulate the exporter or importer from adverse exchange rate movement, but don't allow them to benefit from favourable exchange rate movements. A currency option hedging is a technique that avoids this problem.

A currency option is a contract that gives the buyer the right, but not the obligation to buy or sell a specified currency at a specified exchange rate in the future. Options are basically of two types: put options and call options.

a. A **put option** gives the option holder the right to sell a specified quantity of foreign currency to the option seller at a fixed rate of exchange on or before the expiration date.

b. A **call option** gives the option holder to buy a specified quantity of foreign currency from the option seller at a predetermined exchange rate on or before the expiration date.

A firm that wants to protect itself against the appreciation of particular foreign currency may buy a call option on that currency. Conversely, a firm that wants to protect itself against depreciation of a particular currency may buy a put option on that currency. An important feature of options is that there is no obligation on the part of holder of the option contract to buy or sell the stated currency at the exercise price. If the spot rate of a currency moves against the interest of the option holder, he will just let that option contract expire.

Options can be used to hedge both receivables and payables in foreign currency. A firm that has an obligation to make payments in foreign currency may hedge its payables or

foreign currency outflows by buying a call option on the currency in which the payables are denominated. By buying a call option, the firm knows the maximum amount that it has to buy in home currency and at the same time, can benefit if the exchange rate ends up below the strike rate. Similarly, an exporting firm may hedge its receivables or foreign currency inflows by buying a put option. This will ensure that a minimum quantity of domestic currency is received for foreign currency inflows. At the same time, the exporter may also benefit if the domestic currency price of the foreign currency becomes higher than the strike rate. Option contracts thus protect the buyer or holder against adverse exchange rate movements without depriving the firm of the opportunity to benefit from favourable exchange rate movements. It is this feature which distinguishes the option contracts from forward contracts.

Not only exporters and importers, but also investors can use currency options to hedge their transaction exposure. Investors may also hedge their future payments or receipts of funds in foreign currency by buying options. Currency options can also be used to hedge contingent foreign currency outflows.

Currency options provide firms a flexible means of hedging against foreign currency exposure. Option strategies such as spreads, straddles, strangles and exotic options like barrier options, knock- in and knock-out options, range forwards and forward reversing options offer great opportunities to traders to hedge their transaction exposure.

4. Hedging with Swap Contracts :

A swap is an agreement between two parties to exchange a cash flow in one currency against a cash flow in another currency according to predetermined terms and conditions. In other words, a swap contract requires periodic payments from one party to the other in order to safeguard against unfavourable exchange rate movements. A firm which expects certain cash flows in a foreign currency in the future may enter into a swap contract in order to hedge those cash flows against foreign exchange rate fluctuations. Currency swaps are generally used to hedge long-term transaction exposures.

5. Netting and Offsetting :

A firm may have a transaction exposure portfolio with exposure in different currencies. When exchange rates change, there may be gains on some currencies and losses on others. Exposure netting is a portfolio approach to hedging, according to which a firm may manage its trade transaction in such a way that exposure in one currency will be offset by exposures in the same or other currencies. For instance, suppose that a firm has receivables of GBP 10 million and at the same time payables of GBP 10 million. So the GBP receivables cancel out the GBP payables, leaving no net exposure.

6. Currency Invoicing :

International traders can also shift foreign exchange exposure by getting their exports or imports invoiced in their own currency. This method of hedging does not eliminate foreign exchange exposure, but shifts it from one party to another. For example, if a firm

invoices its imports in its domestic currency, it needs not to face foreign exchange exposure on its payables. But the exporter (counter party) will face the exposure. Similarly, a firm can shift its entire exchange risk to the importer by invoicing its exports in its domestic currency.

It is a common practice for the exporter and the importer to agree to use a currency other than their respective currencies to invoice their transactions. For instance, an Indian exporter and a British importer may agree to use US dollar as the invoice currency– which is less volatile in value or whose country of origin has a developed derivative market.

Sometimes, traders may agree to share the foreign exchange exposure by getting a part of the trade invoiced in the importer's home currency and the rest of the trade invoiced in the exporter's home currency. Such invoicing is known as **mixed currency invoicing.** Trade transactions may also be invoiced in one of the standard currency baskets such as SDR or Euro. Trade transactions may also be expressed in terms of composite currency unit made of different currencies. Such private currency baskets, also known as Cocktails, are designed to avoid violent fluctuations in individual exchange rates.

7. Leading & Lagging Strategy :

Transaction exposure can also be managed by shifting the timing of receipt or payment of a foreign currency in accordance with expectations of future exchange rate movements. A firm may lag the receivables and lead the payables in hard currencies. It may also lead the receivables and lag the payables in weak currencies. By doing so, it can avoid the loss from depreciation of the soft currency and benefit from the appreciation of the hard currency. For example, suppose an Indian firm has three- month payables denominated in US dollars. As the dollar is a hard currency and is expected to appreciate against the Indian rupee, any delay in settlement of the US dollar payable will put additional burden on the Indian firm. Therefore, the firm may settle the payment immediately and avail the cash discount, if any. Contrary to it, if the firm has receivables in weak currency, it may lead the receivables.

Borrowing or lending in hard currencies carries lower rates of interest as compared to soft currencies. Further, the firm may avoid cash discounts if it leads the payables. On the advance settlement of receivables, the firm may offer a cash discount to its customers. Therefore, any gain arising on leading or lagging needs to be considered along with the interest rate differential and other costs associated with leading or lagging.

11.6.2 Management of Operating Exposure

A firm that has eliminated transaction exposure may still remain exposed to operating exposure. Operating exposure cannot be eliminated by using financial hedges. This kind of exposure arises from the effects of changes in the exchange rate on the basic operations of a firm and, therefore, any attempt to reduce or avoid operating exposure should involve suitable and effective decisions with regard to the various operations of a firm. The firm should study the effects of changes in exchange rates on the cash flow

generating capacity of each of its real assets and initiate measures to effectively counteract the negative effects and also capitalize on the opportunities. Further, it may view the operating exposure as its long-term concern and accordingly take steps to manage it.

Management of operating exposure involves decision making with respect to plant location, sourcing of raw material, production, technology, pricing of product, product development and selection of markets in order to avoid fluctuations in the future operating cash flows of the firm due to changes in the foreign exchange rates.

Following are the ways for managing operating exposure:

1. Product and Market Strategy

In view of exchange rate fluctuations, a firm may change its product strategy, which covers decisions with regard to new product development, the products mix and the product line. When the domestic currency value appreciates, the firm faces declining international market share and profits. In order to maintain its international market share and profitability, the firm may introduce new product and adopt new market strategies to fetch new customers and new sales to offset the loss of existing customers that resulted from the appreciation of domestic currency against the foreign currency. Contrary to it, when the domestic currency value is depreciating, besides consolidating its existing markets, it can penetrate into new markets by expanding its product line or product mix.

2. Product Strategy

A firm can also manage its operating exposure by making appropriate decisions with regard to production facilities, which include sourcing of inputs, plant location and using alternative plants. It may shift its source of raw materials and other component to a country whose currency is stable. It may also outsource the supply of components to a country whose currency is linked to the currency of a country that is a big export destination for its product.

A firm can also manage its operating exposure by locating its plant in a country whose currency is stable. Shifting production facilities across countries may also hedge firms against exposure to country- specific political risks. While making decision to shift production facilities, they should also consider cross border variations in labour costs, productivity, tariffs, legal and social infra-structure.

3. Pricing Strategy

A firm may review its pricing strategy in order to deal with the effects of exchange rate fluctuations on its revenues. In the light of depreciation of home currency, a firm may have to decide whether it needs to preserve its profit margin or market share by changing its price strategy. In response to an increase in import prices of goods due to depreciation, a firm selling in its domestic market may increase its price and reap the benefits or may keep its price unchanged and thereby increase its market share. A firm selling overseas can gain a competitive advantage when its home currency depreciates. The competitive advantage can be used to either penetrate into new markets or skim the

cream of the markets. Conversely, in case of appreciation of domestic currency, it may respond to the decline in import prices by reducing domestic price so as to maintain its market share. The firm should also consider factors like the elasticity of demand and economies of scale before introducing any change in its domestic pricing.

4. Technology

Technological factors also play an important role in operating exposure management. The technology used by a firm should be flexible and capable of adjusting to changes in the sourcing of inputs, composition of inputs, production methods and levels of production. In order to respond to exchange rate fluctuations, a firm may make efforts to reduce the domestic currency cost of its products. Efforts may be made at increasing the productivity of various factors of production. This may entail changing the technology through modernization.

Operating exposure is a complex phenomenon that cannot be effectively controlled and managed. As exchange rate fluctuations affect all facets of a firm, despite its best effort, there remains at least some element of operating exposure that cannot be eliminated. This is why operating exposure is also called as the residual foreign exchange exposure.

11.7 Summary

Foreign exchange rates never remain constant. Changes in foreign exchange rate have significant influence on international business transactions and the economies of the world. Business firms, especially those engaged in international trade and investment, are exposed to exchange rates fluctuations. Foreign exchange exposure and foreign exchange risk are conceptually different. Foreign exchange exposure is defined as the sensitivity of change in the real domestic currency value of assets, liabilities or operating incomes to unanticipated changes in exchange rates. Foreign exchange risk, on the other hand is measured by the variance of the domestic currency value of assets, liabilities or operating incomes that is attributable to unanticipated changes in foreign exchange rate.

Foreign exchanges exposure is broadly divided into economic exposure and translation exposure. Economic exposure is also of two types: transaction exposure and operating exposure. Transaction exposure can be managed by hedging techniques or by operational techniques. These include currency forwards and futures, currency options, currency swaps, money market hedge, netting and offsetting, currency of invoicing and leading and lagging. Management of operating exposure involves decision making with respect to product and market strategy, production strategy, pricing strategy and technology. The main currency translation methods are current / non-current method, monetary / non-monetary method, temporal method and current rate method.

11.8 Self Assessment Questions

1. Distinguish between foreign exchange exposure and foreign exchange risk.
2. What is operating exposure and what initiatives should a firm take to cope with it.
3. What do you mean by transaction exposure? How can it be managed?
4. Explain the various types of foreign exchange exposure.
5. What is economic exposure and explain its types.
6. What is transaction exposure? How is it different from translation exposure?
7. Write short-note on the following:
   (i) Forward Contract
   (ii) Swap Contract
   (iii) Currency Option
   (iv) Lagging and Leading
   (v) Netting and Offsetting.

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Unit - 12: International Monetary Fund

Structure of Unit

12.0 Objectives

After completing this unit, you would be able to understand:

- What is IMF?
- What are its objectives?
- How are membership, capital and quotas decided?
- What is the organizational structure of IMF?
- What are the financial facilities provided by IMF to its member countries?
- What are the achievements of IMF?
- What are the criticisms of IMF?

12.1 Introduction

The International Monetary Fund (IMF) is an organisation of 188 countries, working to foster global monetary co- operation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world.

12.2 Establishment of IMF

In 1944, an international monetary conference known as Brettonwoods's conference was organized in America in which representatives of 44 countries participated. In this conference a decision was taken to establish two international institutions. First was International Monetary Fund for monetary cooperation among various member countries and another institute was International Bank for Re- construction and Development popularly known as World Bank for reconstruction of war devastated countries and development of backward countries.

Decision for establishment of International Monetary Fund was taken on 22nd July 1944. Thirty countries signed letter of agreement in this regard on 27 December 1945 and it started working from 1 March 1947. In the beginning there were 44 members of this organisation and at present there are 188 members.

12.3 Objectives of IMF

According to the Articles of Agreement signed by member countries, the objectives of IMF are as under:

A. International Monetary Cooperation

The main objective of the fund is to enhance monetary cooperation among member countries and for this purpose it has a team of experts which provide advice for solving international monetary problems.

B. Balanced Growth of International Trade

According to section 8.2 (a) of letter of agreement of the fund, no member country can impose restrictions on international transactions and payments without permission from the fund. But fund also accords permission to impose restrictions to specific member nations to solve its economic difficulties, whenever so required.

C. Exchange Stability

Most of the countries of the world abandoned gold standard after 1934 and adopted paper currency standard. As a result, fluctuations in exchange rates became more frequent. These fluctuations had very adverse effects on international trade. To end competitive devaluation of money and stabilizing exchange rates is also one of the important objectives of IMF. For this purpose IMF provides expert advice to member countries and lends money if required.

D. Multilateral Payments

On account of paper currencies in different member countries difficulties arise in mutual payments and these difficulties are removed with the help of IMF. IMF promotes multilateral payment system.

E. Financial Aid

When the balance of payments of member country/ countries becomes adverse, the fund provides financial aid in the required currency. By this timely assistance, the member countries get time to improve their balance of payments situation.

F. Shortening the Duration and Lessening the Degree of Disequilibrium in International Balance of Payments

IMF provides timely advice and financial assistance to member countries to improve their balance of payments situation.

G. Balanced Economic Development

IMF promotes balanced economic development of backward member nations and provides loans and credit for this purpose in foreign currencies.

H. Promotion of Long Term Investment of Capital

The fund makes such arrangements so that the member countries can make long- term investments of capital among other.

12.4 Working of IMF

IMF is a very big international organisation. Various aspects of its working can be discussed in the following heads:-

12.4.1 Membership, Capital and Quota

The main features of Membership, Capital and Quotas are as under:-

a. Membership: -

Any country, which makes promise to accept and comply the rules and regulations of IMF, may become its member and similarly any country may quit its membership by giving notice to this effect. If any country does not follow the rules and orders of IMF, its membership can be terminated.

b. Capital and Quotas: -

The capital of the IMF has been created by the quotas of all the member countries. Quota of each member country is determined immediately after its joining membership. In determination of quota of a particular member country a number of factors such as national income, gold reserve, foreign exchange reserve, and position of balance of payments are taken into consideration. If a country decides to revise its quota, it may be done if 85 percent voting power favours it. In the beginning every country was required to deposit 25 percent of its total quota or 10 percent of its official gold and dollar resources (whichever is less) in gold and remaining 75 percent in its own currency. But after second amendments in the rules of agreement which came into force from April 1978, member countries are required to pay 25 percent of its quota, either through SDRs or in currencies of other countries, with the permission of the fund. Remaining 75 percent quota is paid in own currency of the member country.

In the beginning the capital fund of IMF was decided 1, 000 crore dollars and it was distributed among member countries. But Soviet Russia did not accept the membership and did not take its quota of 120 crore dollars, therefore effective quota and capital of the fund was only 880 crore dollars. This quota has been increased from time to time and it is increased to 14,600 crore SDRs or equivalent to 19,900 crore dollar in December 1997. In the year 2008 in fourteenth review, the quota of IMF was increased from 25,000 crore S.DRs. to 74,500 crore SDRs. Ten largest quota holder countries are USA, Japan, Germany, United Kingdom, France, Saudi Arabia, Italy, Canada, Russia and China.

12.4.2 Governance Structure

The IMFs mandate and governance have evolved along with changes in its global economy, allowing the organisation to retain a central role within the international financial architecture. IMF's current governance structure is as under:-

a. Board of Governors

The Board of Governors is the highest decision- making body of the IMF. It consists of one governor and one alternate governor for each member country. The governor is appointed by the member country and is usually the minister of finance or the head of the central bank. While the Board of Governors has delegated most of its powers to the IMFs Executive Board, it retains the right to approve quota increase; special drawing rights (SDRs) allocations, the admittance of new members, compulsory withdrawal of members, and amendments to the Articles of Agreement and By- Laws.

The Board of Governors of the IMF normally meets once a year to discuss the working of IMF. The meetings, which take place in September or October, have customarily been held in Washington for two consecutive years and in another member country in the third year. The Annual Meetings usually include two days of plenary sessions, during which governors consult with one another and present their countries views on current issues in International economics and finance. During the Meetings, the Board of Governors also makes decisions on how current international monetary issues should be addressed and approves corresponding resolutions.

The Annual Meetings are chaired by the Governor of the IMF, with the chairmanship rotating among the membership each year. Every two years, at the time of their Annual Meetings, the Governor of the Bank and the Fund elect Executive Directors to their respective Executive Boards.

b. Ministerial Committees

The IMF Board of Governors is advised by two ministerial Committees, the International Monetary and Financial Committee (IMFC) and the Development Committee.

i. The IMFC has 24 members, drawn from the pool of 188 governors. Its structure mirrors that of the Executive Board and its 24 constituencies. As such, the IMFC represents all the member countries of the fund.

The IMFC meets twice a year, during the spring and Annual Meetings. The Committee discusses matters of common concern affecting the global economy and also advises the IMF on the direction of its work. At the end of the meetings, the Committee issues a joint communiqué summarizing its view. These communiqués provide guidance for the IMF's work program during the six months leading up to the next spring or Annual Meetings. There is no formal voting at the IMFC, which operates by consensus.

ii. The Development Committee is a joint committee, tasked with advising Boards of Governors of the IMF and the World Bank on issues related to economic development in emerging and developing countries. The committee has 24 members (usually ministers of finance or development). It represents the full membership of the IMF and the World Bank and mainly serves as a forum for building intergovernmental consensus on critical development issues.

c. Executive Board

The IMFs 24 member Executive Board takes care of the daily business of the IMF. Together, these 24 board members represent all 188 countries. Large economies, such as the United States and China, have their own seat at the table but most countries are grouped in constituencies representing 4 or more countries. The largest constituency includes 24 countries.

The Board discusses everything from the IMF staff's annual health checks of member countries' economies to economic policy issues relevant to the global economy. The board normally makes decisions based on consensus but sometimes formal votes are taken. At the end of most formal discussions, the Board issues what is known as a summing up, which summarizes its views. Informal discussions may be held to discuss complex policy issues still at a preliminary stage.

d. Managing Director

The Board of Executive Directors appoints a Managing Director for performing day to day business of the fund. The tenure is five years. The Managing Director is a person from outside the Board of Executive Directors. He presides over the meeting of Board of Executive Directors. The Managing Director conducts day to day affairs of the fund, under the directions of Board of Executive Directors. He is the head of staff of the fund and is empowered to appoint or remove employees, under the general control of the Board of Executive Directors.

Governance Reform: - To be effective, the IMF must be seen as representing the interests of all its 188 member countries. For this reason, it is crucial that its governance structure reflect today's world economy. In 2010, the IMF agreed wide- ranging governance reforms to reflect the increasing importance of emerging market countries. The reforms also ensure that smaller developing countries will retain their influence in the IMF.

12.4.3 International Exchange Rate System

According to original system specified by the fund, every member country had to declare the value of its currency in terms of gold or American dollar. Thus, gold was the basis of valuation and exchange rate fluctuations were kept within a narrow margin of 1percent on either side. USA performed this process by buying and selling gold for US dollar, other countries did it through an intervention currency such as UK sterling or US dollar. But after dollar crises of 1971, relaxation was provided to the member countries to increase or decrease the par value by 2.25 percent, under Smith Sonian agreement. To maintain par value a country could devalue its currency with the concurrence of the IMF up to 10 percent change in par value, to make adjustments in balance of payments, the fund would not raise any objection but for any change beyond 10 percent, a country had to justify it.

A number of reforms have been introduced with second amendments applicable from April 1978. According to Article IV of second amendment, now it is not necessary for member countries to declare the par value of their currency and the par values of currencies closed before these amendments have ceased to be operative. Every country will co-operate the IMF and other member countries, to establish systematic exchange rate system. After second amendments, now every country is free to adopt any type of exchange rate system provided by doing so, no competitive advantage is available to it over other countries. Now floating exchange rate system is prevalent and IMF keeps surveillance over it.

12.4.4 Financial Assistance

The fund provides various types of loans and assistance to its member countries. Brief description of some important loan and assistance schemes is given below:

(A) Regular Facilities:

Regular facilities provided by IMF are as follows:

a. Purchases of Foreign Currencies and Repurchase of Own Currencies:

The Monetary Fund provides loans to its member countries in foreign currencies to correct temporary disequilibrium in balance of payments. This activity of providing loans is known as purchase of foreign currencies by the member country. Under it, a member country may get loan up to 125 percent of its quota. It is to be repaid within five years, when the members returns the loan, it is known as repurchase of own currencies.

b. Standby Agreements:

Besides, selling currencies directly to its member countries, the fund also promises to sell foreign currencies to the member countries on additional requirement arises for these currencies. Under this facility, on receiving loan commitment from the fund, a member country can immediately obtain foreign currencies from the fund. Such standby agreements are for the period of 12 months to 18 months. These may be extended for a period up to 3 years. In these agreements, payments of each withdrawal are to be done within the period of $3^{1/4}$ years to 5 years.

c. Extended Fund Facility:

This facility has been started, since September, 1974 as the medium- term assistance to the member countries to remove disequilibrium in balance of payments. Assistance under it is provided for three years, which may be extended upto fourth year. Every withdrawal, under this facility has to be repaid by the member country to the Monetary Fund within a period of 4 ½ years to 10 years.

(B) Special Facilities:

It includes Compensatory and Contingency Financing Facility- CCFF, Buffer Stock Financing- BSFF and Supplemental Reserve Facility- SRF.

a. Compensatory and Contingency Financing Facility (CCFF):

Those member countries of Monetary Fund who in any particular year earn less income from exports, due to any particular reason and hence have to face the problem of temporary disequilibrium in balance of payments, may take loan under compensatory and contingency financing facility, in addition to other facilities of Monetary Fund. This scheme was started in 1963. This facility has not been used by any country after 1983.

b. Supplemental Reserve Facility (SRF):

The Board of Executive Directors of the Monetary Fund has opened a new window of assistance, in the form of supplemental reserve facility, in December 1997. This window has been opened for those member countries, by which short- term finance is much required, due to excessive pressure on capital account, owing to ending of trust of their markets. The basis of providing assistance, under it is that by adhering to strong adjustment policies, the difficulties of balance of payments will be quickly solved. The countries taking assistance under this scheme have to repay the amount to the fund, within a period of 1 to $1^{1/2}$ years. It may be further extended by the Board of Executive Directors by one year.

(C) Concessional Facilities

Facilities, like (i) Structural Adjustment Facility- SAF and (ii) Enhanced Structural Adjustment Facility- ESAF is included in these facilities, which are available to the poor countries, at concessional rates. SAF facility is in operation since 1986. ESA Facility was started in December, 1987. It was expanded in February 1994.Interest at the rate of 0.5 percent is charged on SAF facility and loans, taken under it are to be repaid, within 5 ½ to 10 years. For ESAF, resources are kept separate, from the general funds of International Monetary Fund and the Monetary Fund manages those resources as the trustee of ESAF. Loans of ESAF are also to be repaid within 5 ½ to 10 years and interest rate on loans is 0.5 percent per annum.

12.5 Achievements of IMF

Since its establishment, the International Monetary Fund has made significant progress in various spheres and has achieved many successes. Following are the main achievements of the fund:

1. Increase in Membership:

Letter of agreement for establishment of Monetary Fund was signed by 30 countries. When it started functioning on 1 March 1947, it had 44 members, which gradually increased to 184 on 30 September, 2006. At present membership is 188. The members include developed, undeveloped, capitalist, democratic and communist countries have also become its members.

2. Increase in Capital Resources:

At the time of establishment of the fund, its authorized capital was fixed at 1, 000 crore dollars. But due to Russia's not becoming its member, it was 880 crore dollars only. It has been increased, from time to time. By December, 1997, the capital of the fund had increased to 14,600 crore SDRs. After coming into force of eleventh review, it had become 21, 350 crore SDRs. After fourteenth review, it is 74, 500 crore SDRs.

3. Exchange Rate Management:

The Monetary Fund could successfully maintain fixed exchange rate system, inspite of certain obstacles, since its inception, to international monetary crisis of 1971. At the beginning, the members had the facility of 1percent change in the fixed exchange rates. It was increased to ±2.25 percent, in December 1971, under Smith Soniyan agreement. On 23 June, 1974, the Monetary Fund gave temporary recognition to fluctuating exchange rate system. Under second amendments, which came into effect since April, 1978 the Monetary Fund has given freedom to the member nations to adopt floating or fluctuating exchange rates. Now, this is the responsibility of the members to cooperate stability, the systematic exchange rate system is functional, due to efforts of I.M.F.

4. Increase in International Liquidity:

The Monetary Fund has increased international liquidity, by increasing its capital resources and starting and expanding special drawing rights scheme. In 1947, quotas of the member countries in the Monetary Fund were of 880 crore dollars, which increased to 1,46,000 crore SDRs in 1997. After January, 2002 these have increased to equivalent of 21,350 crore SDRs. Now, these are equivalent to 74,500 crore SDRs. This progress indicates increase in international liquidity. IMF has created scheme of special drawing rights (SDRs) which plays important role in international liquidity.

5. Various Types of Economic Assistance to the Member Countries:

In the beginning, the Monetary Fund used to provide loans to the member countries, in the form of purchase of currencies to correct short- term disequilibrium in their balance of payments. The fund has been providing assistance to the member countries, in various forms, like purchase and sale of currencies, standby agreements, general credit arrangements, compensatory financing, buffer stock facility, enhanced financing facility, assistance from grants account, supplemental financing from trust fund etc.

6. Technical Assistance and Training:

International Monetary Fund has also provided important technical assistance to the member countries by its institutes and experts. One institute runs the courses at the headquarters of the Fund at Washington D.C. and regional centers in Austria, Brazil, China, Singapore, Tunisia, and the United Arab Emirates. This institute also runs the courses financed by some other institutions and governments.

7. Co-operation with Other International Organizations:

The fund maintains close contacts with other organizations of the world. The officers of the fund participate in the meetings of several organizations. The fund maintains close contacts with GATT (now World Trade Organization), bank of International Settlements, World Bank, International Conference on Trade and Development (UNCTAD), Economic Co- operation and Development Association etc.

8. Collection and Publication of Statistical Information:

International Monetary Fund has its own statistical Bureau, which collects, analyses and publishes data, on international trade, balance of payments, fiscal operations, money and banking, price level, production, interest rates, etc. of all countries.

12.6 Failures of IMF

International Monetary Fund has faced several failures also, for which it is bitterly criticized. The main criticisms are as follows:

1. Limited Scope:

Some scholars have criticized the fund, on the ground that it makes attempts to solve only the foreign exchange problems related to current transactions. The member countries do not get any type of assistance from the fund for payments related to war related loans and import-export of capital. Thus, the utility of the fund diminishes, due to its limited scope. However, according to some other scholars, this criticism is not fair. According to them, had the fund been burdened to fulfill all types of requirements, the fund could have closed, in the very beginning itself.

2. Inappropriate Exchange Rates:

The exchange rates of many member countries had been decided at such time, when their currencies were over-valued. Hence, the original exchange rates soon started proving unsatisfactory and need for their devaluation started being realized. Devaluation of their currencies by Britain and many other countries of sterling region in September, 1947, explain this fact.

3. No Scientific Basis of Determination of Quota:

The management of International Monetary Fund, the availability of benefits to the member countries and voting powers depend upon the quantity of quotas. Some commonly agreed principles should been followed for determination of quotas. Quantity of quotas should have been determined on the basis of trade or its requirements of foreign exchange. But, none of these criteria have been followed. Rather, the quantity of quotas has been fixed, by keeping into consideration the political interests of England and America. Possibly, Russia and other communist countries had not accepted the membership of the fund, due to that reason.

4. Faulty Constitution of Board of Executive Directors:

The Board of Executive Directors of the Fund has been constituted, to safeguard American interests. That is why; two seats have been kept reserved for Latin American countries. Such arrangement has been made to maintain the majority of the America, which is not justified.

5. Discrimination:

Some critics are of the view that the fund provides loans, only to support rich countries. When in 1948, France devaluated its currency by 40 per cent, by violating the instructions of the fund, the fund did not take any action, against it. But, possibly now the situation is not like that, because the fund cannot exercise such discrimination, due to the majority of underdeveloped countries.

6. Rich Countries Club:

Some newly rising countries of Africa have criticized the fund by terming it as rich countries club and have alleged that the fund is just a puppet in the hands of certain dominating countries like America and England etc. and provides loans only to the supports of these countries. However, in existing changed circumstances this criticism does not appear to be valid.

7. Donator Institution:

According to some critics the Monetary Fund is a donator institution, run by rich countries, donations are given by rich people and the poor countries make use of that donation. The critics have gone to the extent of saying that if the Monetary Fund provides loan related facilities, many undeveloped countries will become prey of idleness and laxity and will never be in the position to stand on their legs, in the economic field, without external assistance. This criticism also does not appear to be appropriate, because the prosperous countries, like Britain and Italy have also been obtaining loans from the fund. The fact is that the Monetary Fund provides economic assistance to all those countries who have to face balance of payments related difficulties.

The above description makes it clear that the function, policies and system of the fund, certainly have some deficiencies which have either been removed, or are being gradually removed. Many allegations against the fund are baseless and have no substance. The activities of the fund are continuously progressing and improving well, over years.

12.7 International Liquidity and Special Drawing Rights (SDRs)

The SDR is an International reserve asset, created by the IMF in 1969 to support the Bretton Woods fixed exchange rate system. For the first time, 950 Crore SDRs were created and 930 Crore SDRs allotted to the member countries, during 1970, 1971 and 1972. Again 1,210 Crore SDRs were allotted during 1979, 1980 and 1981. Thus, 2140 Crore SDRs were allotted to 141 member countries. Hence no SDRs have been allotted

to those countries that joined the IMF membership after 1981. Nearly 20 percent of the present total membership of 188 nations deprived of allotment of SDRs.

To mitigate the effects of the financial crises of 2008, a third general SDRs allocation of 16,120 Crore SDRs was made effective on August 28, 2009. A forth special onetime allocation of 2,150 Crore SDRs were made on August 10, 2009. The 2009 general and special SDRs allocation together raised total cumulative SDR allocation to about SDRs 20400 Crore.

The SDRs are used by member countries for correcting balance of payments disequilibrium or to remove the shortage of liquid funds. The use of SDRs may be made in three ways: (i) use by designation, (ii) use by mutual agreements and (iii) use of SDRs transactions with general account of IMF.

The value of the SDR was initially defined as equivalent to 0.888671 grams of fine gold which, at the time was equivalent to one U.S Dollar. After the collapse of the Bretton Woods system in 1973, however, the SDR was redefined as a basket of currencies, today this basket consisting the Euro, Japanese Yen, Pound, sterling and US Dollar. The US Dollar equivalent of the SDR is posted daily on the IMF's website. It is calculated as the sum of specific amount of the four basket currencies valued in US dollars, on the basis of exchange rates quoted at noon each day in London market.

It may be concluded that IMF has contributed a lot in International Liquidity by increasing its own quota and capital and by creating SDRs.

12.8 Summary

The International Monetary Fund was conceived at a United Nations conference convened in Bretton Woods, New Hampshire, United States of America, in July 1944. The 44 governments represented at that conference sought to build a framework for economic cooperation to avoid vicious circle of competitive devaluations of 1930s. Thirty countries signed letter of agreement in this regard on 27th December 1945 and IMF started working from 1st March 1947. The International Monetary Fund (IMF) works to foster International monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world. The IMF is governed by and accountable to the 188 countries that make up it's near global membership.

12.9 Self Assessment Questions

1. What is IMF? What are its objectives?
2. Explain the working of IMF.
3. Discuss the objectives and governance of IMF.
4. Discuss the achievements and failures of IMF.
5. What is IMF? How does the fund assist its member countries?
6. What are SDRs? Explain the role of SDRs in International Liquidity.

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Unit - 13: World Bank and Its Affiliates

Structure of Unit

13.0 Objectives

After study of this unit, you would be able to:

- Understand what is World Bank;
- Know what are its affiliates;
- Know the membership, capital and resources of World Bank;
- Explain the governance of World Bank;
- Understand the achievements and failures of World Bank;
- Know in short the progress of its affiliates.

13.1 Introduction

After Second World War, the world was facing two main problems. The first problem was of reconstruction of war devastated countries and another problem was of economic development of undeveloped and underdeveloped countries. Many European countries were very badly devastated, as a result of Second World War. Reconstruction of their economies was very essential. On another side, many countries of Asia and Africa were suffering from acute poverty. Hence, to establish everlasting world peace, it was essential to remove heavy economic disparities existing between eastern and western countries, along with reconstruction of war devastated economies. To fulfill these objectives, the plan of establishment of International Bank for Reconstruction and Development was accepted, by the Brettonwoods Conference. This bank is popularly known as World Bank. It was established on 27 December 1945, along with International Monetary Fund, as an adjunct to the Monetary Fund.

13.2 Establishment of World Bank

The World Bank is an international institute which started functioning from 25 June, 1946. We can discuss it and its affiliates in the following headings:

13.2.1 What is World Bank?

World Bank is an international organisation of 188 member countries and it works like cooperative institution owned and operated for the benefit of member countries. Delivering flexible, timely, and tailored financial products, knowledge and technical services and strategic advice helps its members to achieve results. World Bank's member countries also have access to capital on favourable terms in larger volumes with longer maturities, and in a more sustainable manner from it than world financial markets typically provide.

13.2.2 What are World Banks Affiliates?

When we talk about the World Bank Group, it means four institutions together (make up the World Bank Group). These institutions are:

(1) The International Development Association (IDA) - It provides interest free loans (called credits) and grants to the governments of the poorest countries.

(2) The International Finance Corporation (IFC) - It is an affiliate institution of the World Bank and is the largest global development institution focused exclusively on the private sector.

(3) The Multilateral Investment Guarantee Agency (MIGA) - It provides political risk insurance or guarantees to promote foreign direct investments into developing countries.

(4) The International centre for Settlement of International Disputes (ICSID) – It provides facilities for conciliation and arbitration of international investment disputes between foreign investors and host states. It also researches and publishes on international arbitration and foreign investment laws.

We will discuss in detail about IDA and IFC in the later part of this unit. These two institutions are important constitutes of World Bank or IBRD.

13.3 Objectives of World Bank

The objectives of the World Bank have been specified in section 1 of part second of the report of International Monetary Council. These are as follows:

1. To provide assistance for reconstruction and development of member nations. This is the main objective of the bank. It provides assistance for the reconstruction of devastated European nations. It also provides assistance for the development of under- developed countries of the world.

2. World Bank's second objective is to encourage international investment of capital. Bank invests capital in those countries which cannot get capital at appropriate terms.
3. Third objective of the bank is to establish equilibrium in long term balance of payments. For this, World Bank encourages the rich nations to invest capital in under- developed countries so that the excessive disequilibrium of international trade and balance of payments could be removed.
4. One of the objectives of World Bank has been to establish peace time economy in place of war economy.

13.4. World Bank Membership, Capital and Resources

A. Membership of World Bank

All those countries acquiring membership of International Monetary Fund, automatically acquire the membership of the World Bank. The countries, who had acquired the membership of International Monetary Fund, up to 31 October, 1944 were deemed as the primary members of the World Bank. Since then, along with increase the number of the members of the fund, membership of the World Bank has also increased. It had increased to 180 on 30 June, 1997 and to 188 on 30 September, 2013. Normally, the membership of World Bank ceases for that country, which gets separated from the membership of International Monetary Fund. However, there is one more provision also. If 75 percent of the total voting power of the bank agrees for continuance of the membership of a country in the bank, even on quitting the membership of the Monetary Fund, it may continue to be the member of the bank. Any country may quit the membership of the bank, at any time, when it desire to do so, just on getting the information to this effect, by the bank, it is considered as relinquishing of the membership of the Bank. Board of Governors may suspend any country from the membership of the bank, after appropriate action.

B. Capital and Resources of the World Bank

At the time of establishment of the World Bank its authorized capital was decided 1,000 crore U.S. Dollars, which was divided into 1 lac shares of one lac dollar each. On 22 December, 1958, decision was taken for 110 percent increase in the subscription of the members of the bank. As a result, the capital of the bank was increased to 2,100 crore dollars. This increase came into effect, from 15 September, 1969. Taiwan agreed to increase its subscription by 25 percent only. Thereafter, the capital of the bank has been increased many a times. Authorized capital of the bank on 30 June, 1999 was equivalent to 1,880 crore U.S. dollars and subscribed capital was equivalent to 1,824 crore dollars. On 30 June, 2013, the authorized capital was equivalent to 27,837.7 crore dollars and subscribed was 21,318.1 crore dollars. Some part of the capital of the bank has been allotted to each country, in the form of its quota. Every country has to pay 2 percent of its quota in gold or American dollars, which is now to be paid, in SDRs or in the foreign currency approved by the bank and 18 percent is paid by the member country in its own

currency i.e. the member country pays only 20 percent of its total quota. Remaining 80 percent is paid, when demanded by the bank, on 30 June 2013 the paid up capital of the bank was only 1,343.4 crore U.S. dollars as per banks financial statement for the fiscal year July 2012 to June 2013. Bank's major resources came from the borrowings from international financial markets through issue of Bonds. Outstanding borrowings on 30 June 2013 had been 14,150 crore U.S. Dollars.

13.5 Governance of World Bank

World Bank is managed by the Board of Governors, a Board of Executive Directors, an Advisory Council, Loan Committees, President and other staff.

13.5.1 Board of Governors

The power to operate the bank vests with the Board of Governors. Every country appoints one Governor and one alternate Governor, whose, tenures are of 5 years. The member countries may, however reappoint these Governors. The alternate Governors have the right to cast vote, only, in the absence of the Governor. Generally the Governor is the Finance Minister of the concerned country, whereas the alternate Governor is the Governor of the central bank of his country. The Board of Governors functions as the general body. This board elects one of its members as the president. Convening of at least one meeting of the board of the Governors in a year is necessary. It may be organized in any member country. General policies of the bank are decided in these meetings and the progress achieved during the entire year is also reviewed. Every Governor has the right to cast one vote for every one lakh dollar of its quota plus 250 votes.

13.5.2 Board of Executive Directors

Like International Monetary Fund, a Board of Executive Directors has also been constituted in the World Bank. Presently, this board has 25 members, of whom 5 are the permanent members who are nominated by the countries having highest shares. Presently, five members are nominated by America, Britain, France, Germany and Japan, respectively. Remaining 20 members are elected by the member countries. Their tenure is of 2 years. This board is responsible for day- to- day working of the bank. This board essentially meets at least once in a month. At least 50 percent attendance is essential to conduct the meeting.

13.5.3 Advisory Council

The Board of Governors elects an advisory council also, comprising at least 7 members, who are the experts of banking, commerce, industries, transport, labour etc. At least one meeting of this council is to be convened each year. But, more meetings may also be convened if so required. This council provides appropriate advice to the World Bank regarding its general policies.

13.5.4 Loan Committee

Loan committees are appointed by the bank to examine the suitability of loans, demanded by the member countries, from the World Bank. These committees include one or two members of the World Bank, who are the experts of the concerned industry or scheme, and one member is appointed by the governor of the country seeking loans from the World Bank. Decision of the bank to sanction loan is based on the recommendations of the loan committees.

13.6 Loan Operations of World bank

World Bank provides loans to its member countries out of its own resources and from borrowed resources. Banks own resources are not sufficient for loan purpose, therefore bank borrows money from international capital markets through issue of AAA rated bonds. Bank also arranges loans from investors for member countries by providing guarantees of repayment.

Following are the main characteristics of World Bank loans:

- Bank charges interest on every loan and the rate of interest depends upon the type of loan and purpose of loan. Interest rate varies from 1.93% to 8.32%. Bank charges commission of 1 to 1.5 percent on the guarantee of loans.
- Banks transacts with member countries through their member governments or central bank.
- The bank provides loans from its own resources or borrowed resources or arranges loans through guarantee, when it becomes satisfied that the applicant country is not able to get loans from other sources at fair terms.
- Before providing loans, the bank gets the justification of the loan examined by its loan committee.
- The loan obtained from the bank may be spent only for that purpose for which it has been taken.
- The loan amount is deposited in the central bank of the loanee country, from where the loanee may use it, according to the requirements.
- The loanee country is free in using the loan amount i.e. there is no compulsion on it to use the loan amount only for importing goods from the loan providing country.
- The loanee country may repay the loan, either by SDRs or by its own currency.
- Generally, the World Bank provides or arranges loans, only for reconstruction and development activities.
- Loans are generally provided only for those schemes, on whose completion, repayments of loans and interest are possible, from income generated by the loans.
- The loanee country has to send information about the use of loans obtained from the bank, from time to time. The World Bank itself also sends its experts to review and verify the progress of the schemes executed with the loans from the bank.

- Generally, the bank provides loans for any scheme, only to the extent of requirement for importing of goods from foreign countries. However, this loan amount cannot exceed 50 percent of the total expenditure on the concerned scheme.
- The availability of loan to the member nations from the World Bank is not decided on the basis of their quota, as is the system in the IMF. The quotas of the World Bank just decided the limits of responsibilities of the member countries.
- Bank provides every year loan to its developing member countries for various purposes and regions of the world.

13.7 Achievements of World Bank

The World Bank was established for the reconstruction of devastated nations by Second World War and development of under developed nations. Bank has succeeded in these objectives to a great extent by providing loans and accomplishing following functions:

a. Providing Loans:

World Bank provides loans to its member countries for a period of 5 to 20 years. In those loans, grace period of 5 years is also allowed. As stated earlier, the bank provides loans to the Government of the member country or local bodies or to the private industries on the basis of Government guarantee. Loan amount, period of loan and terms of payment vary, according to the objectives. Since its inception, the World Bank has sanctioned loans of 42,020 crore, dollars to 135 countries upto 30 June, 2006. During 2013, loans of 1,525 crore dollars were sanctioned. Loan disbursements during 2013 were of 708 crore dollars. During 2012, the bank sanctioned loans of 2,058 crore dollars: out of it, loans of 1,033 crore dollars were disbursed. During 2013, outstanding loans of the bank from various countries were of 14,378 crore dollars and in 2012, outstanding loans were of 13,633 crore dollars.

Region-wise and object-wise, these loans may be viewed, as follows:

Region-wise Loans: In region-wise loan distribution, the first rank is of Latin American countries, whereas East Asia and Pacific are at the second place and the third place is of Europe and central Asia. Least loans have been given to Middle East and North African countries. With development in any country, the World Bank goes on reducing loans to that country. Bank provides assistance for development and assistance is also provided for poverty alleviation programmes.

The World Bank provides loans to the member countries in foreign currencies, which are to be paid in freely usable currencies. In special circumstances, bank accords permission for making payments in other currencies. Payment of interest and commissions is also to be made in these very currencies.

Object-wise Loans: The World Bank provides loans for the development of law and justice, general administration, transportation, energy and mining, education, water supply, sanitation, flood control, health and other social information and communication etc.

b. Providing Guarantees

The bank used to get the loans provided by others, by giving its own guarantee. After 1965, the bank has not given guarantee for any loan. However, providing guarantee has been restarted again since 2005. The developing countries are getting loans in adequate quantity from International Development Association and International Finance Corporation, which are the associate institutions of World Bank. The governments of the developed countries are also providing loans to the underdeveloped countries.

c. Providing Technical Assistance

The World Bank provides significant contribution for reconstruction and economic development of the member countries, by providing them technical assistance. To achieve this objective, it has arranged detailed economic surveys of the member countries, so that required information may be obtained, about the natural resources and possibilities of economic development etc. of these countries. The World Bank provides adequate help to these countries in their economic development, by way of providing those surveys etc. On request of member countries, the World Bank sends its experts to these countries, who give valuable economic, scientific and technical suggestions to the concerned countries, in respect of various plans and schemes. Thus, the member countries not only get the economic co- operation from the World Bank but intellectual co- operation also becomes available to them.

Most of the activities of the bank involve technical assistance. Detailed surveys of loan seeking member countries are conducted, which are helpful to the concerned country in formulation of economic policies, determination of priorities and selection of development strategies. At the level of various projects, not only financial assistance is provided to the member countries, appropriate techniques of production, extension of programmes, monitoring and institution building are also transferred to them.

d. Training Facilities

Since January, 1949, the World Bank has started a scheme for imparting training on subjects related to economic affairs. Under this scheme, one year training programme has been started for the senior officers of the member countries. Under this programme theoretical knowledge is imparted, for a period of 4 or 5 months and practical training is imparted, for remaining 7-8 months. Since 1950, the bank has started one more training programme for training in public revenue to the member countries. Since 1952-53, this programme has been made even more comprehensive and under this programme, training related to financial system, taxation system, monetary system, and industrial and banking development has also been started.

The bank has established an Economic Development Institute in 1956, with financial assistance from Rock- feller and Ford Foundation. The main objective of establishment

of this institute is to impart training to the senior officers of the developing countries regarding subjects like public finance, credit and financial management, agriculture and industrial development, trade, balance of payments, and planning. After training these senior officers may easily understand the problems of economic development and may efficiently implement various programmes in their country. This institute has been established at Washington. It arranges half yearly training and about 25 trainees are trained, every year on request, the institute organizes training in other countries also.

This institute of the bank organizes small courses and seminars and co- operates in training courses and seminar organized in other countries. Special programmes may also be organized for the officers of some particular countries.

e. Aid Co- ordination

Presently, various developing countries of the world are getting aid from several institutions and organizations, for various purposes. This aid is provided, under bilateral and multilateral agreements. On request from the countries providing and receiving the aid, the World Bank co- ordinates these aid programmes, so that the aid may be utilized in the most efficient manner.

Inter- agency Co- ordination: The bank also works for inter- agency co- ordination. The bank has provided aid and co-operation, in collaboration with various international institutions, private sector banks and regional institutions. The World Bank has financed, several projects, jointly with other institutions. The World Bank mainly functions in collaboration with the programmes of Food and Agriculture Organization (FAO), UNICEF, UNESCO, World Health Organization, United nations Industrial Development Organization (UNIDO), International Labour Organization (ILO), etc. in a co- ordinate manner. The bank made efforts for convening United Nations Conference on new and renewable sources of energy, which was held at Nairobi in August, 1981.

f. Economic Research and Studies

The World Bank is conducting economic research and studies, since 1971. By now, work of hundreds of research projects has been completed. The results of completed research projects are published in staff papers and other forms. This research work is carried out by the bank with the help of its own experts and external experts. The bank provides assistance also for research activities. Every year, the bank spends about 3 percent of its administrative expenditure on economic and social studies.

g. Co-operation in Establishment of International Financial Institutions

International Finance Corporation was established by World Bank in 1956, with the objective of getting more economic assistance available to the undeveloped countries. This corporation not only provides loans to private industries, it also provides economic

assistance to them, by purchasing their shares, as the shareholder. Besides International Financial Corporation, International Development Association was also established in 1960, mainly due to the efforts of the World Bank. As a result of establishment of this association several undeveloped and underdeveloped nations of the world have started receiving sufficient long- term economic assistance. This Association has provided loans to the backward countries for longer period, in large quantity. Due to establishment of this association, the under- developed countries may take, loans without being worried about repaying the loan through scarce currency.

h. Establishment of Aid Clubs

The World Bank has established aid club for providing assistance to some concerned members for their development programmes. For example, consortium named "Aid India Club" has been established to make Indian economic planning successful in which America, England, Canada, Germany, Japan, France, Italy, Australia, Holland, and Belgium are the member countries. Aid India Club has given loans of crores of dollars for five year plans of India. Similarly World Bank has also established Help Pakistan Club. This club provides loans of crores of dollars for five year plans of Pakistan. America, Canada, France, and Japan are the members of Help Pakistan Club. The credit for establishment and appreciable activities of these aid clubs goes only to the World Bank.

i. Settlement of Disputes:

On emergence of internal economic disputes between member countries, the World Bank being an impartial international organization acts as an impartial mediator to solve these problems. Removal of obstacles in the way of economic development of the member countries, by way of settling economic disputes among the member nations has also become a main function of the World Bank. Credit for agreement between India and Pakistan in 1960, over canal disputes goes to the World Bank. Similarly, the dispute in 1956, between Britain and Egypt on Swez Canal affairs was also resolved, with the sincere efforts of the World Bank.

The World Bank has also established a separate centre named International Centre for Settlement of Investment Disputes to solve the disputes related to investment between various countries and between the residents of other countries and the Governments. Certain rules and systems have been formulated for it.

The progress of World Bank, during last five years has been shown, in the following table:

Table 13.1 Progress of World Bank

(In million dollars)

	Particulars	**2009**	**2010**	**2011**	**2012**	**2013**
1	Commitments, of which development policy loaning	32,911 15,532	44,197 20,532	26,737 9,524	20,582 10,333	15,249 7,080
2	Gross disbursements of which development policy loaning	18,565 9,138	28,565 17,425	21,879 10,582	19,777 9,052	15,830 5,972
3	Repayments including prepayments	10,217	11,624	13,885	11,970	9,470
4	Net disbursements	8,347	17,231	7,994	7,806	6,361
5	Outstanding Loans	1,05,698	1,20,103	1,32,459	1,36,325	1,43,776
6	Undisbursed Loans	51,125	63,524	64,435	62,915	61,306
7	Operational income	572	800	1,023	783	876
8	Usable capital and reserved funds	36,328	36,106	38,689	37,636	39,711
9	Share capital, as percentage of loans	34%	29%	29%	27%	27%

13.8 Criticism of the World Bank

It becomes clear from the above description that the role of World Bank has been quite commendable in reconstruction and economic development of the member countries. However the World Bank is criticized also, on various grounds. Among these, following requires special mention:

1. Over Emphasis on Paying Capacity: Before providing loans, the World Bank reviews the paying capacity of the loan seeking country and provides loans directly or makes loans available by, giving guarantee, only to those countries, who have the capacity of repay the loans. The critics are of the view that this policy of the bank is not fair, since loan repaying capacity is generated only after productive use of the loan and, not before. The resources of the undeveloped countries have not been utilized properly and hence it is almost fertile to search loan repaying capacity in those countries. Besides, had any country possessed paying capacity, before taking loan, that country would not have required the loans.

2. High Interest Rates: Many a times, the interest rate to the member countries, on loan taken from the World Bank, costs between 7.6 to 11.6 percent. Not only that, the bank also charges 1 percent commission, in addition to interest. According to the critics,

liberal institutions, like World Bank should not charge heavy interest rate from under-developed countries.

3. Inadequate Assistance: The critics also feel that although the World Bank has arranged substantial loan facilities for undeveloped and under- developed countries, the assistance provided by the bank cannot be considered adequate, looking to huge economic plans of these countries. The number of countries taking assistance from World Bank is fairly high. But the World Bank has been able to provide assistance of 42,020 crore dollars only up to 30 June, 2006 since its establishment in 1945. This assistance is much less than the requirements.

4. Discrimination among Nations: According to some critics, the World Bank has made discrimination in appointment of its staff and senior officers. In its staff, more employees are of developed countries and number of employees of under- developed countries is less. In loaning also, it has neglected the Asian and African countries, which are the poorest countries. Relatively high loaning has been made to countries of Europe and Middle and South America.

5. Bank's Work is not Superior, as Compared to Private Investors: Some critics are of the opinion that had there not been the intermediary institution, like World Bank, the investors of rich countries could have given loans to the poor nations at relatively more attractive terms and it could have avoided all those botherations also, which are to be faced, in taking loans, due to mediation of World Bank.

6. Delay in Sanction of Loans: For loanee countries, only that loan is useful, which becomes available in sufficient quantity in time. According to the critics, the World Bank loans lack that promptness. Due to complexities of working system, providing of priority, propriety and affectivity of loan schemes of the under- developed countries take fairly long time and hence availability of loans become much delayed.

Among these criticisms, many criticisms have presently no substance. Taking into consideration the circumstances, in which the bank has to function, the working of the bank in totality is appreciable. It is true that even by now; the bank has not been successful. But, it is now making gradual appreciable progress in this direction. In this regard, **Mr. Eugene Black,** the ex- president of World Bank has very correctly stated, "World Bank is a unique support to be assessed in terms of buildings or monuments of stone, steel and concrete. It has had a deeper purpose to enlarge the riches of the earth, to give men light and warmth, to uplift them from drudgery and despair, to interest them in the stirring of ideas and in the grasp of organization and technique towards the realization of a day in which plenty will be a real possibility and not the distant dream."

13.9 Progress of World Bank Affiliates

We will discuss the role and progress of affiliates of World Bank. Here are four affiliates of World Bank out of them two are important. These are International Development Association and International Finance Corporation.

13.9.1 International Development Association:

International Development Association started formal functioning from 8th November 1960 with the objectives of providing long term loans liberally on easy terms to the developing and poor countries of the world to meet their development needs, by working as a complementary institution of the World Bank. The International Development Association (IDA) is the largest multilateral source of concessional financing for the world's poorest countries. Its funding supports countries' efforts to boost economic growth, reduce poverty, and improve the living conditions of the poor. In fiscal year 2013, a total of 82 countries were eligible to receive IDA assistance.

IDA is an associate of World Bank, hence any country with the membership of World Bank can acquire membership of this association and can relinquish its membership by giving intimation for the same. At the time of its establishment there were 51 members and this had been continuously increasing. It increased to 165 on 30 June 2005. Presently its membership is 184 countries. Its membership is divided into two categories. In first category rich nations are included and their contribution is freely usable by IDA. In second category those countries are included which are less- developed and which are required to pay only 10% of their subscription in gold or freely convertible currencies and the balance in their own currencies.USA, UK, France, Germany, and Japan are the five biggest subscribers. The IDA also raises funds by way of special contributions called 'replenishments' from the affluent nations.

IDA is an affiliate of World Bank therefore the Board of Governors and Board of Executive Directors also work as Board of Governors and Board of Executive Director of IDA. IDA's policies are decided by World Bank. World Bank's president is also ex-office president of IDA.

Progress of IDA Operations

If we look IDA's commitments in the fiscal year 2013 as mentioned in the table given below, it was $ 16.3 billion which includes $ 13.8 billion in credits, $ 2.5 billion in grants and $ 60 million in guarantees. The largest share of resources ($ 8.2 billion) was committed to Africa. South Asia ($ 4.1 billion) and East Asia and Pacific ($ 2.6 billion) also received large shares of committed funding, followed by Europe and Central Asia ($ 729 million), Latin America and Caribbean ($ 435 million), and Middle East and North Africa ($ 249 million).

Commitments for infrastructure- including the energy and mining sector, transportation water, sanitation and flood protection and information and communication- reached $ 6.1 billion. Significant support was also committed to the education sector and health and other social services (combined $ 4.2 billion) public administration, law and justice ($ 3.6 billion) and agriculture ($ 1.3 billion).

The progress of IDA's operations for the last five years can be seen from the following table:

Table 13.2 Progress of IDA Operations

(In Million Dollars)

Financial Years					
Particulars	**2009**	**2010**	**2011**	**2012**	**2013**
Commitments	14,041	14,550	16,269	14,753	16,298
Gross disbursements	9,219	11,460	10,282	11,061	11,228
Principle Repayments	2,209	2,349	2,501	4,023	3,845
Net disbursements	7,010	9,111	7,781	7,037	7,371
Credit Outstanding	1,12,894	1,13,474	1,25,287	1,23,576	1,25,135
Undisbursed Credits	29,903	30,696	38,059	37,144	39,763
Undisbursed Grants	5,652	5,837	6,830	6,161	6,436
Development Expenses	2,575	2,583	2,793	2,062	2,380

13.9.2 International Finance Corporation

The International Finance Corporation was formally established in 1956. At that time, it had just 31 members and its authorized capital was 7.8 crore dollars. On 30th June 2013 the number of members were188 and capital stock was 240.3 crore dollars and total capital was 2,227.5 crore dollars. IFC's work in more than a 100 developing countries allows companies and financial institutions in emerging markets to create jobs, generate tax revenues, improve corporate governance and environmental performance, and contribute to their lives.

The strategies priorities of IFC are as under:

- Strengthening the focus on frontier markets.
- Addressing climate change and ensuring environmental and social sustainability.
- Addressing constraints to provide sector growth in infrastructure, health, education, and the food supply chain.
- Developing local financial markets.
- Building long- term client relationship in emerging markets.

This corporation gives loans to private sector companies, participates in their equity capital and arranges risk capital for them and even gives guarantees for their loans from private sector companies and foreign governments.

At the end of fiscal year 2013 its total outstanding loans were $ 8,519 (46.43%) million, guarantees were $ 6,959 (37.93%) million and equity $ 2,732 (14.89%) million and risk management products were $ 138 (0.75%) million. If we analyze its portfolio by industry we find that it was 29% in financial markets, 19% in infrastructure, 13% in

agriculture and forestry, 8% in consumer and social services, 8% in funds, 6% in trade finance, 5% oil, gas and mining, 3% in telecommunication and information technology and 5% in others. If we analyze its portfolio by region we find that at the end of fiscal year 2013 it was distributed 22% in Europe and Central Asia, 22% Latin America and Caribbean, 16% Sub- Saharan Africa, 16% East Asia and the Pacific, 12% Middle East and North Africa, 11% South Africa and 1% Global. IFC brings a distinctive set of comparative advantages to help reduce poverty and foster inclusive economic growth by leveraging the power of private sector. It is an affiliate's institution of World Bank. World Bank's Board of Governors, Board of Executive Directors and President are also its Board of Governors, Board of Executive Directors and President. Its chief Executive officer is designated as Vice- President of IFC. Jin- Yong Cain is the IFC executive Vice President and CEO leads IFC's overall strategies and directions.

13.10 Summary

World Bank started functioning from 25th June 1946. More than 67 years had passed and it had achieved great success in the field of reconstruction of devastated Europe and economic development of poor and under- developed countries. At the beginning there were 44 members of this organisation and presently (2013) 188 countries are its members. It works like a cooperative organisation for the benefit of its members. It had provided huge amount of loans especially to developing countries. It had provided technical assistance, training facilities and aid co-ordination activities. Its two important constituents namely International Development Association and International Finance Corporation have also made significant progress by providing concessional finance to developing countries. IFC promotes private sector enterprises in developing countries.

13.12 Self Assessment Questions

1. Discuss the objectives and functions of World Bank.
2. Critically analyze the achievements and failures of World Bank.
3. Why was World Bank established and had it achieved its objectives?
4. Explain the membership, capital and organisation of World Bank.
5. Write an easy on the working of International Development Association.
6. What is International Finance Corporation? How does it help private sector enterprises of developing countries?

13.13 References

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Unit - 14: Asian Development Bank and European Monetary Union

Structure of Unit

14.0 Objectives

After studying this unit, you would be able to:

- Understand what is Asian Development Bank?
- Know when and why was it established?
- Know the membership, capital and resources of ADB?
- Understand what is European Monetary Union?
- Know the working of EMU.

14.1 Introduction

Two international institutions, namely, International Monetary Fund and International Bank for Reconstruction and Development were established, after Second World War. The first institution provides loans and assistance to various countries of the world to remove temporary disequilibrium in balance of payments and the second institution provides loans and assistance to the developing countries of the world for various developmental activities. However, since the developmental requirements of the developing countries are enormous, these institutions have not been able to completely fulfill these requirements. Hence, International Finance Corporation was established in 1955 and International Development Association in 1960. In spite of these additional international institutions, the requirements of developmental finance of developing countries could not be fulfilled, adequately. Hence, the developing countries started thinking to establish regional institutions to solve their problems on regional basis. That is why, Inter-American Development Bank was established in 1960 to promote the developmental activities in Latin American Countries, and African Development Bank was established in 1964 to promote development of African countries. The need of similar type of bank was also realized by the Asian Countries.

The suggestion to establish a regional development bank to provide momentum to the economic development of the countries of Asian Continent was offered by a select committee of Economic Commission for Asia and Far East (ECAFE) in 1963. This suggestion was discussed and approved in a ministerial level conference held at Manila in December 1963, under the auspices of ECAFE. This conference appointed a committee to give suggestions to implement the establishment of Asian Development Bank.

14.2 Establishment of Asian Development Bank

In ECAFE conference held in December 1963, a committee was constituted to give suggestions for the establishment of ADB. The suggestions of this committee were considered in the Bangkok Conference of ECAFE in 1964. In the meeting of ECAFE in March 1965, an advisory committee was constituted to prepare the articles of agreement of the bank. The articles of agreement of the bank were accepted in ministerial level conference held at Manila in December 1965 and it was sent to the countries willing to become its members, for obtaining signatures. The representatives of 31 countries had signed the articles of agreement. As a result, Asian Development Bank was formally established on 26 November 1966 and it started functioning from 19 December 1966. The head office of the bank is in Manila, the capital of Philippines.

14.3 Objectives of ADB

The objectives of Asian Development Bank have been so mentioned in its articles of agreement, "This bank will generate economic development and co-operation in the countries of Asia and Far East and will provide contribution to the collective and individual economic development process of the developing countries of this region". The bank performs a number of functions to achieve its objectives. Its objectives are as under:

1. **Promotion of Capital Investment:** The most important function of the bank is to promote investment of public and private capital for the development of developing countries of this region.
2. **Use of Available Resources for the Development of Developing Countries:** This bank makes available its own resources also to the developing countries of Asia and Far East, for developmental programmes.
3. **Co-ordination between Policies and Plans of Development:** This bank works for establishing co-ordination between policies and plans of development of the member countries of the region, so that these countries may make best possible utilization of their resources and the economics of the member countries may become mutually complementary. The bank provides co-operation for gradual and systematic growth of foreign trade of the countries of the region.

4. **Technical Assistance:** The bank also provides technical assistance to the member countries for formulation of developmental projects and programmes.
5. **Co-operation with International Institutions:** The bank co-operates with United Nations Organizations and other international institutions concerned with development activities, in the functional jurisdiction of the bank, so that interest of these institutions in searching of new investment opportunities and providing assistance in this region may also be maintained and enlarged.
6. **Others:** The scope of the bank is quite wide, even besides, aforesaid activities. The bank has keen interest in all those activities and projects, which are helpful in promoting employment, income, standard of living etc. so that the countries of the region may achieve speedy and sustainable economic development.

14.4 ADB Membership, Capital & Resources

A. Membership of ADB

Asian Development Bank is not an international institution. Rather, it is a regional institution. Hence, its membership should be assigned only to the regional countries. But, it is not so. The membership of Asian Development Bank may be obtained, both by the regional and the non-regional countries. Non-regional countries are included, mainly to provide financial resources to the bank. Non-regional countries cannot obtain loans from the bank. According to the charter of the bank, following countries can become the members of Asian Development bank:

1. Countries located in Asia and Far East region.
2. The members and associated members of ECAFE.
3. Countries, other than Asian Countries, who are the members of United Nations Organisation and any organisation, related to it. For membership of non-regional countries, approval of 2/3 of members of board of Governors (who represent 75 percent share of total voting rights) is necessary.

From 31 members at its establishment in 1966, ADB has grown to encompass 67 members of which 48 are from within Asia and Pacific and 19 outside.

Regional members are Afghanistan, Australia, Ajarbejan, Bangladesh, Bhutan, Cambodia, China, Cook island group, Fizi, Hongkong (China), India, Indonesia, Japan, Kazakistan, Kiribati, Korean republic, Kirgizistan, Laos, Malayesia, Maldeev, Marshall Island, Micronesia Republic, Mangolia, Mayanmar, Nehru, Nepal, Newzeland, Pakistan, Papua Newgini, Philippines, Samoa, Solomon island, Singapore, Srilanka, Taiwan, Talikistan, Thailand, Tonga, Tuvalo, Uzbekistan, Banatu and Vietnam. Non-regional members are Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Netherland, Norway, Spain, Sweeden, Switzerland, Turkey, United Kingdom and United States of America.

Voting Rights: 80 percent of total voting right in the bank is in the proportion of the capital paid by the member countries, which is known as proportional votes. The number

of proportional votes of each country depends upon the number of shares of the bank purchased by any particular country. In the beginning, the value of one share was 10,000 American dollars on 31 January, 1966. Now, it is considered to be equivalent to 10,000 SDRs. It is expressed in prevalent American dollars. Remaining 20 percent voting right in the bank is equally divided among all countries, which is known as basic votes.

B. Capital and Resources of ADB

(i) **Capital:** The authorized capital of the bank at the time of its establishment was one billion dollar. It has been increased from time to time. As on 31st December 2012 its authorized capital was 1,06,38,933 shares valued at $163.5 billion. Subscribed capital as on 31st December 2012 was 1,06,14,017 shares valued at $163.1 billion. Out of the subscribed capital, $8.2 billion was paid in ($5.3 billion of which was paid as on 31st December 2012) and $154.9 billion was callable. Callable capital can be called only if required to meet ADB's obligations incurred on borrowings or guarantees under OCR. No call has ever been made on ADB's callable capital.

(ii) **Borrowings:** ADB borrows money from various capital markets of the world through issue of debentures and papers. During last four years its borrowings has been as under:

Borrowings of ADB in Millions US $

Year	2009	2010	2011	2012
Amount	10,359	14,940	14,446	15,067

(iii) **Resources generated through creation of special fund:** ADB is authorized by its charter to establish and administer special funds. These are Asian Development Fund (ADF), Technical Assistance Special Fund (TASF), Japan Special Fund (JSF), ADB Institute, Regional Co-operation and Integration Fund, Eli mate Change Fund, Pakistan Earthquake Fund and Asia Pacific Disaster Response Fund.

14.5 Governance of ADB

The governance of ADS is very similar to other international institutions engaged in providing developmental loans and assistance. At the highest level is the Board of Governors, at the second level the Board of Directors and then the President, 6 Vice President and a management team.

14.5.1 Board of Governors

This is the highest authority, which formulates the policies of the bank. It is constituted by one Governor and one alternate Governor from every country. The important functions of this board are formulation of the policies of the bank, amendments in articles of agreements of the bank, selection of Board of Directors, giving entry to the new members etc. Its one meeting in a year is compulsory.

14.5.2 Board of Directors

A 12 member Board of Directors is constituted by the Board of Governors to implement the policies decided by the Board of Governors and to operate day to day business of the bank. Among these members, 8 members are from the regional countries and 4 are from non-regional countries. India, Japan and America are permanent members in the board of directors, on the basis of their share capital. Remaining nine members are selected through election.

By exercising the powers delegated by the Board of Governors, the Board of Directors submits, proposals for loans, guarantees, investments, technical assistance, administrative budget and audited accounts to the Board of Governors for its approval. Boards of Directors have an audit committee also.

14.5.3 Management

a. President: The president is elected by the Board of Directors. He is elected from amongst the members of the Board of Directors. He presides over the meetings of the meetings of the Board of directors. His tenure is of 5 years and may be re-elected also.

b. Vice-President: In the beginning, there used to be one Vice-President to provide co-operation to the President. But, after reforms executed in the organisation of the bank, six Vice-Presidents are presently functional in the bank. The Vice-Presidents are appointed by the Board of Directors, with the advice of the President. They directly report to the president and are responsible for the assigned work.

Total employees of ADB as on 31st December 2012 were 3,045 from 61 countries of its 67 members.

14.6 Lending Operations of ADB

ADB provides loans to its regional members. The loans provided by the ADB can be classified in two broad categories:

(i) Loans from Ordinary Capital Resources known as OCR

Funding for OCR operations comes from three distinct sources: funds borrowed from capital markets and private placements, paid-in capital provided by shareholders, and accumulated retained income (resources). The financial strength of ADB is based on the support it receives from its share holders on its financial policies and practices. Loans are generally provided to developing member countries that have attained a higher level of economic development and to non-sovereign borrowers. Sovereign loans are priced on a cost pass- through basis, which means the cost of funding the loans plus a contractual spread is passed in borrowers. ADB applies market based pricing for non-sovereign loans. ADB also provides guarantees to assist DMC governments and non-sovereign borrowers in securing funds for ADB- assisted projects.

From its establishment to 31st December 2012, ADB had approved loans, net of terminations and reductions, aggregating $146.4 billion in its OCR. On 31st December 2012, the total amount of ADB's loans outstanding in OCR was $83.3 billion. Of this nearly 92.8% represents sovereign loans that are loans to public sector. About 7.2% represents non-sovereign loans that are loans to private sector.

(ii) Loans and Assistance from Special Funds

A number of special funds have been created for special purposes. ADB provides concessional finance from these funds. No interest is charged on these loans only 1 percent annual service charges were recovered.

14.7 Achievement or Progress of ADB

The Asian Development Bank has made progress, in all spheres. The progress of the bank may be viewed, as follows:

1. **Increase in Membership:** The bank had 31 members at the time of its establishment in 1966, which increased to 41 in 1975 and to 45 in 1982. In December 2013, its membership was 67. Among these, 48 were regional countries and 19 were non-regional countries.
2. **Increase in Capital Resources:** At the time of establishment of the bank, its authorized capital was 100 crore dollars, which was increased from time to time. On 31st December, 2012, the authorized capital of the bank was 163.5 billion U.S. dollars. Its subscribed capital was 163.1 billion U.S. dollars. Besides share capital, the bank has issued debentures, also.
3. **Increase in Lending Operations:** Bank has provided loans of 146.4 billion U.S. dollars, since its establishment up to December, 2012. During 2012, the bank sanctioned loans of 94 billion U.S. dollars.
4. **Technical Assistance:** The bank provides technical assistance to the member countries for formulation, study, implementation, financing and management of development projects. This assistance is provided from 'Technical Assistance Special Fund' established by the bank in 1968. Both, the developed and the developing countries had paid contributions for this fund. A part of net income of the general funds of the bank is also transferred, from time to time, in this fund. The bank also manages technical assistance programmes of UNDP and EEC. The bank also co-operates with FAO. The bank has provided technical assistance of 4,135 crore dollars for 7,148 project, since its establishment up to 31 December, 2010. Technical assistance of 14.7 crore U.S. dollars in 2011 and 15.1 crore U.S. dollars in 2012 was sanctioned.
5. **Regional Activities:** The Bank makes all possible efforts to promote economic development of the developing countries of Asia and Far East. Most of the developing countries of this region are dominated by agriculture. Hence, it is essential to develop agriculture for developing these countries. To explore the

possibilities of agriculture development, first Asian Agriculture Survey was got conducted by the bank in 1967. Second Asian Agriculture Survey was got conducted, after 9 years in 1976. In this survey, possibilities of agriculture development were ascertained and the programmes taken up for agriculture and rural development in earlier years were evaluated.

In the decade of 1980, the bank had got a survey conducted to determine priorities among its activities, which was completed in 1982. Seminars were also organized on equity financing, co-financing and power planning etc. Bank also makes technical assistance available for regional studies. Grants equivalent to 10 crore dollars were provided for 465 projects, under regional activities.

Principles for ADB loan operations

ADB follows following principles in granting loans:

(i) **Loans to Regional Countries:** The bank provides loans only to its regional member countries, from its general fund and from special funds for special projects.

(ii) **Assistance for Projects of Public and Private Sectors of Member Countries:** The bank provides assistance for the projects, of both the public and private sectors of the member countries.

(iii) **Consent of Government Essential:** if the bank provides assistance for any project of the private sector of some member country, the consent of the Government of the concerned country is essential.

(iv) **Selection of Projects:** The bank selects such projects for its lending operations, which are very important from regional point of view and are related to highly under-developed nations.

(v) **Objectives of Loans:** The bank provides loans to regional member countries for development of agriculture, industries, transportation, electricity communication, water supply, urban development, and development of health and financial institutions.

(vi) **Guarantee and Collaboration:** If the bank itself is not in the position to provide loans itself, it gets the loans arranged from other institutions and if needed, provides guarantee for such loans. The bank may also provide loans, in collaboration with other financial institutions.

(vii) **Period of Loans:** The bank provides loans for long-term needs. Period of loan and installments are decided, according to the nature of the projects.

(viii) **Loans in Foreign Currency and Domestic Currency:** The bank provides loans to member countries in their own domestic currency and also in foreign currency.

(ix) **Repayments of Loans:** The member country has to repay the loan to the bank in that very currency, in which the loan was taken.

(x) **Interest Rate and Commission:** Rate of interest depends upon the nature of the projects. Lending rates consist of a funding cost margin over or under the 6 month LIBOR and an effective contractual spread. The lending rate is reset every 6 months on each interest reset date and can be converted into fixed rate at borrower's request.

14.8 Problems of ADB

The Asian Development Bank has made remarkable progress in providing loan and assistance to the regional countries, ever since its establishment in 1966. However, since the number of under-developed countries in Asian continent is fairly large and their developmental needs are enormous, the assistance provided by the bank is too inadequate. The bank has to face several difficulties. Among these, following deserves special mention:

1. **Inadequate Capital Resources:** In spite of increasing the capital of the bank, it is very low. Hence, loan requirements of the member cannot be fully met. Capital of the bank should be adequately increased and much more amount should be obtained from non-regional developed countries.
2. **Tight Loan Conditions and High Interest:** The bank provides finance only for very important essential projects, which are helpful in regional development. On an average, the bank charged 5-6 percent annual interest. It is often said that the conditions of the bank are tight and that it charges high interest rate. Average annual interest rate being affected by international finance markets. Loan conditions should be made liberal and if possible, interest rate should also be reduced.
3. **Limited Use of Regional Currencies:** The members of the bank pay their subscription in their own currency. These currencies have very limited use in international trade and finance. The member countries should arrange to pay loans in more popular currencies or in currencies readily acceptable in international payments.
4. **Wide Gap in Economic Conditions of Member Countries:** Very few regional countries of this bank, like Japan, Australia etc. are developed countries. Remaining countries are under-developed. Many countries are in very weak economic position. Hence, most of the countries are engaged in competition to take assistance from the bank. But the bank is not able to help these countries, due to its limited resources. The bank should provide loans to highly backward countries, on top priority basis.
   (i) **Difficulties in the Use of Special Funds:** The bank has created special funds, from time to time. Presently, there are six such funds. Out of which two are important: Asian Development Fund and (ii) Technical Assistance Fund.

   Some countries had paid subscription in these funds, in their own currency. Hence, these funds may be used, for purchasing goods only from the concerned country. It causes difficulty to the borrower's country. This problem may be solved, when the subscription is paid in freely usable currency and it may have no restriction.

14.9 European Monetary Union

14.9.1 What is the European Monetary Union?

European monetary union is the agreement among the participating member states of the European Union to adopt a single hard currency and monetary system. The European council agreed to name this single European currency the Euro. EMU was created as a part to advance economic and social unity among the people of Europe and to propel Europe to greater prominence in international community.

14.9.2 Founding Document for the EMU

The plan for the EMU was formalized within the Maastricht Treaty, which founded the European Union. The Maastricht treaty was signed in 1992, and subsequently ratified by all of the member states. Some countries approved the treaty by a public vote, while other countries ratified the treaty through a legislative vote.

To participate in the initial formation of the EMU, each member state had to meet the following five convergence criteria by 1998: (i) the national legislation governing the country's financial system had to be compatible with the treaty provisions controlling the Europe system of Central Banks; (ii) the country had to achieve a rate of inflation within 1.5% of the rates in the three participating countries with the lowest rates; (iii) the country had to reduce its government deficits to below 3% of its gross national product; (iv) the country had to keep its currency exchange rates with the limits defined by ERM for at least two years; and (v) the country had to keep its interest rates within 2% of the rates in the three participating countries with lowest rates. Eighteen member states of European Union have entered the "third EMU stage" and have adopted the Euro as their currency. Denmark and Lithuania currently participate in Exchange Rate Mechanism (ERMII). Denmark and United Kingdom has received a special opt out from EU treaties allowing for a permanent membership of ERMII, without being required to enter into the "Third EMU stage".

14.9.3 Economic Governance under EMU

Within EMU there is no single institution responsible for economic policy. Instead, the responsibility is divided between member states and the EU institutions. The main actors in EMU are:

- The European Council – sets the main policy orientations.
- The council of the EU – coordinates EU economic policy-making and decides whether a member state may adopt the euro.
- The Euro group – coordinates policies of common interest for the euro-area member states.
- The member states – sets their national budgets within agreed limits for deficit and debt and determine their own structural policies involving labour, pensions and capital markets.
- The European Commission – monitors performance and compliance.
- The European Central Bank (ECB) – sets monetary policy with price stability as the primary objective.

14.10 Summary

A number of international institutions like World Bank, International Monetary Fund, International Finance Corporation and International Development Associations etc. were established after World war second for providing assistance and help for economic development and economic stability. Looking to the enormous requirements of developing countries more and more institutions have been established on regional level and one of such institutions is Asian Development Bank. This bank was established in the year 1966 for the development of Asian and Far East countries with a membership of 31 member states having an Authorized capital of 1 billion U.S. Dollars. The members of this bank are of two types. First regional members which are situated in the region of Asia and far east and second non-regional members which are not in the region of Asia and Fareast. ADB has made tremendous progress in the areas of its operation. In the end of 2012 the authorized and subscribed capital are respectively $163.5 billion and $163.1 billion. ADB has approved from its establishment through 31 December 2012 $146.4 billion from its own OCR. The outstanding loans of ADB in OCR were 83.3 billion. Out of these loans 92.8% were sovereign loans and remaining 7.2% are non-sovereign loans. ADB's loan operations and technical assistance increased in multi fold as described in previous pages. ADB has made rapid progress but it does not mean that it has achieved every success. It has been facing a number of problems specially shortage of funds, cumbersome loan sanction and disbursement procedure, tight loans, difficulties in use of special funds etc. Future of the bank is quite bright. European Monetary Union has been established under the Maastricht treaty which was signed in the year 1992. Eighteen members of European Union have entered "the third EMU stage" and have adopted Euro as their currency.

14.12 Self Assessment Questions

1. Discuss the objectives and functions of Asian Development Bank.
2. What are the objectives of Asian Development Bank? How far those objectives have been achieved.
3. When was Asian Development Bank established? How is it governed?
4. Explain the membership, capital and organisation of Asian Development Bank.
5. Discuss the achievements and failures of Asian Development Bank.
6. What is European Monetary Union? How is it formed?

14.13 Reference Books

- Annual Report for the year 2012, Asian Development Bank, Manila.
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- ADB Management Discussion and Analysis: 31 December 2012.
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Unit -15: International Liquidity and Special Drawing Rights

Structure of Unit

15.0 Objectives

After studying this unit, you should be able to:

- Appreciate the concept and components of international liquidity;
- Understand the problem of international liquidity;
- Come across about the current thinking on the problem of international liquidity;
- Know the meaning and features of SDRs;
- Acknowledge the contribution of SDRs in easing the problem of international liquidity;
- Analyze the role of SDRs in the post Brettonwood's system.

15.1 Introduction

The ratio of official monetary reserves to imports, which for the world as a whole, was 67% in 1951 had fallen to 33% in 1968. This created the serious problem of international liquidity. In fact, the problem of shortage of international liquidity became so serious that in seventies the international monetary system came to the brink of collapse. To prevent it from collapsing, concerted efforts were made and the special Drawing Rights (SDRs) scheme was launched to ease the problem of international liquidity. But after 1990s, the world monetary and financial scenario has undergone a sea change, owing to which, the problem of international liquidity has disappeared–the demand for owned reserves declined. In the present post Brettonwood's system, the role of SDRs has also changed. We shall be examining all these issues in this unit, so that you would be able to appreciate the problem of international liquidity and role of SDRs especially in this context.

15.2 The Concept

International liquidity refers to all those financial resources and facilities that are available to monetary authorities of individual countries for financing deficit in their balance of payments, i.e.; the resources that are used to make the residual payments in foreign currencies when all other sources of foreign funds prove inadequate to bring the international payments into balance. The assets which constitute part of such liquidity range from those financial assets which are readily available to a country to those financial resources which became available to a country only after protracted negotiations with the creditors. Consequently, international liquidity includes the gold held by the central banks, foreign exchange / foreign currencies held by Central banks or treasuries of the governments, borrowing facilities available from the IMF under different schemes, credit facilities available under swap and related credit arrangement of central banks and treasuries and other financial assets which are mobilize able when the need arises. Consequently, international liquidity also includes those elements which are not readily amenable to statistical measurement, such as country's total borrowing capacity in the international money market or in the event of country happening to be a reserve currency centre, the willingness of world's other countries to accumulate their further official holdings of its (reserve currency country's) currency. Thus**,** the term international liquidity refers to the country's international reserves as well as its capacity to borrow in international market to finance deficit in balance of payments. In nutshell, international liquidity refers to all those liquid means available with countries for financing deficit in their balance of payments.

15.3 Components

International liquidity has following main components:

1 **Gold Reserves:** The gold reserves held by the monetary authorities (Central Bank or treasury of government) of the countries.

2 **Foreign Exchange Reserves:** Foreign currencies held by the monetary authorities (Central Bank or treasury of government) of the countries;

3 **Capacity to Borrow:** Borrowing facilities available to the monetary authority of the country, such as loans from IMF and other international monetary institutions, credit facilities under the swap and related credit arrangement of central bank and treasury of the country. Borrowing facilities from the IMF include the ordinary drawing rights as well as Special Drawing Rights (SDRs).

15.4 The Problem of International Liquidity

The problem of international liquidity means the inadequacy of international liquidity for financing the deficit of international community in their international balance of payments. In other words, the problem of international liquidity arises due to the

shortage of financial resources which are available with monetary authorities of the countries to finance the deficit in their balance of payments. Now the question is why the problem of international liquidity arose and intensified over the years? The answer of this question lies in this basic fact that the world trade has increased more rapidly than the quantum of international liquidity. This is evident from the fact of increasing balance of payments difficulties faced by many countries of the world. The ever mounting pressure on balance of payments of most countries of the world, particularly the non-oil producing developing countries shows that the means of international payments have not grown at a fast enough rates required to meet the growing demand for financing the world trade. This widened the gap between the world trade and the means to finance the world trade as a result of which the problem of international liquidity emerged and increased during the post second world war period.

Aspects of the Problem of International Liquidity

The problem of inadequacy of international liquidity has basically two following aspects:

1 An Absolute Shortage of the total international means of payments in relation to the volume of world trade; and

2 A relative shortage resulting from uneven distribution of the total official reserves (including gold) between the developed and developing countries of the world. Of the total official holdings of reserves at the end of March 1999, industrial countries share of the total official reserves was 46%, while the share of developing countries was 47.2%.

15.4.1 The Current Perception

With the demise of Brettonwoods system (August 1971 was the beginning of the end of par value system and the start of a movement toward floating exchange rates) the problem of international liquidity has disappeared (yet not resolved). The reduction in the demand for owned reserves has resulted from the following two features of the present international monetary arrangements:

1 Widespread floating of exchange rates; and

2 Financing the balance of payments deficit through official borrowings.

The two above mentioned features not merely reduce the demand for reserves, but also facilitate the acquisition of owned reserves when needed, and also the reduction of holdings of excess reserves.

The notion of a fixed stock of international liquidity constraining the operation of international monetary system no longer applies since the breakdown of BrettonWoods system. There is nothing in the present international monetary system that stands in the way of monetary authorities achieving their desired reserve holdings, subject, of course, to the cost consideration they face. These reserve assets are overwhelmingly in the form of foreign exchange. As the reserve–currency countries or are as (United States, Japan, United Kingdom and Euro area) have floating exchange rates and face no limit to the

expansion of reserves in this form. Hence, except for SDRs, the stock of international reserves is fully demand determined. Besides, access to capital market has expanded enormously in recent past especially after the globalization and integration of international financial markets. Thus, borrowed reserves could easily substitute for owned reserves to a great extent.

15.5 Backdrop of SDRs

A stated earlier, the problem of international liquidity became acute as the ratio of official reserves to imports declined to 37% in 1966. Though the production of gold was increasing, but with a very slow pace. The reputation of dollar and pound as international reserve currency was also declining. Pound was devalued in 1967. All these events compelled the International Monetary Fund to find out the amicable solution to the problem of international liquidity. Hence, the resolution to adopt the scheme of SDRs accepted in the annual meeting of IMF held at Rio de Janeiro city of Brazil in 1967. The scheme was thoroughly discussed and recommended by the ten member group of the IMF and it was finally approved by the Board of Directors of the IMF on 8th October 1969. Thus, the SDR was seen as a way out of the so called **Triffen Dilemma** whereby additions to official dollar holdings were seen as undermining the stability of the Bretton Woods system, given the tendency on the part of some Central Banks to convert their dollar reserves into gold, thereby drawing down the limited U.S. Gold Stock.

15.6 Salient Features of SDRs

Meaning of SDR:

SDR is the international reserve asset created by the IMF to supplement the existing reserve assets with the purpose of enhancing international liquidity.

Following are the salient features of SDRs:

1. Nature of SDRs:

SDR is neither a bank note, nor a paper instrument like a treasury bill. The IMF has credited the SDRs in the accounts of member countries in proportion of their membership quotas. The member countries have the right to use the SDRs only through the book entries when they have disequilibrium in their balance of payments or their liquid funds have declined unexpectedly. Thus, the transaction of SDRs is possible only through the entries in the books of accounts of member countries with the IMF. There is no tangible physical form of SDRs. Their existence appears only in books of accounts, hence, they are popularly known as paper gold. The IMF acts as a clearing house to its member countries regarding the transactions of SDRs.

2. Use of SDRs:

Member countries of the IMF can use SDRs only for correcting the disequilibrium in their balance of payments or for removing their shortage of liquid funds especially when they have declined unexpectedly. The use of SDRs may be done in following three ways:

(i) **Use by Designation:** According to this method, a country which wants to use SDRs chooses the country at its own whose currency it requires and for that makes the request to the IMF. On the request of a user country, the IMF designates the country concerned and makes its currency available to the Central Bank of the requesting country through the book entries.

(ii) **Use by Mutual Agreement / Use without Designation:** Under this method, the participating countries of SDRs scheme use SDRs without involving the IMF or use the SDRs by mutual consent by simply intimating to the IMF for the sake of making entries in the books of accounts. This method, in present, is being used widely by the participating countries of SDRs scheme.

(iii) **Use of SDRs Transactions with General Account of IMF:** The IMF can obtain the SDRs in its general account from its participating member countries and the member countries may use these SDRs in times of need.

3. Voluntary Participation:

The participation in SDRs scheme is totally voluntary for the members of the IMF. Member country of the IMF may participate or may quit from the SDRs scheme at its own discretion. All member countries are the participants of SDRs scheme.

4. Valuation of SDRs:

The value of one SDR was fixed equivalent to 0.888671 gram of pure gold at the time of implementation of SDRs scheme in 1970. The valuation of SDR was done on the basis of basket of currencies of 16 countries from July 1, 1974 and since July 1, 1981,. The valuation of SDR was done on the basis of basket of currencies only of five countries. Presently, the valuation of SDR is being done on the basis of basket of four currencies since July 1, 2001. The basket of currencies is consisted of U.S. Dollar, British Pound Sterling, Japanese Yen and the Euro. The U.S. Dollar equivalent of the SDR is posted daily on the IMF's Website. It is calculated as the sum of specific amount of the basket of four currencies valued in U.S. Dollars, on the basis of exchange rates quoted at noon each day in London money market.

5. Maximum Obligation Limit:

It is not necessary for any participating country to keep SDRs more than three times of its quota. Voluntarily a country may keep SDRs even more than this limit.

6. Restrictions on the use of SDRs:

In the beginning participating countries could use only 70% SDRs allotted to them, but at present, they may use up to 85% as minimum required deposit limit in account has been reduced from 30 to 15%. If any country uses more than 85%, it has to purchase SDRs from the IMF within next five years by providing currencies of uninterrupted use.

7. Interest Rates:

Countries having deposits of SDRs in their accounts in excess of specified quantity are entitled to receive interest, while those countries in whose accounts the deposits of SDRs is less then specified quantity have to pay interest. The rate of interest was 1.5% up to July 1, 1974. Presently, the rate of interest is determined with reference to a combined market interest rate, which is a weighted average of yields on short-term instruments in the money market of France, Germany, Japan, United Kingdom and the United States of America. It is adjusted on every Friday and is applicable from next meeting.

8. Supervisory Powers of IMF:

The IMF has supervisory powers over the use of SDRs. Of course, SDRs can be used for any amount within the limit prescribed for use, but no country can misuse them. If any country is found guilty of misuse of SDRs, the IMF shall warn it. Further, the IMF may deprive the erring country from using the SDRs in case of ignoring the warning and committing the same mistake again. The right to use of SDRs by **Kampuchea** was deferred by the IMF in 1978.

The IMF reviews the liquid funds position including the SDRs of member countries for the purpose of designation as requested by the members and also for maintaining appropriate level of funds.

9. Other Prescribed Holders of SDRs:

Besides the participating member countries, 15 other prescribed organizations are also the holders of SDRs. These organizations are Asian Development Bank, African Development Bank, African Development Fund, Arab Monetary Fund, Bank of Central African States, Bank of International Settlements, Central Bank of West African States, East African Development Bank, Eastern Caribbean Central Bank, International Bank for Reconstruction Fund for Agricultural Development, Islamic Development bank, Latin American Reserve Fund and Nordic Development Bank. These organizations provide those currencies in return of SDRs which may be used uninterruptedly.

15.7 Creation & Allotment of SDRs

For the first time, 9.5 billion SDRs were created in 1970 and 9.3 billion SDRs were allotted to the member countries in broadly equal installments on January 1, 1970, 1971 and 1972. The second allocation, totaling 12.1 billion SDRs took place in three similar installments on January1, 1979, 1980 and 1981. Thus, 21.4 billion SDRs were allotted to 141 member countries till 1981. Thereafter no SDRs have been allotted to those countries who became the member of the IMF and as a result of which nearly 20% of the present total members (188 nations) were deprived of allotment of SDRs.

To help mitigate the ill effects of the meltdown of 2008, a third general allocation of 161.20 billion SDRs was made on 28th August 2009. Further a fourth special onetime allocation of 21.50 billion SDRs was made on 10th August 2009.

Thus, the total cumulative allocation of SDRs has, so far, become 204.1 billion.

15.8 Benefits of SDRs Scheme

The following advantages have been accrued especially to the member countries of the IMF:

1. Allocation of SDRs has increased the international liquidity equivalent to 204.1 billion which helped in fostering international trade.

2. Participating member countries can freely use 85 per cent of SDRs allotted to them, thus the scheme of SDRs provided the member countries unconditional liquidity.

3. Effective use of SDRs has been done mostly by the developing countries on the basis of agreements. Developed countries have also used the SDRs.

4. SDRs scheme has enhanced the mutual co-operation among members countries of the IMF as they are mostly using the SDRs by mutual agreements or without designation, i.e.; without involving the IMF.

5. SDRs providing countries get the extra benefit of interest and receiving countries get the SDRs at a nominal rate of interest. Thus, both are benefited.

15.9 Drawbacks of SDRs Scheme

The SDRs scheme has several drawbacks. Among them, a few important are as follows:

1. No Scientific Basis for Allocation

The basis of allotment of SDRs is not scientific as developing countries have got relatively much less share as compared to developed countries. The developed countries have been allotted around 74 per cent share of total allocation of SDRs, whereas the share of developing countries is only 26%.

2. **Limited Scope**

   SDRs can be used only for two purposes- either for correcting disequilibrium in balance of payments or for removing shortage of liquid funds. Thus, the scope for using SDRs is limited.

3. **Issued in Limited Quantity**

   SDRs were not increased as per the requirements of the member countries of the IMF. After 1981, the increase in SDRs took place in 2009, after a lapse of 28 years.

4. **Short term Relief**

   SDRs are not the substitute of long-term assistance. They can be used as a short-term relief.

5. **Supremacy of Developed Countries**

   The use of SDRs depends on the mercy of developed countries as they are used on the basis of mutual agreements.

In spite of so many drawbacks, the SDRs scheme has increased the international liquidity, helped member countries of the IMF in reducing the deficit in their balance of payments and in meeting out the shortage of liquid funds. SDRs are being used as reserve currency by many countries and are traded in London and Singapore money markets. Forward transactions in SDRs are also gradually taking place. Some of the countries have also forged alliance of their currencies with SDRs.

15.10 Role of SDRs in Post Brettonwoods System

In post Brettonwoods System, the notion of a fixed stock of international liquidity constraining the operation of international monetary system no longer applies. A country can increase its reserve holdings by intervening to dampen exchange rate appreciation arising from a net capital inflow from abroad or a current account surplus. Many advanced countries can also borrow foreign exchange at interest rates that are only marginally higher than the return on reserve assets. Thus, as long as there is little or no credit risk associated with lending to these countries, they can satisfactorily finance increases in desired reserve holdings by borrowing in international capital markets. Hence they have no need for SDRs allocation to supplement reserves.

On the basis of aforesaid reasoning we may easily think that the role of SDRs as a source of reserve asset has no much significance in present scenario. But this type of thinking may not be true owing to many reasons.

Firstly, developed countries may be willing to hold a portion of their reserves in the form of SDRs for the purpose of portfolio diversification.

Secondly, for most emerging market economies have little or no access to private capital markets and do not have the option of borrowing foreign exchange. For these countries, the primary source of obtaining reserves in short-run is by reducing domestic

consumption and therefore imports, which imposes a significant cost in terms of foregone consumption and investment.

Thirdly, the gap between the interest rate on sovereign bonds and the return on reserve assets for emerging market economies is much higher and varies considerably over time. Not only this, the cost of private market financing to such economies fluctuates sharply in response to conditions in emerging markets themselves.

Thus, for most emerging market economies, the cost of acquiring and holding international reserves is substantial and subject to considerable uncertainty.

By contrast, substantial part of the growing demand for reserves through SDRs allocations can be done with essentially zero real resource costs. Recipients of SDRs pay the SDR rate of interest (plus a very small assessment charge to cover the costs of administering the SDR Department) on their cumulative allocations and receive the same rate of interest on their total SDR holdings. Thus there are efficiency gains for the world economy if SDR allocations substitute, at least in part, for reserves that otherwise would be acquired by running a current account surplus or by borrowing on world capital markets. These gains are similar to the substitution of domestic fiat money for commodity money such as gold.

In nutshell, we may conclude by saying that the regular annual allocation of relatively moderately amounts of SDRs is still required due to benefits in terms of:

1. The interest cost of reserves that would accrue to the large majority of members of the IMF that do not have assured access, or only very costly access, to capital markets; and
2. The enhanced strength of the international financial system as a whole if a larger part of the world's reserves are owned rather than borrowed.

15.11 Summary

International liquidity encompasses the international reserves and the facilities for international borrowings for financing the deficit in balance of payments. International reserves are defined to include official holdings of gold, foreign exchange, SDRs and reserve position in the IMF. It may be noted that the international liquidity does not include private holdings of gold, foreign exchange and long-term international financing. Thus, the constituents of international liquidity are: gold reserves and foreign exchange reserves held by the monetary authorities of the countries and borrowings facilities available to the monetary authorities including the ordinary and special drawing rights form the IMF. The problem of international liquidity means the inadequacy of liquid funds with monetary authorities of the countries for financing the balance of payments deficit. The problem of international liquidity has arisen because of this fact that the world trade has increased with more pace than the volume of international liquidity which caused mounting pressure on balance of payments of most of the countries especially the non-oil producing developing countries. The problem of international

liquidity has manifested into an absolute shortage and a relative shortage. Acceptance of floating exchange rate system and the practice of financing the balance of payments deficit through official borrowing have resulted into the disappearance of the problem of international liquidity. The above mentioned two factors made the stock of international reserves demand determined.

The acute shortage of international liquidity compelled the IMF to find out the alternative ways to supplement the international official reserves. The SDRs scheme was finally approved by the IMF on October 8, 1969 and for the first time; SDRs were created and allotted on January 1, 1970. Since then, SDRs have been allocated thrice. The SDR is the international reserve asset created by the IMF to supplement the existing reserves with the object of increasing international liquidity. SDRs can be used by the participating countries in the scheme by designation or by mutual agreements or with general account of the IMF. Presently, the valuation of SDR is done on the basis of basket of four currencies namely Dollar, Yen, Pound Sterling and the Euro. So far, the total cumulative allocation of SDRs has become 204.1 billion. One of the main benefits of the SDRs has been increase in unconditional liquidity, but the main drawbacks of this scheme are irrational basis of allocation and inadequate creation of SDRs. SDRs are still important even in the post-Brettonwoods era as their allocation is essentially at zero real cost and they have provided the strength to international financial system.

15.12 Self Assessment Questions

1 What do you mean by international liquidity? Why the problem of international liquidity arose?
2 Explain the nature and magnitude of the problem of international liquidity.
3 Throw light on the meaning and features of Special Drawing Rights (SDRs).
4 Analyze the problem of international liquidity. What is the current thinking on it?
5 Mention the main characteristics of SDRs and explain to what extent, the creation of SDRs have eased the problem of international liquidity?
6 Why SDRs are said to be the 'paper gold'? Explain their operational mechanism.
7 What are the advantages and drawbacks of SDRs scheme?
8 What is International liquidity? What constitutes the International Reserves / international liquidity?

15.13 Reference Books

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- Chrunilam, Francis' **'**International Economics', Tata McGraw Hill Publishing Company Ltd.

Unit - 16: International Stock Exchanges

Structure of Unit

16.0 Objectives

After reading the unit, the learner would be able:

- To understand the international stock exchanges;
- To know about four major stock exchanges.
- To analyze the features of the exchanges in terms of differences, operations etc.

16.1 Introduction

The money lenders played a very important role in Europe. The customers started keeping debts with the money lenders. This led to the money lenders who wanted to protect themselves and thus sold these debt instruments to their customers. Thus began the business of trading debt. In the 1300s, the Venetians were the first to start trading the securities from other governments. They would carry the various issues of sales on slates to meet with clients similar to brokers of today. Belgium had a stock exchange where brokers and moneylenders would meet to deal their business, government and even individual debt issues. In the 1500s there were no real stocks so this stock exchange dealt exclusively in promissory notes and bonds. There were many types of business-financier partnerships that produced income similar to stocks, but there was no actual trade taking place.

16.2 Characteristics of the Stock Exchange

Though stock exchanges differ distinctly from each other in terms of structure, composition, location, size etc, there are certain common features. They are as listed below:

A. Liquidity

Liquidity refers to the ability to sell an asset without significant reduction in the price of the asset. Liquid markets are those markets where the assets held can be sold easily and quickly. This would facilitate international money managers to invest in liquid markets. Liquidity premium is the higher compensation offered for illiquid stocks over liquid stocks. The liquidity of a market can be measured based on size, volume and bid-ask spreads are good liquidity indicators.

B. Taxes

Taxes are an overt transfer of wealth. Taxes on investments are applied in three areas: transactions, income (dividends, coupon payments etc.) and capital gains. In general, taxes on transactions are small, from 0.01% to 0.50% of nominal amount traded. Some countries impose domestic no transactions tax, for example, Canada, Israel, and Sweden, while countries like France and Finland impose transactions taxes on domestic residents only. Some countries also impose a VAT (Value Added Tax) on the commission paid to a broker.

Taxes on income are collected based on two principles:

(1) The residence principle: All residents of the country can be taxed on their worldwide income.

(2) The source principle: All income earned inside the country, whether by residents or non residents, is taxable in this country.

The two principles are in perfect agreement if the entire income is earned within the country, if earned outside the country then it has a different implication.

C. Stock Market Benchmarks

There are several stock market benchmarks which allow an investor to measure the average performance of a national stock market.

16.3 New York Stock Exchange

History

The first stock exchange in London was officially formed in 1773, 19 years before the New York Stock Exchange. While the London stock exchange dealt with shares with restrictions, the NYSE dealt with stocks without restrictions from its inception. Philadelphia stock exchange was the first stock exchange but NYSE became more powerful quickly.

Significance

The New York Stock exchange is setup at Wall Street. The exchange's location led to the dominance of NYSE mainly. It was in the heart of all the business and trade coming to and going from the United States, as well as the domestic base for most banks and large corporations. New York stock exchange became very wealthy by setting listing requirements and demanding fees at Wall Street.

EXHIBIT 16.1

NYSE Group Volume in all Stocks Traded, 2013

	Trading Days	NYSE Group Shares (millions)	NYSE Group Trades (thousands)	NYSE Group Dollar Volume (billions)
January	21	30,786.85	102,841.37	1,106.48
February	19	28,085.92	95,198.31	1,036.00
March	20	28,920.32	94,342.35	1,063.24
April	22	32,465.35	112,501.71	1,218.10
May	22	31,778.54	108,155.50	1,227.02
June	20	34,898.75	108,183.80	1,308.63
July	22	29,081.72	98,520.18	1,114.79
August	22	27,994.98	96,547.47	1,064.66
September	20	28,841.83	88,650.29	1,111.08
October	23	31,926.57	107,768.43	1,299.92
November	20	26,360.08	89,773.82	1,064.62
December	21	28,064.38	99,601.95	1,161.45

Its international prestige rose with the rapidly increasing American economy and it was soon the most important stock exchange in the world. The NYSE was impacted by everything from the Great Depression to the Wall Street bombing of 1920. This led to the exchange forming striker listing and reporting requirements.

Many countries like Germany, France, the Netherlands, Switzerland, South Africa, Hong Kong, Japan, Australia and Canada developed their own stock exchanges; the first step before the companies could get listed at LSE and NYSE. Some of these international exchanges are dangerous investments avenues because of weak listing rules and less rigid government regulation.

Trading:

The New York Stock Exchange acts as a platform for trading stocks of publically registered companies. The NYSE is open for trading Monday through Friday from 9:30 am – 4:00 pm ET.

The NYSE uses a continuous auction format where the traders invest on behalf of the investors. The traders use an open cry system where a specialist is appointed by NYSE to manage the actual auction. The specialist helps in giving information that would connect the buyers and sellers. The use of wireless hand held computers (HHC) helped the auction process toward automation. The system enabled traders to receive and execute orders electronically via wireless transmission.

From 2007 all NYSE stocks are being traded via its electronic Hybrid Market. Customers punch orders for immediate electronic execution or route orders to the floor for trade in the auction market. NYSE works with US regulators like the SEC and CFTC to coordinate risk management measures in the electronic trading environment through the implementation of mechanisms like circuit breakers and liquidity replenishment points.

Performance

The NYSE Composite is a stock market index covering all common stock listed on the New York Stock Exchange, including American depositary receipts, real estate investment trusts, tracking stocks, and foreign listings. Over 2,000 stocks are covered in the index, of which over 1,600 are from United States Corporations and over 360 are foreign listings; however foreign companies are very prevalent among the largest companies in the index: of the 100 companies in the index having the largest market capitalization (and thus the largest impact on the index), more than half (55) are non-U.S. issues. This includes corporations in each of the ten industries listed in the Industry Classification Benchmark. It uses free-float market cap weighting.

On June 1, 2007 the NYSE composite outperformed the Dow Jones Industrial Average and all other indices. On September 29, 2008, troubles continued in the financial sector leading in losses accounting for more than 8%. On November 20, 2008, the index plummeted below 5,000 to a multi-year bear market low near 4,650.

A gradual recovery since 2009 has led the NYSE market to close to an all time high of 10,406.77 on December 31, 2013.In addition to the overall composite, there are separate indices for industrial, transportation, utility, and financial corporations.

Exhibit 16.2

Performance of Dow Jones

16.4 London Stock Exchange

Located in London City, it is the oldest and fourth-largest stock exchange in the world. The exchange was founded in 1801 and its current premises are situated in Paternoster Square close to St Paul's Cathedral. It is the most traded of all the world's stock exchanges, with around 3,000 companies from over 70 countries admitted to trading on its markets. The London Stock Exchange runs several markets for listing, giving an opportunity for different sized companies to list. For the biggest companies exists the Premium Listed Main Market, while in terms of smaller SME's the Stock Exchange operates the Alternative Investment Market and for international companies that fall outside the EU, it operates the Depository Receipt scheme as a way of listing and raising capital.

The History of the London Stock Exchange – source: www.britishcouncil.com

One of the world's oldest stock exchanges, the London Stock Exchange has a history dating from the 17th century. In 1698 a stock dealer called John Castaing started to produce a list of stock and commodity prices. Together with other dealers he operated from Jonathan's Coffee House in London, which became the first centre for organised trading in marketable securities in the capital. The coffee house burnt down in a fire in 1748.

In 1761 a group of 150 stockbrokers set up a club to buy and sell shares. Originally named 'New Jonathan's', club members later voted to rename it 'The London Stock Exchange'. The Stock Exchange was first regulated in 1801, and continued in business until it was forced to close in July 1914 because of the First World War. The Stock Exchange reopened the following year and has operated almost continuously since then, closing for only a few days during World War Two.

A major milestone in the Stock Exchange's history occurred in 1973, when women members were admitted for the first time, the result of years of campaigning by women working in the financial sector. Although accepted as members, women dealers were still not allowed onto the trading floor, and it wasn't until 2001 that a woman was given a senior post, when Clara Furse was appointed as chief executive.

Another big shake-up came in 1986, with deregulation of the market, the famous 'Big Bang'. The Stock Exchange became a private limited company and trading was no longer carried out face-to-face on the market floor, but via computer and telephone from separate dealing rooms. Then in 2000 shareholders voted to transform the Stock Exchange into a public limited company, known as London Stock Exchange plc, and listed on the stock market.

In 2004 the London Stock Exchange moved to new all-electronic headquarters near St. Paul's cathedral. The new building reflects the needs of an organisation that has evolved rapidly over recent years. Electronic trading means there is no need for a trading floor, the emphasis instead being on an efficient IT infrastructure. The London Stock Exchange's role in the global financial community has also changed. New York took over as the world's largest stock exchange many years ago, but the London Stock Exchange is still the most international exchange in terms of the number of shares traded in foreign companies.

- **SETS:**

SETS is the London Stock Exchange's premier electronic trading service that combines electronic order-driven trading with integrated market maker liquidity provision, delivering guaranteed 2-way prices.

- **SETSqx:**

SETSqx (Stock Exchange Electronic Trading Service – quotes and crosses) supports 4 electronic auctions a day: at 8am, 11am, 3pm and 4:35pm, along with continuous stand alone quote driven Market Making.

- **SEAQ:**

Quote driven platform for Fixed Interest market and AIM securities not traded on either SETS or SETSqx.

International Trading Services

a. International Order Book

Electronic order book for trading Global Depositary Receipts from some of the world's fastest growing markets.

b. European Quoting Service

Quote Driven Market Making and trade reporting service for liquid MiFID securities not on another Exchange service.

c. European Trade Reporting

Trade reporting service for non-liquid MiFID securities not found on another Exchange service. Trading Services are available on all UK business days, OTC MIFID trade reporting services are also available on UK bank holidays.

Performance

Financial Times Stock Exchange 100 is a market capitalization weighted index representing the top 100 blue chip companies on the London Stock Exchange. The index is said to map more than 80% of the total capitalization in the United Kingdom. Stocks are free-float weighted to ensure that only the investable opportunity set is included within the index. The FTSE group manages the Index, which in turn is a joint venture between the Financial Times and the London Stock Exchange.

16.5 Luxembourg Stock Exchange

History

The Luxembourg Stock Exchange (Luxembourgish: Bourse vu Lëtzebuerg, French: Bourse de Luxembourg, German: Börse Luxemburg) is a stock exchange situated at Luxembourg City, in southern Luxembourg. The Exchange is located on boulevard Joseph II. The Chairman of the Board is Frank Wagener and the President of the Executive Committee and Chief Executive Officer is Robert Scharfe.

A law establishing a stock exchange in Luxembourg was passed on 30 January 1927. The company was incorporated as the Société Anonyme de la Bourse de Luxembourg on 5 April 1928, with an initial issue of 7,000 shares, each valued at 1000 francs. In November 2000, the stock exchange entered into an agreement with Euronext.

Trading

The Luxembourg Stock Exchange operates two markets. The first, the 'Bourse de Luxembourg' market opened in May 1929 and it later became a European regulated market which offers European passport. The second, opened in July 2005, is named 'Euro MTF' and is a Multilateral Trading Facility. The rules and regulations and trading mechanism are similar in both markets.

Trading Mechanism

LuxSE market operates at different modes:

- Real-time mode (level 1 and/or level 2)
- Delayed mode (15 minute delay)
- End of day data (6 p.m. CET).

Level 1 (inside market)

This level deals with the best bid/ask price (last price) for bid/ask size and last size. It also deals with volume, opening prices, trade high and low individual trades, closing prices, order book VWAP, and off book data.

Level 2 (market depth)

This level deals with full depth of the book with all quotes, orders and level 1 data including trades, opening price, closing price, best price and volume. The number of market-depth levels varies based on the availability of the trading segment.

Post-trade Data Service (Last Trade Data)
This includes real-time on and off order book trade reports including transaction values and volumes (no pre-trade quotes).
Off Book Data
This includes on exchange, off book and OTC trade reporting.
Performance
The Luxembourg Stock Exchange has four national indices:
- Price LuxX
- Return LuxX
- Price Lux General
- Return Lux General

The LuxX index is a basket index with a twofold computation, ie the Price LuxX Index and the Return LuxX Index. The Price Index is published on 4 January 1999.
The Return LuxX Index is similar to the Price Index except that it takes into account the stripped net dividends. In so doing it enables the investors to assess their return on investment. The Return Index has been published since 31 March 1999.
There are also two GDR indices (Lux GDRs India and GDRs Taiwan) and one fund index for responsible investment (Lux RI Fund).Bond indices are also available.

16.6 Frankfurt Stock Exchange

History
The Frankfurt Stock Exchange (German: Frankfurter Wertpapierbörse, FWB) is located at Frankfurt, Germany and is the world's 10th largest stock exchange based on market capitalization. The Frankfurt Stock Exchange, European futures exchange Eurex and the clearing company Clearstream is owned and operated by Deutsche Börse. It is located at Bankenviertel, a central business district at Innenstadt.
The Frankfurt Stock Exchange accounts for over 90 percent of the turnover in the German market and a very large share of the European market. In 2010, the Frankfurt Stock Exchange agreed to move to abolish floor trading and completed this transition in May 2011. Today, trading takes place exclusively via the Xetra system, with redundant floor brokers taking on the role of market-makers on the new platform.
Approximately 47% of the 300 market participants in Frankfurt are international participants. As on November, 2010, companies from more than 80 countries list on the Frankfurt Stock Exchange with 49% from North and South America, 31% from Europe (including Russia), 14% from Asia and 6% from Australia and Africa.
The Frankfurt Stock Exchange has more than 250 international trading institutions and more than 4,500 traders. Investors directly connected to the Frankfurt Stock Exchange represent 35% of the world's investment capital.
Trading
Floor trading takes place on the floor of the Frankfurt Stock Exchange. However, access to the trading floor is not available to the general public but to authorized trading participants, who buy and sell securities on behalf of their customers.

Trading Floor Webcam

Live Impression of Floor Trading: The view from the Visitors Gallery of the Frankfurt trading floor shows specialists' desks in front of the DAX board backdrop, a view that many private investors relate directly to the Frankfurt Stock Exchange. Very few know that the largest part of trading takes place somewhere else.

In fact, the electronic trading system Xetra has increasingly replaced broker supported floor trading. Large domestic shares as well as ETFs, for instance, are traded primarily through Xetra. However, order in less liquid securities, smaller cap shares, foreign shares, investment funds and almost all bonds are still traded on the Frankfurter floor. Moreover, early trading from 8 to 9 a.m. and after the closing of trade on Xetra at 5.30 p.m. late trading in all securities takes places exclusively on the floor. However, not only the volumes, but also the processes in floor trading have changed a lot in recent years.

Until 2002, official exchange brokers used to sit at the floors' desks. They were admitted to the floor by the Exchange Supervisory Authority and usually matched the buyers and sellers on the floor by open outcries. Since the 4th Financial Markets Promotion Act came into effect in July 2002, lead brokers have been calculating the prices of the securities allocated to them.

Between 2002 and 2011 floor trading was supported by lead brokers (Skontroführer) on a system called Xontro. This meant that market participants no longer had to come to the trading floor, but make their deals from special trading rooms from within their banks.

Since 2011 specialists offer quotes and supervise executed trades while price fixing is automatically done in Xetra.

Performance

The trading indices in Frankfurt are DAX, DAXplus, CDAX, DivDAX, LDAX, MDAX, SDAX, TecDAX, VDAX and EuroStoxx 50.

16.7 Case Study

Market and regulatory change

London Stock Exchange Group is Europe's leading diversified exchange business, incorporating London Stock Exchange, Borsa Italiana, MTS and Turquoise. Headquartered in London with significant operations in Italy and Sri Lanka, the Group offers international business unrivalled access to Europe's capital markets. In addition, the Group provides high performance technology solutions to exchanges, depositories, brokerages and regulatory bodies in the United States, Europe, Africa and the Asia-Pacific region. The Group operates in a rapidly evolving economic, competitive and regulatory environment. The exchange industry is undergoing significant and continual change, at both domestic and international levels.

A client-centered business

During 2009 and 2010, the Group developed its corporate strategy to respond to such an environment, and focused on diversifying its business, aligning its interests with those of its customers and exploring new partnership opportunities across the globe. To facilitate effective decision-making, the company recognized the need for high quality market

information and intelligence. Its workforce has to keep on top of market developments as and when they occur, and the breadth and diversity of its client base means each employee needs to keep informed about emerging trends and issues across a range of sectors.

FT intelligence

The Financial Times was identified by the Group as an important source of information to meet these requirements. With over 550 journalists around the world, the FT validates and distils information from hundreds of sources to deliver accurate news and analysis on global business, finance and politics. It also has a section, the FT Trading Room, dedicated to the global exchange industry. As part of a corporate license, access to FT.com was provided to a specified group of users in the company. Users receive unlimited access to FT journalism, including blogs, videos and interactive graphics, and a full range of online alerting tools. “I’ve found the FT corporate service both flexible and easy to use,” said Jonny Blostone, Press Officer at London Stock Exchange Group. “FT.com is simple to access and it is straightforward to add users, track who has access and manage our subscription.” “Our FT.com subscription helps us meet the challenge of operating in today’s fast moving environment by giving people content to help them make quick, informed decisions.”

A business development tool

The Group’s international business development team promotes the benefits of a London listing to companies abroad. When travelling and meeting prospective clients, having a firm grasp of current news and ongoing issues affecting that region is essential. The team uses FT.com to access high quality real time news on global trading and technology. As Jon Edwards, Business Development Manager for Russia and the CIS at the London Stock Exchange, explained: “Whether I’m meeting clients in Moscow, talking to new companies in Astana, or speaking at a conference in Mongolia, I need to keep up to speed with what’s going on, locally and globally. FT.com means I can be confident of accessing timely, relevant and reliable news wherever I am that day.” FT.com is proving crucial in terms of the breadth of coverage, depth of analysis and access it has to leading industry figures. Users have made extensive use of the FT.com email alerts and the ‘Alphaville 6am Cut’ has been cited as particularly valuable.

Strategic information

The FT is used as a source of news and analysis for people across the business, from software developers to senior executives developing the Group’s corporate strategy. FT.com plays an important informative role in keeping the management team informed about external market influences such as politics, regulation, technological innovation and macroeconomic trends. By identifying and providing advance warning of emerging issues, the FT has helped the business respond quickly and take advantage of the opportunities available. The dynamic nature of the market intelligence on FT.com has also proved valuable in enabling executives to adapt and react effectively in fast moving situations.

16.8 Summary

Stock exchange originated from Europe, where the money lenders started trading the excess cash that they had. Gradually many brokers and money lenders started adapting this technique which fetched them extra money than what they gained through lending. Belgium stock exchange was introduced in the year 1531. There were many followers after this. The main characteristics of a stock exchange are the liquidity, taxes and the benchmarks. The unit mainly focuses on 4 major stock exchanges of the world – New York stock exchange, London stock exchange, Luxembourg stock exchange and the Frankfort stock exchange. It talks about the origin, the way of trading and also the indices of each stock exchange.

16.9 Self Assessment Questions

1. What are the characteristics of international stock exchanges?
2. Compare the various major players in international stock exchange.
3. List out the investment alternatives provided by various international stock exchanges?
4. What differences do you observe across international stock exchanges, in terms of trading and other offerings?
5. Why do you think, international exchanges are better sound than Indian stock exchanges?
6. Write short notes on:
   a. New York Stock exchange
   b. London Stock exchange
   c. Frankfurt Stock exchange
   d. Luxemburg Stock exchange.

16.10 Reference Books

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- Mark Grinblatt, 'Financial Markets and Corporate Strategy', Tata McGraw Hill Publishing Company, New Delhi.
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Unit – 17: Asian Stock Exchanges

Structure of Unit

17.0 Objectives

After completing this unit, you would be able to:

- Develop an understanding of the Asian stock markets;
- Compare the features of the exchanges;
- List out the investment alternatives available in each of these exchanges.

17.1 Introduction

The Asian Equity markets are large markets and fast developing. Since 1990, Asia's capitalization excluding Japan and Australia has raised 10 fold and is more than the double of the US to $13.7 trillion constituting of about 30% of the world capitalization. The main financial hubs are Hong Kong, SAR, Singapore and Japan which account for two thirds of Asian equity assets. Markets in countries like Malaysia, Taiwan, and China play an important part too and are large markets. But for most part market capitalization remains well below industrial country levels. With the development of the Asian markets there has been a change in the properties of the market like a better liquidity and an improvement in the breadth. Since 1990 market liquidity (share turnover\market capitalization) has risen almost four times. Market breadth is greater in Asia now than in emerging markets, although less than other industrial countries.

17.2 The Indian Stock Exchange

India has been witnessing tremendous growth ever since it opened up its economy for trade and investment. Indian stock market is one of the oldest stock market in Asia. The origin could be dated back to the close of 18th century when the East India Company used to transact loan securities. In the 1830s, trading started on stocks of companies and

Banks in Bombay. The brokers who took part were very less and hence trading is said to have started taking place under a Banyan tree during 1850s. Each of these brokers is said to have invested one rupee. Gradually after the American Civil War, the number of brokers expanded to 250. This group started the Native Share and Stockbrokers Association in 1875, came formally known as the Bombay Stock Exchange. Indian stock market is dominated by the two major stock exchanges. They are the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). The NSE was founded in 1992 and started trading in 1994. However, both exchanges follow the same trading mechanism, trading hours, settlement process etc. BSE has about 4,700 listed firms, whereas the NSE has about 1,200 listed firms.

17.2.1 BSE and NSE

Initially, BSE followed an open outcry floor trading exchange later in 1995, the Bombay Stock Exchange switched to an electronic trading system. This automated, screen-based trading platform called BSE On-line trading (BOLT).BOLT was a "quote driven" and "order driven system". The BSE has also introduced the world's first centralized exchange-based internet trading system. Almost all the significant firms of India are listed on both the exchanges. NSE enjoys a dominant share in spot trading, with about 70% of the market share, almost a complete monopoly in derivatives trading, with about a 98% share in this market. NSE has two segments namely the capital market segment and the wholesale debt market.NSE is an order driven system. Both exchanges compete for the order flow that leads to reduced costs, market efficiency and innovation.

- **Trading Mechanism**

Trading at both the exchanges takes place by an order driven system. The market orders placed by the buyers and sellers which maybe either limit orders or market orders. A limit order pre-specifies the price limit while the market order specifies to buy or sell at the best prevailing price. The system matches the orders for buy and sell constantly based on price-time priority. Circuit breakers are available which are implemented on individual stocks or the market as a whole in case of abnormal movement of the prices.

- **Settlement Cycle and Trading Hours**

The settlement period of an equity market is T+2 days rolling settlement. All trading on stock exchanges takes place between 9:55 am and 3:30 pm, Indian Standard Time (+ 5.5 hours GMT) for five days a week. Delivery of shares must be made in dematerialized form. Each exchange has its own clearing house, which takes care of the settlement risk by playing a role of a central counterparty.

- **Market Indices**

The market index shows the overall movement of stock prices in the market. The Indian market indexes are Sensex and Nifty. Sensex is the market index for BSE and it reflects the movement of 30 sensitive stocks from the stock exchange. Nifty is the market index representing NSE and it reflects 50 sensitive stocks selected based on market capitalization and liquidity.

- **Market Regulations**

The responsibility of development, regulation and supervision of the stock market lies with the Securities & Exchange Board of India (SEBI). SEBI has consistently been implementing market rules to ensure best market practices. It is vested with powers of imposing penalties on market participants, in case of a breach of protocols.

- **Investment Opportunities**

India gave permissions for foreign investments only since the 1990s. Foreign investments are classified into two categories: Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI). FDI is when the investor takes part in the day to day operations of the company while FPI is an investor who does not control the working of the company. To make portfolio investments in India, one should be registered either as a Foreign Institutional Investor (FII) or as one of the sub-accounts of one of the registered FIIs. Both registrations are granted by SEBI. Foreign institutional investors mainly consist of mutual funds, pension funds, endowments, sovereign wealth funds, insurance companies, banks, asset management companies etc. At present, India does not allow foreign individuals to invest directly into its stock market but those with high net worth can be registered as sub accounts of FIIs.

Foreign institutional investors and their sub accounts can invest directly into any of the stocks listed on any of the stock exchanges. FIIs can also invest in unlisted securities outside stock exchanges with the prior approval of RBI. An FII registered as a debt-only FII can invest 100% of its investment into debt instruments. Other FIIs must invest a minimum of 70% of their investments in equity. The balance of 30% can be invested in debt. FIIs must use special non-resident rupee bank accounts, in order to move money in and out of India. The balances held in such an account can be fully repatriated.

- **Restrictions/Investment Ceilings**

The government of India prescribes the FDI limit and different ceilings have been prescribed for different sectors. Over a period of time, the government has been progressively increasing the ceilings. FDI ceilings mostly fall in the range of 26-100%. By default, the maximum limit for portfolio investment in a particular listed firm is decided by the FDI limit prescribed for the sector to which the firm belongs. However, there are two additional restrictions on portfolio investment. First, the aggregate limit of investment by all FIIs, inclusive of their sub-accounts in any particular firm, has been fixed at 24% of the paid-up capital. However, the same can be raised up to the sector cap, with the approval of the company's boards and shareholders.

Secondly, investment by any single FII in any particular firm should not exceed 10% of the paid-up capital of the company. Regulations permit a separate 10% ceiling on investment for each of the sub-accounts of an FII, in any particular firm. However, in case of foreign corporations or individuals investing as a sub-account, the same ceiling is only 5%. Regulations also impose limits for investment in equity-based derivatives trading on stock exchanges.

- **Investment Opportunities for Retail Foreign Investor**

Foreign entities and individuals can gain exposure to Indian stocks through institutional investors. Many investors in India focus on mutual funds which are growing in popularity among retail investors. Investments can be made through some of the offshore instruments, like Participatory Notes (PNs) and depository receipts, such as American Depository Receipts (ADRs), Global Depository Receipts (GDRs), and Exchange Traded Funds (ETFs) and Exchange Traded Notes (ETNs.)

As per Indian regulations, participatory notes representing underlying Indian stocks can be issued offshore by FIIs, only to regulated entities. Retail investors also have the option of investing in ETFs and ETNs, based on Indian stocks. Indian ETFs mostly make investments in indexes made up of Indian stocks. Emerging markets like India are fast becoming engines for future growth.

17.3 Japanese Stock Exchange

The largest stock exchange in Japan (Tokyo Stock Exchange) is headquartered in the city of Tokyo. The Tokyo Stock Exchange (TSE) was established on May 15, 1878. The exchange has more than 2,200 listed companies, with a combined market capitalization at the end of 2010, $3.8 trillion, making it the third-largest in the world by this measure. The exchange is home to the largest and best-known Japanese giants with a global presence, including Toyota, Honda and Mitsubishi.

At the peak of the Japanese asset price bubble in December, 1989, when the Nikkei 225 index reached a record high of 38,957, the Tokyo Stock Exchange accounted for a staggering 60% of global stock market capitalization. The TSE's combined market capitalization shrank dramatically over the next two decades, as the Japanese economy struggled with a recessionary environment and the Nikkei plunged in value. The acronym TSE for the Tokyo Stock Exchange should not be confused with Canada's Toronto Stock Exchange, which is known by the acronym TSX.

Challenges for Japan Stock Exchange

Impact of the Great East Japan Earthquake- The major earthquake disaster affected all JSDA members in some way or other. Along with the collapse in stock prices after the major earthquake hit on March 11, 2011, there were large amounts of advances made to customers by many JSDA members to avoid settlement fails by customers on deposits for futures, options, margin and other transactions.

17.4 Stock Exchanges of China

The Shanghai Stock Exchange is a membership institution closely monitored by the China Securities Regulatory Commission (CSRC). It bases its development on the principle of “legislation, supervision, self-regulation and standardization.” Its functions are providing a marketplace and facilities for the securities trading; formulating business

rules; accepting and arranging listings; organizing and monitoring securities trading; regulating members and listed companies; managing and disseminating market information. SSE is open for trading from Monday to Friday. In the morning session, the market opens with a call auction between 9.15 am and 9.25 am, which is followed by a continuous auction between 9.30 am and 11.30 am. The afternoon session begins with a continuous auction between 1.00 pm to 3.00 pm and then block trading takes place between 3.00 pm to 3.30 pm. The market is closed on weekends and public holidays.

The Shenzhen Stock Exchange (http://www.szse.cn/main/en/) also is a membership institution closely monitored by CSRC. Like the Shanghai Stock Exchange, stocks are further divided into A-Shares and B-Shares, with A-Shares limited to domestic investors and limited foreign investors, while B-Shares are available to domestic individuals and foreign investors. This Exchange is now composed of its main board, small and medium enterprises board, and Chi Next, a notable new board established for growth enterprises in 2009. Securities listed on SSE fall into four categories: stocks, bonds, (collective) investment fund units and warrants. Stocks are further divided into A-Shares and B-Shares. Trading in both A- and B-Shares and investment funds is subject to a 10% daily price up and down limit, except for the first trading day. Special treatment shares (ST) are subject to a 5% daily price up and down limit. The price limits on warrants are based on that of their corresponding underlying securities and are determined by multiplying the conversion ratio by a certain coefficient. The price of a block trade of securities with a price limit is determined by the buyer and seller within the price limit applicable to such securities on the day of trading. The price of a block trade of securities without any price limit is negotiated by the buyer and seller within 30% of the previous closing price or between the highest and lowest traded prices on the day of trading. In the absence of any transaction for a particular stock, the closing price of the previous trading day will be the execution price. (Trading on the Shenzhen Stock Exchange is driven by orders on price-time priority. A price limit of 10% is imposed for common stocks and 5% for stocks under special treatment. The market trades four hours a day and five days a week: 9:30–11:30 am; 1:00–3:00 pm.).

The Hong Kong Stock Exchange is a separate institution with its own governing rules. Some of the trading rules include the following: (i) Rules of the Exchange; (ii) Disciplinary Procedures; (iii) Operational Trading Procedures; (iv) Rules, Regulations and Procedures of the Futures Exchange.

A company is deemed to be red chip (China-controlled company), if (i) the company has at least 30% shareholding held in aggregate directly by mainland China entities, and/or through companies which are controlled by mainland China entities, or (ii) the company has below 30% but 20% or above shareholding held in aggregate directly by mainland China entities, and/or through companies which are controlled by Mainland China entities and, there is a strong influential presence, on a judgmental basis, on the company's board of directors. Mainland China entities include State-owned organizations and entities controlled by local authorities or private business.

- **Challenges faced by Chinese Stock Exchanges**

Capital structure of Chinese market is one of its key obstacles to further development. There are very few stocks that would fit the definition of blue-chip trading on China's mainland exchanges. Whereas most developed markets are more dominated by a limited number of large cap stocks, China s market is cramped by a multitude of small cap stocks. This feature allows for increased speculation and higher turnover for both investors and indexes among other problems.

Moreover, China's political economy creates unique investment challenges. In China, the state plays a key role in setting economic and, often, corporate agendas. Accordingly, understanding the China market's history and exogenous forces, and also developing a balanced view on the Communist Party's political imperatives and China's developmental path, are mandatory prerequisites for all investors.

- **Government order**

One such exogenous factor is the role of China's capital markets in the country's economy. In most developed markets, the primary function of an equity market is to provide price discovery, allowing companies to raise capital for profitable investment opportunities. Stock markets also reflect the development of an economy, including the growth model, structure and pattern. The creation of the Chinese stock market in the early 1990s, however, served a different purpose: to recapitalize and restructure large state-owned enterprises (SOEs) that otherwise would have gone under.

17.5 The Hong Kong Stock Exchange

The Hong Kong Stock Exchange is Asia's second largest stock exchange in terms of market capitalization. The first is the Tokyo Stock exchange. It is the sixth largest in the world. It has 1600 around listed companies, out of which around 770 are from china and 730 are from Hong Kong and the remaining from other countries.

The Securities and Futures Commission: The Principal regulator of Hong Kong Securities and Futures Markets is the SFC. It is an independent statutory body established in 1989. It is the apex body responsible for administering the laws governing the stock markets there, apart from facilitating the developmental and regulatory processes. The basic objective is:

- To maintain and promote fairness, efficiency, competitiveness, transparency and orderliness of the underlying;
- To promote understanding by the public of the operation and functioning of the securities and futures industry;
- To provide protection for members of the public investing in or holding financial products;
- To minimize crime and misconduct in the securities and futures industry;
- To reduce systemic risks in the industry;
- To assist the Financial Secretary in maintaining financial stability.

Operational Divisions:

The SFC is divided in to four divisions for optimizing its functions. They are as follows:

a. The Corporate Finance Division is responsible for functions relating to listing, administering takeovers and mergers etc. It also monitors the activities of listed and unlisted companies.
b. The Intermediaries and Investment Products Division is responsible for devising and administering licensing requirements. It supervises and monitors the conduct of intermediaries for the efficient marketing of investment products.
c. The Enforcement Division is responsible for conducting market surveillance to undertake inquiries and incorporating disciplinary actions against misconduct.
d. The Supervision of Market Division supervises and monitors activities of the exchanges and clearing houses. It promotes and develops self-regulation by market bodies.

The Hong Kong Stock market has the following exchanges:

1. **HKEX:** It is a recognized exchange controller under the SFO. It operates the only stock exchange and futures exchange in the country. It also monitors the clearing houses. The major clearing houses are Hong Kong Securities Clearing Company Limited (HKSCC), HKFE Clearing Corporation Limited (HKCC) and The SEHK Options Clearing House Limited (SEOCH).
2. **The Stock Exchange of Hong Kong Limited**: The stock exchange is a wholly-owned subsidiary of HKEX. It is a recognized exchange company under SFO. It operates and maintains a stock market in Hong Kong and companies listed on the main board and Growth Enterprise Market (GEM).
3. **Hong Kong Futures Exchange Limited:** The futures exchange is a wholly owned subsidiary of the HKEX. It operates and maintains futures market.

17.6 The Singapore Stock Exchange

Singapore Exchange Limited is a holding company located in Singapore to offer different investment services. It is a member of the World Federation of Exchanges and the Asian and Oceanic Stock Exchanges Federation. The Singapore Exchange was formed in the year 1999. It originally was in the form of a holding company. According to the official website of the exchange, SGX was formed on 1 December 1999 as a holding company. The share capital of some former exchange companies, namely Stock Exchange of Singapore (SES), Singapore International Monetary Exchange (Simex) and Securities Clearing and Computer Services Pvt. Ltd. (SCCS) was cancelled and new shares issued in these companies were fully paid up by SGX. This way, all assets previously owned by these organisations were transferred to SGX. The shareholders previously holding share in SES, Simex and SCCS received newly issued SGX shares. It is second exchange in the Asia Pacific region to be listed through a public offer and a

private placement. It is a component of benchmark. Singapore offers various off shore trading opportunities for investors from other countries.

According to various web sources, SGX operates several different divisions, each responsible for handling specific businesses.

- SGX ETS (Electronic Trading System): provides global trading access to SGX markets where 80 percent of the customers are from outside Singapore.
- SGX DT (Derivatives Trading): provides derivatives trading.
- SGX ST (Securities Trading): provides securities trading.
- SGX DC (Derivatives Clearing): subsidiary for clearing and settlement operations.
- SGX Asia Clear: offers clearing services for over-the-counter (OTC) oil swaps and forward freight agreements.
- SGX Reach: an electronic trading platform.
- Central Depository Pte Ltd: subsidiary responsible for securities clearing, settlement and depository services.
- Asian Gateway Investments Pte Ltd: wholly owned subsidiary.
- Singapore Exchange IT Solutions Pte Ltd: provides computer services and maintenance as well as software maintenance.

Having discussed the features and performance of leading stock exchanges in the Asian region, a snap shot of the performance of the stock exchanges in the Asia Pacific region is presented in the table provided below.

Table 17.2 Comparative Performances of Asia Pacific Exchanges

EXCHANGE	YTD % chg	52 WEEK CHANGE			3-yr % chg
		High	Low	% Chg	
DJ Asia-Pacific TSM (Asia-Pacific)	**-2.4**	1471.96	1279.77	**3.6**	0.8
All Ordinaries (Australia)	**1.8**	5450.1	4633.5	**7.4**	3.6
S & P/ASX 200 (Australia)	**1.6**	5441.4	4656.0	**7.6**	4.2
Dow Jones China 88 (China)	**-6.4**	227.41	174.96	**-20.1**	-10.8
Shanghai Composite (China)	**-1.9**	2365.59	1950.01	**-10.7**	-10.3
Hang Seng (Hong Kong)	**-3.9**	24038.55	19813.98	**-1.9**	-0.3

S & P BSE Sensex (India)	**-1.7**	21373.66	17905.91	**7.7**	5.7
Jakarta Composite (Indonesia)	**8.2**	5214.98	3967.84	**-1.5**	10.4
Nikkei 300 (Japan)	**-6.6**	265.90	193.76	**24.3**	9.3
Nikkei Stock Avg (Japan)	**-8.9**	16291.31	11253.97	**27.2**	12.4
Topix Index (Japan)	**-6.4**	1306.23	953.72	**24.3**	9.3
Kuala Lumpur Composite (Malaysia)	**-2.1**	1872.52	1621.36	**12.4**	7.1
NZSX-50 (New Zealand)	**4.9**	4969.65	4226.44	**17.6**	13.8
KSE 100 (Pakistan)	**2.0**	27104.70	17492.00	**43.0**	30.7
PSEi (Philippines)	**6.9**	7392.20	5738.06	**-6.3**	19.1
Straits Times (Singapore)	**-1.9**	3454.37	2960.09	**-5.6**	1.5
Kospi (South Korea)	**-3.1**	2059.58	1780.63	**-3.0**	unch.
Colombo Stock Exchange (Sri Lanka)	**-0.5**	6488.85	5605.26	**2.6**	-8.1
Weighted (Taiwan)	**-0.6**	8625.30	7663.23	**7.7**	0.1
SET (Thailand)	**0.2**	1643.43	1224.62	**-15.5**	10.0

17.7 The Bursa Malaysia

According to the official website of the exchange, Bursa Malaysia is an exchange holding company established in 1973 and listed in 2005. Today, it is one of the largest bourses in Asia, hosting just fewer than 1,000 diversified companies. The exchange operates and regulates a fully integrated exchange offering a comprehensive range of exchange-related facilities including listing, trading, clearing, and settlement and depository services. They also offer a diverse spread of products covering equities, derivatives, offshore listings and services and bonds and Islamic offerings. In assisting the development of the Malaysian capital market, Bursa Malaysia is committed to provide the infrastructure needed to create a globally competitive and vibrant marketplace. Bursa Malaysia (Company) adheres to high standards of corporate governance practices under the leadership of the Board, as guided by the Malaysian Code of Corporate Governance (Code) which was revised on 1 October 2007. The Company's Corporate Governance Statement is available in the Company's Annual Report.

- **Bursa Malaysia Securities**

Provide, operate and maintain securities exchange.

- **Bursa Malaysia Derivatives**

Provide, operate and maintain a futures and options exchange.

- **Labuan International Financial Exchange Inc.**

Provide, operate and maintain offshore financial exchange.

- **Bursa Malaysia Bonds**

Provide, operate and maintain registered electronic facility for secondary bond market.

- **Bursa Malaysia Securities Clearing**

Provide, operate and maintain a clearing house for the securities exchange.

- **Bursa Malaysia Derivatives Clearing**

Provide, operate and maintain a clearing house for the futures and options exchange.

- **Bursa Malaysia Depository**

Provide, operate and maintain a central depository.

- **Bursa Malaysia Depository Nominees**

Act as a nominee for the central depository and receive securities on deposit for safe-custody or management.

- **Bursa Malaysia Information**

Provide and disseminate prices and other information relating to securities quoted on exchanges within the group.

- **Bursa Malaysia Islamic Services**

Operate all Islamic Markets businesses and activities initiated under Bursa Malaysia.

17.8 Integration and Transmission Effect

Understanding the nuances of stock market integration is important both for the industry practitioners and academicians. Integration means close linkages between stock markets scattered across the globe. While, integration is criticized mainly for contributing to the spread of financial shocks, it has increased the opportunity sets for investors. Investors stand benefitted on account of diversification. Integration has provided opportunities for investors to diversify in order to enhance the risk-adjusted returns of their portfolios. Though, theoretically speaking, integration facilitates the flow of capital from developed economies to emerging economies, practically, we have witnessed markets becoming more vulnerable to financial shocks. This phenomenon of one market getting affected by the shocks of other is known as transmission effect.

Indian financial system was almost insulated from the recent financial turmoil that originated in the West. Though, opinions differ, there is a consensus on insulation. While economies try to integrate, it is for the financial system and the institutions to decide the optimum level of integration that each economy would sustain. The level of integration and the coping up mechanisms should be decided and monitored regularly to help the economy getting led to sustained development.

17.9 Summary

Most of the trading in the Indian stock market takes place on its two stock exchanges: the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). The two prominent Indian market indexes are Sensex and Nifty. Foreign investments are classified into two categories: Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI). It is important to have a better understanding of the Challenges faced in Indian Stock Markets, and about Japan and China Stock Markets. Capital market is characterized by a large variety of financial instruments such as equity and preference shares, fully convertible debentures (FCDs), non-convertible debentures (NCDs) and partly convertible debentures (PCDs) currently dominate the capital market, however new instruments are being introduced such as debentures bundled with warrants, participating preference shares, zero-coupon bonds, secured premium notes, etc. The major Asian stock exchanges are located in Japan, Malaysia, Singapore, Hong Kong and China. All these stock markets are interdependent and integrated. There are both advantages and disadvantages of financial integration. The sustainable level of integration should be decided by the regulatory authorities and lead integration to the development of an economy.

17.10 Self Assessment Questions

1. What are the investment opportunities in Indian stock exchanges for investors?
2. What are the challenges faced in Asian stock market?
3. Assess the quality of Asian stock market indices.
4. Find the impact of financial crisis on Asian stock exchanges.
5. Discuss in brief the effects of integration on Indian economy.
6. Explain the trading mechanism of:
   a. BSE and NSE(India)
   b. Japanese Stock Exchange
   c. Singapore Stock Exchange

17.11 Reference Books

- William O'Niel, 'How to make money in stocks'.
- Mark Minerveni, 'Trade like a stock market wizard'.
- Martin Zweigh, 'Winning on Wall street'.
- John Murphy, 'Technical Analysis of Financial Markets'.
- Benjamin Graham, 'The Intelligent Investor'.
- Jeremy Siegel, 'Stocks For The Long Run'.
- Warren Buffett and Lawrence Cunningham, 'The Essays of Warren Buffett: Lessons for Corporate America'.
- Shenzen Stock Book, 2013.
- Richard J. Teweles and Edward S. Bradley, 'The Stock Market', Wiley, 7th edition,

Appendix-1 : List of Asian Stock Exchanges

Azerbaijan	• Baku Interbank Currency Exchange • Baku Stock Exchange (BSE)
Bangladesh	• Chittagong Stock Exchange(CSE) • Dhaka Stock Exchange (DSE)
China	• China Financial Futures Exchange (CFFEX) • Dalian Commodity Exchange(DCE) • Shanghai Futures Exchange(SHFE) • Shanghai Steel Electronic Exchange • Shanghai Stock Exchange (SSE) • Shenzhen Stock Exchange • Zhengzhou Commodity Exchange (ZSE)
Hong Kong	• Chinese Gold & Silver Exchange Society (CGSE) • Growth Enterprise Market • Hong Kong Exchanges (HKEx)(holding company of Stock Exchange of Hong Kong, Hong Kong Futures Exchange and Hong Kong Securities Clearing Company)
Indonesia	• Indonesia Stock Exchange (IDX) • Jakarta Futures Exchange (JFX)
Japan	• Central Japan Commodity Exchange (C-COM)(incorporates Osaka Mercantile Exchange) • Kansai Commodities Exchange (KEX) (incorporates Fukuoka Futures Exchange) • Fukuoka Stock Exchange • Jasdaq Securities Exchange • Nagoya Stock Exchange • Osaka Securities Exchange(OSE) • Sapporo Securities Exchange • Tokyo Commodity Exchange(TOCOM) • Tokyo Financial Exchange (TFX) (formerly Tokyo Financial Futures Exchange) • Tokyo Grain Exchange (TGE) • Tokyo Stock Exchange (TSE)
Kazakhstan	• Kazakhstan Stock Exchange(KASE)
Kyrgyzstan	• Kyrgyz Stock Exchange

Malaysia	• Bursa Malaysia (formerly Kuala Lumpur Stock Exchange) • Labuan International Financial Exchange (LFX) (offshore financial exchange)
Maldives	• Maldives Stock Exchange
Mongolia	• Mongolian Stock Exchange
Nepal	• Nepal Stock Exchange (NEPSE)
Pakistan	• Islamabad Stock Exchange (ISE) • Karachi Stock Exchange (KSE) • Lahore Stock Exchange (LSE)
Singapore	• Singapore Commodity Exchange(SICOM) • SGX - Singapore Exchange(Stock Exchange of Singapore and the Singapore International Monetary Exchange)
South Korea	• Korea Exchange (KRX)(consolidates Korea Stock Exchange, KOSDAQ Market and the Korea Futures Exchange)
Sri Lanka	• Colombo Stock Exchange (CSE)
Taiwan	• GreTai Securities Market • Taiwan Stock Exchange (TSEC) • Taiwan Futures Exchange(TAIFEX)
Thailand	• Agricultural Futures Exchange of Thailand (AFET) • Stock Exchange of Thailand(SET)
Uzbekistan	• Tashkent Republican Stock Exchange • Uzbek Commodity Exchange

Unit - 18: Investment Alternatives

Structure of Unit

18.0 Objectives

After reading the unit, the student shall be able:

- To develop an understanding of the alternatives available at the global level;
- To present a sketch of the investment opportunities available for an investor;
- To evaluate the features of ADRs and GDRs as effective alternatives;
- To analyze the alternative choice of funding;
- To select and suggest a suitable alternative for a firm given conditions;
- To perform a cost-benefit analysis of each of the alternatives.

18.1 Introduction

Investment avenues are plenty in modern world. The more the availability, the more difficult it is to choose. Savings is the output of hard earned money. The purpose of savings is to optimize returns. Unless these savings are channelized into productive avenues, the whole purpose of investment itself is lost. While savings are not exposed to risks, investments are. So an investment program has to be planned only after taking into consideration, the risk tolerance of an individual. Similarly investment has to be planned only by a person who has sound knowledge of each of the avenues along with the risk-sets associated with them. With higher degree of integration across markets, every economy reacts to financial shocks of other economies. Thus it is always advisable to invest in a portfolio of equity, debt and mutual funds. Mutual funds are managed portfolio. Indian stock market is semi-efficient in nature when compared to its western counterparts. After the introduction of electronic trading system, the information flow has become faster. But sometimes, in developing countries like India, sentiments play major role in price movements, fluctuations, where investors find it difficult to predict the future with certainty. Some of the events affect economy as a whole, while some events are sector specific. Investment traditionally meant investing in equity, bonds etc. that too only buying. Buying is known as “Long” in investment parlance. Selling is known as “shorting”. Traditionally investment connoted only long strategies. But modern investment includes shorting, hedging, speculation and arbitraging.

18.2 Investment Alternatives within a Country

The first sub heading presents an exhaustive list of investment avenues with in a country. But investment alternatives are not limited within geographical boundaries of a country. Now days, investors invest across financial markets. So the subsequent headings shall present list of avenues across the world.

18.2.1 Equity and Preference Shares:

Equity investments represent ownership in a running company. By ownership, it is meant a share in the residual profits and assets of a company. Investing in equity shares does not ensure a fixed return. Residual profits mean the profits that are available after fulfilling the fixed obligations of a company. Fixed obligations include interest payable on bonds and long term loans, and preference dividend. The company is also not obliged to pay dividends regularly. However, if the company feels that reinvesting profits into the business would prevent the company from financial distress, then it shall do so. Investors can invest in equity shares for capital gain. The basic objective of a company is to maximize wealth of its shareholders. A company should strive to increase the market price of its share. Thus equity is considered as a risky investment but at the same time, they are most liquid investments due to presence of stock markets. Equity shares of companies can be classified as follows:

a. Blue Chip Shares:

These are shares of companies that have been doing extremely well in the stock market. These are usually well established companies. The word blue-chip shares represent the shares of those companies that are financially sound, well established and widely accepted. These shares generally do not succumb to the adverse effects of economic downturn. They withstand to all pressures. Investors prefer such companies for long term investments.

b. Income Shares:

These are the shares of the companies which have stable operations. These companies have a high dividend payout ratio and when the dividends paid are high it implies that the profits saved for company is less and hence less opportunities of growth. So investors preferring regular returns prefer income shares for their investments.

c. Growth Shares:

Companies which have secured high positions in respective industries are termed as growth shares. It is, sometimes, said that these shares grow at a rate faster than that of the Gross Domestic Product of a country. They generally pay fewer dividends. Investors who prefer growth rather than income invest in growth shares.

d. Cyclical Shares:

Certain shares react to industry cycles. Their performance is also based on the general prospects of the industry to which it belongs. These shares are known as cyclical shares. The market prices of these shares are affected by the economic conditions of a country.

e. Defensive Shares:

Certain shares do not react much to the market conditions. If the market moves up, these shares do not proportionately go up. At the same time, these shares do not go down when the market conditions are not encouraging. The beta of these shares is below 1 and investors who are not willing to take risk invest in defensive shares.

f. Speculative Shares:

The characteristics of these shares are similar to those mentioned above. Modern portfolio theory believes in the dictum that "Higher the risk, higher the return". These shares are meant for investors who are aggressive. They prefer high returns, hence prefer these shares.

Preference share holders are legally entitled to receive a certain amount of dividend before any dividend is issued to equity share holders. Read unit 20 for more detail.

18.2.2 Debentures or Bonds:

Debentures or bonds are long term investment options with a fixed stream of cash flows depending on the quoted rate of interest. They are considered relatively less risky. Amount of risk involved in debentures or bonds is dependent upon who the issuer is. For example, if the issuer is government, the risk is assumed to be zero. Following alternatives are available under debentures or bonds:

- Government Securities
- Savings Bonds
- Public Sector Units Bonds
- Debentures of Private Sector Companies
- Preference Shares

18.2.3 Money Market Instruments:

Financial markets can be classified into capital and money market. While capital market fulfills the long term needs of investors, money market fulfills the short term needs. Money market represents the short term segment of the debt market. It is less than 1 year. Corporate entities can utilize their idle working capital by investing in money market instruments. Some of the money market instruments are

- Treasury Bills
- Commercial Paper
- Certificate of Deposits

18.2.4 Mutual Funds:

All investors need not have adequate knowledge of the financial markets. All of them need not have enough time to spend for managing their investments. For those class of investors, mutual funds are advised. They are professionally managed portfolios. Mutual fund is an investment mix of debts and equity and ratio depending on the scheme. They provide with benefits such as professional approach, benefits of scale and convenience. In mutual funds also, we can select among the following types of portfolios:

- Equity Schemes
- Debt Schemes
- Balanced Schemes
- Sector Specific Schemes etc.

18.2.5 Life Insurance and General Insurance:

They are one of the important parts of good investment portfolios. Life insurance is an investment for security of life. The main objective of other investment avenues is to earn return but the primary objective of life insurance is to secure our families against unfortunate event of our death. It is popular in individuals. Other kinds of general insurances are useful for corporate. There are different types of insurances, some of which are as follows:

- Endowment Insurance Policy
- Money Back Policy
- Whole Life Policy
- Term Insurance Policy
- General Insurance for any kind of assets.

18.2.6 Real Estate:

Every investor has some part of their portfolio invested in real assets. The investment need not be on residential building alone. Normally the second house is considered as investment, as it assures a regular return and capital gain. Other than residential building an investor has the following options too. With the real estate sector seeing a boom, including this in the overall portfolio is good hedge.

- Agricultural Land
- Raw House
- Farm House
- Semi-urban Land
- Commercial Property

18.2.7 Antiques:

Investors who have an interest towards artistry, they prefer investing in antiques. Certain pieces of art are considered invaluable. They are priceless and runs to millions of dollars. These investments are considered for societal status and not for regular returns unless the profession of the investor is in the line of trading in artistic pieces.

18.2.8 Bullion and Commodities:

Investing in Gold, Silver, and Platinum has always been favorites of Indians. They appreciate very rapidly and ensure of capital gains. They are considered as consumption assets as they are used by the investors. But in western countries, they are considered as investments. With the advent of gold funds, it is now considered as a good investment option. Other than the precious metals, investors can choose from the wide array of commodities available.

18.2.9 Derivatives:

Financial market is not devoid of risks. The financial system is complete only when there is a parallel market that helps the investors in mitigating the risks that have arose because of their primary positions in the capital markets. Derivative markets aid in hedging the risks. But now days, derivatives are also considered as a separate asset class.

Investment in futures and options and index futures assure investors of good returns, provided, the investor has sound knowledge of dealing with derivatives. They are often labeled as "Double edged swords". Derivatives are available for all types of investments like currency, stock, bullion, commodity, real and weather investments. They are classified into four as follows:

- Forwards
- Futures
- Options
- Swaps

18.2.10 Non Marketable Securities:

Certain investments cannot be marketed. They give the right of ownership only to the primary investor. They assure the investors regular return during the life time, but do not appreciate and hence no capital gains can be expected.

- Bank deposits
- Post office investments like Savings Bank etc
- Provident Fund
- Company deposits
- Public Provident Fund

18.3 Global Avenues- American Depository Receipts

Few of the important alternative investments are investments in ADR, GDR, and Euro Bonds etc. These are explained in detail here.

Depository Receipts

Depository receipts are a type of negotiable instrument (transferable) financial security which allows investors to hold shares in equity of other countries.

American Depository Receipts

A. Definition

American Depositary Receipt (ADR) is a certificate that represents shares of a foreign stock owned and issued by a U.S. bank. The foreign shares are usually held in custody overseas, but the certificates trade in the U.S. Through this system, a large number of foreign-based companies are actively traded on one of the three major U.S. equity markets.

B. Different Type of ADR Issues

- **Level 1 -** These are found on over the counter market and have the loosest requirements from Securities and Exchange Commission (SEC).
- **Level 2 -** These are listed on an exchange or NASDAQ. They have slightly more requirements from the SEC, but they have greater visibility and trading volume.
- **Level 3 -** The issuer floats a public offering of ADRs on a U.S. exchange.

C. Advantages of American Depository Receipts

1) Access to Growth Markets – ADR can give access to emerging high growth markets that have a high GDP growth. Compared to the American stocks, ADRs would be a

better prospective investment .With diversification being the main focus of a portfolio ADR would be a good option.

2) Benefit from Currency Swings – ADRs can help in currency conversion and easy liquidity. For example, if you own shares of a European ADR and the euro strengthens against the dollar, any dividend increase will be boosted because the dividend payment has to be converted to dollars before you receive it.

3) It is a Convenient Way to Invest –Many investors would like to invest in foreign companies but would not have access to an overseas brokerage account. In purchasing an ADR, we invest in a foreign company through a domestic financial institution.

4) Tax Simplification – Transactions involving ADR would attract only tax in US dollars and hence it is easy to manage in contrast to taxes from different regions which would be a result of transactions in different stock markets.

D. Disadvantages of American Depository Receipts

1. Illiquidity – Companies which are well known in the US may not be a good choice to invest in as the liquidity would be low unless the investor wants to invest over a long period of time.

2. Diversification Risk – Diversification is very important. Low capital for investment along with illiquidity and scarcity in availability would lead to lack of proper diversification leading to a higher risk.

3. Foreign Exchange Risk –The investments made would be subjected to volatility of the currency rates which would in turn affect the returns from the investment. Investors should be aware of investing in countries which have historically experienced large swings in exchange rates, hyper-inflationary economies or currency revaluations.

4. Withholding and other Taxes – Since the investments are done overseas it is subjected to taxes at different rates in different countries. Because of this processing time the ADRs dividend payment may be more delayed than a payment from a domestic company.

5. Additional Fees – The fees necessary for the processing of the transactions with ADRs are deducted from the dividends.

18.4 Global Depository Receipts

A. Definition

A negotiable certificate held in the bank of one country representing a specific number of shares of a stock traded on an exchange of another country.

Listing of Global Depository Receipts

The exchanges on which the GDR trades are chosen by the company. Currently, the stock exchanges trading GDRs are the:

1. London Stock Exchange
2. Luxembourg Stock Exchange
3. NASDAQ Dubai
4. Singapore Stock Exchange
5. Hong Kong Stock Exchange

B. Advantages of GDRs

- **For Issuing Company:**

1. Indian companies with good profit record can get attractive prices for their equity shares through GDRs. This results in significant reduction in the cost of capital to the company.
2. Investors in GDR become shareholders. Therefore, depreciation in the value of the Indian Rupee does not lead to any extra outflow for the company. It affects the profits of the foreign investor.
3. GDR issues enhance the image of the issuing company in international markets.
4. GDR enables the issuing company to raise capital in two or more countries simultaneously and enlarge its shareholders base.
5. Sale proceeds of GDR are received in foreign currency. This enables the issuing company to pay off its foreign exchange liabilities in respect of project cost, foreign currency loans etc.

- **For Investors:**

1. GDRs provide an opportunity to foreign investors to diversify their investment portfolio. They can participate in Indian capital market.
2. Global custodians/safe keeping charges are eliminated, saving investors 30 to 61 basis points annually.
3. GDRs overcome obstacles that mutual funds, pension funds and other institutions may have in purchasing and holding securities outside their domestic markets.
4. GDRs are negotiable and liquid. An investor can any time sell his GDR and raise money.
5. GDRs overcome foreign investment restrictions, and are free from cumbersome paper settlement system.

C. Disadvantages of GDRs

1. A GDR issue dilutes earnings.
2. Pricing of GDRs are expected to be at discount to the local market price.
3. In India, GDR issues have an uneven track record for international investors.

18.5 Euro Bonds

A **Euro Bond** is a bond denominated in a currency not native to the issuer's home country. Eurobonds are commonly issued by governments, corporations, and international organizations.

A. Advantages

1. Higher yield is achieved by the investor if he invests in bonds in contrast to other avenues like shares, banks etc.
2. Bonds are less risky.
3. Issuing Eurobonds are cheaper source of financing than obtaining foreign currency bank loan.
4. Euro bonds give the companies to access to the international market and makes financing avenues more accessible.

5. It gives companies the ability to raise funds without having to issue shares.
6. Euro bonds are cheaper for the issuing company because there is no advertisement costs involved as they are issued to institutional investors.
7. It helps companies to obtain foreign currency liabilities equal to its foreign currency assets.

B. Disadvantages

1. The Eurobond issuing firm is affected by foreign exchange risk and may be open to issue costs if the debt does not match the foreign currency asset.
2. Euro bonds have a low liquidity rate and hence not preferable for investors who need the repayment in a short period of time.
3. There is always the risk of the issuing company not performing well and the maturity value of the Eurobond not being paid.

18.6 Case Study

Global Depository Receipts: The Values and the Challenges

It was Guaranty Trust Bank that opened the floodgate when in July it successfully issued and listed its Global Depository Receipt (GDR) on the London Stock Exchange (LSE). FCMB, Fidelity Bank and now Diamond Bank have followed to further attract foreign direct investment into the Nigerian banking sub-sector through issuance of the local equity-backed global financing instrument. This is an endorsement of Nigeria's indigenous banking brands by international investors at a time the banks are moving to the world stage. Seen in the local market context, the rising number of Nigerian banks issuing Global Depository Receipts is capable of correcting the lopsidedness that currently characterize primary market activities at the Nigerian stock exchange. The real sector players have remained crowded out of the primary market by the banks as progress is unlikely on the tenuous call for 'market access quota system' by legislation or regulation.

Indian companies, including those outside the financial services sector, have been issuing depository receipts for international trading since the early 1990s. In 1999, Hyundai Motor Company issued $500 million GDR to international investors. At the listing of Bank Muscat on the LSE on October 5, 2005, the Chairman of the Omani bank, Sheikh Abdul Malik Bin Abdullah Al Khalili, disclosed that the bank's $149million GDR was several times oversubscribed.

More remarkable is the official listing on the LSE of Oil and Gas Development Co. Ltd. (OGDCL) on December 8, 2006. OGDCL is a state owned Pakistan’s flagship company in the energy sector. The listing and trading of OGDCL's global depository shares (GDS) is reported to represent a significant milestone in Islamabad's privatization program.

The transactions mentioned above clearly point to the fact that whereas Nigerian banks only launched into the GDR market in 2007, the instrument has been popularly issued by both private and public sector companies in the mature and not-so-mature emerging markets for more than fifteen years. As reported recently in the local media, the attempt by Dangote Industries to issue Global Depository Receipts hit the rocks as the local conglomerate fell short on some of the vital requirements.

The banks are coming belatedly into the GDR market; it is obvious that our SOEs are far from attaining the level of value delivery and openness required for international listings. In any case, where compliance is enforced, not many of the corporations owned by the Nigerian state will meet listing requirements at the NSE.

Successful issuance of internationally traded Depository Receipts (DRs), especially in the emerging markets, is perceived as progress in regulation and disclosure in the local market. For the issuer, it evidences its sound corporate governance practice. That is the huge barrier to issuing the financing instrument, in spite of the big risk appetite of international investors.

In the last two years, the various regulatory agencies overseeing different operators in the Nigerian markets have been up and doing. They are aware that globalization is also converging market regulations, although Nigeria is more likely to attain world standard faster when she consolidates her financial markets regulators into one single authority.

In preparing for its GDR issuance, Diamond Bank Plc had put some of the advantages of depository receipts in public domain. For the issuer, there is prestige and greater exposure in the world market. The two-way exchange ability of GDR enhances liquidity of the equity concerned, and it encourages an international shareholder base. It enables investor savvy Diaspora communities to invest in the underlining equities of their countries of birth which is traded in their countries of residence - thereby overcoming the inhibitions of high risk perception of their indigenous markets.

For local investors, buying depository receipts immediately makes their portfolios global. Investors gain the benefits of portfolio diversification, while trading in their own market under familiar settlement and clearance conditions. The DR investors is able to reap the benefits of these usually higher-risk, higher-return equities, without having to go directly into foreign markets perceived to have peculiar and unfamiliar regulatory and disclosure risks.

India's relatively early entry into the international equity market through the GDR and the way it evolved her regulation of the market offer insights to a newly emerging market like Nigeria's. In India, and as would be found elsewhere, proceeds from the GDR are used to finance capital goods imports; capital expenditure including domestic purchase/installation of plant, equipment and buildings and investments in software development; prepayment or scheduled repayment of earlier external borrowings. Proceeds from DRs are not investible by the issuers in stock markets and real estate in India. These help in channeling the funds appropriately. They also address the concern expressed by the IMF in April on tracking FDI proceeds.

Most certainly the lead which the banks have taken in Nigeria in issuing internationally traded equities has its roots in the visionary banking consolidation program introduced by the Soludo-led CBN in July 2004. Of note too is the relatively benign risk perception of Nigeria since the exit from the Paris Club debt and the BB- sovereign rating of Nigeria by S&P. It is, however, imperative that the apex banking regulator continues to tune its framework for ensuring that Nigerian banks remain safe, sound and investor friendly.

Some of Nigerian CEOs in the banks have shown that they can respond positively to the right regulatory / market impetus. Although the new era of competition by Nigerian banks in the international arena has further opened up human capital gaps in the financial services system, nevertheless, the banks have the largest pool of skilled manpower in the economy.

A more acutely localized sectoral skill gap is partly the challenge operators in the real sector face. Most of their products are emblematic of this, and the few manufacturers in the economy have found no financing refuge in the capital market.

Finding a workable solution to lift the real sector out of the current situation is daunting. The TABB Group recently affirmed in a study that "global market consolidation will not spell the end for the international depository receipt as a financial instrument." It is therefore expected that more Nigerian banks will continue to embrace DRs in a way that will reduce the amount of capital they would have otherwise raised from the local primary market. This presents a glimmer of hope that the real sector will begin to show more presence in the primary market at the NSE.

But then, are the manufacturers near a position where they can deliver competitive returns to investors? It is also a sure bet that high net worth local investors will seize the opportunities for diversification of their portfolio through DRs and earn returns in dollars. That is the thinking behind the massive awareness programme in the local press by Diamond Bank in the run up to on-going GDR issue.

Questions:

1. Explain the challenges faced in issue of GDR.
2. Explain the advantages of GDR.
3. Discuss about the GDR issue at Nigeria.
4. What is the need for awareness on GDR?

18.7 Summary

Investing in a portfolio is considered better than investing in a single avenue as it helps in diversifying risk. Even this portfolio is subjected to risk as they are connected to one country; with financial markets more integrated and economies more liberated an investor has the extended alternative of adding stocks from other countries. Investment alternatives can be defined to include any investments outside of the mainstream and conventional asset types, such as stocks, bonds, cash, mutual funds or real estate. By including a bond component in the portfolio a fixed income is assured. This chapter begins with the various investment alternatives available within the domicile of a country. It goes on to explain the investment opportunities available outside the country. The case given as additional material presents the steps in issue of depository receipts.

18.8 Self Assessment Questions

1. Explain the term Investment Alternatives.
2. What are ADR and GDR? Explain their advantages and disadvantages?
3. What is Euro Bond? What are the advantages and disadvantages of investing on it?
4. What strategic decisions should an investor consider before deciding on an alternative?
5. Briefly outline the stages involved in the issue of depository receipts.
6. How ADRs and GDRs help in diversifying risks?
7 Explain the meaning of the term Global Portfolio with examples.
8 What is global diversification?

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Unit - 19: International Investment Strategies

Structure of Unit

19.0 Objectives

After studying this unit, you would be able to:

- Understand Investment Strategies useful at International level.
- Know the concept of Foreign Direct Investment.
- Know various types of FDI.
- Know merits and demerits of FDI.
- Understand the trends of FDI inflows.
- Know FDI policy framework in India.

19.1 Introduction

International trade and international investment are the most important economic activities which integrates world economy. During last fifty years nobility of factors across countries has increased rapidly. Now semi skilled and skilled labour has been moving from developing countries to developed countries in search of employment and capital has been moving from developed world to developing countries in search of high returns and wide opportunities of expansion. Foreign direct investment is the largest source of external finance for developing economies. Presently inward stock of FDI amounts about 30-35 percent of the developing economies' gross domestic product, which was only 10 percent in 1980. Foreign direct investment plays very important role in the development of developing countries. It enhances production capacity and export capability of the host country. On one hand production of various sectors increases and on the other hand competitive strength of host country increases on account of transfer of latest technology, strengthening infrastructure, raising productivity and generating employment opportunities.

Foreign director investment has often been considered as threat to the political and economic system of developing countries due to the huge capacity of Multinational Corporation to interfere and influence them. Some of the developing countries consider FDI as a modern form of economic colonialism and exploitation. Developing countries had very unpleasant experience of with previous colonial powers. If we made a deep study we find that FDI flows are preferred to other forms of external finance because FDI flows are non debt creating sources and the returns depend on the performance of the enterprises or projects financed by the foreign investors.

19.2 Concept of FDI

Foreign direct investment (FDI) refers to the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is sum of equity capital, reinvestment of earnings, other long term and short term capital as shown in the balance of payments. It usually involves participation in management, joint venture, transfer of technology and expertise.

FDI is defined as an investment involving a long-term relationship and reflecting a lasting interest and management control by a foreign enterprise or foreign direct investor in host country's economy in an enterprise other than that of the foreign direct investor. For acquiring substantial controlling interest, usually 10 percent or more equity is to be acquired in foreign entity or enterprise. The lasting interest means the existence of a long- term relationship between the direct investor and the enterprise where substantial degree of influence is exerted by the investor in the management of the enterprise.

19.3 Foreign Portfolio Investment

To understand the concept of FDI we should also know foreign portfolio investment and we should distinguish each other. Foreign portfolio investment(FPI) is an investment made by individuals, firms, or a public body in foreign financial investments such as foreign stocks (shares) government securities (bonds) etc. in FPI government stake in foreign enterprise is not significant enough to expert any management control. It is a kind of passive holding of securities and other financial assets by foreign individuals or financial institutions which does not entail management control of the issuing firm. FPI is influenced by high returns and diversification of risks.

If we distinguish FDI with FPI, we find that FDI is active and FPI is passive. The returns in FPI are in the form of non- voting dividends and interest payments where as in FDI, management control and returns are influenced by voting rights.

19.4 Types of FDI

Foreign Direct Investment may be classified under various heads. Major heads are discussed as under:

I. Inward FDIs and Outward FDIs

a. Inward FDI:

Inward FDI is that where foreign firms taking control over domestic assets (in host country). If we look from Indian perspective, direct investments made by foreign firms, such as Nissan, Honda, Samsung, LG, Electrolux etc. in India are examples of inward FDI.

b. Outward FDI:

Outward FDIs are those investments which are made by domestic firms' overseas and taking control over foreign assets. From the Indian perspective FDI which is also known as Direct Investment Abroad (DIA) is that which is made by Indian firms abroad, such as Tata Motors, Infosys, Videocon, ONGC etc.

II. Resource- seeking FDIs, Market- seeking FDIs and Efficiency- seeking FDIs

a. Resource- seeking FDIs:

MNCs (Multinational Corporation) invest in developing countries with availability of natural resources to get privileged access over those natural resources. Resource-seeking FDI are influenced by a number of factors such as availability of raw material, complimentary factors of production and physical infrastructure. Resource-seeking FDI are favoured by those countries which have vast natural resources but lack capital, technical knowhow and even physical infrastructure. Resource- seeking FDI have become less important in present than past but still those remain extremely important for investing in developing countries.

b. Market- seeking FDIs:

MNCs have been investing in countries where they see sizeable market and growth opportunities. Those FDI are helpful for the investing firms' to reduce transportation cost, improve buyer understanding and to overcome a number of regulatory controls in host country. Market seeking FDI are influenced by the size of market, market growth and regional integration.

c. Efficiency- seeking FDIs:

Efficiency seeking FDIs are those which provide the investing firms' not only access to markets but also economies of scope, diversification and international sourcing of inputs such as raw materials, land and labour.

Efficiency seeking FDIs are often favoured in production of motor vehicles, electrical appliances, textile, pharmaceuticals, etc.

III. Industrial FDIs and Non Industrial FDIs

a. Industrial FDIs:

Industrial FDIs are those where MNCs invest in manufacturing sectors. Major objectives of FDIs in manufacturing sector include the following:

- To achieve cost efficiency by getting cheaper raw material and man power.
- To overcome difficulties of trade barriers and import restrictions.
- To be closer to markets and serve better to the consumers.

b. Non Industrial FDIs:

Non Industrial FDIs are investments made by foreign firms in service sector. Major objectives of those FDIs are as under:

- Services are non- tradable, therefore FDIs become important to enter international markets.
- To create regular and easy contact with customers.
- To overcome regulatory obstacles and difficulties.

IV. On the Basis of Entry Modes

On the basis of entry mode, foreign direct investment may be of the following types:

a. Greenfield Investments

Investments which are made for the creation of new facilities or expansion of existing facilities are Greenfield Investments. MNCs enter international markets by way of Greenfield investments where technology skills and production skills are key factors. These investments are also influenced by institutional factors, cultural factors and transactional cost factors. In developing countries government policy favours Greenfield ventures and absences of right type of companies for acquisition also focuses foreign investors for Greenfield investment.

b. Mergers and Acquisitions

Mergers and Acquisitions are crucial tools for establishing overseas production facilities. Mergers and acquisitions have become popular mode of investment among firms worldwide. It is estimated that about 70-80 percent of FDI are in the form of mergers and acquisitions.

c. Brownfield Investments

A Brownfield Investment is where a site in advance used for “un-clean" business purpose, such as a steel mill or oil refinery, is cleaned up and used for a less polluting purpose, such as commercial office space or a residential area.

V. Other Forms

a. Backward Vertical FDI:

In backward vertical FDI, an industry abroad provides inputs for a firm's domestic production process.

c. Forward Vertical FDI:

In Forward vertical FDI, an industry abroad sells the outputs of a firm's domestic production.

19.5 Benefits of FDI

In modern world FDI Inflows have become big source of economic development and creation of income and employment opportunities. Following are the important merits of FDI for developing countries including India:

I. Economic Growth: - FDI directly increases domestic investment in various sectors of the economy, and this leads faster economic growth.

2. Foreign Trade: - FDI have opened a wide spectrum of opportunities in import and export trade.

3. Superior Quality: - FDI Inflows have brought along with them superior technology and managerial skills, which have contributed in manufacturing of world class quality products in India.

4. Increased Employment: - FDI inflows have flowed in service and manufacturing sectors. Large number of new production and service units have been added which gave new opportunities for large scale employment.

5. Bridging Host Country's Foreign Exchange Gaps: - Usually there had been wide gap between foreign exchange receipts and payments. This gap may be on current account and this is met with FDI.

19.6 Negative Impact of FDI

In most of the developing countries, the public opinion is not favourable towards FDI due to its impact on the economy, culture, and domestic firms. The major demerits of FDI are as under:

1. Market Monopoly: - Multinational corporations (MNCs) are very big in size and advanced in technology and financial resources than the domestic companies. This is leading to market monopoly and preventing entry of domestic firms.

2. Technology Dependence: - MNCs are working in such a way that they do not share or transfer their technology to domestic firms, therefore they remain dependent on MNCs.

3. Huge Profit Outflow: - MNCs earn huge profits and they repatriate a large part of it to their parent country.

4. Corruption: - Large foreign investors bribe government officials specially regulators and distort market forces.

5. National Security: - Usually MNCs are holding a dominant position in sensitive industries, such as telecommunication, supply of core equipments and software for information technology industry. There is a danger that on account of this dominant position country's strategic interests are compromised.

19.7 Trends in FDI Inflows

Widening growth differences across economies and gradual opening up of capital account in the emerging economies resulted in a steep rise in cross border investment flows during the last two decades. We can discuss these recent trends of Global FDI Inflows and Trends in FDI Inflows to India as follows:

19.7.1 Global Trends in FDI Inflows:

After the dotcom burst, there has been an unprecedented rise in cross- border investment and this rise was sustained till the occurrence of global financial crises in the year 2008-09. Between 2003 and 2009, global FDI flows grew nearly four- fold and flows to EMEs (Emerging Market Economies) grew by about three fold (see unit 3). After reaching a peak of US $ 2.1 trillion in 2007, global FDI flows witnessed significant moderation over the next two years to touch US $ 1.1 trillion in 2009, following global financial

crisis. As the world economic recovery continued to be uncertain and thus global FDI flows remained stagnant at US $ 1.1 trillion in 2010.

Improved macro- economic conditions in emerging markets boosted corporate profits and better stock market valuations and rising business confidence augured well for global FDI prospects. The share of developing countries now constitutes 50 percent in the total FDI inflows may further increase on the back of strong growth prospectus. FDI flows into selected countries are given in table 19.1.

Table 19.1 FDI Inflows in Selected Countries of the World

	Amount (US $ **billions**)			
	2007	**2008**	**2009**	**2010 (Estimates)**
World	**2100.0**	**1770.9**	**1114.2**	**1122.0**
Developed Economies	**1444.1**	**1018.3**	**565.9**	**526.6**
United States	266.0	324.6	129.9	186.1
France	96.2	62.3	59.6	57.4
Belgium	118.4	110.0	33.8	50.5
United Kingdom	186.4	91.5	45.7	46.2
Germany	76.5	24.4	35.6	34.4
Developing Economies	**564.9**	**630.0**	**478.3**	**524.8**
China	83.5	108.3	95.0	101.0
Hong Kong	54.3	59.6	48.4	62.6
Russian Federation	55.1	75.5	38.7	39.7
Singapore	35.8	10.9	16.8	37.4
Saudi Arabia	22.8	38.2	35.5	-
Brazil	34.6	45.1	25.9	30.2
India	**25.0**	**40.4**	**34.6**	**23.7**

Source: World Investment Report, 2010 and Global Investment Trends Monitor, UNCTAD.

19.7.2. Trends in FDI Inflows in India:

In line with robust domestic performance, India also received large FDI inflows in line of other EMEs. FDI inflow in India increased from around US $ 6 billion in 2001-02 to 38 billion in 2008-09. This huge increase in FDI inflows to India reflected the impact of liberalization of the economy since the early 1990 as well as gradual opening up of the capital account. FDI was gradually allowed in almost all sectors except a few sectors on ground of strategic importance. Sector specific rules and regulations are to be followed by the foreign investors. FDI inflows in India were US $ 27.1 billion in 2009-10 and US $ 20.3 billion during 2010-11 (see unit 3 for more detail).

If we look table 19.2 we find that from sectoral perspective FDI inflow in India mainly flowed into service sector (with an average share of 41 percent in the last five years, followed by manufacturing (around 23 percent) and mainly it routed through Maturities (43%) and followed by Singapore (11%). Equity FDI inflows in India and sectoral shares may be seen from the following table.

Table 19.2: Equity Inflows to India

(Per cent)

Sectors	2006-07	2007-08	2008-09	2009-10	2010-11	Average Annual
	Sectoral Shares (Per cent)					
Manufactures	17.6	19.2	21.0	22.9	32.1	22.6
Services	56.9	41.2	45.1	32.8	30.1	41.2
Construction, Real estate and mining	15.5	22.4	18.6	26.6	17.6	20.2
Others	9.9	17.2	15.2	17.7	20.1	16.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	Equity Inflows (US$ billions)					
Manufactures	1.6	3.7	4.8	5.1	4.8	4.0
Services	5.3	8.0	10.2	7.4	4.5	7.1
Construction, Real estate and mining	1.4	4.3	4.2	6.0	2.6	3.7
Others	0.9	3.3	3.4	4.0	3.0	2.9
Total Equity FDI	**9.2**	**19.3**	**22.6**	**22.5**	**14.9**	**17.7**

19.8 FDI Policy Framework in India

There has been a sea change in India's approach to foreign investment from the early 1990s when it began structural economic reforms encompassing all the sectors of the economy. This framework can be discussed as follows:

19.8.1 Pre- Liberalization Period:

India had followed an extremely cautious and selective approach while formulating FDI policy in view of the dominance of 'import- substitution strategy' of industrialization. With the objective of becoming 'self reliant', there was a dual nature of policy intention- FDI through foreign collaboration was welcomed in the areas of high technology and high priorities to build national capability and discourage in low technology areas to protect and nurture domestic industries. The regulatory framework was consolidated through the enactment of Foreign Exchange Regulation Act (FERA), 1973 wherein foreign equity holding in a joint venture was allowed only up to 40 percent. Recognizing limitations of highly protective policies partial liberalization in the trade and investment policy was introduced in the 1980s with the objective of enhancing export competitiveness, modernization and marketing of exports through Transnational Corporations (TNCs). The announcements of Industrial Policy (1980 and 1982) and Technology Policy (1983) provided for a liberal attitude towards foreign investments in terms of changes in policy directions. The policy was characterized by de- licensing of some of the industrial rules and promotion of Indian manufacturing exports as well as emphasizing on modernization of industries through liberalized imports of capital goods and technology. This was supported by trade liberalization measures in the form of tariff reduction and shifting of large number of items from import licensing to Open General Licensing (OGL).

19.8.2 Post- Liberalization Period:

A major shift occurred when India embarked upon economic liberalization and reforms program in 1991 aiming to raise its growth potential and integrating with the world economy. Industrial policy reforms gradually removed restrictions on investment projects and business expansion on the one hand and allowed increased access to foreign technology and funding on the other. A series of measures that were directed towards liberalizing foreign investment included: (i) introduction of dual route of approval of FDI- RBI's automatic route and Government's approval (SIA/FIPB) route, (ii) automatic permission for technology agreements in high priority industries and removal of restriction of FDI in low technology areas as well as liberalization of technology imports, (iii) permission to Non- resident Indians (NRIs) and Overseas Corporate Bodies (OCBs) to invest up to 100 percent in high priorities sectors, (iv) hike in the foreign equity participation limits to 51 percent for existing companies and liberalization of the use of foreign 'brand name' and (v) signing the Convention of Multilateral Investment Guarantee Agency (MIGA) for protection of foreign investments. This effort was boosted by the enactment of Foreign Exchange Management Act (FEMA), 1999 [that replaced the Foreign Exchange Regulation Act (FERA), 1973] which was less stringent.

This along with the sequential financial sector reforms paved way for greater capital account liberalization in India.

Investment proposals falling under the automatic route and matters related to FEMA are dealt with by RBI, while the Government handles investment through approval route and issues that relate to FDI policy per se through its three institutions, viz., the Foreign Investment Promotion Board (FIPB), the Secretariat for Industrial Assistance (SIA) and the Foreign Investment Implementation Authority (FIIA).

FDI under the automatic route does not require any prior approval either by the Government or the Reserve Bank. The investors are only required to notify the concerned regional office of the RBI within 30 days of receipt of inward remittances and file the required documents with that office within 30 days of assurance of shares to foreign investors. Under the approval route, the proposals are considered in a time-bound and transparent manner by the FIPB. Approvals of composite proposals involving foreign investment/ foreign technical collaboration are also granted on the recommendations of the FIPB. Current FDI policy in terms of sector specific limits has been summarized in Table 3:

Table 19.3: Sector Specific Limits of Foreign Investment in India

Sector	FDI Cap/ Equity	Entry Route	Other Conditions
A. Agriculture			
1. Floriculture, Horticulture, Development of Seeds, Animal Husbandry, Pisciculture, Aquaculture, Cultivation of vegetables & mushrooms and services related to agro and allied sectors.	100%	Automatic	
2.Tea sector including plantation	100%	FIPB	
(FDI is not allowed in any other agriculture sector/ activity)			
B. Industry			
1. Mining covering exploration and mining of diamonds & precious stones; gold, silver and minerals.	100%	Automatic	
2. Coal and lignite mining for captive consumption by power projects, iron & steel, cement production.	100%	Automatic	
3.Mining and mineral separation of titanium bearing minerals	100%	FIPB	

C. Manufacturing			
1. Alcohol- distillation and brewing	100%	Automatic	
2. Coffee & Rubber processing and warehousing	100%	Automatic	
3. Defense production	26%	FIPB	
4.Hazardous chemicals and isocyanates	100%	Automatic	
5.Industrial explosives-manufacturing	100%	Automatic	
6.Drugs and Pharmaceuticals	100%	Automatic	
7.Power including generation (except Atomic energy); transmission, distribution and power trading	100%	Automatic	
(FDI is not permitted for generation, transmission & distribution of electricity produced in atomic power plant/ atomic energy since private investment in this activity is prohibited and reserved for public sector)			
D. Services			
1. Civil aviation (Greenfield projects and Existing projects)	100%	Automatic	
2.Asset reconstruction companies	49%	FIPB	
3. Banking(private) sector	74%(FDI+FII).FII not to exceed 49%	Automatic Automatic	s.t. minimum capitalization norms
4. NBFCs: Underwriting, portfolio management services, investment advisory services, financial consultancy, stock broking, asset management, venture capital, custodian, factoring, leasing and finance, housing finance, Forex broking	100% 20% 49%(FDI+FII) 49%(FDI+FII)	FIPB	

etc. 5. Broadcasting a.FM Radio b. Cable network; c. Direct to home; d. Hardware facilities such as up-linking, HUB. e. Up- linking a news and current affairs TV channel 6. Commodity Exchanges	49%(FDI+FII) 100% 49% (FDI+ FII) (FDI 26% FII 23%)	FIPB	
7. Insurance	26%	Automatic	Clearance from IRDA
8. Petroleum and natural gas: Refining	49% (PSUs). 100% (Pvt. Companies)	FIPB (for PSUs). Automatic (Pvt.)	
9. Print media a. Publishing of newspaper and periodicals dealing with news and current affairs b. Publishing of scientific magazines/ speciality journals/ periodicals	26% 100%	FIPB FIPB	s.t. guideline-s by Ministry of Informati-on & Broadcast-ing
10. Telecommunication a. Basic and cellular, unified access services, national/ international long- distance, V-SAT, public mobile radio trunked services (PMRTS), global mobile personal communication services (GMPCS) and others.	74% (including FDI, FII, NRI, FCCBs, ADRs/ GDRs, convertible preference shares, etc.)	Automatic Up to 49% and FIPB beyond 49%	

Sectors Where FDI is Banned

1. Retail trading (except single brand product retailing) but now Multi Brand Retail is also opened.
2. Atomic Energy.
3. Lottery business including Government/ private lottery, online lotteries etc.
4. Gambling and betting including casinos etc.
5. Business of chit fund.
6. Nidhi Company.
7. Trading in Transferable Development Rights (TDRs).
8. Activities/ sectors not opened to private sector investment.
9. Agriculture (excluding Floriculture, Horticulture, Development of Seeds, Animal Husbandry, Pisciculture, Aquaculture, Cultivation of vegetables & mushrooms etc. under controlled conditions and services related to agro and allied sectors) and Plantations (other than Tea Plantations).
10. Real estate business or construction of farm houses.
11. Manufacturing of Cigars, cheroots, cigarillos and cigarettes, of tobacco or of tobacco substitutes.

19.9 Summary

International investment has become very important source of economic development of emerging market economies during last three decades. Now a day's Foreign Direct Investment inflows are considered superior to other forms of external finance because it is non debt creating finance and returns depend on the performance of the enterprises or projects financed by FDI. Global FDI inflows from 2003 to 2009 grew nearly fourfold and flow to EMEs grew by about three fold. It reached a peak of US $ 2.1 trillion in 2007 and in the next two years it moderated to US $ 1.1 trillion in 2009. In India FDI inflows grew from 25 billion in 2007 to 40 billion in 2008 and declined to 24 billion in 2010. FDI has both merits and demerits but merits are more vital and therefore every EME is trying to get more and more FDI. India is opening more sectors for FDI and limits of investment by foreigners are increased substantially.

19.10 Self Assessment Questions

7. What do you understand by FDI? How does it differ from FPI?
8. Write down the merits and demerits of FDI for the host country.
9. Explain the global and Indian trends of FDI inflows.
10. Differentiate between the following types of FDI:-
    a. Resources seeking vs. Market seeking FDI;
    b. Industrial vs. Non- industrial FDI;
    c. Greenfield vs. Acquisition.
11. Explain FDI Policy Framework in India after liberalization.
12. Explain the concept of FDI. Give different types of FDI.

19.11 Reference Books

- Rakesh Mohan Joshi, 'International Business', Oxford University Press, New Delhi.
- Francis Cherumilan, 'International Business', Prentice- Hall of India Pvt Ltd, New Delhi.
- Word Investment Report, 2010 and Global Investment Trends Monitor, UNCTAD.
- Department of Industrial Policy Promotion (Various Annual Reports and Policy Documents) Government of India, New Delhi.

Unit - 20: International Financing Sources

Structure of Unit

20.0 Objectives

After studying this unit, you are able to understand:

- Different sources of international financing such as international equities, international bonds etc.
- Cost of foreign borrowings.
- Factors influencing the cost of raising funds from abroad.
- Financing foreign subsidiaries or projects.

20.1 Introduction

The globalization of world's capital market has created a great deal of competition and has enabled the international business firms particularly the MNCs to diversify their financing sources. Now they have more and better options of raising funds from global financial markets. The increased competition and variety of instruments of raising international finance has brought financial innovation in the global capital market and also made it more complex and diversified. The cost of foreign borrowings has also affected by it and the factors influencing it have also changed over the years. It is also a well known fact that the cost of capital for MNCs is different as compared to the cost of capital for domestic firms. We shall discuss all such related issues in this unit so that you are able to understand not only the various international financing sources, but also the cost involved in foreign borrowings and other issued related to it.

20.2 Long Term Financing Sources

After deciding the capital structure, the MNC has to identify the various sources for raising funds. These sources may be broadly classified into the following categories:

20.2.1 Equity Capital / Shares

An equity share represents a share of ownership in a company with voting rights that can be exercised in corporate decisions taken at the time of annual general meeting of the company. Shares of the company may be in the form of preference shares and equity shares**.** Preference shares are known as preferred stock; while equity shares are known as common stock or equity stock. Preference shares typically do not carry voting rights, but they are legally entitled to receive a certain level of dividends before any dividend is issued to equity share holders. Generally, MNCs have larger chunk of equity shares. The MNC can issue equity shares either in the domestic country or in other countries, including the countries in which subsidiaries are located, depending upon cost of equity. The MNC can issue equity shares in the country in which the cost of equity, i.e.; the required rate of return is the lowest. If capital markets around the world are fully integrated, the cost of equity may be more or less the same. But, in reality, most of the capital markets in the world still remain segmented and, therefore, the cost of equity is different in different capital markets / countries depending upon the risk perceptions of the investors as well as many other factors. For instance, in the countries where capital markets are well developed and the saving rate is high, the cost of equity is lower. Savings rate in the country also influences the cost of equity. The higher the savings rate, the lower is the cost of equity.

Capital markets may also differ in issue costs and transaction costs. When issuing costs are lower, the proceeds of the issue, after factoring in issuing costs, will be greater. This will reduce the cost of equity in terms of rate of return. Similarly equity shares will have larger marketability, if the transaction costs are lower. This will bring down the required rate of return and also the cost of equity. In view of differences among countries in terms of the cost of equity, MNCs may issue equity shares in countries where they can get funds at the minimum cost.

When MNCs issue equity shares outside their home country, such issues are known as Euro Equity issues or International Equity issues**.** Euro equity issues are offered simultaneously in more than one country through an international syndicate. International equity issues are also known as cross border equity issues. They have registered a remarkable growth in volumes as well as in value over time in spite of the fact that they are a recent phenomenon. Many MNCs have successfully raised huge amount of funds through the euro equity issues.

The concept of euro equity came into prominence in 1980s. As these issues were exposed to many regulations and controls including stringent listing requirements and foreign exchange risks, international investors perceive a greater amount of risk in euro equity issues. However, with the opening up of financial markets due to globalization,

the situation has significantly changed. The restrictions on the flow of funds across countries have been eased to a greater extent in recent years. This has helped investors opt for equity issues that diversify their investment internationally. Further, the breadth and depth of international derivative markets have increased over time, which has facilitated the hedging of the risks involved in euro equity issues by investors. One additional alternative feature of euro equity issues is that they have a larger profit potential then domestic equity issues or other kinds of capital issues. Added to this, international financial markets have developed in terms of infra-structure and sophistication. This also enhances the marketability and liquidity of euro equity issues. All these developments have made international equity issues more popular. Now they are one of the main sources of international financing.

In recent years, a new financial instrument known as **global shares** came into focus. These are the listed equity shares which are traded in the same form on any stock market of the world. They are traded in the functional currency of the stock exchange on which they are listed. The clearing and settlement of trade occurs at the global level electronically (see unit 18 for more detail).

20.2.2 Depository Receipts

To circumvent the conditions of listing of equity shares of foreign stock markets and also for other benefits, euro equity issues are structured into depository receipts (DRs). DRs are issued in the foreign markets against the shares of a domestic company. Thus, they are issued as an evidence of ownership of the underlying stock of a foreign company. Each DR may represent the ownership of one or more equity shares of a company, depending upon the value of a share. The procedure is that a company issues its shares to an international bank, which acts as a depository. The international bank, in turn, bundles a specified number of shares as a DR, and issues them to investors in foreign countries. The dividends of the underlying equity shares are first distributed to the depository. The depository, in turn pays those dividends to the holders of Depository Receipts. Thus, DRs are not direct holding in the company, but derivative securities created by the depository that holds the underlying shares. Investors who have subscribed to DRs can, therefore, have all the benefits associated with the euro equity issues without possessing the equity shares of a foreign company.

- **American Depository Receipts (ADRs):** The DRs denominated in U.S. dollars and issued in the US are known as ADRs. Thus, ADRs are the USD-denominated securities representing shares of foreign company. These are listed and traded on stock markets in the US.

- **Global Depository Receipts (GDRs):** The initial success of ADRs resulted in the rise of the GDRs throughout the world. These are normally listed and traded on many stock exchanges in the world (see unit 18 for more detail).

20.2.3 Debt Capital

Another important international financing source is debt capital. The debt capital can be raised through the bonds, syndicated credit, MTNs and EMTNs, NIF and other sources of financing. Now we shall discuss them in brief here:

1. **Bonds:** A bond is a contractual obligation of the borrower to make payments of interest at an agreed rate on borrowed funds and payment of the principal at a certain fixed time. The bonds can be of following types :

a. Euro Bonds:

These are the bonds which are denominated in a currency that is not that of a country in which the bonds are floated. For instance, USD-denominated bonds issued outside the U.S. and GBP-denominated bonds issued outside the U.K. Though, historically, the U.S. dollar used to be a most preferred currency in which Euro bonds were denominated, in recent years many currency like the British pound, the Japanese yen, and the euro have become popular currencies in which the euro bonds are denominated. Many varieties of euro bonds are available in international financial markets to satisfy the needs of different investors. For example, some euro bonds are convertible into equity shares of the issuing company or some other company. Another variant is bonds with equity warrants. The warrants entitle the bondholder to purchase a certain number of equity share at pre-specified price over a predetermined period of time. .

b. Foreign Bonds :

It is a bond floated in a foreign currency and denominated in the currency of the country where they are issued for example, Yankee Bonds. Yankee Bond is a dollar denominated bond issued in the capital markets in the U.S. by a non American company. These are sold in U.S., and denominated in U.S. dollars, but issued by a borrower of different nationality (e.g.; German or French Corporations). This allows a U.S. citizen to buy a bond of a foreign firm, but received all payments in U.S. dollars thereby eliminating exchange rate risk.

c. Multiple Currency Bonds :

These are also called Currency Option Bonds. These are issued in one currency with an option to take interest and principal in another currency. The rate at which the conversion takes place may be fixed at the time of issue of bonds or at floating rates. For instance, U.K. based company might issue U.S. dollar bond which is convertible into shares of stock quoted in pound sterling. These may be dual currency bonds as well as multicurrency bonds.

d. Alpine Convertible :

These are new alternatives for the companies who are scouting for overseas funds. Alpine bonds are making an entry into the country through the three major Swiss banks – Union Bank of Switzerland (UBS), Credit Suisse and Swiss Banking Corporation. Alpines are convertible bonds sold to Swiss investors through Swiss banking syndicates. They are issued in dollars and sold only through the Swiss retail investor's network. The

offer for an issue comes from the Swiss market and if the company qualifies for the issue, it is subsequently placed by investment banker. An Alpine could be unlisted and thus free from post market pressure. The issue costs are lower (only 1.75%) since the concerned Swiss bank pays a single cheque to the corporate and places out the bonds to its retail clients.

e. Fixed Rate Bonds :

These bonds are the standard and traditional variety of bonds with medium and long-term maturities offered in many financial markets. These bonds have a specific maturity date. They are straight fixed rate bonds in the sense that the interest in the form of fixed coupon payments is typically paid annually throughout the life of the bonds. These bonds are usually bearer bonds**.** Because of their simple and straight structure, they are widely accepted in international financial markets. Fixed rate bonds are of following types:

(a) Callable Bonds: These are the bonds that can be redeemed by the issuer at any time prior to its maturity. The major advantage of such bonds is that they give an option to the issuer to redeem the bond to his / her advantage.

(b) Puttable Bonds: These are just the opposite of the callable bonds. Such bonds allow the bondholder to sell the bond back to the issuer prior to the maturity.

Note: The coupon rate of interest carried by a callable bond is higher because of the disadvantage of the investor while the coupon rate of interest is lower in the case of a puttable bond as the investor enjoys the privilege of premature termination of the bond.

(c) Zero Coupon Bonds: Zero coupon bonds do not carry any coupon (interest) at all, but the issue price is fixed at discount in order to give the expected yield to the investors. Some zero coupon bonds are originally sold at face value and they are redeemed at an amount in excess of the face value. These bonds are similar to cumulative deposits or cash certificates of banks in our country.

(d) Cocktail Bonds: These bonds are denominated in mixture of currencies, for example, SDR bonds which represent weighted average of four currencies. The major advantage of such bond is that investors get automatically the benefit of currency diversification.

(e) Sinking Fund Bonds: In a traditional bond, repayment of the principal is done at maturity. But in the case of sinking fund bonds the principal is repaid in small amounts every year and hence by the end of the term of the bond there will be only a small amount of the principal to be repaid. Investors perceive this type of bond to be less risky as the burden of redemption is evenly spread.

2. Floating Rate Notes (FRN)**:** These are the bonds with coupon payments indexed to some standard / reference rate. That is, the interest rate in case of such bonds is variable and determined periodically at a discount or premium to a reference rate through LIBOR is usually used as reference rate. Other reference rates such as T-bill rates are also common. The interest rates are quoted as three month LIBOR + 100 bp, six months

LIBOR+75 bp or any other period of the reference rate and the discount premium. For instance, in case of three month LIBOR, the interest rate is revised quarterly. Sometimes, the interest may be an average reference rate observed over a certain period like three months or six months. It is also worth mentioning here that the spread (say, 100 bp or 50 bp) can be fixed for the whole period of the FRN or can vary over time. Thus, the yield on FRNs varies with interest rate in international financial markets.

Many variants of FRNs are available in international financial markets in accordance with investor's preference. These variants of FRNs are as follows:

a. Perpetual FRNs: In case of such notes, the principal amount is never repaid and therefore known as quasi – equity instruments.

b. Mini - Max FRNs: These notes are issued with a minimum and a maximum rate of interest.

c. Capped FRNs: Capped FRNs is a security with only a maximum rate of interest.

Some FRNs are issued with a provision that give the investor right or the obligation to convert the FRN into a long-term fixed rate bond.

3. Euro Medium Term Notes (EMTNs): These notes appeared for the first time in mid eighties in USA. EMTNs are continuously issued notes, which are usually unsecured with maturities ranging from a month to 10 years. They allow the borrower flexibility with respect to maturity profiles and timing of issues. The borrowers i.e. issuers of EMTNs include sovereign governments as well as large companies and financial institutions.

4. **Euro Syndicated Credit:** A typical euro syndicated credit is one in which a syndicate (group) of international banks provides funds to a firm. Syndicated credit may be a medium term or a long term credit. When the loan sought by a borrower is too large for any bank, a group of banks may come forward to lend money to the borrower. Two or more banks may act as lead managers. One of the lead banks acts as the agent bank and administers the loan after its sanction .The agent bank takes on the responsibility of determining the interest rate for each period and ensuring that the terms and conditions of the loan are respected. The rate of interest is generally fixed on LIBOR plus basis. For details, please see unit no.21 of this subject.

5. Note Issuance Facility (NIF): This is a new credit instrument, also known as Euro Note facility, which has been introduced as a low cost substitute of syndicated credit. An NIF is a medium-term legally binding commitment under which a borrower can issue a short term paper in its own name and the underwriters of the issue are committed either to purchase any notes that the borrower is unable to sell or to provide standing credit. The arrangement under which the bank provide credit to make-up the shortfall is known as revolving underwriting facility (RUF). The RUF provides the borrower a medium-term continuous access to short term credit at a fixed margin. Although the borrower firm can issue notes (called euro notes) with one month, three-month, six–month or twelve-month maturities, the underwriter of the NIF has a legal commitment to provide funding support for five to seven years. The interest rate is fixed as a margin over LIBOR.

The main advantage of NIF is the draw-down facility. The borrower firm can opt to draw -down all or part of its total credit whenever the need arises, it can roll over a portion of the credit at will and issue notes with different maturities known as multi option facility (MOF). Thus, NIF is more flexible and cheaper than syndicated credit.

20.2.4 Other Sources of Long- Term Financing

There are many other sources of long-term financing. These are as follows:

a. Parallel Loans:

These involve an initial exchange of funds between firms of MNC in different countries, such that the transaction is reversed some time in future. Such types of loans do not involve any foreign exchange risk because no currency conversion takes place.

b. Credit Swaps :

Credit swaps make it possible to acquire loans for a foreign subsidiary without sending funds abroad. These involve exchange of currencies between a bank and a firm, not between two firms.

c. International Development Institutions :

There are number of development institutions at international level which provide funds especially to developing countries to finance development projects. These institutions grant loan either to the governments of concerned countries or to the private corporate on the basis of guaranties of their governments. World Bank and its two affiliates IDA and IFC, Asian Development Bank are the main development institutions at international level.

d. Governments :

Governments of many countries also provide financial incentives to foreign investors including the loans, subsidies, grants and also loan guarantees especially to those projects which are expected to generate jobs and income and involve transfer of technology.

20.3 Short-Term Financing Instruments

International money market offers a number of instruments to raise short-term funds. These include mainly the following:

A. Inter-Company Financing:

It is the common practice that the parent company or its subsidiaries provide loans to each other for short period.

B. Local Currency Financing:

The subsidiary companies of MNCs generally meet their working capital requirements from the local money market of the country concerned for the sake of convenience and also for foreign exchange exposure management point of view. These companies take short term loans mainly from commercial banks. They also raise short- term funds from non-bank sources such as commercial paper, certificates of deposit, euro notes etc. Bank

loans can be in the form of term loans, line of credit, overdrafts, discounting of bills and revolving credit. Non bank sources of finance are as follows:

1 Commercial Paper (CDP): It is a short term unsecured promissory note that is generally sold by large corporations on discount basis to institutional investors and to other corporations.

2 Euro Notes: These are short-term notes usually denominated in US dollars and are issued by governments and corporations. These notes are issued in that country in whose currency they are denominated. These are also known as Euro Commercial paper (Euro CP).

3 Certificates of Deposits (CD): A CD is a negotiable instrument representing a deposit with a bank. Unlike a conventional bank deposit (non transferable), a CD is a marketable / transferable instrument which can be sold in the secondary market when cash is required by the CD holder. The final holder is paid the face value with interest on maturity date. CDs are issued for large denominations generally $1,00,000 or higher denominations. Euro CDs are issued mainly in London by banks.

4 Banker's Acceptance: This is the instrument widely used in the US money market to finance domestic and international trade both. In international transaction, the exporter draws a time draft on the importer's bank. On completion of shipment, the exporter hands over the shipping documents and letter of credit issued by importer's bank to its bank. The exporter gets paid the discounted value of draft and thereafter the exporter's bank presents the draft to the importer's bank, which stamps it has accepted. Thus, a banker's acceptance is created.

5 Others: Euro currency market is another important source of short-term credit ranging from overnight to one year. Similarly, **repurchase obligations (REPOS)** are used by securities dealers in U.S. for financing their securities holdings. The duration of REPOS may range from overnight to one year.

20.4 Cost of Capital

The cost of capital is defined as the minimum rate of return that a firm must earn on its investment so that market value per share remains unchanged. In other words, it is that minimum rate of return required by a firm on its investment in order to provide the rate of return required by the suppliers of capital. The suppliers of capital are broadly divided into equity shareholders and debt holders. That is, the total capital of a firm consists of equity (equity share capital plus retained earnings) and debt (all types of borrowed funds). Of course, there are many variants of these two components of capital. These different variants may have different required rates of return, depending on the various risks involved in each component of capital and also the prevailing risk free rate of return in the economy.

The required rate of return on each component of capital is the cost of that component of capital. Thus, a firm may have cost of equity, cost of retained earnings and cost of debt.

The cost of capital of a firm is the combined cost of all the sources of capital. It is also known as the overall or average cost of capital. As the component costs are usually combined according to the weight of each component in the firm's capital structure, the overall cost of capital can be termed as the **weighted average cost of capital (WACC).** The overall cost of capital represents the rate of return required to compensate the passage of time as well as to compensate the firm's overall / average level of risk.

The cost of capital may be explicit and implicit. The explicit cost of capital is the discount rate that equated the present value of expected payments to the sources of funds with the net funds received from those sources of funds. The implicit cost of capital is the opportunity cost or the rate of return on the best alternative investment.

The cost of capital of a firm can be divided into the following components:

A. The Cost of Equity (Ke):

It is the rate of discount that equals the present value of expected payments to equity shareholders with the net funds received from the equity issue. There are different models for computing the cost of equity. They are as follows:

1. Dividend Yield Model: As per the model, the cost of capital is defined as "the discount rate that equates the present value of all expected future dividends per share with the net proceeds of the sale (or the current market price) of a share". This model is based on the assumption that the market value of equity shares is directly related to the future dividends on those shares. Another assumption is that the future dividend per equity share is expected to be constant and the company is expected to earn at least this yield to keep the shareholders satisfied. This model is:

$$K_e = \frac{D1}{P_o}$$

Here,

K_e = Cost of equity capital

D_1 = Annual dividend per share on equity capital in period 1

P_o = Current market price of equity share.

This model has no relevance in practice as shareholders expect returns from equity to grow over time.

2. Dividend Growth Model: In this model, an allowance for future growth in dividend is added to the current dividend yield. It is recognized that the current market price of equity reflects expected future dividends. This model is also known as **"Gordon Growth Model.** The model is:

$$K_e = \frac{D_1}{P_o} + g$$

Here,

D_1 = Expected dividend per share in the next year (period 1)

P_o = Present market price of the share

G = Growth rate by which dividends are expected to grow per year at a constant compound rate.

Note that the growth rate will be zero if the company does not retain any of its earnings. In such a case, the cost of equity can be stated as:

$$K_e = \frac{D_1}{P_2} = \frac{EPS_1}{PO}$$

Here, EPS is the earnings per share in next year.

3. Price Earning Model: This model takes into consideration the earnings per share (EPS) and market price of the share. This model reads as follows:

$$K_e = \frac{E}{M}$$

Here,

E = Current earnings per share

M = Market price per share

4. Capital Asset Pricing Model (CAPM): This model divides the cost of equity into two components: the near risk -free return available on investing in government bonds and an additional risk premium for investing in a particular share / investment. This risk premium in turn comprises the average rate of return on the overall market portfolio and the beta factor (risk factor) of the particular investment. Putting all this together this model assesses the cost of equity for an investment as the following:

$$K_e = Rf + (Rm-Rf) \square$$

Here,

Rf = Risk – free rate of return

Rm-Rf = Market risk premium measured by the difference between the expected return on the market portfolio and the risk –free return.

$\square$ = Relative systematic risk or non-diversifiable risk of equity share.

Both the Gordon model and the CAPM yield a risk adjusted rate of return on equity. The major difference is that the latter utilized beta which is a measure of market related risk rather than total risk which is traditionally measured by the standard deviation.

B. The Cost of Retained Earnings (K_p) :

The retained earnings are obviously the funds of shareholders. The share holders of the company are entitled to these funds, therefore these should be taken into account while calculating the cost of capital. If company does not retain the earnings and entire net

profit is distributed to equity shareholders as dividend, the shareholders could reinvest such earnings and earn some return on them. Therefore, the cost of retained earnings may be considered equivalent to the return foregone or opportunity cost by the equity shareholders on retained earnings. Thus, the minimum required rate of return on the retained earnings is the return that the share holders could earn on alternative investment of equivalent risk. The return in this context is composed of dividend and capital gain. Thus, the cost of retained earnings (K_p) equals to the cost of equity (K_e) as the shareholders could earn that return by simply buying the shares of the company or making equivalent risk investments.

In case of a foreign project, the cost of retained earnings should also account for dividend withholding tax (T) on the dividends repatriated to the parent firm, and then the cost of retained earnings is stated as:

$$K_p = K_e (1-T)$$

C. The Cost of Debt (k_d):

The cost of debt is the rate of return required by the supplier of debt capital. For example, a company that has issued debentures that has a par value of INR 10,000 at a coupon rate of 10%. In this case, K_d is equal to 10%. As the interest on debt is tax deductible for the company, it is the interest rate on debt less the tax saving that is actually the cost of debt. Thus, the cost of debt is defined as:

$$K_d (1-T),$$

Here, T is the company's marginal tax rate.

Suppose the company's marginal tax rate is 40%. The cost of debt in above example is 6%. Thus, the cost of debt to the company is less than the required by lenders. The explicit cost of debt before tax is the discount rate that equates the net proceeds of the debt issue with the present value of interest payments plus redemption value of the debt. Since the debt can be issued at par, discount or premium, the net proceeds of the debt are relevant here.

When foreign debt is used to finance a project, the cost of debt in home currency of the parent firm should incorporate the interest on debt, currency gains and losses and taxes.

D. Weighted Average Cost of Capital (WACC):

The cost of capital of a firm is the combined cost of all the sources of capital. It is known as overall or average cost of capital. As the component cost are usually combined according to the weight of each component in the firm's capital structure. Therefore, a firm's WACC is a composite of the individual cost of financing weighted by the proportion of financing provided by each individual source, i.e.; the weights being in proportion to the individual components of the firm's capital structure. The WACC can be stated as:

$$K = \square\square k_e + (1-\square)\, Kd$$

Here,

K = Weighted average cost of capital

$\square$ = Proportion of equity capital

Kd = After tax cost of debt

K_e = Cost of equity

20.5 Cost of Capital for MNCs & Domestic Firms

The cost of capital for MNCs may differ from that of domestic firms because of the following factors:

1 Difference in access to global financial markets.

2 Difference in size of organization.

3 Difference in stability of cash flows.

4 Difference in exposure to exchange rate fluctuations or foreign exchange risk.

5 Other factors such as political risk, country risk, tax concessions etc.

20.6 Differences in Cost of Capital across Countries

The cost of capital is not uniform throughout the world. There are some countries where cost of capital is relatively low as compared to other countries. For Example, the cost of capital in Germany, US and Japan is low as compared to India, Brazil and Russia. In General, developed countries have comparatively, lower cost of capital as compared to developing economies. As explained earlier, the rate of interest in any economy is composed to the risk-free rate and the risk premium. Interest rates are generally high in developing economies because of inflation and high demand of capital. These economies are also capital scarce economies because of the low rate of savings. Moreover, the risk premium is also very high in developing economies because of their fragile economies. Likewise price-earnings (P/E) multiple is higher in less developed economies than in developed economies. Thus, it is the level of development of the economies, rate of interest, availability of capital, demand for capital, risk premium, price-earnings multiple and integration of financial markets create the difference in cost of capital across the countries.

20.7 Summary

The main sources of long-term financing are equity capital and debt capital. Depository receipts are also used for raising funds from the international financial markets. Equity capital can be in the form of equity stock and preferred stock. Debt capital can be raised through the different kinds of bonds, floating rate notes, euro medium-term notes, euro syndicated credit, note issuance facility etc. Other sources of long-term financing include parallel loans, credit swaps, international development institutions and governments. Short-term financing instruments include inter-company financing and local currency financing through the bank and non-bank sources. The cost of capital is the minimum rate of return required by a firm on its investment in order to provide the rate of return required by the supplier of capital. The cost of capital may be explicit as well as implicit. The various components of cost of capital are: the cost of equity, the cost of retained earnings and the cost of debt. We also witness differences in cost of capital across countries mainly due to differences in interest rates, price-earnings multiple and level of development of different countries. The cost of capital for MNCs is different than the purely domestic firms due to many reasons.

20.8 Self Assessment Questions

1. How can foreign projects be financed?
2. What is cost of capital? Why is debt cheaper than equity?
3. Explain various long-term financing sources for the MNCs
4. Explain briefly the different models/methods used in calculating cost of equity.
5. "Cost of capital is the sum of the minimum rate of return at zero risk level plus a premium for business risk and a premium for financial risk". Elaborate.
6. Discuss various short-term financing instruments.
7. Why cost of capital for MNCs is different than the domestic firms? Explain.

20.9 Reference Books

- Kishore, Ravi M, 'Financial Management', Taxman.
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